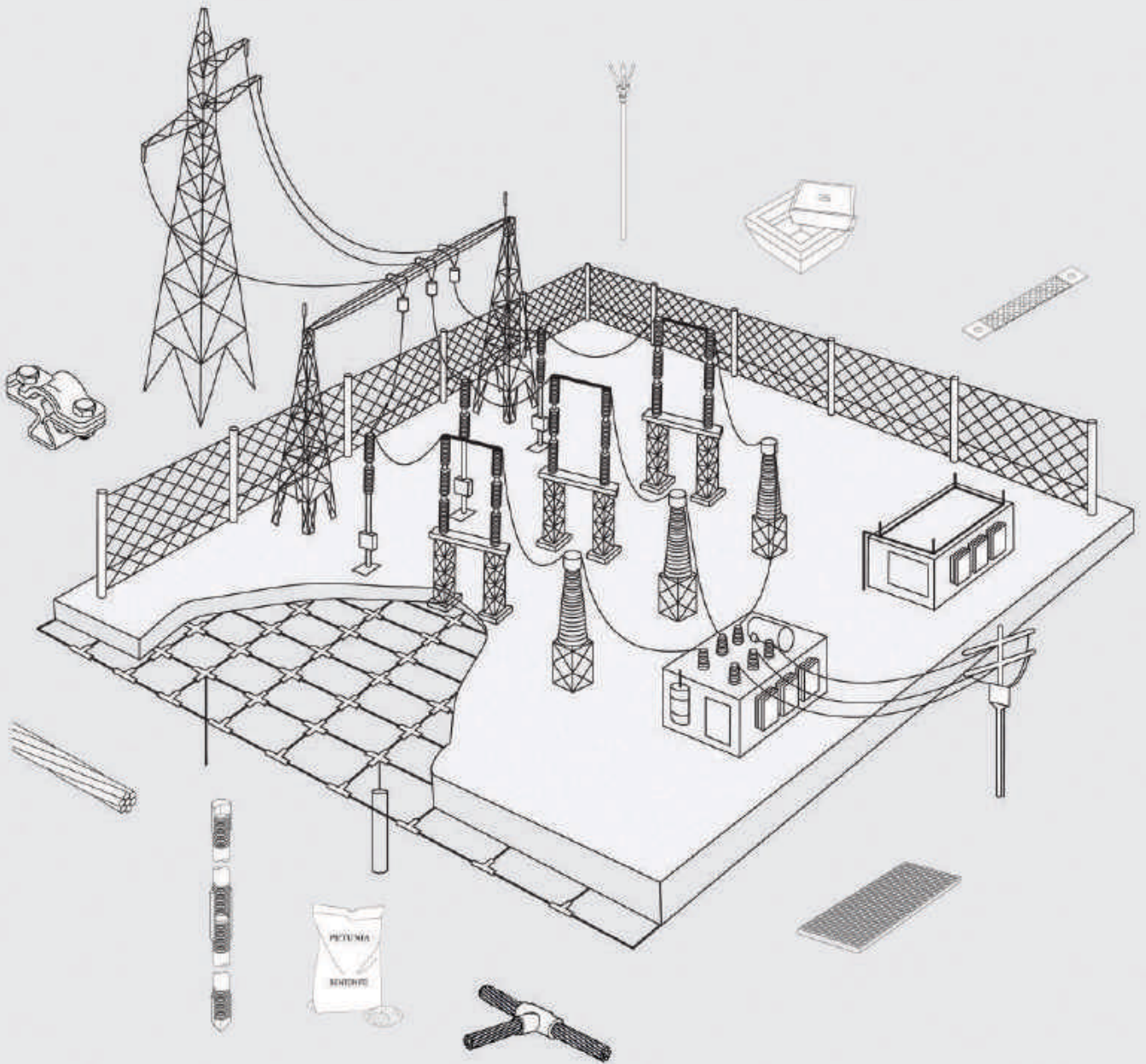




"EARTHING" SYSTEM

New Products





In an substation, the following items from the earthing system can be used:

- ① Copper Wires are connected together in a mesh shape.
- ② Earth Rods connected to copper wire mesh.
- ③ Types of " PetWeld" Welds for connecting wires in the network to each other and to earth rods and down conductors
- ④ Lightning Rods on top of office and control buildings or masts
- ⑤ Earth Mat for points where the operator may want to disconnect and connect the disconnectors with a stick.
- ⑥ Petunia "Petlenfill" backfill for Ground rods
- ⑦ Flexible Ground Band to connect moving points to the Earthing System
- ⑧ Some different Clamps
- ⑨ Earth Pits
- ⑩ Clamp connecting the Wire to the Ground Rod

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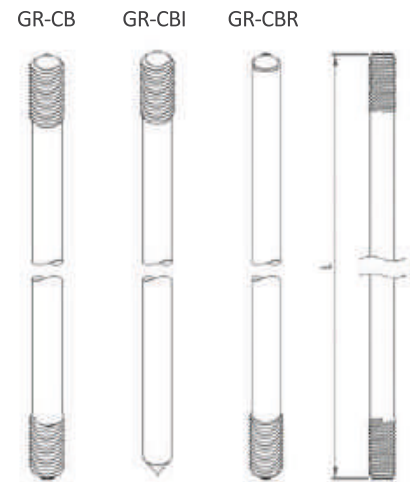
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EARTH ROD & ACCESSORIES

► COPPER BONDED STEEL EARTH ROD

Copper Bond Earth Rods are the ideal driven earth electrodes, as they offer the installer an economical and efficient earth rod Earthing system. Pure electrolyte copper is uniformly molecularly bonded into a high tensile steel core to a minimum thickness of 0.254 mm. As standards UL 467 and IEC 62561, "The copper covered shall not be less than 0.010 inches {0.254mm} thick at any point and shall comply with the adherence requirement and bending requirement thus ensuring excellent corrosion resistance and eliminating electrolytic action."

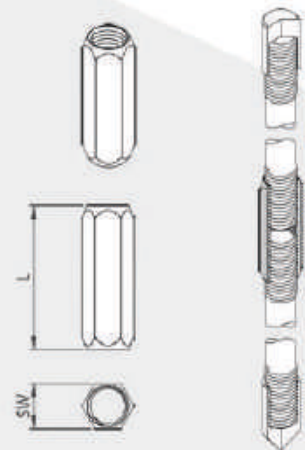
Reference Code	Earth Rod Type	Nominal Dia.(ø2) (inch)	Actual Dia.(ø1) (mm)	Length		Box. Qty	Unit Weight (Kg)
				L (m)	L (feet)		
GR-CB 16/1200	Threaded/Threaded	5/8	14.2	1.2	4	10	1.53
GR-CBI 16/1200	Threaded/Sharp						
GR-CBR 16/1200	Threaded/Flat						
GR-CB 16/1500	Threaded/Threaded	5/8	14.2	1.5	5	10	1.88
GR-CBI 16/1500	Threaded/Sharp						
GR-CBR 16/1500	Threaded/Flat						
GR-CB 16/2000	Threaded/Threaded	5/8	14.2	2	7	10	2.63
GR-CBI 16/2000	Threaded/Sharp						
GR-CBR 16/2000	Threaded/Flat						
GR-CB 16/3000	Threaded/Threaded	5/8	14.2	3	10	5	3.75
GR-CBI 16/3000	Threaded/Sharp						
GR-CBR 16/3000	Threaded/Flat						
GR-CB 20/1200	Threaded/Threaded	3/4	17.2	1.2	4	10	2.23
GR-CBI 20/1200	Threaded/Sharp						
GR-CBR 20/1200	Threaded/Flat						
GR-CB 20/1500	Threaded/Threaded	3/4	17.2	1.5	5	10	2.75
GR-CBI 20/1500	Threaded/Sharp						
GR-CBR 20/1500	Threaded/Flat						
GR-CB 20/2000	Threaded/Threaded	3/4	17.2	2	7	10	3.84
GR-CBI 20/2000	Threaded/Sharp						
GR-CBR 20/2000	Threaded/Flat						
GR-CB 20/3000	Threaded/Threaded	3/4	17.2	3	10	5	5.49
GR-CBI 20/3000	Threaded/Sharp						
GR-CBR 20/3000	Threaded/Flat						



► COPPER BONDED STEEL EARTH ROD COUPLER

Petunia Couplings have a high copper content to ensure excellent corrosion resistance. They facilitate deep driving and also protect the rod threads while using the driving head.

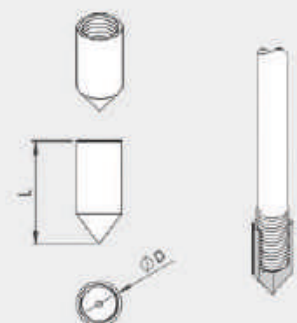
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box. Qty	Unit Weight (kg)
				SW	L		
GRU 16	Coupler	16	Brass	19	70	10	0.08
GRU 20		20		22	70	10	0.09



► COPPER BONDED STEEL EARTH ROD DRIVING POINT

These Spikes protect the tip of the Earth Rods and let the installer push the rods to the earth easily when driving.

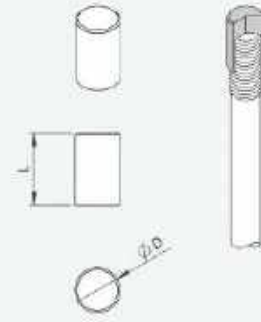
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box. Qty	Unit Weight (kg)
				øD	L		
GRDP 16	Driving Point	16	Hardened	19	50	10	0.08
GRDP 20		20	Steel	22	50	10	0.08



► COPPER BONDED STEEL EARTH ROD DRIVING HEAD

These reusable high-tensile Steel Driving Heads are suitable for driving Earth Rods by hand or with a power hammer. They are used for threaded or non-threaded Earth Rods.

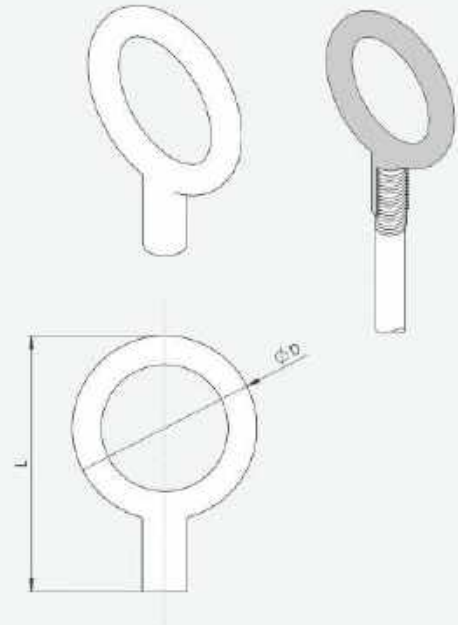
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
				ØD	L		
GRS 16	Driving Head	16	Hardened	19	35	10	0.06
GRS 20		20	Steel	22	35	10	0.06



► COPPER BONDED STEEL EARTH ROD EYE NUT

Copper Bonded Steel Earth Rod Eye Nut provides a static earth point when attached to the top of a threaded Copper Bond Earth Rod.

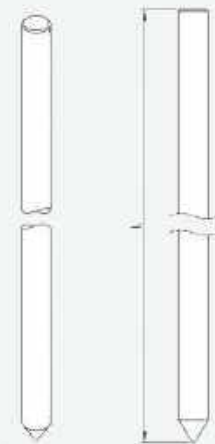
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
				ØD	L		
EES 16	Earth Rod	16	Brass	90	125	10	0.32
EES 20	Eye Nut	20		90	125	10	0.35



► NON-EXTENSIBLE COPPER BONDED STEEL EARTH ROD

Non-extensible Copper-Bonded Steel Earth Rods have not been threaded. The rods are manufactured on one side flat and the opposite side sharp. Copper coating is Min. 0.25 mm according to standard UL 467 and IEC 62561.

Reference Code	Actual Diameter (mm)	Length		Box Qty	Unit Weight (kg)
		L (m)	L (Feet)		
GR-NE 14.2/1200	14.2	1.2	4	10	1.53
GR-NE 14.2/1500	14.2	1.5	5	10	1.88
GR-NE 14.2/2000	14.2	2	7	10	2.63
GR-NE 14.2/3000	14.2	3	10	5	3.75
GR-NE 16/1200	16	1.2	4	10	1.93
GR-NE 16/1500	16	1.5	5	10	2.37
GR-NE 16/2000	16	2	7	10	3.32
GR-NE 16/3000	16	3	10	5	4.74
GR-NE 17.2/1200	17.2	1.2	4	10	2.23
GR-NE 17.2/1500	17.2	1.5	5	10	2.75
GR-NE 17.2/2000	17.2	2	7	10	3.84
GR-NE 17.2/3000	17.2	3	10	5	5.49
GR-NE 20/1200	20	1.2	4	10	3.01
GR-NE 20/1500	20	1.5	5	10	3.71
GR-NE 20/2000	20	2	7	10	5.19
GR-NE 20/3000	20	3	10	5	7.41

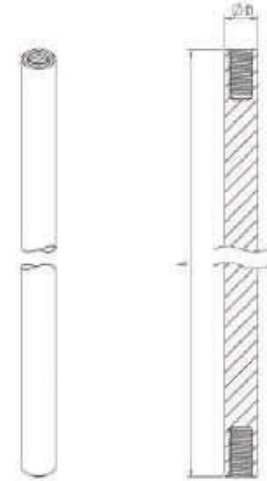


► SOLID COPPER, STAINLESS STEEL & GALVANIZED STEEL EARTHING ROD

Solid Copper and Stainless Steel Earth Rods are designed with suitable corrosion resistance and exceptionally long life in various soils and Galvanized Steel Earth Rods are used in low corrosion attack cases. Generally, they can be used in a borehole or driven by a hammer on the ground directly.

The Solid Copper Rods are manufactured from hard-drawn copper with purity and mechanical properties according to standard BS 7430. Stainless Steel Earth Rods are made according to BS 74 too.

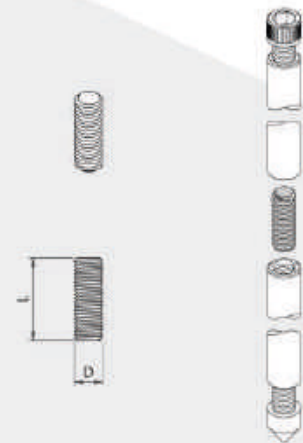
Reference Code	Material	ØD (mm)	Length		Box. Qty	Unit Weight (kg)
			L (m)	L (feet)		
GR-GS 16/1200	H. D. Galvanised Steel	16	1.2	4	10	1.89
GR-SC 16/1200	Pure Copper					2.16
GR-SS 16/1200	Stainless Steel					1.89
GR-GS 16/1500	H. D. Galvanised Steel	16	1.5	5	10	2.36
GR-SC 16/1500	Pure Copper					2.69
GR-SS 16/1500	Stainless Steel					2.36
GR-GS 16/2000	H. D. Galvanised Steel	16	2	7	10	3.15
GR-SC 16/2000	Pure Copper					3.6
GR-SS 16/2000	Stainless Steel					3.15
GR-GS 16/3000	H. D. Galvanised Steel	16	3	10	5	4.73
GR-SC 16/3000	Pure Copper					5.4
GR-SS 16/3000	Stainless Steel					4.73
GR-GS 20/1200	H. D. Galvanised Steel	20	1.2	4	10	2.96
GR-SC 20/1200	Pure Copper					3.37
GR-SS 20/1200	Stainless Steel					2.96
GR-GS 20/1500	H. D. Galvanised Steel	20	1.5	5	10	3.7
GR-SC 20/1500	Pure Copper					4.22
GR-SS 20/1500	Stainless Steel					3.7
GR-GS 20/2000	H. D. Galvanised Steel	20	2	7	10	4.93
GR-SC 20/2000	Pure Copper					5.62
GR-SS 20/2000	Stainless Steel					4.93
GR-GS 20/3000	H. D. Galvanised Steel	20	3	10	5	7.39
GR-SC 20/3000	Pure Copper					8.44
GR-SS 20/3000	Stainless Steel					7.39



► SOLID COPPER, STAINLESS STEEL & GALVANIZED STEEL EARTHING COUPLER

The GRDC Couplers are used for Solid Copper, Stainless Steel & Galvanized Steel Earth Rods. They are manufactured from stainless steel.

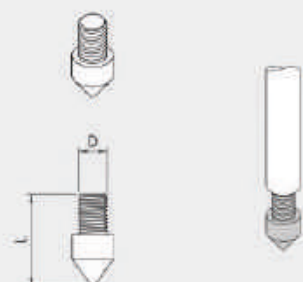
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box. Qty	Unit Weight (kg)
				D	L		
GRDC 16	Coupler	16	Stainless Steel	M10	40	10	0.02
GRDC 20		20		M14	40		



► SOLID COPPER, STAINLESS STEEL & GALVANIZED STEEL EARTHING DRIVING POINT

The GRT Driving Points are used for protecting the tip of the Solid Copper, Stainless Steel & Galvanized Steel Earth Rods while driving to the ground.

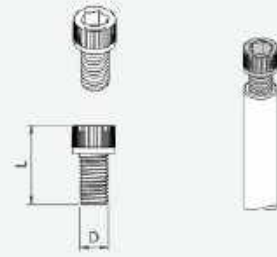
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box. Qty	Unit Weight (kg)
				D	L		
GRT 16	Driving Point	16	Hardened Steel	M10	45	10	0.06
GRT 20		20		M14	45		



► **SOLID COPPER, STAINLESS STEEL & GALVANIZED STEEL EARTHING DRIVING HEAD**

They are manufactured from high-strength steel. The Driving Heads enable the rods to be driven easily and avoid any damages.

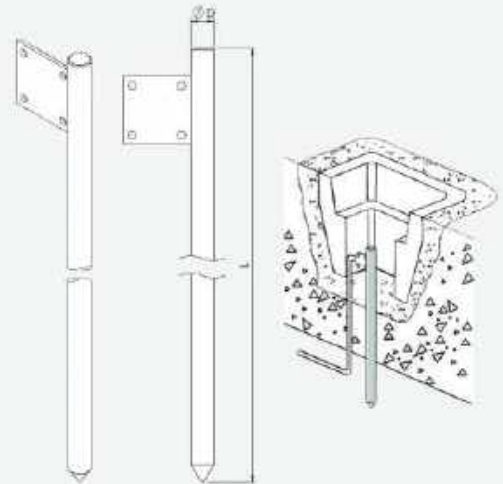
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
				D	L		
GRPS 16	Driving Head	16	Hardened Steel	M10	30	10	0.03
GRPS 20		20		M14	40	10	0.05



► **GALVANIZED STEEL EARTHING ROD WITH CLAMP**

Zinc-coated Steel Ground Rods are suitable for benign soil according to the corrosion study. Galvanized Steel Rods with 100 microns of zinc should be expected to last for 10 to 15 years reliably. So if the facility being grounded has a life expectancy of fewer than 15 years, a Galvanized Ground Rod is appropriate and will provide the most cost-effective solution.

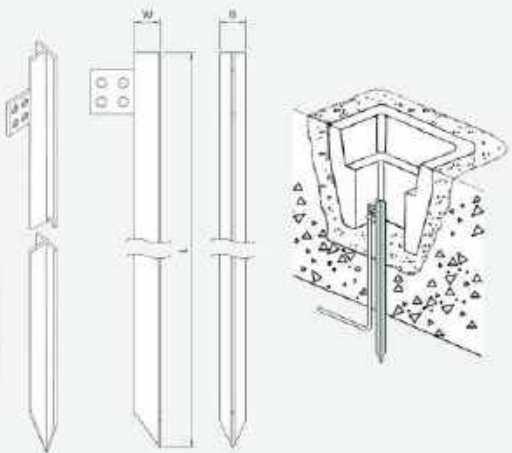
Reference Code	Conductor Range (mm ²)	ØD (mm)	Length		Box Qty	Unit Weight (kg)
			L (m)	L (feet)		
GR-GSC 16/1200	50-120	16	1.2	4	10	1.89
GR-GSC 16/1500	50-120	16	1.5	5	10	2.36
GR-GSC 16/2000	50-120	16	2	7	10	3.15
GR-GSC 16/3000	50-120	16	3	10	5	4.73
GR-GSC 20/1200	50-120	20	1.2	4	10	2.96
GR-GSC 20/1500	50-120	20	1.5	5	10	3.7
GR-GSC 20/2000	50-120	20	2	7	10	4.93
GR-GSC 20/3000	50-120	20	3	10	5	7.4



► **"T" SHAPE GALVANIZED STEEL EARTHING ROD WITH CLAMP**

These "T" shape Ground Rods are highly resistant to mechanical stress. Galvanized Rods with 100 microns of zinc should be expected to last for 10 to 15 years reliably. So if the facility being grounded has a life expectancy of fewer than 15 years, a Galvanized Ground Rod is appropriate and will provide the most cost-effective solution.

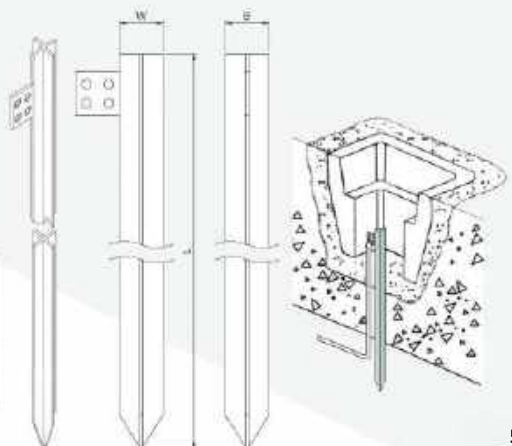
Reference Code	Shape	Dimension (mm)			Box Qty	Unit Weight (kg)
		L	W	B		
GR-TS 20/1200	T	1500	30	30	10	2.66
GR-TS 20/1500	T	2000	30	30	10	3.54
GR-TS 20/2000	T	3000	30	30	5	5.31



► **"X" SHAPE GALVANIZED STEEL EARTHING ROD WITH CLAMP**

These "X" shape Ground Rods are highly resistant to mechanical stress. Galvanized Rods with 100 microns of zinc should be expected to last for 10 to 15 years reliably. So if the facility being grounded has a life expectancy of fewer than 15 years, a Galvanized Ground Rod is appropriate and will provide the most cost-effective solution.

Reference Code	Shape	Dimension (mm)			Box Qty	Unit Weight (kg)
		L	W	B		
GR-XS 20/1200	Cross	1500	50	50	10	3.41
GR-XS 20/1500	Cross	2000	50	50	10	4.58
GR-XS 20/2000	Cross	3000	50	50	5	6.92



► LIGHT EARTHING ELECTRODE

Stainless Steel & Galvanized Light Earthing Electrodes are types of earth electrodes according to IEC 62651 with a coupler, Driving Head, and Driving Point that is easier to store and transport, and universal application according to local soil conditions.

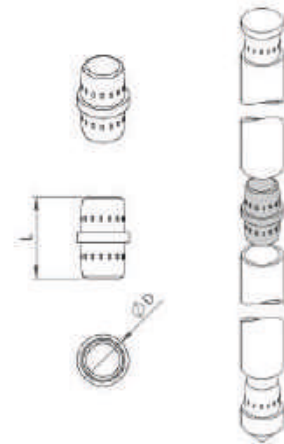
Reference Code	Outside Diameter (mm)	Pipe Thickness (mm)	Material	Length		Box Qty	Unit Weight (kg)
				L (m)	L (feet)		
GR-SSL 25/1500	26	1.65	Stainless Steel	1.5	5	10	1.55
GR-SSL 25/2000		1.65	Stainless Steel	2	7	10	2.06
GR-SSL 25/3000		1.65	Stainless Steel	3	10	5	3.09
GR-GSL 25/1500		1.25	H. D. G.	1.5	5	10	1.19
GR-GSL 25/2000		1.25	H. D. G.	2	7	10	1.58
GR-GSL 25/3000		1.25	H. D. G.	3	10	5	2.37



► LIGHT EARTHING ROD COUPLER

To connect two parts of the Stainless Steel & Galvanized Light Earthing Electrodes, they use a suitable Coupler which is made of hardened steel.

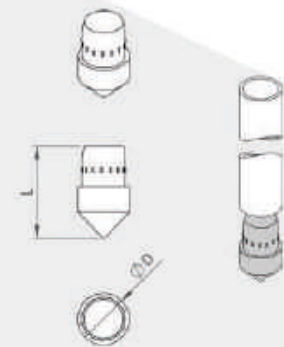
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
				ØD	L		
GRDL 25	Coupler	25	Hardened Steel	26	40	10	0.07



► LIGHT EARTHING ROD DRIVING POINT

These Spikes which are made of hardened steel, protect the tip of the Rods and let the installer push the rods to the earth easily when driving.

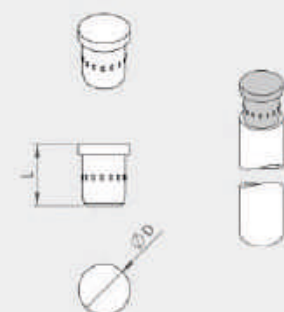
Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
				ØD	L		
GRTN 25	Driving Point	25	Hardened Steel	26	45	10	0.08



► LIGHT EARTHING ROD DRIVING HEAD

The Driving Heads enable the Rods to be driven and avoid any damage and are made of hardened steel.

Reference Code	Description	Earth Rod Type (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
				ØD	L		
GRPN 25	Driving Head	25	Hardened Steel	26	30	10	0.06



► PIPE EARTHING ELECTRODE

Stainless Steel & Galvanized Pipe Earthing Electrodes are a type of earth electrode according to IEC 62561 and are used in earth well. They are filled around with low-resistivity material in order to reach suitable ground resistance.

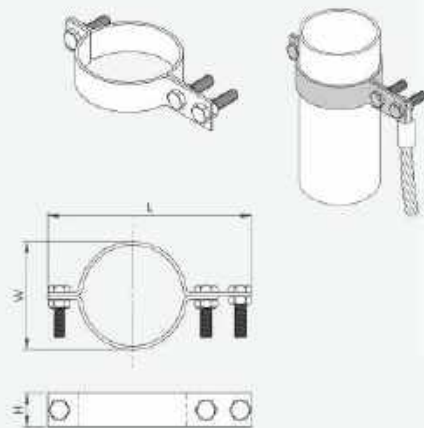
Reference Code	Dia. (inch)	Pipe Thickness (mm)	Material	Length		Box. Qty	Unit Weight (kg)
				L (m)	L (feet)		
GR-SSP 33/3000	3	3	Stainless Steel	3	10	1	19.35
GR-SSP 33/6000	3	3	Stainless Steel	6	20	1	38.7
GR-SSP 43/3000	4	3	Stainless Steel	3	10	1	25.08
GR-SSP 43/6000	4	3	Stainless Steel	6	20	1	50.16
GR-GSP 33/3000	3	3	H. D. G.	3	10	1	19.53
GR-GSP 33/6000	3	3	H. D. G.	6	20	1	39.06
GR-GSP 43/3000	4	3	H. D. G.	3	10	1	25.14
GR-GSP 43/6000	4	3	H. D. G.	6	20	1	50.28



► PIPE EARTHING CLAMP

Stainless Steel & Galvanized Pipe Earthing Clamps are suitable for connecting pipe to Cable Lugs.

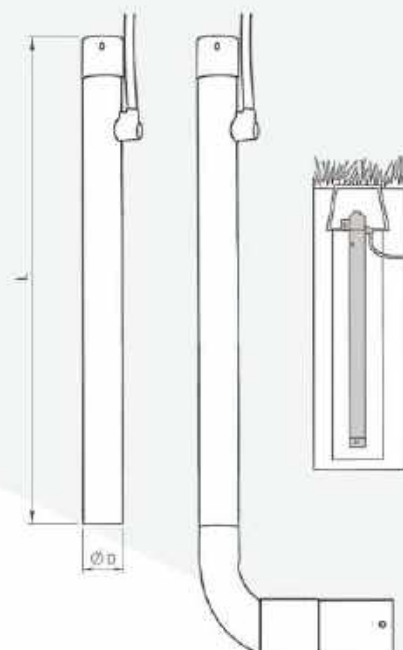
Reference Code	Pipe (inch)	Thickness (mm)	Material	Dimension (mm)			Box. Qty	Unit Weight (kg)
				L	W	H		
GRP# 3	3	3	Galvanized Steel	180	90	30	1	0.31
GRP# 4	4	3	Galvanized Steel	200	120	30	1	0.37



► CHEMICAL EARTH ROD

Chemical Earth Rod solves problems with conventional ground rods by requiring less ground and fewer electrodes to meet specified resistance. Each Chem-Rod creates an optimal electrical connection to the earth with a large conductive surface. The earth/electrode interface is further enhanced by conductive backfill and electrolytic salts, ensuring a consistent bed. The Chemical Rods filled with electrolytic salt come with an exothermically welded tail of either solid tinned or stranded bare copper wire. A test well is provided as well as a bentonite admixture for backfill, Some specifications call for the backfill material to be a non-corrosive form of bentonite clay free of polymer sealants that should absorb.

Reference Code	Clamp	Shape	Dimension (mm)		Box. Qty	Unit Weight (kg)
			L	ØD		
CHRD 2128	-	Vertical	2100	28	1	4.9
CHRD 2128/C50	✓	Vertical	2100	28	1	4.9
CHRD 2528	-	Vertical	2500	28	1	9.5
CHRD 2528/C50	✓	Vertical	2500	28	1	9.5
CHRD 3054	-	Vertical	3010	54	1	13.8
CHRD 3054/C50	✓	Vertical	3010	54	1	13.8
CHRD 2954	-	L Shape	2900+910	54	1	16.8
CHRD 2954/C50	✓	L Shape	2900+910	54	1	16.8

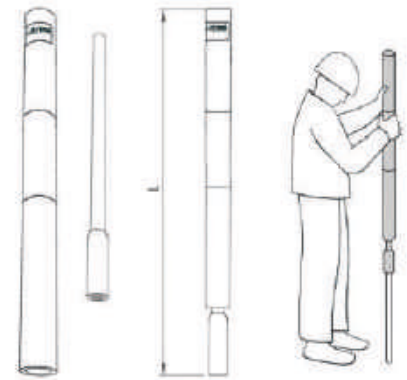


▶ EARTH ROD DRIVER

Earth Rod Drivers are used for driving Earth Rods easier to the ground. The general advantages of them are:

- Completely self-contained and easy shipping
- Integral insert prevents the driver from slipping off the rod near ground level
- Use on all types of Earth Rods Copper Bond, Stainless Steel, Solid Copper, Galvanized type
- Saving time and money

Reference Code	Description	Dimension			Box Qty	Unit Weight (kg)
		L (m)				
ERDI	Earth Rod Driver	1.5			1	6.4

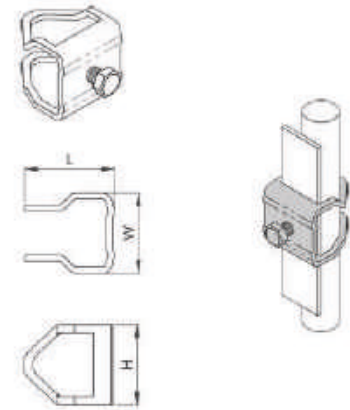


EARTH ROD CLAMPS

▶ TAPE TO EARTH ROD CONNECTION CLAMP

Tape to Earth Rod Connection Clamp is suitable for attaching the Tape to the Ground Rod. The screw is made of stainless steel or phosphor bronze to prevent galvanic corrosion in a lifetime, according to BS 7430 and IEC 62561.

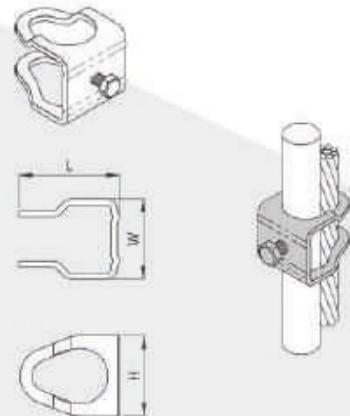
Reference Code	Max.Rod Ø (mm)	Max.Tape size (mm)	Material	Dimension (mm)			Box Qty	Unit Weight (Kg)
				L	W	H		
GRT-P 20	20	30x5	CZ 106-108	45	40	40	10	0.08
GRT-Pg 20			Galvanized Steel				10	0.07



▶ CABLE TO EARTH ROD CONNECTION CLAMP

Wire to Earth Rod Connection Clamp is suitable for attaching the Wire to the Ground Rod. The screw is made of stainless steel or phosphor bronze to prevent galvanic corrosion in a lifetime, according to BS 7430 and IEC 62561.

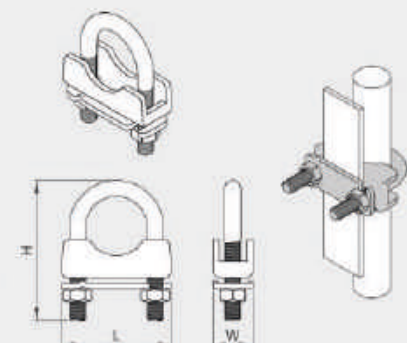
Reference Code	Max.Rod Ø (mm)	Conductor Range (mm ²)	Material	Dimension(mm)			Box Qty	Unit Weight (Kg)
				L	W	H		
GRC-P 20	20	35-120	CZ 106-108	50	40	40	10	0.09
GRC-Pg 20			Galvanized Steel				10	0.08



▶ "U" BOLT TAPE TO EARTH ROD CLAMP

Rod to Tape Type "U" Bolt Clamps are designed to join conductor tapes to the Earth Electrodes/Rebars, without the need to drill the tape. They are made according to BS 7430 and IEC 62561.

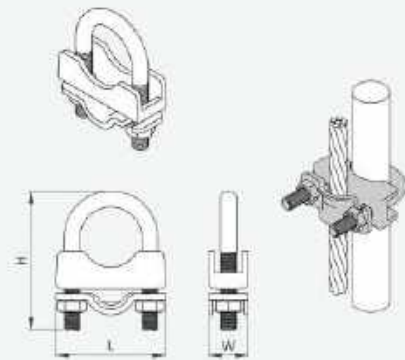
Reference Code	Rod Range Ø (mm)	Max.Tape size (mm)	Material	Dimension(mm)			Box Qty	Unit Weight (Kg)
				L	W	H		
GRC-N 30x5	14.2-20	30x5	CZ 106-108	55	20	70	10	0.15
GRC-Ng 30x5			Galvanized Steel				10	0.14



► **“U” BOLT CABLE TO EARTH ROD CLAMP**

Rod to Copper Wire type "U" Bolt Clamps are designed to join the Wire to the Earth Electrodes/Rebars. They are made of stainless steel to prevent galvanic corrosion in a lifetime, according to BS 7430 and IEC 62561.

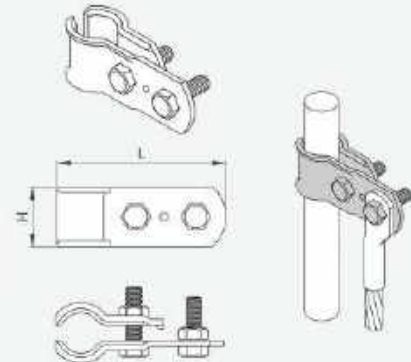
Reference Code	Rod Range Ø (mm)	Conductor Range (mm ²)	Material	Dimension (mm)			Box Qty	Unit Weight (Kg)
				L	W	H		
GRC-A 10-25	14.2-20	10-25	CZ 106-108	55	20	70	10	0.15
GRC-Ag 10-25			Galvanized Steel					
GRC-A 35-70		35-70	CZ 106-108	55	20	70	10	0.15
GRC-Ag 35-70			Galvanized Steel					
GRC-A 95-150		95-150	CZ 106-108	55	20	70	10	0.15
GRC-Ag 95-150			Galvanized Steel					



► **EARTH ROD SPLIT CONNECTOR**

Split Connector Rod Clamps are suitable for connecting Cable Lug to earth Rods. They are designed to suit a full range of Copper Bonds, Solid Copper, or Stainless Steel Earth Rods. Split Connector Rod Clamps are made according to BS 7430 and IEC 62561.

Reference Code	Max. Rod Ø (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	H		
GRC-T 20	20	CZ 106-108	85	30	10	0.13
GRC-Tg 20		Galvanized Steel	85	30	10	0.12

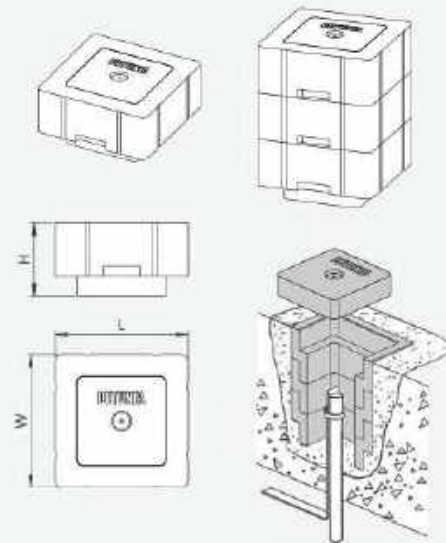


EARTH INSPECTION PIT

► **EXTENSIBLE EARTH INSPECTION PIT**

The Extensible Heavy Concrete Inspection Pit is suitable for most types of earthing and lightning protection installations. It is designed to protect and make available for inspection and testing of the earth rods and earthing connections.

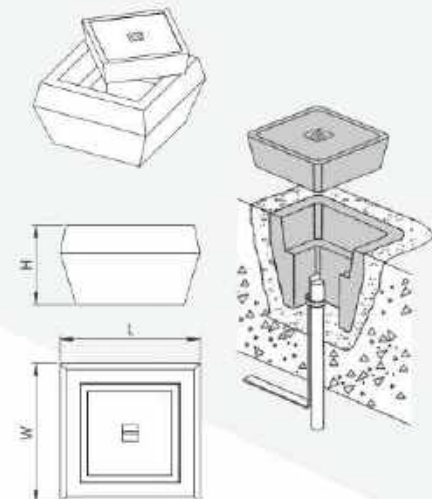
Reference Code	Test Link	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
			L	W	H		
IEEP	-	Concrete	400	400	220	1	21.5
IEEP/TL	✓	Concrete	400	400	220	1	22



► **GENERAL EARTH INSPECTION PIT**

The General Concrete Inspection Pits are used in most earthing and lightning protection installations. It is not suitable for use in areas where high load and small wheel vehicles are used.

Reference Code	Test Link	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
			L	W	H		
IPCE	-	Concrete	320	320	240	1	30
IPCE/TL	✓	Concrete	320	320	240	1	30.5

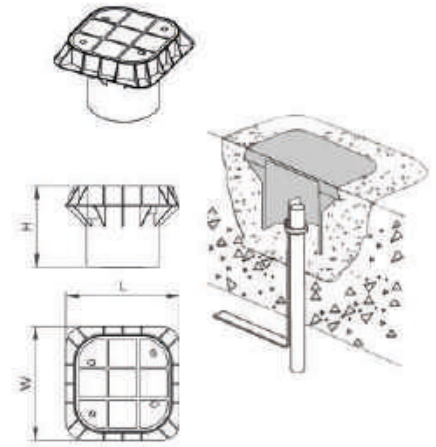


► HIGH PRESSURE PLASTIC EARTH INSPECTION PIT

The Lightweight, Heavy-Duty Inspection Pit with its unique design has resulted in performance capabilities superior to the traditional concrete pit. In addition, the features incorporated within its design ensure ease of storage, reduced transportation costs, ease of installation, and ease of subsequent inspection and testing of the earth electrode system, therefore providing significant practical benefits to both installers and specifiers alike.

The lip of the pit makes a flush fit with standard-sized bricks, making them blend in with no requirement for a cement surround to the lid.

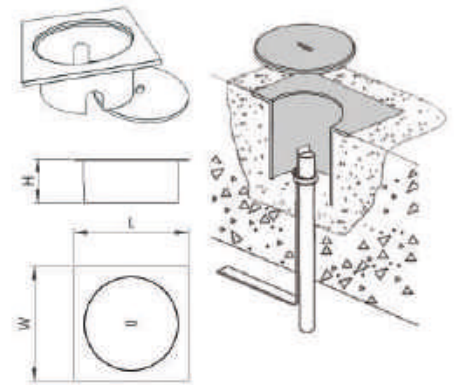
Reference Code	Test Link	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
			L	W	H		
IPEP	-	Plastic	300	300	212	1	1.85
IPEP/TL	✓	Plastic	300	300	212	1	2.1



► CAST IRON EARTH INSPECTION PIT

Heavy Duty Cast Iron Earth Pit with an earth point symbol on the cover is the best choice when heavy-duty inspection pit needs.

Reference Code	Test Link	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
			L	W	H		
IPCI	-	Cast Iron	300	300	115	1	7.6
IPCI/TL	✓	Cast Iron	300	300	115	1	8



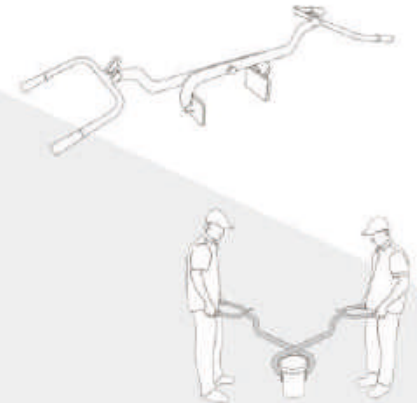
► EARTH PIT PLACEMENT HANDLE

The Earth Pit Placement Handle is used for moving earth pits easily and comfortably.

Features:

- Heavy-duty construction of lightweight, high-tensile steel
- Jaws open from 100-500mm
- Products are quickly and safely lifted without the need to rig & remove
- Simple and reliable mechanical operation with no maintenance requirements
- Maximum safe working load of up to 120 Kg.
- Easy adjustment for various sizes of Earth Pits.

Reference Code	Description	Working Load Limit (kg)	Max. Grip Range (mm)	Max. Dimension (mm)			Box Qty	Unit Weight (kg)
				L	W	H		
EPPH	Earth Pit Placement Clamp	120	100-500	1800	530	440	1	17



► EARTHING ENHANCING COMPOUND

One method of reducing the ground bed resistance is to surround the rod electrode with low-resistivity soil; This method has several advantages:

Reduce the resistance between conductors and soil.

Provide a uniform environment so that the conductor output is predictable and constant. Backfill has no organic acids and anaerobic bacteria consequently reducing the rate of corrosion in the neighborhood of rods.

Petunia produces "PetInfill" according to IEC 62561-7 in the appropriated polyethylene bags.

Bentonite is a moisture-retaining clay used as an earth electrode backfill to help lower soil resistivity. The bentonite clay is sodium-activated montmorillonite that-when mixed with water- swells to many times its original volume.

Reference Code	Description	Packing Type (Bag)	Unit Weight (kg)
BNTT	Active Bentonite	1	30
PetInfill 30	Petunia Earthing Backfill	1	30



EARTH PLATE & MAT

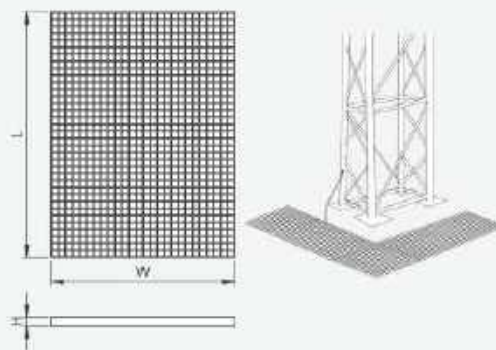
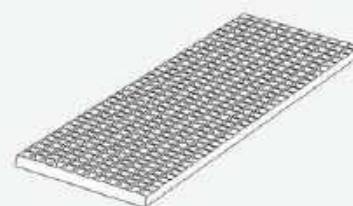
► GALVANIZED STEEL EARTHING MAT

An Earthing Mat is a flat pad used for working on electrostatic-sensitive devices. It is generally made of galvanized steel which is electrically attached to the earth. This helps to discharge any Static charge that a worker has built up and any static charge on tools or exposed components laid on the mat.

It is used most commonly in electrical devices. They are also found on fuel trucks and tankers, which are otherwise insulated from the earth as they make physical contact only with their tires and they are obviously, static discharge is undesirable during fuel-transfer operations.

Similarly, in aircraft refueling, an earth cable connects the tanker (truck or airplane) to the fuel-seeking craft to eliminate charge differences before fuel is transferred.

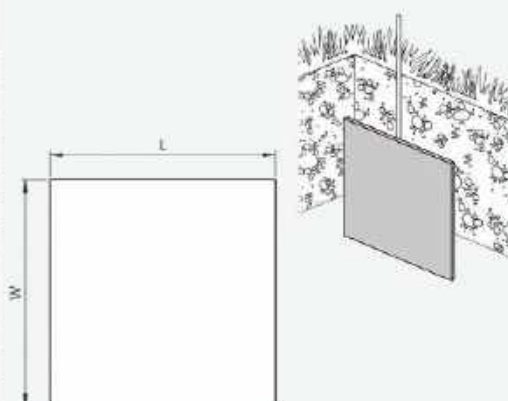
In an electrical substation, an earthing mat is a mesh of conductive material installed at places where a person would stand to operate a switch or other apparatus; it is bonded to the local supporting metal Structure and to the handle of the switchgear so that the operator will not be exposed to a high differential voltage due to a fault in the substation.



Reference Code	Strip Cross Section (mm)	Dimension (mm)			Box Qty	Unit Weight (kg)
		L	W	H		
EM 863	30x3	800	600	30	1	7.8
EM 153	30x3	1000	500	30	1	9.1

► SOLID COPPER & H.D.G. & STAINLESS STEEL EARTHING PLATES

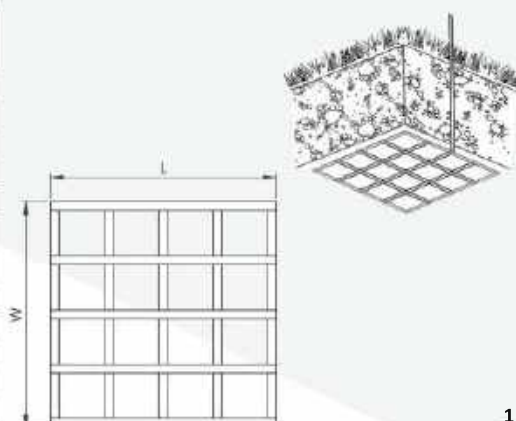
These Solid Earth Plates are used as a part of Earthing Systems. The material is pure copper as BS Standard. They provide a long-lasting solution where earth rods are not suitable. Other dimensions and types of materials such as Galvanized Steel, Stainless Steel, and high-purity atomized copper-coated steel are available too.



Reference Code	Plate Thickness	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	W		
ES 663	3	Copper	660	660	1	11.6
ES 163	3	Copper	1000	660	1	19.4
ES 665	5	Copper	660	660	1	17.6
ES 165	5	Copper	1000	660	1	29.3
ESs 663	3	Stainless Steel	660	660	1	10.2
ESs 163	3	Stainless Steel	1000	660	1	15.5
ESg 663	3	H. D. G.	660	660	1	10.3
ESg 163	3	H. D. G.	1000	660	1	15.5
ESg 665	5	H. D. G.	660	660	1	17.1
ESg 165	5	H. D. G.	1000	660	1	25.9
ESc 663	3	Copper Coated	660	660	1	10.3
ESc 163	3	Copper Coated	1000	660	1	15.5

► LATTICE COPPER EARTHING PLATES

Copper Lattice Earth Plates are manufactured from copper tape that is riveted together in lattice form. These copper earth mats provide reliable earthing in high fault-current applications and cover a wide surface area, enabling good earthing contact with the surrounding soil. The following materials can be taken into consideration too: pure copper, galvanized steel, and stainless steel.

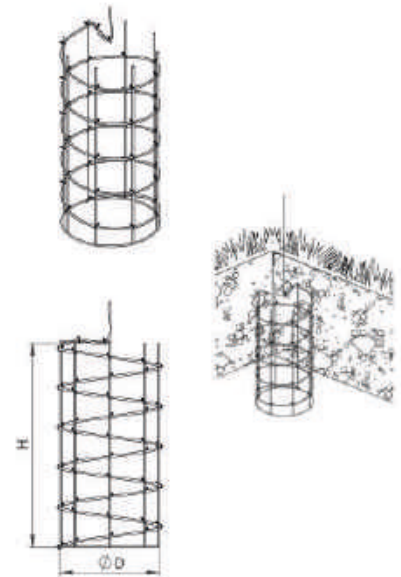


Reference Code	Plate Thickness	No. of Strips	Strip Size (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
					L	W		
ESL 663	3	10	25x3	Copper	660	660	1	4.4
ESL 163	3	10	25x3	Copper	1000	660	1	6.4
ESL 665	5	10	25x5	Copper	660	660	1	7.3
ESL 165	5	10	25x5	Copper	1000	660	1	10.7
ESLs 663	3	10	25x3	Stainless Steel	660	660	1	3.9
ESLs 163	3	10	25x3	Stainless Steel	1000	660	1	5.7
ESLs 665	5	10	25x5	Stainless Steel	660	660	1	6.5
ESLs 165	5	10	25x5	Stainless Steel	1000	660	1	9.4
ESLg 663	3	10	25x3	H. D. G.	660	660	1	3.9
ESLg 163	3	10	25x3	H. D. G.	1000	660	1	5.7
ESLg 665	5	10	25x5	H. D. G.	660	660	1	6.5
ESLg 165	5	10	25x5	H. D. G.	1000	660	1	9.4

► **FIVE RING EARTHING WIRES**

Five Ring Earthing Wire is one of the methods of implementing an earthing system that has more efficiency than the plat method. Its advantages are cheapness, easy installation, no need for additional connections and there is no problem in terms of corrosion.

Reference Code	Conductor Size (mm ²)	Extensible Length (m)	Material	Dimension (m)		Box Qty	Unit Weight (kg)
				H	ØD		
ESR 50	50	6	Copper	1	0.5	1	7.9
ESR 70	70	6	Copper	1	0.5	1	10.4
ESR 95	95	6	Copper	1	0.5	1	13.5
ESR 120	120	6	Copper	1	0.5	1	16.6

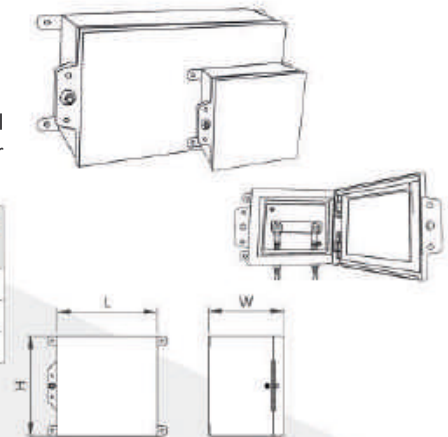


EARTH TERMINALS

► **DISCONNECTING LINK WITH METALLIC BOX**

Petunia also offers several types of metallic boxes with disconnecting links. Small types are used for one-to-one link disconnection, and large boxes are used for multiple connections.

Reference Code	Description		Tape Size (mm)	Box Dimension (mm)			Box Qty	Unit Weight (Kg)
	Ways	Links		L	W	H		
EPL 4	4	1	40x5	350	150	250	1	4.8
EPL 6	6	1	40x5	400	150	300	1	4.7
EPL 8	8	1	40x5	450	150	400	1	5.1



► **UPVC COVERED TEST CLAMP**

UPVC covered test clamps are made of durable yet lightweight materials. They are very easy and ideal to install and implement in many applications, such as residential structures.

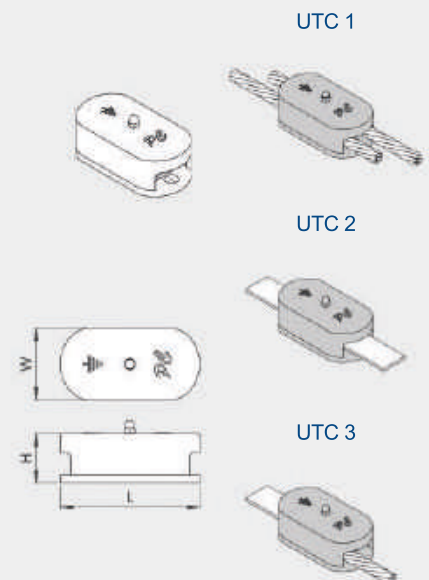
According to the type of clamps, their application is divided in the following table:

UTC 1: for connecting wire to wire.

UTC 2: connecting tape to tape.

UTC 3: connecting tape to wire.

Reference Code	Conductor Range(mm ²)	Max.Tape Size(mm)	Dimension (mm)			Box Qty	Unit Weight (kg)
			L	W	H		
UTC 1	50-120	-----	105	54	37	1	0.28
UTC 2	-----	20X3	105	54	37	1	0.28
UTC 3	50-120	20X3	105	54	37	1	0.28

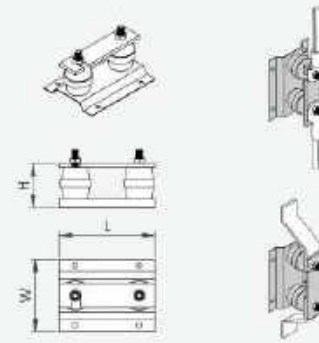


► DISCONNECTING LINK

The Disconnecting Link is mainly used to make a temporary break in the connection to earthing system. It is allowed the testing of an earth rod while disconnecting from the lightning protection system.

Reference Code	Description		Tape Size (mm)	Tape Material	Dimension(mm)			Box. Qty	Unit Weight (Kg)
	Ways	Links			L	W	H		
EP 1/1	2	1	30x3	Copper	120	90	56	1	0.62

According to your request, tin plated copper can also be provided.

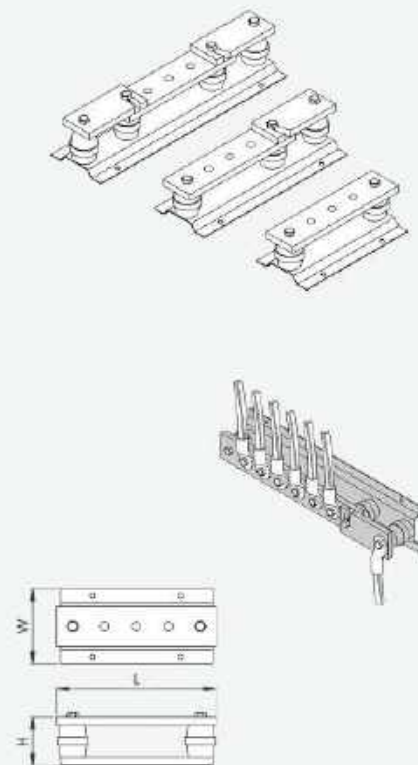


► MULTIPLE CONNECTION TERMINALS

Earth Terminals are used to connect the equipment to earthing system. Earth Terminals with disconnecting link are dedicated to enabling the measuring of disconnected circuit resistance.

Reference Code	Description		Copper Tape Size (mm)	Dimension (mm)			Box. Qty	Unit Weight (Kg)
	Holes	Links		L	W	H		
EP 6	6	-	40x5	320	90	63	1	1.01
EP 6/1	6	1	40x5	395	90	63	1	1.38
EP 6/2	6	2	40x5	470	90	63	1	1.74
EP 8	8	-	40x5	440	90	63	1	1.42
EP 8/1	8	1	40x5	515	90	63	1	1.79
EP 8/2	8	2	40x5	590	90	63	1	2.15
EP 10	10	-	40x5	520	90	63	1	1.62
EP 10/1	10	1	40x5	595	90	63	1	1.99
EP 10/2	10	2	40x5	670	90	63	1	2.35
EP 12	12	-	40x5	600	90	63	1	1.82
EP 12/1	12	1	40x5	675	90	63	1	2.18
EP 12/2	12	2	40x5	750	90	63	1	2.55
EP 14	14	-	40x5	680	90	63	1	2.01
EP 14/1	14	1	40x5	755	90	63	1	2.38
EP 14/2	14	2	40x5	830	90	63	1	2.74
EP 16	16	-	40x5	760	90	63	1	2.21
EP 16/1	16	1	40x5	835	90	63	1	2.57
EP 16/2	16	2	40x5	910	90	63	1	2.94
EP 18	18	-	40x5	880	90	63	1	2.64
EP 18/1	18	1	40x5	955	90	63	1	2.98
EP 18/2	18	2	40x5	1030	90	63	1	3.35
EP 20	20	-	40x5	960	90	63	1	2.81
EP 20/1	20	1	40x5	1035	90	63	1	3.18
EP 20/2	20	2	40x5	1110	90	63	1	3.54

According to your request, tin plated copper can also be provided.

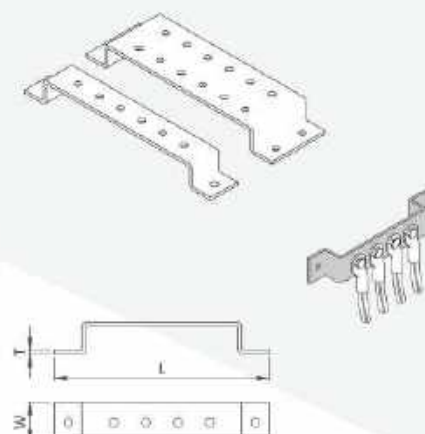


► "Ω" SHAPE COPPER TAPE

"Ω" Shaped Copper Tapes are used as the primary material for multi-wire connections to provide a centralized location. It is a reasonable overall design for fixing the desired position on the structure. It has good conductivity and the copper bar surface can be Tin-plated as requested, with small resistance and good electrical conductivity using punching (or drilling), making holes accurate, and consistent in size.

Reference Code	Holes	Copper Tape Size (mm)	Dimension (mm)			Box. Qty	Unit Weight (kg)
			L	W	T		
EPO 4	4	40x5	250	40	5	1	0.79
EPO 6	6	40x5	330	40	5	1	0.95
DEPO 4	8	100x5	250	100	5	1	2
DEPO 6	12	100x5	330	100	5	1	2.39

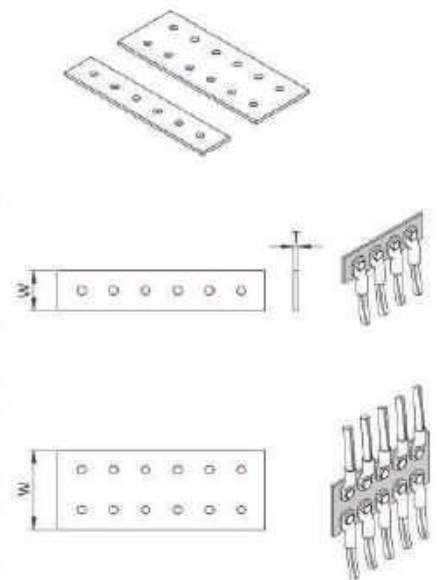
According to your request, tin plated copper can also be provided.



► COPPER FLAT EARTH BAR

Copper Flat Earth Bars are used as the primary material for multi-wire connections, which provide a centralized location. It has good conductivity. The product is a reasonable overall design for fixing in the desired position on the insulator. The copper bar surface can be Tin-plated (on request), with small resistance and good electrical conductivity using punching (or drilling), to make uniform holes.

Reference Code	Rows	Holes Axis (mm)	Holes Size (mm)	Dimension (mm)		Box. Qty	Unit Weight (kg)
				W	T		
CEB 30x3	S. R.	40	9.2	30	3	1	0.7
CEB 30x5	S. R.	40	9.2	30	5	1	1.23
CEB 40x5	S. R.	40	10.8	40	5	1	1.68
CEB 40x10	S. R.	40	10.8	40	10	1	3.46
CEB 50x5	S. R.	40	10.8	50	5	1	2.12
CEB 50x10	S. R.	40	10.8	50	10	1	4.35
CEB 60x5	S. R.	40	10.8	60	5	1	2.57
CEB 60x10	S. R.	40	10.8	60	10	1	5.23
CEB 100x5	S. R.	40	10.8	100	5	1	4.35
CEB 100x10	S. R.	40	10.8	100	10	1	8.79
CEBD 80x5	D. R.	40	10.8	80	5	1	3.46
CEBD 80x10	D. R.	40	10.8	80	10	1	7.01
CEBD 100x5	D. R.	40	10.8	100	5	1	4.35
CEBD 100x10	D. R.	40	10.8	100	10	1	8.79



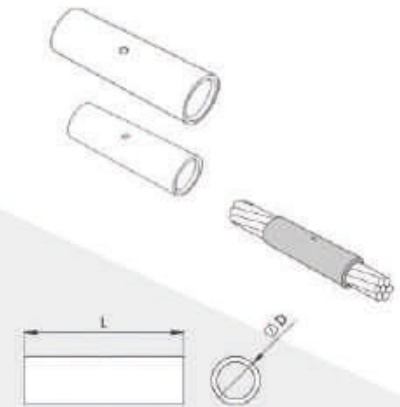
According to your request, tin plated copper can also be provided.

CRIMP CABLE LUGS

► CABLE TERMINAL FERRULES

These cable terminal ferrules are ideal for the most incredible variety of applications. These are the cable diameter sizes to fit and have a good crimp in the terminal.

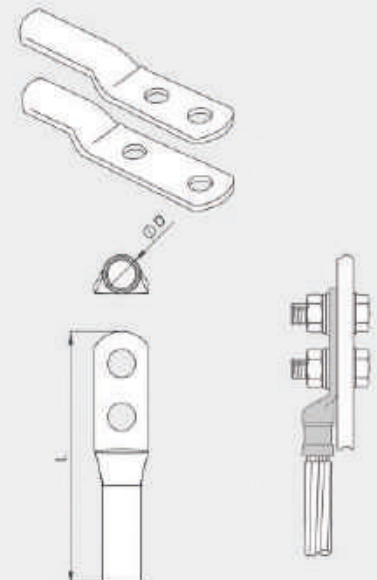
Reference Code	Cable Size (mm ²)	Max. Dimension (mm)		Box. Qty	Unit Weight (kg)
		∅D	L		
PMC 10	10	7	30	100	0.01
PMC 16	16	8.5	35	100	0.01
PMC 25	25	10	40	100	0.01
PMC 35	35	12	45	50	0.01
PMC 50	50	14	50	50	0.01
PMC 70	70	16.5	55	50	0.02
PMC 95	95	18	60	50	0.03
PMC 120	120	19.5	65	25	0.04
PMC 150	150	21	70	25	0.06
PMC 185	185	24	75	25	0.07
PMC 240	240	26	85	10	0.13
PMC 300	300	29.5	100	10	0.2



► TWO HOLE CABLE LUGS

Crimping-Type Copper tinned Cable Lugs with a hole are used to make an easy connection to structures. They are made from high-conductivity pure copper and tin-plated to corrosion resistance. The distance between two holes in DLT lugs is 25mm and 40 mm, but other sizes are available as per your request.

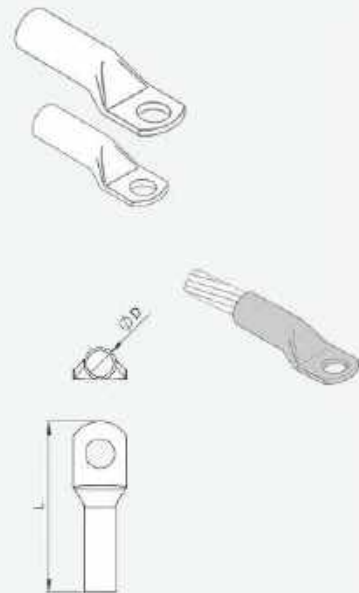
Reference Code	Cable Size (mm ²)	Holes Axis (mm)	Max. Hole Dia. Available	Max. Dimension (mm)		Box. Qty	Unit Weight (kg)
				∅D	L		
DLT 70	70	25	M12	16.5	93	50	0.04
DLT2 70	70	40	M12	16.5	108	50	0.04
DLT 95	95	25	M12	19	104	25	0.06
DLT2 95	95	40	M12	19	119	25	0.07
DLT 120	120	25	M12	21	105	25	0.08
DLT2 120	120	40	M12	21	120	25	0.09
DLT 150	150	25	M12	23.5	125	25	0.13
DLT2 150	150	40	M12	23.5	140	25	0.15
DLT 185	185	25	M12	25.5	126	10	0.14
DLT2 185	185	40	M12	25.5	141	10	0.16
DLT 240	240	25	M12	29	140	10	0.22
DLT2 240	240	40	M12	29	155	10	0.25



► HEAVY DUTY CABLE LUG

Heavy Duty Cable Lugs are manufactured from pure electrolytic copper. They are provided with different hole sizes.

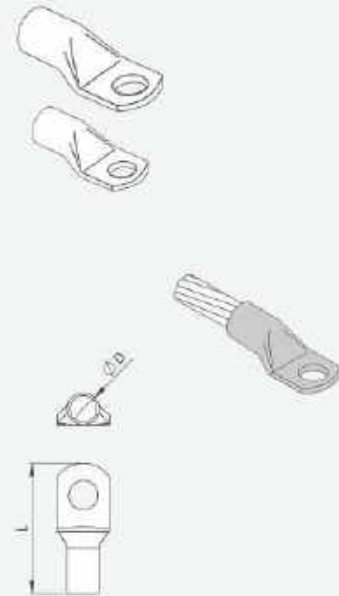
Reference Code	Cable Size (mm ²)	Max. Hole Dia. Available	Max. Dimension (mm)		Box. Qty	Unit Weight (kg)
			ØD	L		
DL 6	6	M6, M8	6	30	100	0.01
DL 10	10	M6, M8, M10	7	44	100	0.01
DL 16	16	M6, M8, M10	8.5	47	100	0.01
DL 25	25	M6, M8, M10	10	49	50	0.01
DL 35	35	M6, M8, M10	12	57	50	0.01
DL 50	50	M8, M10, M12	14	63	50	0.02
DL 70	70	M8, M10, M12	16.5	68	50	0.03
DL 95	95	M8, M10, M12	19	79	25	0.05
DL 120	120	M10, M12, M14	21	80	25	0.06
DL 150	150	M10, M12, M14	23.5	100	25	0.11
DL 185	185	M10, M12, M14	25.5	105	10	0.11
DL 240	240	M12, M14, M16	29	115	10	0.18
DL 300	300	M14, M16, M20	32	123	10	0.29
DL 400	400	M14, M16, M20	38.5	128	10	0.34



► ECONOMIC CABLE LUG

The Economic Cable Lugs are "everyday items." It consists of electrolyte copper which, in order to protect against oxidation, is usually tin-plated. They are also available as bare versions. Economic Cable Lugs, made from pure electrolytic copper (Cu) 99.9% in smaller weight.

Reference Code	Cable Size (mm ²)	Max. Hole Dia. Available	Max. Dimension (mm)		Box. Qty	Unit Weight (kg)
			ØD	L		
DLI 6	6	M6, M8	6	28	100	0.01
DLI 10	10	M6, M8, M10	7	35	100	0.01
DLI 16	16	M6, M8, M10	8.5	37	100	0.01
DLI 25	25	M6, M8, M10	10	42	50	0.01
DLI 35	35	M6, M8, M10	12	47	50	0.01
DLI 50	50	M8, M10, M12	14	54	50	0.02
DLI 70	70	M8, M10, M12	16.5	61	50	0.02
DLI 95	95	M8, M10, M12	19	65	25	0.04
DLI 120	120	M10, M12, M14	21	71	25	0.06
DLI 150	150	M10, M12, M14	23.5	73	25	0.08
DLI 185	185	M10, M12, M14	25.5	89	10	0.1
DLI 240	240	M12, M14, M16	29	95	10	0.15
DLI 300	300	M14, M16, M20	32	107	10	0.25
DLI 400	400	M14, M16, M20	38.5	113	10	0.3

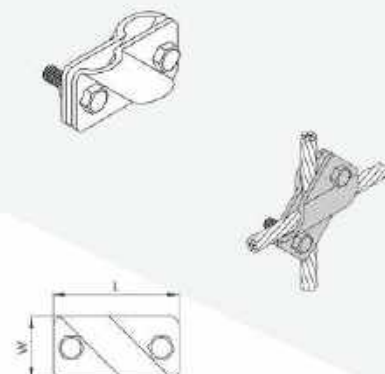


EARTHING CLAMPS

► "X" BOLTED TYPE CONNECTOR CLAMP

This is a Cross-Connection Clamp type for the two wires in different sizes. Although the main body is made of copper and the bolts are also made of stainless steel, according to IEC, it should not be buried underground for connections. Acc. to BS 7430 and IEC 62651.

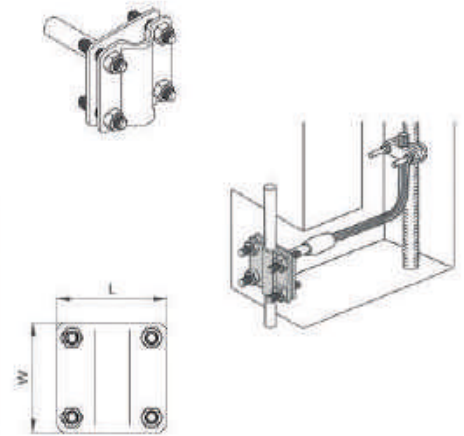
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box. Qty	Unit Weight (kg)
			L	W		
TXN 16-50	16-50	CZ 106-108	60	30	10	0.13
TXNg 16-50		Galvanized Steel			10	0.12
TXN 70-120	70-120	CZ 106-108	70	35	10	0.18
TXNg 70-120		Galvanized Steel			10	0.17



► FOUNDATION EARTH BONDING POINT

The Earth Bonding Points are used to make the rebar's electrical connections to the earthing or lightning protection system. It provides convenient earth system connection points in concrete structures. These types of earth bonding points are provided according to BS 7430 and IEC 62651, so they can easily be connected to the earthing system connection wire.

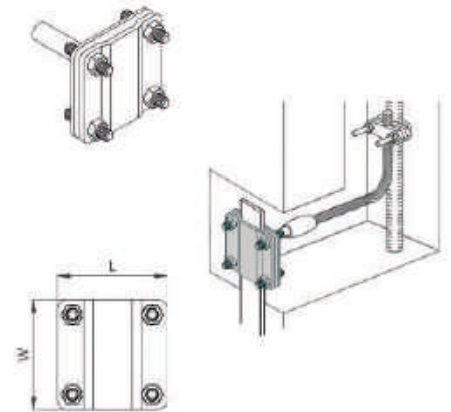
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	w		
EPAD 25-50	25-50	CZ 106-108	55	55	10	0.13
EPADg 25-50		Galvanized Steel				
EPAD 70-120	70-120	CZ 106-108	55	55	10	0.12
EPADg 70-120		Galvanized Steel				
EPAD 150-240	150-240	CZ 106-108	60	60	10	0.12
EPADg 150-240		Galvanized Steel				



► SIMPLE FOUNDATION EARTH BONDING POINT

This type of Earth Bonding Point is suitable for places where cable lugs are used to create earthing connections. It provides convenient earth system connection points in concrete Structures. The bolts are made of Stainless Steel to have the least amount of corrosion (BS 7430 and IEC 62651).

Reference Code	Max. Tape Size (mm)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	w		
EPAS 30x5	30x5	CZ 106-108	55	55	10	0.18
EPASg 30x5		Galvanized Steel				

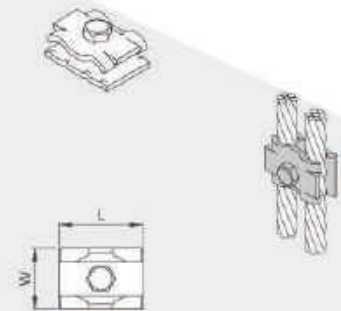


► STRUCTURE EARTH WIRE CONNECTION CLAMP

Structure Earth Wire Connection Clamps are suitable for making electrical connections between the conductor and steel structure.

Petunia structure clamps have high-strength bodies, corrosion resistance, high conductivity, and mechanical strength, to support and pass an electrical current. They are manufactured according to BS 7430 and IEC 62651.

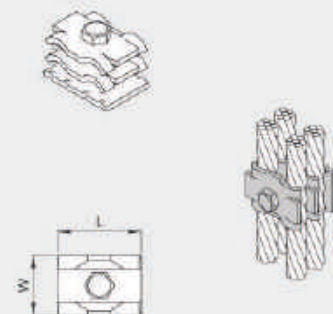
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	W		
GWN 50-120	50-120	CZ 106-108	42	30	5	0.09
GWNg 50-120		Galvanized Steel				
GWN 150-300	150-300	CZ 106-108	62	40	5	0.14
GWNg 150-300		Galvanized Steel				



► STRUCTURE EARTH DOUBLE WIRE CONNECTION CLAMP

This Electrical/Support Double Connection Clamp must be firmly tightened by hand using standard tools. The tightening torque required mainly depends on the shape and material of the connector or clamp and the material and mechanical properties of the screws. Material and recommended torque values for fixing screws regardless of the material used for the clamp/connector are chosen according to BS 7430 and IEC 62651.

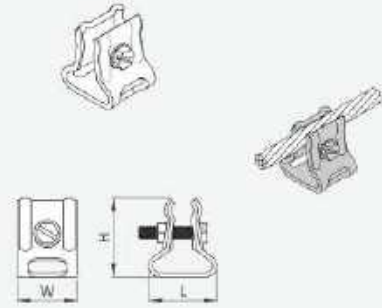
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	W		
DGWN 50-120	50-120	CZ 106-108	42	30	5	0.12
DGWNg 50-120		Galvanized Steel				
DGWN 150-300	150-300	CZ 106-108	62	40	5	0.22
DGWNg 150-300		Galvanized Steel				



► CABLE SUPPORT CLAMP

These clamps are suitable for holding conductors on Steel Structures. Structure Clamps have high Strength copper alloy bodies, corrosion resistance, high conductivity, and sufficient mechanical strength in order to support and pass a fault current. Acc. to BS 7430 and IEC 62651

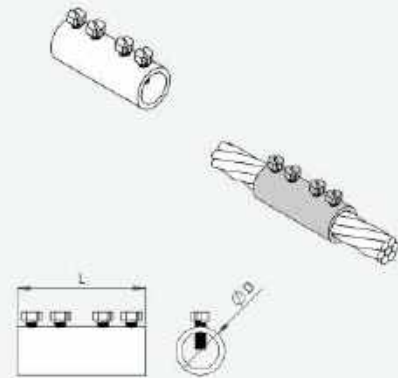
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
			L	W	H		
CSNN 25-70	25-70	CZ 106-108	34	30	40	5	0.07
CSNng 25-70		Galvanized Steel					0.06
CSNN 95-240	95-240	CZ 106-108	44	35	46	5	0.10
CSNng 95-240		Galvanized Steel					0.09



► STRAIGHT WIRE CONNECTION BOLTED CLAMP

The Petunia Straight Wire Connection Bolted Clamps range of mechanical connectors is designed for straight connections on stranded or solid cables. The ferrules are manufactured of brass of suitability of jointing of copper circular shaped conductors cores.

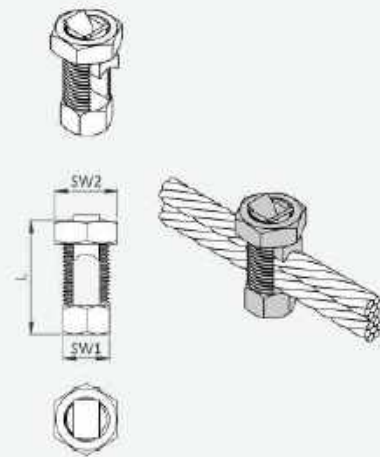
Reference Code	Cable Section (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			∅D	L		
PCC 10	10	Brass	6	20	10	0.002
PCC 16	16	Brass	7	26	10	0.004
PCC 25	25	Brass	9	32	50	0.007
PCC 35	35	Brass	10	36	50	0.009
PCC 50	50	Brass	12	40	50	0.017
PCC 70	70	Brass	14	45	50	0.023
PCC 95	95	Brass	17	45	25	0.036
PCC 120	120	Brass	19	45	25	0.041
PCC 150	150	Brass	21	55	50	0.056
PCC 185	185	Brass	22	60	10	0.064
PCC 240	240	Brass	25	80	10	0.098
PCC 300	300	Brass	28	85	10	0.118



► CABLE CONNECTION CLAMP

Brass Bolted Type Connectors are used for connecting two-run and tap copper wire conductors. The Split Bolt Connectors are made of brass and designed to sequence and transport all kinds of conductors in an electric network. Using matched fittings will make your earthing and lightning system convenient and long lifetime. Acc. to BS 7430 and IEC 62651.

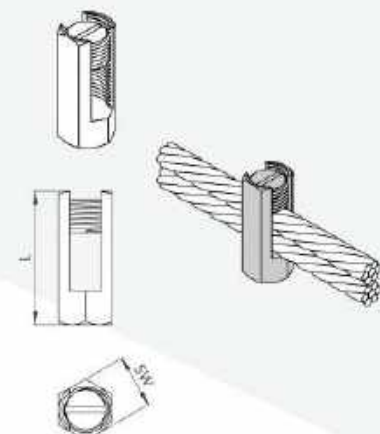
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
			SW1	SW2	H		
BCSU 50	16-50	Naval Brass	16	22	40	10	0.06
BCSU 120	70-120		26	32	60	5	0.2



► LIGHT CABLE CONNECTION CLAMP

This brass Lightweight Connector Clamp is also designed for the parallel connection of two wires in the network of earthing systems. The maximum thickness of the wire in this clamp is 35 mm². Acc. to BS 7430 and IEC 62651.

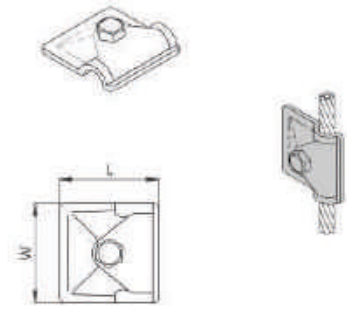
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			SW	H		
LBCSU 35	16-35	Naval Brass	16	40	10	0.05



► TOWER EARTH CLAMP

This is a new design One-Hole Tower Clamp suitable for making electrical connections between the conductor and Steel structure. They have high-strength bodies, corrosion resistance, high conductivity, and mechanical strength, to support and pass an electrical current. Acc. to BS 7430 and IEC 62651.

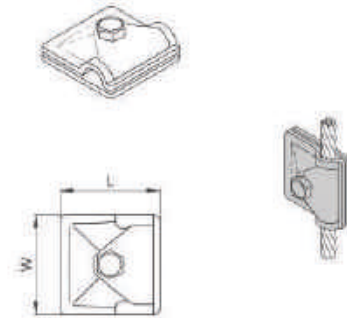
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	W		
TEN 16-35	16-35	CZ 106-108	40	40	10	0.09
TENg 16-35		Galvanized Steel				
TEN 50-120	50-120	CZ 106-108	50	50	10	0.10
TENg 50-120		Galvanized Steel				
TEN 150-240	150-240	CZ 106-108	60	60	5	0.11
TENg 50-240		Galvanized Steel				



► TOWER EARTH CLAMP WITH SADDLE

This is also a new design One-Hole Tower Clamp with a saddle that makes it better to be deleted the electrical connection resistance between the conductor and steel structure. Acc. to BS 7430 and IEC 62651

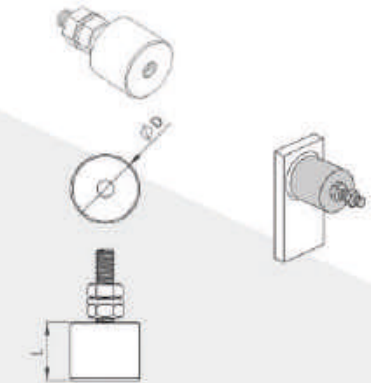
Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	W		
FTEN 16-35	16-35	CZ 106-108	40	40	10	0.15
FTENg 16-35		Galvanized Steel				
FTEN 50-120	50-120	CZ 106-108	50	50	10	0.16
FTENg 50-120		Galvanized Steel				
FTEN 150-240	150-240	CZ 106-108	60	60	5	0.17
FTENg 150-240		Galvanized Steel				



► EARTH BOSS

The Petunia Earth Boss is designed to provide an earth connection point on a steel structure. The boss Can be welded or screwed on the steel vessels, tanks, and other structures. It comes complete with a stainless steel dowel, a flat washer, a spring washer, and two nuts. According to BS 74

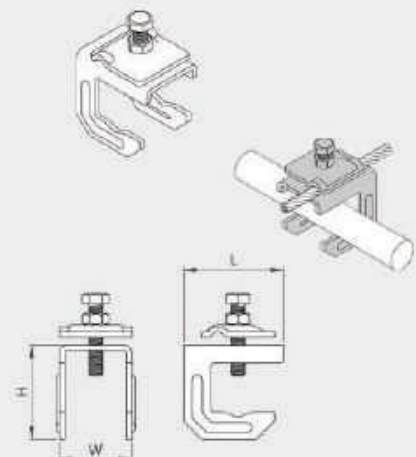
Reference Code	Material	Thread Size	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	øD		
EBs 32/38-08	Stainless Steel	M8	32	38	10	0.26
EBs 32/38-10	Stainless Steel	M10	32	38	10	0.26
EBs 38/50-08	Stainless Steel	M8	38	50	10	0.55
EBs 38/50-10	Stainless Steel	M10	38	50	10	0.55
EBg 32/38-08	H. D. G.	M8	32	38	10	0.26
EBg 32/38-10	H. D. G.	M10	32	38	10	0.26
EBg 38/50-08	H. D. G.	M8	38	50	10	0.55
EBg 38/50-10	H. D. G.	M10	38	50	10	0.55



► EARTH REBAR CLAMP "RBC"

These Rebar Clamps are designed to be used for fixing wire to steel reinforcement in concrete to be deleted , according to BS 7430 and IEC 62651. They have high Strength materials bodies, corrosion resistance, high conductivity, and mechanical strength to support and pass an electrical current.

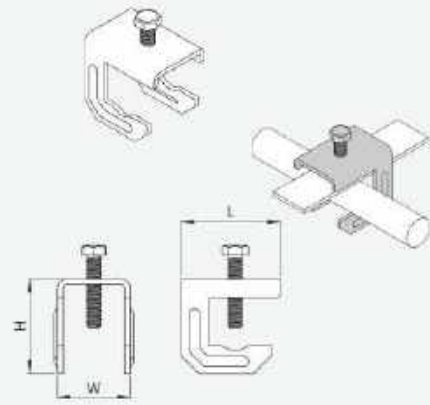
Reference Code	Rebar Size (mm)	Conductor Range (mm ²)	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
				L	W	H		
RBC 6-16/16-35	6-16	16-35	CZ 106-108	55	40	42	5	0.21
RBCg 6-16/16-35			Galvanized Steel					
RBC 6-16/50-120	6-16	50-120	CZ 106-108	55	40	42	5	0.22
RBCg 6-16/50-120			Galvanized Steel					
RBC 16-22/16-35	16-22	16-35	CZ 106-108	55	40	52	5	0.24
RBCg 16-22/16-35			Galvanized Steel					
RBC 16-22/50-120	16-22	50-120	CZ 106-108	55	40	52	5	0.25
RBCg 16-22/50-120			Galvanized Steel					



► EARTH REBAR CLAMP "RBT"

These Rebar Clamps are designed to be used for fixing tape to steel reinforcement in the concrete according to BS 7430 and IEC 62651. They have high strength materials bodies, corrosion resistance, high conductivity, and mechanical strength to support and pass an electrical current.

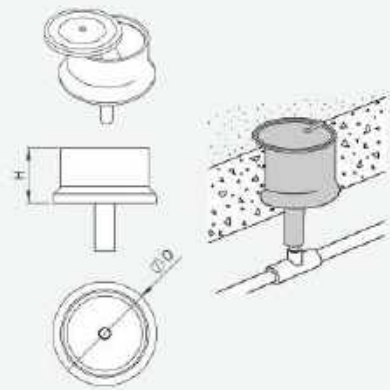
Reference Code	Rebar Size (mm)	Conductor Range (mm ²)	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
				L	W	H		
RBT 6-16/30x3	6-16	30x3	CZ 106-108	55	40	42	5	0.14
RBTg 6-16/30x3			Galvanized Steel					
RBT 16-22/30x3	16-22	30x3	CZ 106-108	55	40	52	5	0.17
RBTg 16-22/30x3			Galvanized Steel					



► STATIC EARTH RECEPTACLE

The Static Earth Receptacle is used in open areas where a temporary earthing point may be required, such as airfields or petrol Stations. Corrosion resistance, conductivity, and mechanical strength are essential considerations in bond design to ensure an earthing system remains operative for many years.

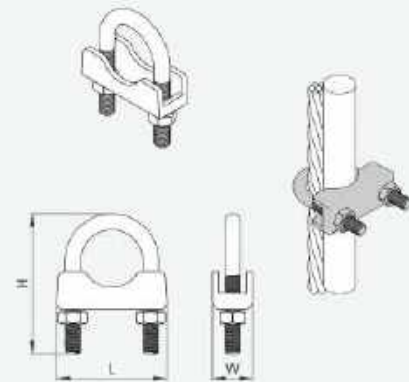
Reference Code	Application	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			ØD	H		
SERPb	Static Discharge Point	Brass	130	70	1	6.50
SERPg		Cast Iron	130	70		



► CABLE CONNECTION CLAMP

"U" Bolt Connection Clamp can be a versatile clamp for making all kinds of connections between wires, rods, and ribs. The body of this clamp is made of brass, and the U bolt is made of stainless steel. Acc. to BS 7430 and IEC 62651.

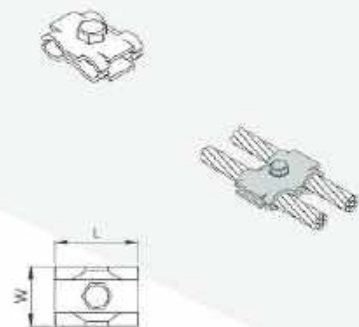
Reference Code	Rod Range Ø (mm)	Conductor Range (mm ²)	Material	Dimension (mm)			Box Qty	Unit Weight (kg)
				L	W	H		
KCC	14.2-20	35-185	CZ 106-108	55	20	70	10	0.13
KCCg			Galvanized Steel					



► PARALLEL GROOVE CLAMP

These new design Bolted Type Parallel Connector Clamps are used for making connections between two wire conductors. They are manufactured from brass with stainless steel screws. The body is also designed in such a way that it can withstand a lot of pressure. Acc. to BS 7430 and IEC 62651.

Reference Code	Conductor Range (mm ²)	Material	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	W		
SMC 16-35	16-35	CZ 106-108	31	30	10	0.07
SMCg 16-35		Galvanized Steel				
SMC 50-120	50-120	CZ 106-108	42	30	10	0.09
SMCg 50-120		Galvanized Steel				
SMC 150-300	150-300	CZ 106-108	62	40	5	0.18
SMCg 150-300		Galvanized Steel				

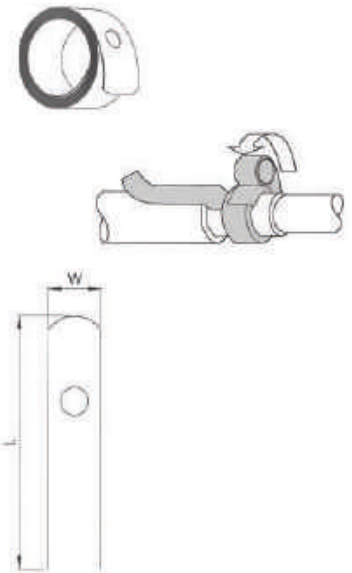


► CONSTANT FORCE SPRING

A Constant Force Spring is a pre-stressed flat strip of spring material that is formed into virtually constant radius coils around itself or on a drum. When the strip is extended (deflected) the inherent stress resists the loading force, the same as a common extension spring, but at a nearly constant (zero) rate.

The constant force spring is an excellent device for applications where a constant load is required.

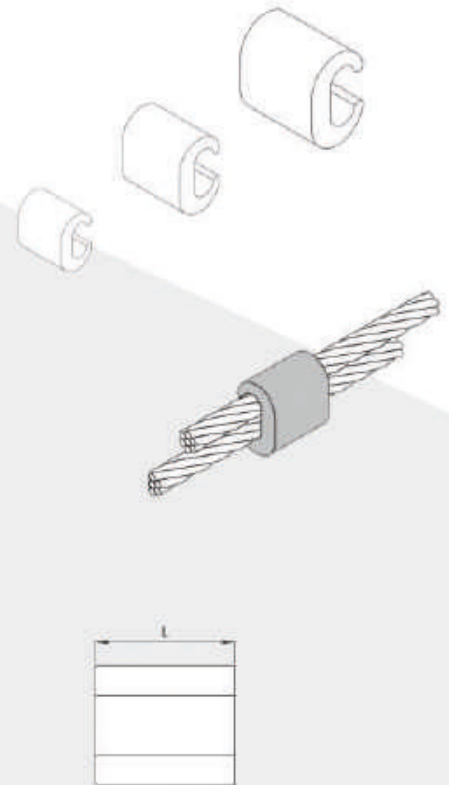
Reference Code	Suitable Dia. (mm)	Inner Dia. (mm)	Dimension (mm)		Box Qty	Unit Weight (kg)
			L	W		
RF 10	4-10	3.5	80	9	1	0.001
RF 15	9-15	7.5	175	10	1	0.004
RF 22	14-22	11	225	16	1	0.008
RF 29	19-29	14.5	295	16	1	0.011
RF 37	25-37	18.5	375	16	1	0.014
RF 50	30-50	25	505	16	1	0.019
RF 70	44-70	32	710	20	1	0.033
RF 94	58-94	44	935	20	1	0.044
RF 130	70-110	57	1250	20	1	0.058



► "C" CLAMP

"C" Clamps are used for connecting two-wire conductors. "C" Crimp Connectors will accept a range of stranded or solid circular conductors. "C" connector clamps are made from pure copper, with corrosion resistance, and high conductivity, in order to support and pass fault current. According to BS 7430.

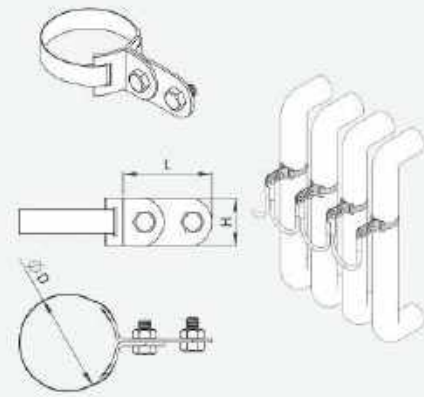
Reference Code	Conductor Range (mm ²)		T Code	Dimension L (mm)	Box Qty	Unit Weight (Kg)
CC 6/6	6	6	T11	12	50	0.01
CC 10/6	10	6	T16	13	50	0.02
CC 10/10	10	10	T20	13	50	0.02
CC 16/6	16	6	T20	13	50	0.02
CC 16/10	16	10	T26	16	50	0.03
CC 16/16	16	16	T44	20	50	0.04
CC 25/25	25	6-25	T44	20	50	0.04
CC 35/10	35	6-10	T44	20	50	0.04
CC 35/25	35	16-25	T60	22	50	0.07
CC 35/35	35	35	T76	22	50	0.09
CC 50/6	50	6	T60	22	50	0.07
CC 50/25	50	10-25	T76	22	50	0.09
CC 50/35	50	35	T98	25	5	0.1
CC 50/50	50	50	T122	26	5	0.15
CC 70/10	70	6-10	T76	22	5	0.09
CC 70/25	70	16-25	T98	25	5	0.1
CC 70/50	70	35-50	T122	26	5	0.15
CC 70/70	70	70	T154	28	5	0.17
CC 95/10	95	6-10	T98	25	5	0.1
CC 95/35	95	16-35	T122	26	5	0.15
CC 95/70	95	50-70	T154	28	5	0.17
CC 95/95	95	95	T190	35	5	0.19
CC 120/25	120	6-25	T154	28	5	0.17
CC 120/50	120	35-50	T190	35	5	0.19
CC 120/95	120	70-95	T240	40	1	0.2
CC 120/120	120	120	T288	45	1	0.24
CC 150/35	150	6-35	T190	35	5	0.19
CC 150/95	150	50-95	T240	40	1	0.2
CC 150/120	150	120	T288	45	1	0.24
CC 150/150	150	150	T365	50	1	0.25
CC 185/10	185	6-10	T190	35	5	0.19
CC 185/50	185	16-50	T240	40	1	0.2
CC 185/95	185	70-95	T288	45	1	0.24
CC 185/185	185	120-185	T365	50	1	0.25
CC 240/35	240	6-35	T240	40	1	0.2
CC 240/95	240	50-95	T288	45	1	0.24
CC 240/150	240	120-150	T365	50	1	0.25
CC 240/240	240	185-240	T450	60	1	0.27
CC 300/50	300	6-50	T365	50	1	0.25
CC 300/120	300	70-120	T450	60	1	0.27
CC 300/240	300	150-240	T560	65	1	0.28
CC 300/300	300	300	T700	70	1	0.64



► PIPE BOND CLAMP

The Petunia Pipe Bonding Clamp is suitable for connecting metallic pipes to the earthing system and is made of stainless steel that is resistant to rust and corrosion.

Reference Code	Pipe Size ØD (in)	Material	Dimension (mm)		Box Qty	Unit Weight (Kg)
			L	H		
PBC 102	1-2	Galvanized Steel	55	30	10	0.1
PBC 253	2½-3	Galvanized Steel	55	30	10	0.1
PBC 354	3½-4	Galvanized Steel	55	30	10	0.1
PBC 456	4½-6	Galvanized Steel	55	30	10	0.1

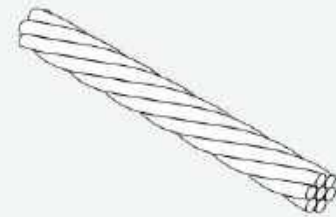


CONDUCTORS

► BARE STRANDED COPPER CONDUCTORS

Petunia provides a range of Bare Copper Conductors, ideally suitable for use in electrical Grounding Systems. Hard-drawn Stranded Copper Conductors offer greater flexibility than solid hard-drawn wire. Stranded Bare Copper Wire manufactured in accordance with BS 7884.

Reference Code	Wire Size (mm ²)	Material	Dia. (mm)	DC Res. (Ω/km)	Stranding	Packing Type Coil/Drum (m)	Unit Weight (Kg/m)
CBS 010	10	Copper	4.2	<1.6490	7×1.4	100	0.09
CBSt 010		Tinned Copper					
CBS 016	16	Copper	5.1	1.15	7×1.7	100	0.14
CBSt 016		Tinned Copper					
CBS 025	25	Copper	6.4	0.754	7×2.1	100	0.22
CBSt 025		Tinned Copper					
CBS 035	35	Copper	7.6	0.532	7×2.5	100	0.31
CBSt 035		Tinned Copper					
CBS 050	50	Copper	9	0.381	7×3	100	0.44
CBSt 050		Tinned Copper					
CBS 070	70	Copper	10.5	0.279	19×2.1	100	0.59
CBSt 070		Tinned Copper					
CBS 095	95	Copper	12.5	0.197	19×2.5	100	0.84
CBSt 095		Tinned Copper					
CBS 120	120	Copper	14.2	0.157	19×2.8	100	1.05
CBSt 120		Tinned Copper					
CBS 150	150	Copper	15.7	0.126	37×2.3	100	1.33
CBSt 150		Tinned Copper					
CBS 185	185	Copper	17.7	0.102	37×2.5	100	1.64
CBSt 185		Tinned Copper					
CBS 240	240	Copper	19.8	0.066	63×2.25	100	2.21
CBSt 240		Tinned Copper					
CBS 300	300	Copper	22.5	0.052	63×2.52	100	2.23
CBSt 300		Tinned Copper					



► BARE STRANDED GALVANIZED STEEL CONDUCTORS

Galvanized Steel Wire Strand refers to any steel wire product that has been subjected to a galvanizing process to improve its corrosion resistance. This process typically involves dipping the finished wire product into a bath of heated zinc compound to form a scratch and corrosion-resistant coating across the entire surface of the wire. Its low cost and ease of production make galvanized steel wire ideal for mass-produced corrosion-resistant wire products. The galvanized steel strand wires have excellent mechanical properties. The galvanized steel wire strand is used for overhead ground lines or electrical power transmission lines.

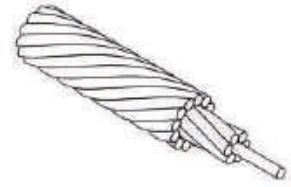


Reference Code	Wire Size (mm ²)	Cross Section (mm ²)	Material	Packing Type Coil/Drum (m)	Unit Weight (kg/m)
CBSg 35	35	34.34	H. D. G.	100	0.31
CBSg 50	50	49.46	H. D. G.	100	0.44
CBSg 70	70	65.78	H. D. G.	100	0.59
CBSg 95	95	93.22	H. D. G.	100	0.84
CBSg 120	120	116.93	H. D. G.	100	1.05
CBSg 150	150	147.04	H. D. G.	100	1.33
CBSg 185	185	181.53	H. D. G.	100	1.64

► BARE STRANDED A.C.S.R WIRE

A.C.S.R. Wires are used as bare overhead guard wire conductors. It offers optimal Strength for line design.

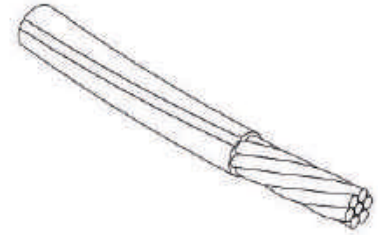
Variable steel core stranding enables desired strength to be achieved without sacrificing ampacity. The outer strands of A.C.S.R. Wires are from high-purity aluminum, chosen for good conductivity, low weight, and low cost. The center strand is the steel for additional strength in order to support the conductor.



Reference Code	No. Wire Dia. (mm)		Overall Dia. (mm)	Packing Type Coil/Drum (m)	Unit Weight (kg/m)
	Al	St.			
ACSR 050	5/3.35	1/3.35	10.5	100	0.21
ACSR 070	12/2.79	7/2.79	13.95	100	0.54

► EARTHING PVC COVERED STRANDED COPPER CABLES

Earth wire is one of the essential wires in various types of industrial and construction wiring. These types of wires appear in a protective and conductive role and connect all electrical appliances to the grounding system. Earth wires produced by Petunia are according to the Standard: IEC 60227- 2 and ISIRI 607-3 and are made of annealed copper. The insulation color is yellow with a green Stripe or vice versa and according to the customer's order.



Reference Code	Cross Section (mm ²)	Color	Stranding	Packing Type Coil/Drum (m)	Unit Weight (kg/m)
CP5g 006	6	Green/Yellow	7×1.04	100	0.07
CP5y 006		Yellow/Green			
CP5g 010	10	Green/Yellow	7×1.35	100	0.12
CP5y 010		Yellow/Green			
CP5g 016	16	Green/Yellow	7×1.7	100	0.19
CP5y 016		Yellow/Green			
CP5g 025	25	Green/Yellow	7×2.14	100	0.27
CP5y 025		Yellow/Green			
CP5g 035	35	Green/Yellow	7×2.5	100	0.36
CP5y 035		Yellow/Green			
CP5g 050	50	Green/Yellow	19×1.8	100	0.51
CP5y 050		Yellow/Green			
CP5g 070	70	Green/Yellow	19×2.1	100	0.7
CP5y 070		Yellow/Green			
CP5g 095	95	Green/Yellow	19×2.5	100	0.96
CP5y 095		Yellow/Green			
CP5g 120	120	Green/Yellow	37×2.03	100	1.2
CP5y 120		Yellow/Green			
CP5g 150	150	Green/Yellow	37×2.25	100	1.5
CP5y 150		Yellow/Green			
CP5g 185	185	Green/Yellow	37×2.52	100	1.85
CP5y 185		Yellow/Green			
CP5g 240	240	Green/Yellow	61×2.25	100	2.39
CP5y 240		Yellow/Green			
CP5g 300	300	Green/Yellow	61×2.52	100	2.95
CP5y 300		Yellow/Green			
CP5g 400	400	Green/Yellow	61×2.85	100	3.7
CP5y 400		Yellow/Green			

► BIMETALLIC BARE STRANDED COPPER CONDUCTORS

Copper-Clad Steel Wire combines the electrical characteristics of copper with the mechanical properties of Steel.

Often used for buried Ground Grid Systems, Overhead Ground Wire, and Messenger Wire, it can resist mechanical damage during installation, as well as electrical damage during a fault condition. Copper-Clad Steel has virtually no scrap value, greatly reducing the potential for theft. Construction Dead Soft Annealed (DSA) Copperclad Steel (CCS) conductors is a concentric lay-Stranded construction. The CCS Strands are a 40% conductivity grade of material using a low carbon steel core rendering greater flexibility to enable easier handling during installation.

NOTE: The ampacity rating and the DC and AC resistance of the Copper Clad Steel Wire conductor is not equivalent to that of the copper conductor. So to select the correct equivalent please contact our engineers.

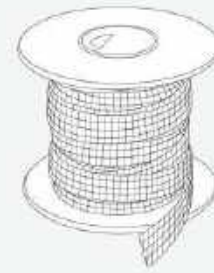


Reference Code	Wire Size (mm ²)	Copper Equivalent (mm ²)	Fusing Current	DC Res. (Ω/km)	Stranding	Packing Type Coil/Drum (m)	Unit Weight (Kg/m)
CBB 016	16	6	3.2	2.75	1×4.37	100	0.12
CBB 025	25	10	5.1	1.78	1×5.84	100	0.21
CBB 035	35	16	7.1	1.26	1×6.5	100	0.28
CBB 095	95	35	12.1	0.46	7×4.2	100	0.8
CBB 120	120	50	23.8	0.37	7×4.65	100	0.97
CBB 150	150	70	32.3	0.27	19×3.3	100	1.34

► FLEXIBLE COPPER CONDUCTORS TAPE

Petunia provides a complete range of Flexible Copper Earth Tapes.

Reference Code	Conductor Size (mm)	Material	Packing Type Rolled (m)	Unit Weight (kg/m)
FCCB 15x1.5	15x1.5	Copper	50	0.1
FCCBt 15x1.5		Tinned Copper		
FCCB 19x2.5	19x2.5	Copper	50	0.16
FCCBt 19x2.5		Tinned Copper		
FCCB 23x2	23x2	Copper	50	0.25
FCCBt 23x2		Tinned Copper		
FCCB 25x3.5	25x3.5	Copper	50	0.34
FCCBt 25x3.5		Tinned Copper		
FCCB 30x5	30x5	Copper	50	0.48
FCCBt 30x5		Tinned Copper		
FCCB 32x6	32x6	Copper	50	0.63
FCCBt 32x6		Tinned Copper		

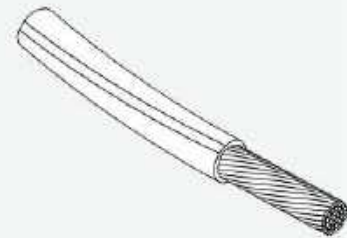


Other lengths, sizes, and customized copper earth tapes are available on request.

► PVC COVERED FLEXIBLE COPPER WIRES

Yellow/Green Flexible Wire usually is a set of wire filaments with a specific diameter from this type of wire. The diameter of each of these wire strands is between 0.25 and 0.5 mm, which together form the desired cross-sectional area for the primary wire. This helps the wire to be very flexible and to be used sparingly on winding routes.

Reference Code	Cross Section (mm ²)	Color	Packing Type Coil/Drum (m)	Unit Weight (kg/m)
CPFg 004	4	Green/Yellow	100	0.05
CPFy 004		Yellow/Green		
CPFg 006	6	Green/Yellow	100	0.07
CPFy 006		Yellow/Green		
CPFg 010	10	Green/Yellow	100	0.12
CPFy 010		Yellow/Green		
CPFg 016	16	Green/Yellow	100	0.19
CPFy 016		Yellow/Green		
CPFg 025	25	Green/Yellow	100	0.27
CPFy 025		Yellow/Green		
CPFg 035	35	Green/Yellow	100	0.36
CPFy 035		Yellow/Green		
CPFg 050	50	Green/Yellow	100	0.51
CPFy 050		Yellow/Green		
CPFg 070	70	Green/Yellow	100	0.7
CPFy 070		Yellow/Green		
CPFg 095	95	Green/Yellow	100	0.96
CPFy 095		Yellow/Green		
CPFg 120	120	Green/Yellow	100	1.2
CPFy 120		Yellow/Green		
CPFg 150	150	Green/Yellow	100	1.5
CPFy 150		Yellow/Green		
CPFg 185	185	Green/Yellow	100	1.85
CPFy 185		Yellow/Green		



► ROLLED BARE ALUMINUM CONDUCTORS TAPE

Aluminum tape is suitable for internal foundation earthing rings (According to BS: EN 62305). They form part of the Air Termination Network - arresting the lightning strike, the Down Conductor System - taking the lightning discharge to the ground, and the Earth Termination Network - safely dissipating the lightning discharge into the ground.

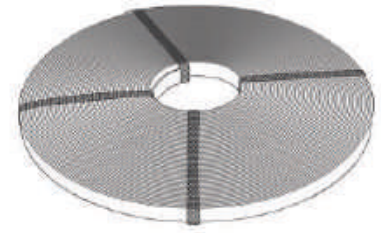
Reference Code	Conductor Size (mm)	Material	Cross Section (mm ²)	Packing Type Rolled (m)	Unit Weight (kg/m)
FAT 19x2	19x2	Aluminum	38	50	0.1
FAT 25x3	25x3	Aluminum	75	50	0.2



▶ ROLLED BARE COPPER CONDUCTORS TAPE

Copper/Tinned Copper Tapes are used in both earthing and lightning protection systems and are manufactured to BS EN 13601.

This product is offered in the form of rolled rings to ensure the integration of conductivity as much as possible.

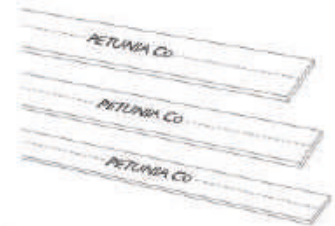


Reference Code	Conductor Size (mm)	Material	Cross Section (mm ²)	Packing Type Rolled (m)	Unit Weight (kg/m)
FCT 20x3	20x3	Copper	60	50	0.53
FCTt 20x3		Tinned Copper			
FCT 20x5	20x5	Copper	100	50	0.89
FCTt 20x5		Tinned Copper			
FCT 25x3	25x3	Copper	75	50	0.67
FCTt 25x3		Tinned Copper			
FCT 25x5	25x5	Copper	125	50	1.11
FCTt 25x5		Tinned Copper			
FCT 30x3	30x3	Copper	90	50	0.8
FCTt 30x3		Tinned Copper			
FCT 30x5	30x5	Copper	150	50	1.33
FCTt 30x5		Tinned Copper			
FCT 40x5	40x5	Copper	200	50	1.78
FCTt 40x5		Tinned Copper			
FCT 50x5	50x5	Copper	250	50	2.22
FCTt 50x5		Tinned Copper			
FCT 60x5	60x5	Copper	300	50	2.67
FCTt 60x5		Tinned Copper			

▶ FLAT BARE COPPER CONDUCTORS TAPE

Flat Bare Copper Tape is considered an efficient conductor and is used in electrical panels and Earthing Systems. FTB are manufactured according to BS EN 13601.

Reference Code	Conductor Size (mm)	Cross Section (mm ²)	Material	Dimension L (m)	Branch Qty	Unit Weight (kg)
FCB 30x5	30x5	200	Copper	4	1	1.33
FCB 40x5	40x5	250	Copper	4	1	1.78
FCB 40x10	40x10	300	Copper	4	1	3.56
FCB 50x5	50x5	400	Copper	4	1	2.22
FCB 50x10	50x10	500	Copper	4	1	4.45
FCB 60x5	60x5	600	Copper	4	1	2.67
FCB 60x10	60x10	500	Copper	4	1	5.33
FCB 100x5	100x5	1000	Copper	4	1	4.45
FCB 100x10	100x10	1200	Copper	4	1	8.89
FGT 30x5	30x5	150	H. D. G.	6	1	1.18
FGT 40x5	40x5	200	H. D. G.	6	1	1.57
FGT 50x5	50x5	250	H. D. G.	6	1	1.96

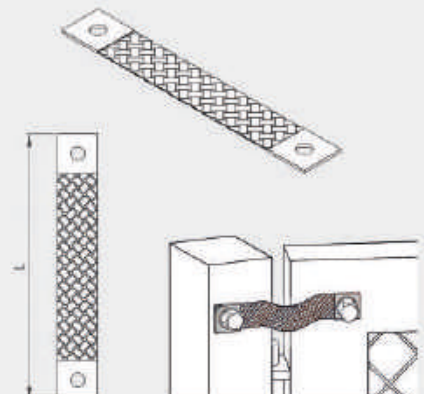


ACCESSORIES

▶ FLEXIBLE COPPER FLAT EARTH BOND

The Flexible Earth Strap Bars are manufactured from pure copper wire braid in accordance with BS 4109 C101. The ferrules are pressed on each end to make good conductivity.

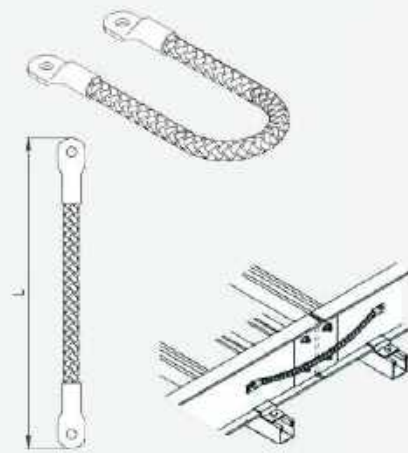
Reference Code	Screw Hole Size (mm)	Tape Size (mm)	Material	Dimension L (m)	Box Qty	Unit Weight (kg)
FC 20x1	M8	20x1	Flexible Braided Copper Tape	200	10	0.07
FC 20x2	M8	20x2		200	10	0.11
FC 20x3	M8	20x3		200	10	0.13
FC 25x3	M10	25x3		300	10	0.4
FC 30x3	M10	30x3		300	10	0.53



► **FLEXIBLE COPPER ROUND EARTH BOND**

The Flexible Earth Round Bars are manufactured from pure copper wire braid in accordance with BS 4109 C101. The Lugs are pressed on each end to make good conductivity.

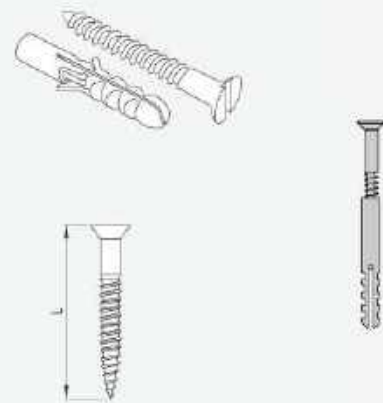
Reference Code	Screw Hole Size (mm)	Conductor Size (mm ²)	Material	Dimension L (m)	Box Qty	Unit Weight (kg)
FW 35	M8	35	Flexible Braided Copper Round Conductor	300	10	0.09
FW 50	M8	50		300	10	0.13
FW 70	M10	70		300	10	0.19
FW 95	M10	95		300	10	0.25
FW 120	M10	120		300	10	0.32



► **COUNTERSUNK WOOD SCREWS WITH PLASTIC WALL PLUG**

The appearance of the Countersunk Screw is such that it is produced sharp and smooth and is semi-threaded. This material is supplied with a plastic wall plug. The horned plastic wall plug on the body has horns that are firmly attached to the inner wall when tightening the horn screws.

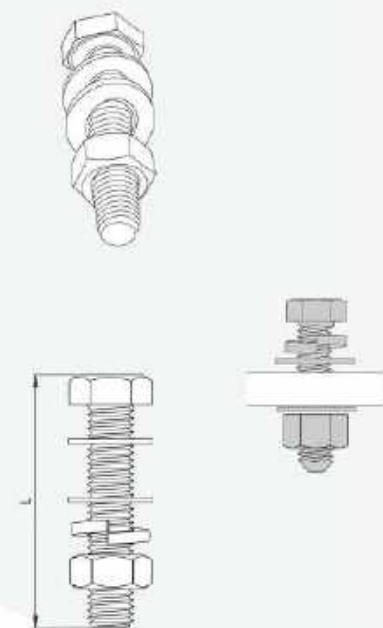
Reference Code	Screw Size	Material	Dimension L (mm)	Box Qty	Unit Weight (kg)
MWS 5x40	M5	Mild Steel	40	100	0.01
MWS 6x45	M6	Mild Steel	45	100	0.01
MWS 6x50	M6	Mild Steel	50	100	0.01
MWS 8x45	M8	Mild Steel	45	100	0.02
MWS 8x50	M8	Mild Steel	50	100	0.02
MWS 8x60	M8	Mild Steel	60	100	0.02



► **BOLT WITH NUT, WASHER, SPRING WASHER**

We provide sets of Screws, Nuts, Washers, and Spring Washers in galvanized steel, and stainless steel materials.

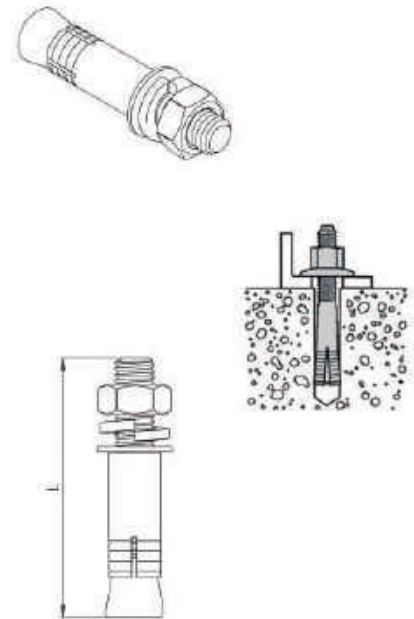
Reference Code	Included one Screw, one Nut, one Flat Washer and one Spring Washer Size	Material	Dimension L (mm)	Box Qty	Unit Weight (kg)
SETb 6x25	M6	Brass	25	100	0.03
SETg 6x25		H. D. G.			0.03
SETs 6x25	M8	Stainless Steel	30	100	0.03
SETb 8x30		Brass			0.04
SETg 8x30	M8	H. D. G.	40	100	0.04
SETs 8x30		Stainless Steel			0.04
SETb 8x40	M8	Brass	40	100	0.05
SETg 8x40		H. D. G.			0.05
SETs 8x40	M10	Stainless Steel	30	100	0.05
SETb 10x30		Brass			0.05
SETg 10x30	M10	H. D. G.	40	100	0.05
SETs 10x30		Stainless Steel			0.05
SETb 10x40	M10	Brass	40	100	0.06
SETg 10x40		H. D. G.			0.06
SETs 10x40	M12	Stainless Steel	30	50	0.06
SETb 12x30		Brass			0.08
SETg 12x30	M12	H. D. G.	40	50	0.08
SETs 12x30		Stainless Steel			0.08
SETb 12x40	M12	Brass	40	50	0.09
SETg 12x40		H. D. G.			0.09
SETs 12x40	M14	Stainless Steel	35	50	0.09
SETb 14x35		Brass			0.12
SETg 14x35	M14	H. D. G.	40	50	0.11
SETs 14x35		Stainless Steel			0.11
SETb 14x40	M14	Brass	40	50	0.12
SETg 14x40		H. D. G.			0.11
SETs 14x40		Stainless Steel			0.11



► EXPANSION (ROLL) BOLT

Expansion (Roll) Bolt is made of mild steel with various coatings or stainless steel. The Expansion (Roll) bolt consists of an industrial bolt with one end threaded and the other end tapered with a slotted metal cylinder and nuts and washers.

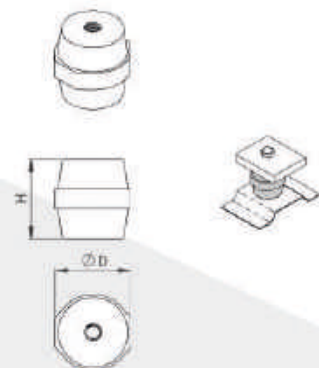
Reference Code	Included one Screw, one Nut, one Flat Washer and one Spring Washer Size	Material	Dimension L (mm)	Box Qty	Unit Weight (kg)		
RSBm 6x35	M6	Mild Steel	35	100	0.01		
RSBs 6x35		Stainless Steel			0.01		
RSBm 6x50		Mild Steel	50		100	0.01	
RSBs 6x50		Stainless Steel				0.01	
RSBm 8x40	M8	Mild Steel	40	50		0.01	
RSBs 8x40		Stainless Steel				0.01	
RSBm 8x65		Mild Steel	65		50	0.02	
RSBs 8x65		Stainless Steel				0.02	
RSBm 8x80	M8	Mild Steel	80	50		0.02	
RSBs 8x80		Stainless Steel				0.02	
RSBm 10x50		M10	Mild Steel		50	50	0.02
RSBs 10x50			Stainless Steel				0.02
RSBm 10x75	M10		Mild Steel	75	50		0.02
RSBs 10x75			Stainless Steel				0.02
RSBm 10x100	M10	Mild Steel	100	50		0.03	
RSBs 10x100		Stainless Steel				0.03	
RSBm 12x60		M12	Mild Steel		60	50	0.03
RSBs 12x60			Stainless Steel				0.03
RSBm 12x75	M12		Mild Steel	75	50		0.03
RSBs 12x75			Stainless Steel				0.03
RSBm 12x100	M12	Mild Steel	100	25		0.04	
RSBs 12x100		Stainless Steel				0.04	



► INSULATOR

These Epoxy Resin Insulators are used to support and separate electrical conductors without allowing current through themselves. Petunia's Insulators are supplied in three sizes.

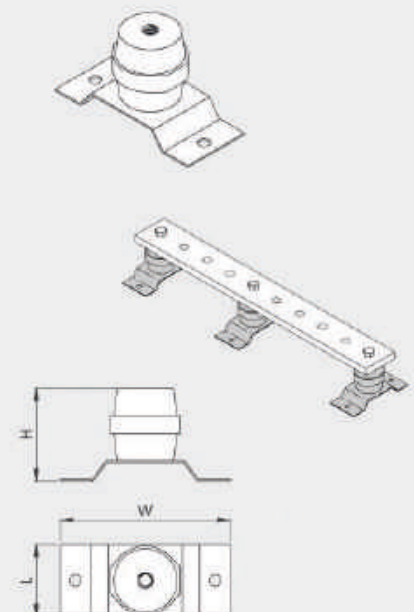
Reference Code	Threaded Size	Max. Dimension (mm)		Box Qty	Unit Weight (kg)
		ØD	H		
IN 100	M6-M8	32	32	12	0.05
IN 200	M8	40	40	12	0.08
IN 500	M10	50	50	12	0.155



► INSULATOR WITH SADDLE

These Insulators are supplied with individual saddles and can be used easily for insulating the conductors in the earthing system.

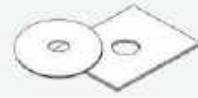
Reference Code	Specification	Threaded Size	Dimension (mm)			Box Qty	Unit Weight (kg)
			L	W	H		
INB 100	Insulator With Saddle	M8	50	90	40	2	0.13
INB 200		M8	50	90	50	2	0.17
INB 500		M10	50	90	60	2	0.3



► BIMETALLIC WASHER (CIRCULAR)

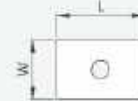
These washers have two sides, aluminum, and copper, to protect from galvanic corrosion between copper alloy clamps and steel structures.

Reference Code	Shape	Thickness (mm)	Bolt Size	Dimension ØD (mm)	Box Qty	Unit Weight (kg)
BPC 30/8	Circular	1	M8	Ø30	50	0.003
BPC 30/10		1	M10	Ø30	50	0.003
BPC 30/12		1	M12	Ø30	50	0.003
BPC 30/14		1	M14	Ø30	50	0.003
BPC 30/16		1	M16	Ø30	50	0.003



► BIMETALLIC WASHER (SQUARE)

Reference Code	Shape	Thickness (mm)	Bolt Size	Dimension (mm)		Box Qty	Unit Weight (kg)
				L	W		
BPQ 19/12	Square	1	M12	50	30	50	0.007
BPQ 19/14		1	M14	50	30	50	0.007
BPQ 25/14		1	M14	70	40	50	0.008
BPQ 25/16		1	M16	70	40	50	0.008



► STEEL CONDUIT GALVANIZED PIPE

Conduit pipe or PG is the same as galvanized steel pipe, which is a sheath to protect power and telecommunication cables and is used in related industries, which are produced and supplied in two types, threaded and non threaded.

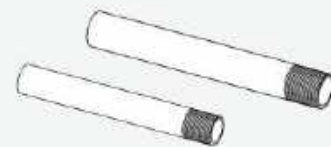
Reference Code	Material	Pipe Size (mm)	Thickness (mm)	Length		Branch Qty	Unit Weight (kg)
				L (m)	L (feet)		
PG 11	Galvanized Steel	18.5	1	3	3	1	1.5
PG 13.5	Galvanized Steel	20	1	3	3	1	1.5
PG 16	Galvanized Steel	22	1	3	3	1	1.8
PG 21	Galvanized Steel	29	1	3	3	1	2.4
PG 29	Galvanized Steel	37	1.5	3	3	1	4.2
PG 36	Galvanized Steel	47	1.5	3	3	1	5.4
PG 42	Galvanized Steel	54	2	3	3	1	8.1
PG 48	Galvanized Steel	60	2	3	3	1	9



► STEEL RIGID GALVANIZED PIPE

Rigid steel conduit with providing a high level of protection for conductors and cables installed in areas potentially exposed to severe physical damage. It also offers corrosion protection for installation in dry, wet, exposed, concealed or hazardous locations that comply with the wide situation.

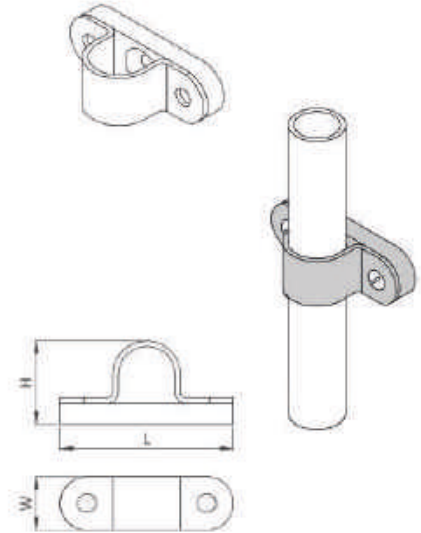
Reference Code	Material	Pipe Size (inch)	Thickness (mm)	Length		Branch Qty	Unit Weight (kg)
				L (m)	L (feet)		
PIPEg 1/2	H.D.G Steel	1/2	2	6	20	1	6.28
PIPEg 3/4	H.D.G Steel	3/4	2.3	6	20	1	9.24
PIPEg 1	H.D.G Steel	1	2.6	6	20	1	12.5
PIPEg 1-1/4	H.D.G Steel	1-1/4	2.6	6	20	1	17.12
PIPEg 1-1/2	H.D.G Steel	1-1/2	2.9	6	20	1	21.59
PIPEg 2	H.D.G Steel	2	2.9	6	20	1	27.21
PIPEg 2-1/2	H.D.G Steel	2-1/2	3.2	6	20	1	37.34
PIPEg 3	H.D.G Steel	3	3.2	6	20	1	41.34
PIPEg 4	H.D.G Steel	4	3.6	6	20	1	63.22



► H.D.G. PIPE CLAMP

Hot dipped galvanized steel Pipe clamps, or pipe fixings, are best defined as the support mechanism for suspended pipes, whether horizontal overhead or vertical, adjacent to a surface. They are vital in ensuring all pipes are fixed securely while also allowing for any pipe movement or expansion that may occur. Pipe clamps come in many variations as the requirements for pipe fixing can range from simple anchoring in place, to more complex scenarios involving pipe movement or heavy loads. It is essential that the right pipe clamp is used to ensure the integrity of the installation

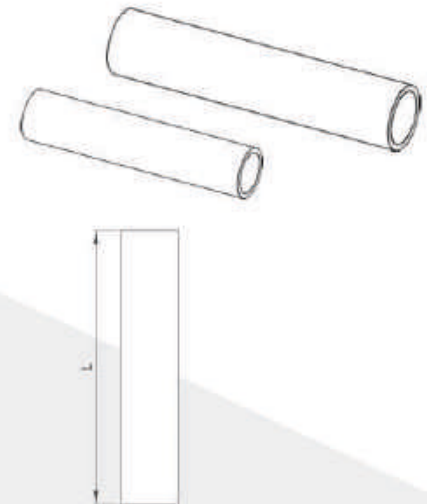
Reference Code	Material	Size (inch)	Dimension (mm)			Box Qty	Unit Weight (Kg)
			L	W	H		
CPIPEg 1/2	H.D.G Steel	1/2	116	20	23	10	0.08
CPIPEg 3/4	H.D.G Steel	3/4	126	20	28	10	0.10
CPIPEg 1	H.D.G Steel	1	129	20	35	10	0.12
CPIPEg 1-1/4	H.D.G Steel	1-1/4	142	20	44	10	0.14
CPIPEg 1-1/2	H.D.G Steel	1-1/2	142	20	50	10	0.16
CPIPEg 2	H.D.G Steel	2	153	20	62	10	0.18
CPIPEg 2-1/2	H.D.G Steel	2-1/2	185	25	75	5	0.27
CPIPEg 3	H.D.G Steel	3	199	25	82	5	0.29
CPIPEg 4	H.D.G Steel	4	220	25	116	5	0.35



► PVC PIPE

PVC Pipes as electrical conduits are well accepted in household and industrial activities. They have been accepted by all Electricity Boards. Their lightweight, low cost, easy installation, non-corrosive, and high tensile strength to withstand high fluid pressure make them ideal for a number of purposes. They also offer resistance to most chemicals and have excellent electrical and heat insulation properties. Due to their chemical-resistant properties, PVC pipes are widely used in these areas.

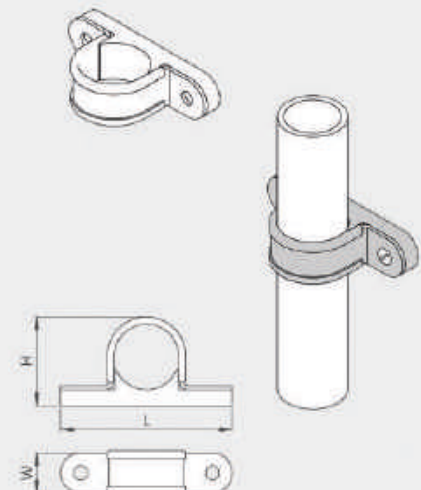
Reference Code	Material	Pipe Size (mm)	Thickness (mm)	Length		Branch Qty	Unit Weight (Kg)
				(m)	L(feet)		
PVC 32	PVC	32	1.5	6	20	1	1.2
PVC 40	PVC	40	1.5	6	20	1	1.5
PVC 50	PVC	50	1.6	6	20	1	2.1
PVC 63	PVC	63	2	6	20	1	3.3
PVC 75	PVC	75	2.3	6	20	1	4.5
PVC 90	PVC	90	2.8	6	20	1	6.6



► PVC PIPE CLAMP

PVC Clamps are a type specialized in supporting pipes and conduits. While PVC clamps are similar to metal clamp pipes, their specialties, and purposes differ. This type of pipe clamp is also significantly easy to use, as it has the ability to install wall and metallic structures.

Reference Code	Size (Inch)	Material	Dimension (mm)			Box Qty	Unit Weight (Kg)
			L	W	H		
CPVC 32	33.4	Steel Galvanized	86	20	35	10	0.05
CPVC 40	42.16	Steel Galvanized	93	20	42	10	0.06
CPVC 50	48.26	Steel Galvanized	100	20	52	10	0.07
CPVC 63	60.32	Steel Galvanized	113	24	61	5	0.09
CPVC 75	73.02	Steel Galvanized	130	24	77	5	0.14
CPVC 90	88.9	Steel Galvanized	147	24	91	5	0.17



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Field Objective of the Study:
The study was conducted to evaluate the performance of the proposed system in terms of its ability to protect the structure from lightning strikes. The study was conducted in a laboratory setting and the results were compared with the theoretical values. The study was conducted in a laboratory setting and the results were compared with the theoretical values.

Field Test:
The proposed system was tested in a laboratory setting and the results were compared with the theoretical values. The study was conducted in a laboratory setting and the results were compared with the theoretical values.



MET
MET Laboratories, Inc.

Summary:

Parameter	Value
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...	...
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Summary By: [Signature]
Summary By: [Signature]



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