Kinkas

Earthing redefined

Kirkas Tech Ventures

As a registered company, we have a well established quality control system for all our divisions certified as meeting the requirements of ISO 9001: 2015 & ISO 14001:2015

Our business is focused on the protection of man and the environment. Founded in 2003, we research, design, develop, manufacture and market high technology systems which solve very specific problems in specialized area of earthing/grounding system.

Copper Bonded Rod

Copper bonded rods are made by molecularly bonding pure electrolytic copper (99.9%) onto a low carbon, high tensile steel core with exceeding 0.254 mm (254 microns) thick.

Low carbon & high tensile steel core is selected to ensure a perfect and even bonding between the steel and copper. The thickness of the copper layer is of minimum 254 microns to meet the UL 467 standard.

The low carbon tensile steel comply with UL 467, BS 970 & AISI 1018 that has great capacity of being stretched or extended at least up to 600 N/mm2. The steel rods are extremely opposed to oxidization and add a lot of strength & longevity to electrical grounding system.

Copper Pipe Electrode

KIRKAS COPPER EARTH ELECTRODE consists of a primary earthing electrode (outer pipe) of 99.9% pure Copper pipe. The hollow space of the electrode is duly filled with a highly conductive and non-corrosive compound which safeguards the secondary electrode getting corrode over a long period of time under the soil.

Both the ends of the electrode are permanently sealed and the top portion of the earth electrode is compressed to form an extended lead with 2 holes on the terminal for connecting to the load/equipment.

- Length : 2 & 3 meters
- Diameter (mm) : 50 & 80 (±5%)

GI Earth Electrode

KIRKAS GI EARTH ELECTRODE consists of primary earthing electrode (outer pipe) and secondary earthing electrode (inner pipe). The secondary electrode is inserted inside the primary electrode and the process of hot dip galvanization is well performed to a level of 80-100 microns. The space between the primary and the secondary electrode is duly filled with a highly conductive and non-corrosive compound which safeguards the electrode getting corrode over a long period of time under the soil. Also the compound ensures the easy distribution of leakage/fault current lands on the electrode. Both the ends of the electrode are permanently sealed at both the ends with the lead terminal at the top with 2 holes on the terminal for connecting to the load/equipment.

Dual Pipe Technology

Technical Specification

Model	Length (mm)	Outer Dia (mm)	Inner Dia (mm)	Terminal (mm)	G.I. Pipe
KD250	2000	46-50	23-25	32x10	✓
KD350	3000	46-50	23-25	32x10	✓
KD280	2000	76-80	47-50	50x10	✓
KD380	3000	76-80	47-50	50x10	✓

Single Pipe Technology

Technical Specification

Model	Length (mm)	Outer Dia (mm)	Terminal (mm)	G.I. Pipe
KS250	2000	46-50	32x10	✓
KS350	3000	46-50	32x10	✓
KS280	2000	76-80	50x10	✓
KS380	3000	76-80	50x10	✓

G.I. Earth Rod

Driven earth rods are better in soil contact and offers good conductivity and low ohmic value for a good grounding system. As per IS 3043:1987 clause 9.2.1 states that "Driven rods generally consists of round copper, steel cored copper or galvanized steel of 13, 16 or 19 mm in diameter from 1220 to 2440 mm in length"

G.I. earth rods are solid in construction with highly hot dip galvanized to resist the corrosion when buried in the soil. The outer surface of the steel core is galvanized through the hot dipping process and the layer is solid with strong anti-corrosive feature and high electrical conductivity performance. Pre holed bolt & nut connections are provided for the easy connection of the load at the site.

- Length : 1, 2 & 3 meters
- Diameter (mm) : 20 & 25

Kirkas Grounding Minerals

- Permanent and maintenance free(no re-charging with slats or any other chemicals)
- Sets firmly and maintains its earth resistance with time
- Does not dissolve or decompose or otherwise pollutes the soil or the local water table
- Suitable for use in dry form or slurry form
- Does not dependent on the continuous presence of water or moisture in the surrounding to maintain its conductivity.
- Resistivity of the grounding minerals is less than 0.12 ohm-mtr as per IEEE 80-2013 (Clause 14.5d)
- Has better hygroscopic properties and maintains moisture around the earth electrode
- Non toxic, non reactive, non explosive, & non corrosive
- Suitable for any kind of electrode and all kinds of soils of different resistivity
- Does not cause burns, irritation to eye, skin etc.
- Supplied in ealed, moisture proof bags, marked with Pragati name, quantity, batch no & date of manufacture
- Available in standard packing of 8 & 25 Kgs bag

Domestic Earthing Kit

Earthing is the most neglected part of an electrical system in the domestic (house) application. People do not try to understand or seem to have given up trying to understand this electrical earth. Due to this lack of awareness and whatever the real reasons are, this situation has resulted in a very serious problem: many people are not able to use electricity safely. They allow their loved ones be exposed to unnecessary risks and dangers.

The current can travel through the earth wire if any fault occurs. The earth wire is actually the third wire in your house wiring, which is the green wire. For example; take a case of washing machine in a house and the third wire of the machine is for earthing. This path will follow the wire and arrive at the earthing connection inside the electrical panel or distribution board which inturn is solidly grounded/earthed.

Under normal situation the electric current inside the washing machine does not flow through this path (the third path of earth wire) whereas it will just flow through the line & neutral wires. However like everything else in life, nothing last forever and same is the case with the expensive.

If any of the components and parts inside the machine gets fail and this failure leads to poor insulation of live parts (line & neutral wires), then a small amount of electric current may leak to one of the exposed metal parts of the machine. That metal part will get energized or become "live" and this is why we need the earth wire connection at this junction. The exposed metal parts are not supposed to get "live" and that's why they are exposed to touch for people. With the earth wire in contact with the exposed metal of the machine, that current has a path to escape to which is straight to earth and people are safe.

If the metal part of the machine is not earthed/grounded or the earthing is not proper, the person subjected to electric shock. Kirkas Tech Ventures has developed a cost effective and quality conscious and easy to install earthing kit namely "Kirkas Domestic Earthing Kit"

Model : KDEK

GI Rod (01 mtr long 25 mm dia) - 01

Grounding Minerals (8 Kgs Bag) - 01

Earth Pit Cover (K1) - 01

Poly Plastic Earth Pit Chamber

The lightweight, heavy duty earth pit chamber with its unique design has resulted in performance capabilities superior to the traditional concrete pit, at a similar cost. Manufactured from a high performance polymer, the lightweight, heavy duty earth pit chamber is UV stable and chemical resistant.

Features

- **Light weight construction**
  The earth pit weights only one tenth in comparison with a massive 30 kg for a concrete pit.
- **High load-bearing capacity**
  Safe working load of 5,000 kgs or more superior to that of the traditional concrete pit.
- **Lockable jam free lid**
  Once installed the lid can be locked to prevent tampering with the earth electrode. Once locked, the design of the lid is such that debris cannot become jammed between the lid and the surround.
- **Unbreakable material**
  The high performance polymer is significantly less brittle than concrete, reducing the likelihood of wastage due to breakages.

Environment friendly rust proof heavy duty weather proof polyplastic earth pit chamber
Model: K1

DIMENSIONS

At Top (Dia) = 155 mm
At Bottom (Dia) = 210 mm
Height = 240 mm

FEATURES

- Factory built long holes for accessing strips/ wires at two side.
- Made of heavy duty polyethylene for extra durability.
- Resistant materials, assuring long use-life.
- Green top cap matches the environment.

Environment friendly rust proof heavy duty weather proof polyplastic earth pit chamber
Model: K2

DIMENSIONS

At Top (Dia) = 254 mm
At Bottom (Dia) = 330 mm
Height = 260 mm

FEATURES

- Factory built long holes for accessing strips/ wires at four side.
- Made of heavy duty polyethylene for extra durability.
- Resistant materials, assuring long use-life.
- Green top cap matches the environment.

Lightning Arrester

Lightning is one of the most devastating natural phenomena. There are many discharges during lightning storms and some of them can even reach hundreds of kilo amperes. The electrical discharges are a great hazard to people, animal, buildings and electronic equipments.

Until now, there is no device that can prevent lightning formation or lightning strikes. However, it is possible to create a path (divert) for the lightning discharge to the ground which will minimise the damage to the environment through a well designed Lightning Protection System (LPS).

Kirkas design, manufacture & implementation of LPS (Lightning Protection System) in accordance to IS/IEC 62305 standard.

Technical Specification

Model	Rod Length (mtr)	Rod Dia (mm)	Material
KLA 1016A	1	16	Aluminium
KLA 1516A	1.5	16	Aluminium
KLA 1016C	1	16	Copper
KLA 1516C	1.5	16	Copper

KLB 16BU	Air Terminal	Base Unit	Alloy

Kirkas

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