

EARTH ELECTRODES, GROUND ENHANCING PRODUCTS AND EARTH PITS

ENHANCED ELECTRODES FOR LOW-CONDUCTIVITY SOILS - APLIROD® DYNAMIC ELECTRODE

116

Reference	Dimensions (mm)	Shape	Included	Material	Weight (kg)
AT-024H	2000 x Ø28	Vertical	AT-020F + AT-031L	Copper + Salts	4
AT-025H	2500 x Ø28	Vertical	AT-020F + AT-031L	Copper + Salts	4,5
AT-012H	(1000 + 2000) x Ø54	L-shaped	AT-020F + 2 x AT-032L	Copper + Salts	62,5
AT-030H	(1000 + 3000) x Ø54	L-shaped	AT-020F + 2 x AT-032L	Copper + Salts	67
AT-032H	2000 (threaded) x Ø54	Vertical	AT-020F + 2 x AT-032L	Copper + Salts	58,5
AT-033H	3000 (threaded) x Ø54	Vertical	AT-020F + 2 x AT-032L	Copper + Salts	62,5
AT-102H	2000 x Ø28	Vertical	AT-031L	Copper + Salts	4
AT-103H	2500 x Ø28	Vertical	AT-031L	Copper + Salts	4,5
AT-108H	(1000 + 2000) x Ø54	L-shaped	2 x AT-032L	Copper + Salts	62,5
AT-104H	(1000 + 3000) x Ø54	L-shaped	2 x AT-032L	Copper + Salts	67
AT-105H	2000 x Ø54	Vertical	2 x AT-032L	Copper + Salts	58,5
AT-106H	3000 x Ø54	Vertical	2 x AT-032L	Copper + Salts	62,5
AT-035H	190 x Ø220	Charge for APLIROD®	Charge for APLIROD®	Salts	5,5

Meets UL 467, IEC 62305, EN 50164, UNE 21186, NFC 17102

INSTRUCTIONS FOR USE

- For vertical electrodes bore a hole, minimum 20cm diameter and 50cm deeper than the length of the rod to be buried (AT-025H needs 40mm of diameter). For the L-Shaped installation, bore a trench suitable to the electrode dimensions.
- Withdraw the covers of the leaching holes.
- Mix the low resistivity compound APLIFILL® (AT-031L / AT-032L), supplied together with the electrode, with water outside the excavation and gradually fill the hole using the proportion of 1 kilo of APLIFILL® to 8 litres of water. The mixture fills the perforation up.
- Place the electrode in the hole so that the upper end is approximately 20cm below the surface. The filling will expand in few minutes.
- Place the inspection pit so that the cover remains at surface level. The electrode will stand out approximately 10cm over the bottom of the inspection pit, leaving the breathing holes uncovered.
- Withdraw the covers of the upper breathing holes.
- Connect the grounding electrode to the test bonding bar.
- More electrodes should be placed at even intervals, and interconnected with bare copper, buried at least 0.5m deep. It is recommended to cover the conductor with APLIFILL®.

The absence of free ions in the surrounding soil damages the proper performance of the earthing. Dynamic Electrodes are based on the contribution of ions to the ground.

The system consists mainly of a conductive electrode (APLIROD®) made of copper and filled with a mixture of ionic compounds. The moisture condenser absorbs environmental moisture and leaches out at the bottom of the rod, lowering gradually the resistivity of the surrounding soil:

The efficacy of this earth electrode is improved by placing a ground conductivity improver such as CONDUCTIVER PLUS (AT-010L) around the rod.

Soil resistivity and site characteristics are the main factors for determining the model of electrode to be selected. Poor soil conditions or extremely sensitive equipment will require longer rods, multiple rods, or a combination of both.

The adequate configuration in most cases is a triangular arrangement. Vertical shapes are good to obtain low earth resistance values. L-shaped models are better when it is recommended a horizontal configuration of earth terminations.

