



> ENHANCED ELECTRODES FOR LOW-CONDUCTIVITY SOILS

133 > APLIROD® DYNAMIC ELECTRODE

A lack of free ions in the surrounding ground is detrimental to the correct performance of the earthing. Earthing systems using dynamic electrodes are based on the contribution of ions to the ground.

The system mainly consists of a copper electrode (**APLIROD®**) filled with a mixture of ionic compounds. The moisture condenser absorbs environmental moisture and dissipates it in the soil surrounding the electrode, adding free ions and gradually lowering the resistivity of the soil.

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

Soil resistivity and site characteristics are the main factors to be considered when determining the electrode model to use. Where the soil shows a lack of ion presence or the material that may be affected by lightning is extremely sensitive, longer electrodes, several earthing systems, or a combination of both, should be used.

The most appropriate configuration in most cases is a triangular arrangement. Vertical shapes are good to obtain low earth resistance values. L-shape models are better when you cannot make a deep excavation.

INSTALLATION

1. For vertical electrodes, bore a 25 x 25 cm hole x 25 cm in diameter (for the earth pit), and within this another Ø40 mm hole for the Ø28 mm electrodes or Ø75 mm for the Ø54 mm electrodes, with an approximate depth of 10 cm less than the length of the electrode. For the horizontal or L-shape electrodes, bore a trench suitable for the size of the electrode.
2. Remove the covers of the leach holes.
3. Place the electrode in the hole.
4. Fill the hole with the conductive compound **APLIFILL** supplied together with the electrode, mixing it with water outside the excavation and gradually fill it using 1 kilo of **APLIFILL** for every 4 litres of water.
5. Place the earth pit so that the cover remains at surface level. The electrode will hang out by approximately 10 cm over the bottom of the earth pit, leaving the breather holes uncovered.
6. Remove the covers of the upper breather holes.
7. Connect the grounding electrode to the test bonding bar.
8. More electrodes should be placed at regular intervals, interconnected with bare copper cable and buried at least 0.5 m deep. It is advisable to cover the conductor with **APLIFILL**.

APLIROD® APPLICATION



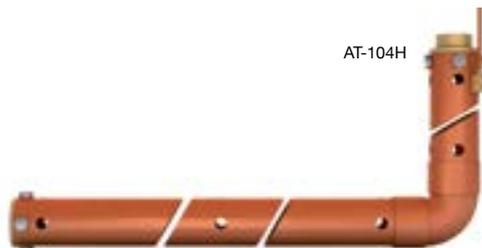
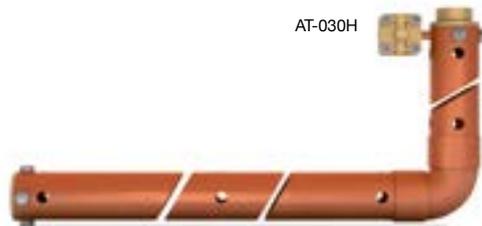
Reference	Dimensions (mm)	Shape	Includes	Material	Weight (kg)
AT-024H	Ø28 x 2000	Vertical	AT-020F + AT-031L	Copper + Salts	4.0
AT-025H	Ø28 x 2500	Vertical	AT-020F + AT-031L	Copper + Salts	4.5
AT-012H	Ø54 x (1000 + 2000)	Horizontal (L-shape)	AT-020F + 2 x AT-032L	Copper + Salts	62.5
AT-030H	Ø54 x (1000 + 3000)	Horizontal (L-shape)	AT-020F + 2 x AT-032L	Copper + Salts	67.0
AT-111H	Ø54 x 2500 (threaded)	Vertical	AT-020F + AT-032L	Copper + Salts	35.0
AT-102H	Ø28 x 2000	Vertical	50 mm ² welded cable + AT-031L	Copper + Salts	4.0
AT-103H	Ø28 x 2500	Vertical	50 mm ² welded cable + AT-031L	Copper + Salts	4.5
AT-108H	Ø54 x (1000 + 2000)	Horizontal (L-shape)	50 mm ² welded cable + 2 x AT-032L	Copper + Salts	62.5
AT-104H	Ø54 x (1000 + 3000)	Horizontal (L-shape)	50 mm ² welded cable + 2 x AT-032L	Copper + Salts	67.0
AT-112H	Ø54 x 2500 (threaded)	Vertical	50 mm ² welded cable + AT-032L	Copper + Salts	35.0
AT-035H	Ø220 x 190		Load required for APLIROD®	Salts	5.5

Complies with IEC 62305, IEC 62561, UNE 21186, NF C 17-102

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APLIROD® (application)



Moisture
condenser

Leach holes

Ionic mixture

