

## AT-611 GRAPHITE ELECTRODE



In rocky grounds of high resistivity, deep earthing are the most economic and effective in order to get an earthing resistance according to the standards.

Graphite, due to its high electrical and thermal conductivity, is immune to chemical agents (except for oxygen at high temperature), is the ideal element for building an electrode for the earthing,

together with the graphite powder which is used for filling the hole of the earthing and ensures the contact electrode/powder and powder/soil because of its penetration power even in rocky cracks.

*The graphite electrode remains inalterable during the years and offers the same safety since the first day of its installation.*

### INSTALLATION

In order to get maximum profit of the Graphite Electrodes it is convenient to dig a deep hole, so the electrode will be at least 2 meters under surface (1,25x1,25x2m).

The electrode has a connection terminal through an adapting piece, which allows using 35 to 70 mm<sup>2</sup> cross section cable.

The hole must be filled with bentonite or graphite powder (800 Kg), in order to optimise its efficacy and life.



### FICHA TÉCNICA

Graphite dimensions	Ø50 × 500 mm	Dilatation Coefficient	3,00 × 10 <sup>-6</sup> /°C
Dim. of the full electrode	Ø150 × 600 mm	Apparent Density	1,54 gr/cm <sup>3</sup>
Theoretical Resistance	0,475 Ω	Traction rupture charge	75 Kg/cm <sup>2</sup>
Empirical Resistance	0,4 a 0,6 Ω	Flexion rupture charge	150 Kg/cm <sup>2</sup>
Max. thickness of grains	1,6 mm	Compression rupture charge	215 Kg/cm <sup>2</sup>
Graphite powder	800kg	Electrical Resistivity	950μΩ/cm

### ESTIMED RESISTANCE VALUES (Ω)

Resistivity (Ω·m)	Number of holes							
	1	2	3	4	5	6	7	8
15	6,61	3,97	2,98	1,98	1,52	1,20	0,97	0,82
40	16,50	10,20	7,90	5,60	4,40	3,60	3,00	2,60
50	21,50	13,20	9,90	7,30	5,70	4,70	3,90	3,40
100	43,00	26,40	19,80	14,20	11,10	9,00	7,50	6,50
150	66,10	39,70	29,80	21,50	16,70	13,40	11,10	9,50
300	128,90	79,30	59,50	43,00	33,80	27,30	22,90	19,70
500	214,90	128,90	99,20	72,70	57,10	46,10	38,40	33,00
1000	429,80	257,90	198,40	145,50	114,30	92,30	76,90	66,00
2000	859,60	505,40	379,30	290,60	228,10	184,10	153,10	131,20
3000	1289,00	776,90	595,10	446,30	352,30	286,10	239,30	206,40
4000	1719,00	1041,00	793,40	595,10	470,10	382,00	320,10	276,40
5000	2149,00	1289,00	991,80	743,90	586,90	476,20	398,00	342,80
25000	10745,00	6447,00	4959,00	3719,00	2935,00	2381,00	1990,00	1714,00
50000	21489,00	12811,00	9661,00	7438,00	5869,00	4761,00	3979,00	3428,00