

PRODUCT DATA SHEET

LIGHTNING PROTECTION AND EARTHING SYSTEM COMPONENTS

Type: TVH-EA-34/120

ed.09/2024

Description: Exothermic welding 3/4" (Ø17 mm) earth rod / 120 mm² Cu in "T" connection

Application

Connection of earth rod to copper conductor through exothermic welding. The welding takes place in a graphite mould-crucible, into which has been introduced welding powder and the pieces to be welded. The powder is ignited by the starting powder using a flint igniter. Molten metal from the exothermic reaction flows over the pieces, causing them to be melted and fused into a solid homogeneous mass.

Classification as per IEEE 837

- Electromagnetic force (EMF) withstand:
Asymmetrical current 107 kA first peak, 45 kArms @ 150ms
- Fault current withstand: 7,7 kA @ 10s
- Corrosion withstand: 500h of continuous salt spray

Classification as per IEC EN 62561

- Heavy duty (H – 100 kA)
- General use
- Intended to withstand a static mechanical load
- Permanent connection



Connection type

Needed equipment

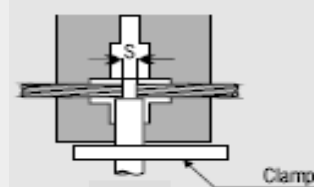
Code	Description
13 17 603	Graphite mould of average last of 70-100 connections under normal conditions of use.
18 20 150	Exothermic powder
19 30 160	Handle clamp, allowing to open and close the mould safely
19 00 002	Mould cleaner, to remove the slag and to check tap hole clearance after making every weld
19 10 032	Flint igniter
19 80 313	Soft brush for safely cleaning the inner part of the mould after every weld
19 50 000	Wire brush used for cleaning the conductors before making the weld
19 20 315	Mould seal to prevent leakage of the molten weldmetal.

Installation data

Conductor's dimensions	3/4" thread (Ø17 mm shank) earth rod / 120 mm ² stranded
Conductor's material	Copper coated steel / Copper
Connection arrangement	"T" (B4)
Installation	Outdoor, buried in ground, embedded in concrete

Note

For the welding procedure please refer to general instructions O.E.2.1-15, accompanying the mould. Especially for this mould, cut run cable and gap it (S) 5–6 mm under center of tap hole. Use a clamp on rod below mould.



Testing

The above exothermic powder has successfully passed the testing requirements of standards:

- IEC EN 62561-1 "Lightning protection system components (LPSC) – Part 1 : Requirements for connection components". Test report No **32003** by accredited laboratory as per ISO 17025
- IEEE 837 "Permanent connections used in substation grounding". Test report No **32185**

Manufacturing Quality Control

Manufacturing quality control according standard ISO 9001

Country of Origin

Greece

We reserve the right to introduce changes in the component due to technical evolution.