exothermic welding CE3

Complies with IEEE 837 and UL 467

Through-run copper conductor to the side of a vertical earth rod

Conductor-to-earth rod exothermic welding



Code	CE3
Connection type	Through-run copper conductor to the side of a vertical earth rod
Group	Conductor to earth rod
Earth rod diameter	14.2 mm, 17.2 mm
Conductor cross-section	16 to 300 mm²
Weld powder	KWD 090 to 2 × KWD 150
Matching handle clamp	HC 01
Standard	As per IEEE 837 and UL 467
Mould body material	High-grade graphite
Mould lid material	Stainless steel
Mould life	50 to 60 welds with correct use

exothermic welding CE3 Used to join a through-run copper conductor to the side of a vertical earth rod in earthing networks, bonding and lightning protection. After welding, the joint becomes one with the conductors and has no nuts and bolts to work loose over time.

Mould and powder selection table

Earth rod diameter (mm)	Thread (inch)	Conductor (mm²)	Weld powder	Mould code
14.2	5/8"	25	KWD 090	CE3-142-025
14.2	5/8"	35	KWD 090	CE3-142-035
14.2	5/8"	50	KWD 115	CE3-142-050
14.2	5/8"	70	KWD 115	CE3-142-070
14.2	5/8"	95	KWD 115	CE3-142-095
14.2	5/8"	120	KWD 150	CE3-142-120
14.2	5/8"	150	KWD 150	CE3-142-150
14.2	5/8"	185	KWD 250	CE3-142-185
14.2	5/8"	240	2 × KWD 200	CE3-142-240
14.2	5/8"	300	2 × KWD 250	CE3-142-300

Earth rod diameter (mm)	Thread (inch)	Conductor (mm²)	Weld powder	Mould code
17.2	3/4"	16	KWD 090	CE3-172-016
17.2	3/4"	25	KWD 090	CE3-172-025
17.2	3/4"	35	KWD 090	CE3-172-035
17.2	3/4"	50	KWD 115	CE3-172-050
17.2	3/4"	70	KWD 150	CE3-172-070
17.2	3/4"	95	KWD 150	CE3-172-095
17.2	3/4"	120	KWD 150	CE3-172-120
17.2	3/4"	150	KWD 250	CE3-172-150
17.2	3/4"	185	2 × KWD 150	CE3-172-185
17.2	3/4"	240	2 × KWD 250	CE3-172-240

The thread on the top of the earth rod must be cut off before welding. These moulds are made for copper-bonded earth rods.

The mould code and powder size are also marked on the lid of each mould. Do not substitute powder from another mould or another size. For other sizes, contact our specialists.

Preparation and welding

Cut off the thread on the earth rod top before welding, and flatten any earth rod head that has mushroomed from driving, so the mould sits fully on it. Hold the mould on the earth rod with a clamp so it does not slide down.

1. Check the mould and powder against the table.
2. Preheat a cold mould before the first weld.
3. Clean the conductors to bright metal and dry them fully.
4. Close the handle clamp, place the conductors in the centre of the chamber and lock the mould.
5. Place the steel disc concave side up and pour in the powder.
6. Add the starting powder, close the lid and ignite it with a flint igniter.
7. Wait at least one minute, then open the mould.
8. Clean the mould with a soft brush and a scraper; never use a wire brush.

Welds KALWELD Complies with IEEE 837 and UL 467 , welds KALWELD have passed freeze testing (10 cycles), thermal cycling (25 cycles) and a 20 kA short-circuit test at the Power and Water University of Technology (Shahid Abbaspour) (reports 95/4221 and 95/4220, 1395/12/24).

Result
Approved by

Full illustrated guide, safety notes and troubleshooting: exothermic welding instructions KALWELD at www.kalot.ir

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