exothermic welding CR4

Through-run copper conductor crossing over a horizontal reinforcing bar

Complies with IEEE 837 and UL 467

Conductor-to-reinforcing bar exothermic welding



Code	CR4
Connection type	Through-run copper conductor crossing over a horizontal reinforcing bar
Group	Conductor to reinforcing bar
Conductor cross-section	16 to 240 mm²
Reinforcing bar	10, 16, 20 mm
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 CR4 Used for joining a through-run copper conductor across a horizontal reinforcing bar in a cross in earthing, bonding and lightning protection networks. After welding, the joint fuses with the conductors and has no nuts or bolts to work loose over time.

Mould and powder selection table

Reinforcing bar (mm)	Conductor (mm²)	Weld powder	Mould code
10	16	KWD 090	CR4-10-016
10	25	KWD 090	CR4-10-025
10	35	KWD 090	CR4-10-035
10	50	KWD 115	CR4-10-050
10	70	KWD 115	CR4-10-070
10	95	KWD 150	CR4-10-095
16	16	KWD 115	CR4-16-016
16	25	KWD 115	CR4-16-025
16	50	KWD 150	CR4-16-050
16	70	KWD 150	CR4-16-070
16	95	KWD 200	CR4-16-095
16	120	KWD 200	CR4-16-120

Reinforcing bar (mm)	Conductor (mm²)	Weld powder	Mould code
16	150	KWD 200	CR4-16-150
20	16	KWD 115	CR4-20-016
20	25	KWD 115	CR4-20-025
20	35	KWD 115	CR4-20-035
20	50	KWD 150	CR4-20-050
20	70	KWD 150	CR4-20-070
20	95	KWD 200	CR4-20-095
20	120	KWD 200	CR4-20-120
20	150	KWD 250	CR4-20-150
20	185	KWD 250	CR4-20-185
20	240	2 × KWD 150	CR4-20-240

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

Use a grinder or brush to clean rust, mill scale and any coating from the weld area on the reinforcing bar until it shines. Wrap ribbed reinforcing bar with the heat insulation from the box so molten metal cannot run out between the ribs.

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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