



Luvata welding electrodes are available in all industry sizes, geometries and tapers.

Z-TRODE™

The ideal cap electrode for resistance welding of light-to-medium gauge coated and uncoated steels

The Luvata Z-Trode™ cap electrode is cold-formed from CDA Alloy 15000 zirconium copper. The combination of advanced copper metallurgy and our cold-forming technology gives you an electrode that outperforms conventional electrodes in most areas. Benefits include:

Prevents sticking

It's inevitable when you weld galvanized steel with conventional electrodes. The chrome in conventional electrodes encourages the alloying of the zinc and copper to create a brass alloy surface that stops the welding dead. But Z-Trode is an alloy of zirconium and oxygen-free copper. The irconium discourages the alloying effect on the electrode face and prevents sticking. This increases productivity without special dressings or increased power requirements to weld coated materials.

Resists mushrooming

When compared to CuCrZr and CuCr alloys, the zirconium-copper alloy resists mushrooming and wear due to its

superior conductivity. Z-trode's conductivity allows it to be used with lower current settings and less heat, greatly improving the alloy's resistance to mushrooming.

Requires less energy

In comparison to CuCrZr and CuCr alloys, Z-trode requires lower current due to its higher electrical conductivity, when used on both sides of the weldment. This results in longer electrode life, more consistent welds and energy savings. Welder current settings can be reduced up to 20% from the conventional CuCrZr and CuCr settings, with no loss in weld integrity.

Reduces downtime

Overall maintenance of Z-Trode caps is much less than with conventional electrodes, increasing welding process and production efficiencies.

Produces smooth start-ups

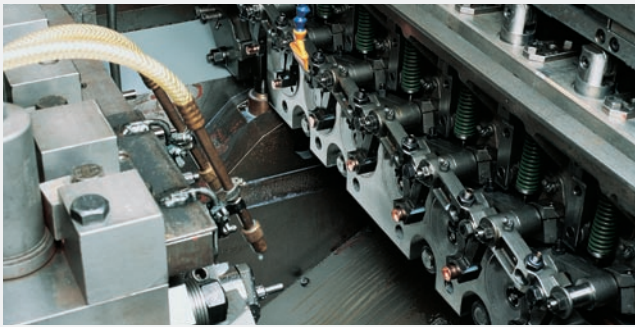
Z-Trode caps require no warm-up, conditioning time or initial preparation following electrode changes.

Most cost-effective electrode

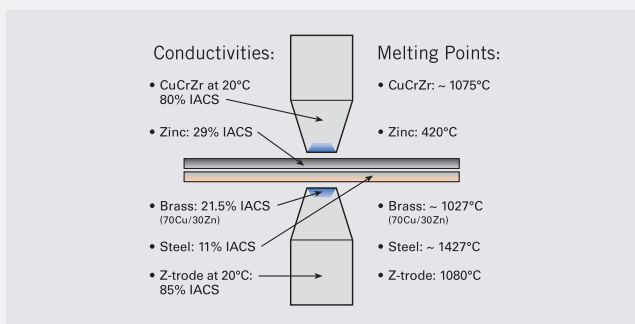
Z-Trode's increased life expectancy, maintenance savings, lower energy requirements and consistent quality welds assure you the most return on your investment.



Oxygen free copper casting



Cold heading



Electrical and physical constants

Z-Trode production

Z-Trode's freedom from oxygen allows us to alloy the copper with the optimum level of zirconium; that's what gives excellent conductivity, and that's what gives you the ability to reduce current settings.

Z-Trode's physical properties

All Z-trode electrodes are cold worked and most items are fully cold formed to ensure the maximum possible amount of cold work. Result; mechanical properties equivalent to conventional CuCrZr and CuCr electrodes, but with better electrical conductivity.

- **Hardness at ambient temperature:**
Minimum 65 HRB
- **Conductivity:**
Minimum 85% IACS

Z-Trode's non-stick properties

A resistance weld forms where the electrical resistance in an assembly is highest. Z-Trode's superior conductivity means that the maximum electrical resistance in an assembly is always clearly between the steel or aluminum sheet. This reduces heat generated between the sheet and electrode, which in turn reduces sticking.

Traceability

All Luvata materials are fully traceable. Z-Trode electrodes can be recognized by their flats.

About Luvata

Luvata is a world-leader in metal fabrication, component manufacturing and related engineering and design services. We are committed to partnering with our customers to help them increase their competitiveness. Our products and services enable our customers to improve operational efficiency, improve products and reduce tied-up capital. This focus on our customers' results, backed by our unflinching reliability, makes us a partner on which our customers base their future development.

For more information about the Luvata Z-Trode™ please contact:

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