

# **CADLOK™**

**ANODE CONTACT CONNECTIONS  
FOR PRIMARY PRE-BAKE ALUMINUM SMELTING**

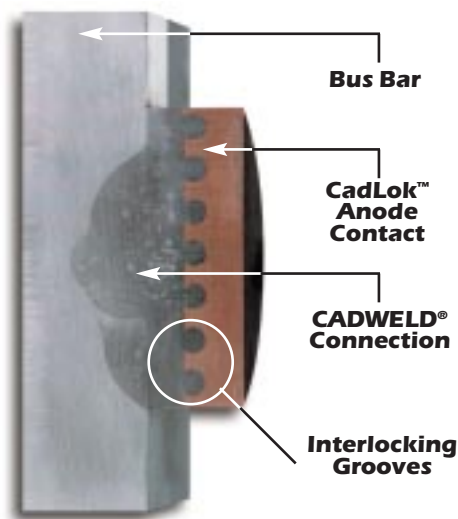


# **ERICO®**

# CADLOK™

## UNIQUE FAST EFFECTIVE

- Off-Line & **On-Line** Connections
- No Line Drops
- No Downtime
- Saves Money
- New Installations
- Connects in a Magnetic Environment
- Adapts to Any Bus – Standard Shape
- Unique Locking Grooves
- Increased Surface Area in Busbar Weld
- Reduced Arcing – Decreases Potential for Damaged Surfaces
- Less Resistance – Copper Contact to Copper Rod
- Improved Efficiency
- No External Power Supply Required
- Improved Contact Surface



**Unique grooves on the back lock-on and create a complete surface area for a continuous electrical path**



ERICO® introduces CadLok™ anode contact connections that can be installed off-line or **on-line**. Installing CadLok connections on-line means there are no line drops and no lost production due to downtime.

Utilizing the patented CADWELD® exothermic welding technique, CadLok connections require no external power supply; the inconvenience of traditional contacts and conventional welding applications are gone. With CadLok even magnetic fields are no longer a factor. The process is simple and does not require a certified welder; this translates into savings on labor costs.

The superior efficiency of the unique CadLok design provides additional savings in the form of reduced energy costs. The standard shape of the contact also adapts to any bus configuration. This adaptability, plus the improved contact, makes the CadLok welding system ideal for new installations as well as repairs.

## CADLOK AND CADWELD® HOW THEY WORK TOGETHER

Four primary components – mold, weld metal, contact and support fixtures – work together to make CadLok connections the best solution today for repairs or new installations.

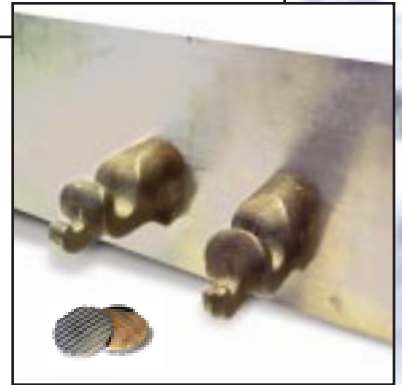
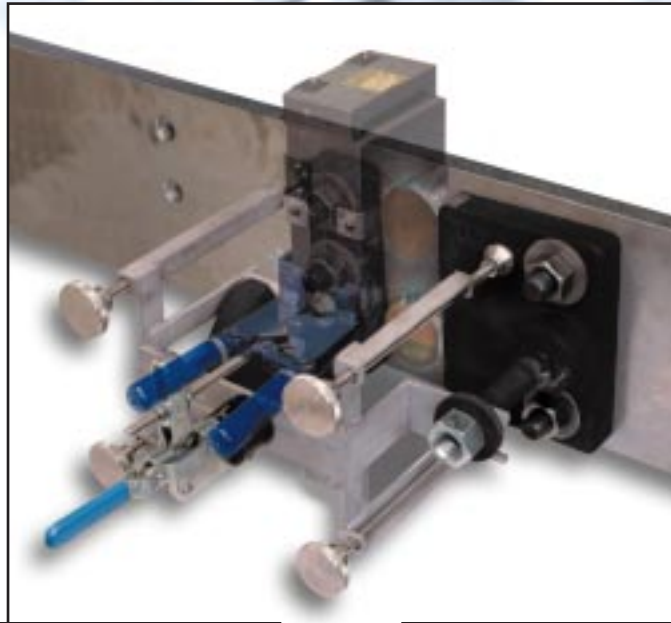
The CADWELD chemical reaction produces a molten metallic aluminum composition. This molten material flows through the mold and between the interlocking grooves of the CadLok contact, thus "exothermically welding" itself to the busbar. In seconds the reaction is complete and a molecular bond is created. This bond will last longer and function more efficiently than conventional welding applications.

## IMPROVED CONNECTIONS ELECTRICAL EFFICIENCY

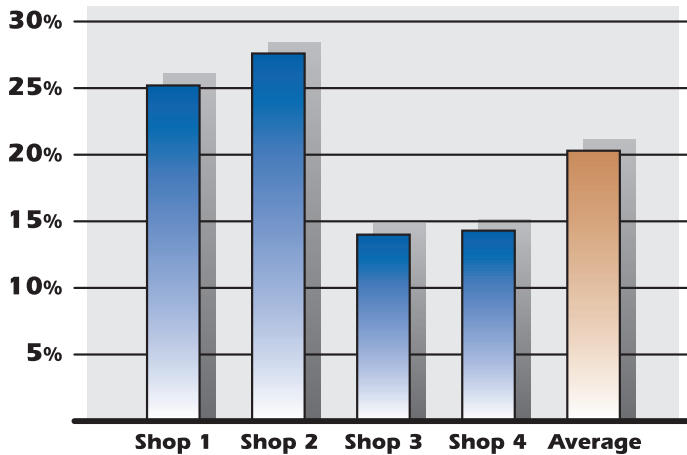
The unique shape and composition of the CadLok contact is better by design. The oval copper contact allows for maximum surface area and mechanical strength. Unique grooves on the back lock-on and produce a complete surface area for a continuous electrical path. The aluminum weld material, in combination with the CadLok design of an oxygen-free copper plate, forms a stronger and more efficient bond.

## ADAPTS TO ANY BUSBAR CONFIGURATION

The CadLok system can accommodate any bus configuration or J-bolt assembly producing a secure mechanical connection with high electrical efficiency.



## Percent Improvement of CadLok Anode Contact Over Traditionally Welded Contacts



## TYPICAL APPLICATION RESULTS

Typical Application Results

- 11% reduction in resistivity.
- 20% reduction in mV drop (Average of four tested facilities).
- Shear tests conducted at 11,600 pounds without failure.
- Compression tests performed at 38,500 pounds without failure.

**ERICO**<sup>®</sup>

## SIMPLE STEP-BY-STEP CADLOK™ INSTALLATION

ERICO® offers hands-on training for CadLok connections at no additional cost. If you prefer, ERICO personnel can provide the installation for you.



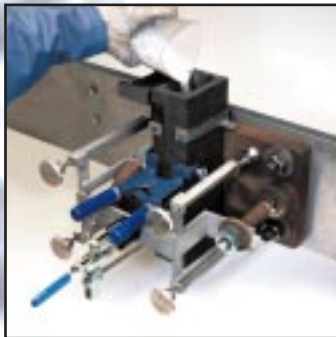
**1**

Grind and clean the busbar where new CadLok contacts will be mounted.



**2**

Attach bracket tightly to busbar. Insert CadLok contact and batting material into the mold. Fasten.



**3**

Introduce the CADWELD welding materials into the mold.



**4**

Close the mold lid and initiate the chemical reaction with the flint igniter.



A complete offering of nonmagnetic tools is available.