

Maintenance **FREE** & Cost Effective

- The ERICO® chemical ground electrode along with ERICO's unique GEM™ and bentonite backfill materials combine to furnish a *maintenance free* installation that provides an immediate and lasting low resistance to ground.
- With over 70 standard configurations available, ERICO is committed to meeting all our customers' requirements, and shipping orders of 10 pieces or less within three working days.
- The ERICO chemical ground electrode system introduces natural electrolytic salts into the surrounding soil to increase its conductivity.
- Low impedance to effectively dissipate lightning and electrical fault currents.
- Replaces multiple conventional ground rods, which is ideal for space considerations.
- Provides decades of dependable service due to rugged construction: hard-drawn Type-K copper pipe and electrolytic salts, CADWELD® exothermically welded connections, and superior backfill materials.
- Easy connection to ground electrode conductor using the factory provided pigtail. The pigtail is CADWELD exothermically welded to the rod.
- Pigtails are available oriented downward for general grounding applications or upward to provide a lower impedance, preferred for lightning protection ground systems.
- 2-1/8" (54 mm) OD Type-K copper pipe, 0.083" (2.1 mm) wall contains natural electrolytic salts that permeate into the surrounding soil, lowering resistivity.
- Provides stability through seasonal changes ensuring a reliable ground system.
- L-shaped rods can be installed horizontally in a trench where impractical to auger deep vertical holes.
- Optional factory attached radial strips are available to reduce impedance to high-frequency lightning energy and to control the direction of dissipation.
- Available up to 20 feet (610 cm) in continuous length, and longer rods can be assembled using 10-foot (305 cm) sections.
- Custom assemblies available.
- 30-year minimum service life.
- UL and cUL listed to UL 467 and CSA C22.2 No. 41 respectively.
- ERICO has been a leader in the manufacturing of grounding and bonding technology since 1951.



ERICO® Chemical Ground Electrodes are most effective when installed as part of a total system that includes high conductivity back-fill materials, access/inspection wells, and permanent, reliable CADWELD® connections.

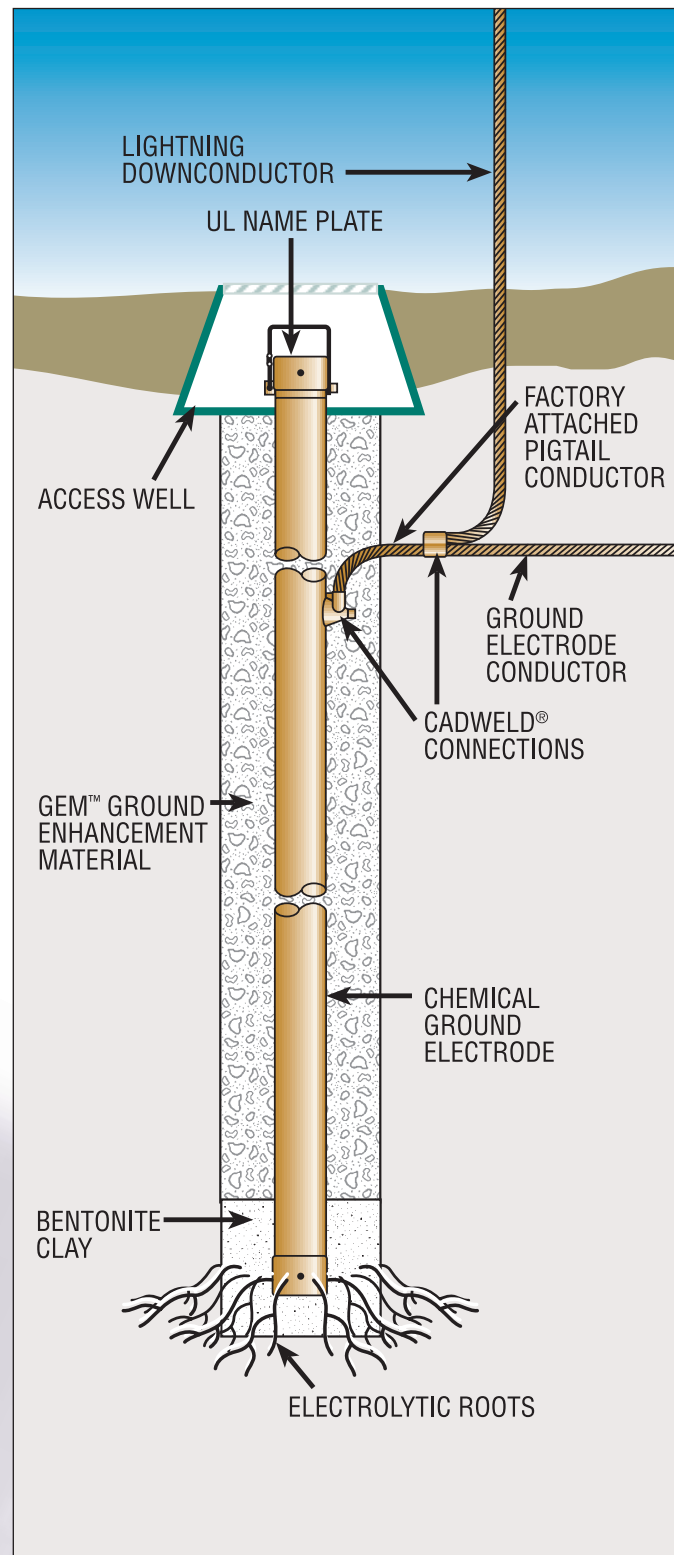
For the lowest impedance and the most stable, long-term performance under the most challenging grounding conditions, ERICO recommends installing the complete chemical ground electrode system.

- ERICO chemical ground electrodes are filled with conductive electrolytic salts to increase surrounding soil conductivity.
- Bentonite clay, a natural, low-resistivity backfill material, is placed around the bottom of vertically installed rods and around the horizontal section of L-shaped rods.
- GEM™ Ground Enhancement Material is used to fill the rest of the hole for the vertical installation and around the horizontal and vertical sections of the L-shaped rod.
- ERICO Access/Inspection Wells protect the chemical rod, while allowing necessary air and moisture to enter. Opens easily for inspection and future recharging if required.
- CADWELD exothermic connections bond all the elements in a grounding system to provide permanent, low-impedance current paths.

Chemical electrodes are available in a range of standard and custom configurations and are available individually or as part of a complete kit that includes the chemical electrode, bentonite clay backfill, GEM Ground Enhancement Material and Access/Inspection Well.

MARKET APPLICATIONS

- Telecommunications
- Power Generation & Distribution
- Commercial and Industrial
- Petrochemical
- Governmental Facilities
- Defense
- Institutions
- Manufacturing
- Railways
- Recreational Facilities
- Lightning Protection



Typical Vertical Installation

The Critical CADWELD® Connection

Over time, connections can be the weak point in any ground system. Only CADWELD exothermically welded connections provide the permanent, low-impedance, high ampacity connection needed to create a long-lasting, reliable ground system.

Only CADWELD connections:

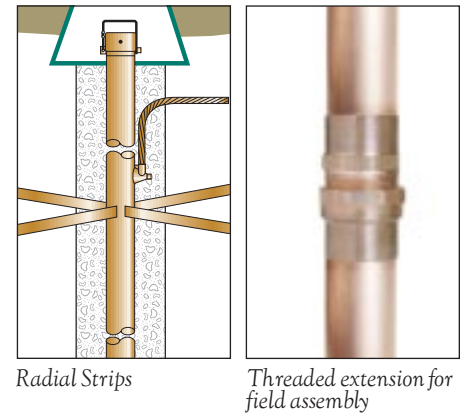
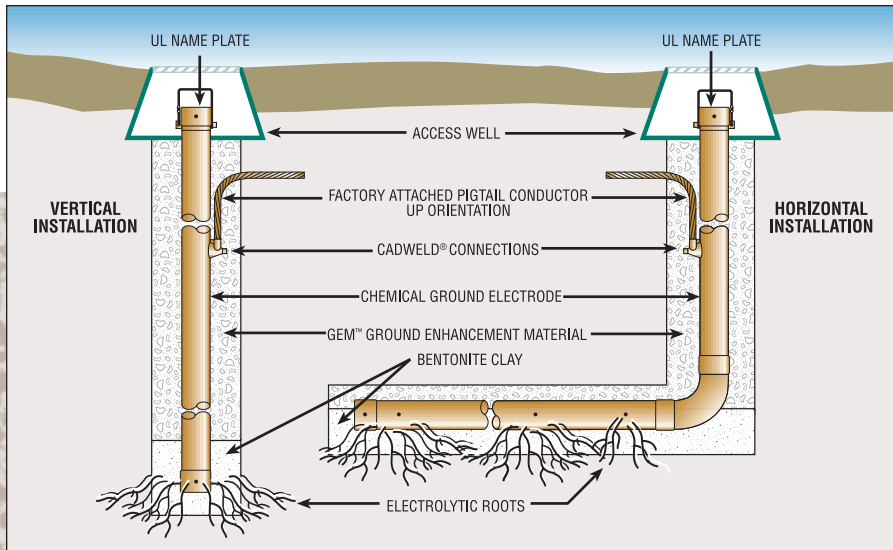
- carry more current than the conductor.
- will never deteriorate with age.
- provide a molecular bond that won't loosen or corrode.
- resist repeated fault and surge currents.
- use lightweight, inexpensive equipment and require no special skills.
- can be quality checked by visual inspection.
- provide confidence that the ground system installed today will ensure safety for generations to come.

GEM™ Ground Enhancement Material

GEM is a superior conductive backfill material that should be used anywhere rock, sandy soil or other conditions that create high resistivity. Mixed with water to form a slurry, or installed dry, GEM sets up permanently around any ground electrode, effectively increasing its size and lowering ground impedance. Over six years of testing in the National Electrical Ground Research Project, GEM-encased ground rods out performed other electrodes, demonstrating consistently low, stable ground resistance values.



GEM™ Ground Enhancement Material



CUSTOM CONFIGURATION:

- Custom lengths.
- Factory attached radial strips (contact factory).

(See instruction sheet packaged with ERICO[®] chemical ground electrodes for complete details.)

ORDERING INFORMATION

Chemical ground electrodes can be ordered as individual components or as a complete kit. Kits include the chemical electrode (pre-filled with electrolytic salts), bentonite, GEM[™] backfill and an access well. To order the chemical electrode only, add "B" to the end of the part number.

REFERENCE PART NUMBER CODE	
<p>ERICO GROUND ELECTRODE SYSTEM</p> <p>ECR V 10 2Q 4 U B</p> <p>(V) VERTICAL STYLE (H) HORIZONTAL STYLE (E) EXTENDED VERTICAL</p> <p>ELECTRODE LENGTH (FT)</p> <p>PIGTAIL CABLE CODE</p> <p>ADD (B) for (ROD ASSY ONLY)</p> <p>PIGTAIL ORIENTATION (D) DOWN OR (U) UP</p> <p>PIGTAIL LENGTH (FT)</p>	

COPPER CONDUCTOR CODES			
Pigtail conductor			
Conductor Code	Size Description	Conductor Code	Size Description
1T	#2 Solid Tinned	2Q	4/0 Conc.
2C	1/0 Conc.	2V	250 Kcmil Conc.
2G	2/0 Conc.	3Q	500 Kcmil Conc.

INDIVIDUAL COMPONENTS	
Part No.	Description
(see above)	Chemical ground rod electrode only
GEM25A	25 lb. (11.4 kg) bag of GEM [™] Ground Enhancement Material
BENTFILL	50 lb. (22.7 kg) bag of bentonite
(see catalog #A1A)	CADWELD [®] material for cable-to-cable connections
T416BH	High-density polyethylene access well for no traffic areas (type supplied with kits)
T416D	Concrete access well for traffic areas

REFERENCE PART NUMBER CODES

- Style** Vertical (straight) or Horizontal (L-shaped) and Extended Vertical
- Length** 10' (3.05 m), 12' (3.66 m), 15' (4.57 m), 20' (6.10 m) continuous length, 20' (6.10 m) and longer using 10' (3.05 m) threaded extensions for field assembly
- Pigtail** see conductor code chart
Conductor - 4' (1.2 m) standard length
- Pigtail Orientation**
D-Down - (general grounding)
U-Up - (lightning grounding)

Chemical Ground Electrode Kit

Example: ECRH101T4U

10' Horizontal with #2 solid tinned pigtail (4' length) in up orientation with backfill and access well.

Chemical Ground Electrode Only

Example: ECRV102Q4DB

10' Vertical with 4/0 Pigtail (4' length) in down orientation (Electrode only).

Distributed By:



For a complete list of ERICO[®] UL-Listed products, contact factory today.



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