

REFERENCE ELECTRODES

for Cathodic Protection Systems

Reference electrodes are used in locations where a constant, stable reference is required, with constant potential rectifiers and at inaccessible locations. MATCOR manufactures a complete line of cathodic protection reference electrodes.

Choose from a wide variety of probe, zinc, silver chloride or copper sulfate reference electrodes for condenser water box/vessel applications. We can also custom-manufacture any of our reference electrodes to meet your specific project requirement.



Underground Copper Sulfate Reference Electrode



Freshwater Copper Sulfate Reference Electrode

Copper Sulfate-CuSO₄ Reference Electrodes

Copper sulfate reference electrodes are available in underground and freshwater models. MATCOR CuSO₄ electrodes are larger and have more copper sulfate than others, resulting in a longer life. We offer four basic types of copper sulfate reference electrodes:

- | | |
|--------------------|---|
| Basic | <ul style="list-style-type: none"> • Underground and water tank • Dimensions: 2" dia. x 10" long • Chloride ion trap in heat formed recess • Lead wire: 25 ft. #14 HMWPE stranded copper • All tested for + or - 10 millivolts to standard electrode |
| Underground | <ul style="list-style-type: none"> • Basic electrode is packaged in prepared backfill to retain moisture contact and electrode stability • Size: 10" dia. x 24" long • Weight: 25 lbs. • Model code: PRC-CU4-UG <i>pictured top left</i> |
| Under Tank | <ul style="list-style-type: none"> • Small profile for under tank applications • Size: 3" dia. x 24" • Weight: 3 lbs. • Model code: PRC-CU4-UT |
| Freshwater | <ul style="list-style-type: none"> • Basic electrode has extended shield over porous plug to avoid contact with structure • Model code: PRC-CU4-WT <i>pictured bottom left</i> |

NOTE: Reference electrodes listed above represent standard sizing. MATCOR CuSO₄ Reference Electrodes can also be produced to your size and lead wire type specifications.

Zinc Underground Reference Electrodes

Zinc has the longest life of any of the permanent type reference electrodes. We use Hi-Pure zinc to ensure consistent quality and a constant conversion factor of -1.1V to CuSO₄. MATCOR Zinc reference electrodes are suitable for underground applications:



Zinc Underground Reference Electrode

- Packaged in prepared backfill to maintain stability.
- Size: 10" dia. x 24" long
- Weight: 25 lbs.
- Model code: PRC-ZN-UG

REFERENCE ELECTRODES

for Cathodic Protection Systems

Silver Chloride-AGCL Reference Electrodes

MATCOR AgCl reference electrodes are designed for use in high-chloride conditions. There are three standard types:

- | | |
|-----------------|---|
| Seawater | <ul style="list-style-type: none"> • Size: 1" dia. x 10" long • Lead wire: 150 ft. AWG #14 HMWPE • Model code: PRC-AGCL-WT |
| Probe | <ul style="list-style-type: none"> • For water boxes and pressure vessels • Contact MATCOR with specific requirements |
| Concrete | <ul style="list-style-type: none"> • Packaged in prepared backfill suitable for concrete environments |



Silver Chloride Reference Electrode

PRC-AGCL-ZN-X Direct Drive Dual Reference Electrode

The dual reference electrode consists of both a silver chloride and a zinc reference electrode, prepackaged within a tightly compacted MATCOR reference electrode backfill to retain moisture contact and electrode stability.

Designed with a unique driving cone and driving assembly to enable the dual reference electrode to be directly driven into soft soil, mud or sand to depths of 40 feet or more without the need for drilling equipment. This design is not suitable for all soil conditions – please contact MATCOR to discuss the feasibility of direct driving the anode.

Internal Vessel Reference Electrodes

MATCOR manufactures a wide variety of probe or plug type zinc, silver chloride or copper sulfate reference electrodes for condenser water box/vessel applications.

Please contact us for assistance with cathodic protection reference electrode specifications and ordering.

MATCOR's mission is to solve your corrosion problems. In addition to our broad range of proprietary corrosion prevention products, we are ready to assist with your corrosion engineering and field service needs, including design, manufacturing, installation, commissioning and ongoing maintenance, as well as full turnkey solutions.

To get in touch with our team of corrosion experts for more information, to ask a question or get a quote, please click below. We will respond by phone or email within 24 hours. For immediate assistance, please call +1-215-348-2974.

REGIONAL OFFICES

CO	303 407 2709
GA	267 291 2099
OK	405 293 9777
PA	215 348 2974
TX	281 558 2600
WY	307 362 7992

BRAND ENERGY & INFRASTRUCTURE SERVICES
 MATCOR is a Brand Energy & Infrastructure Services Company.



+1 800 523 6692
 matcorsales@matcor.com
 matcor.com