

# TerraDyne®

## ***Why Install a TerraDyne Electrolytic Grounding System?***

One of the most important investments a facility makes is in sensitive electronic equipment. As this equipment becomes more sophisticated and electrically susceptible, the need for an exceptionally low-resistance grounding system becomes more crucial. It is in response to this requirement that ALLTEC Corporation has developed the TerraDyne Electrolytic Grounding System.

## ***What is a TEGS?***

TEGS is a multipurpose grounding system. It was designed to provide long term protection from lightning, electrical transients, static discharges, electro-magnetic interference and other electrical hazards. The system may be used for virtually any application where the protection of machinery, electronics and personnel is important.

TEGS was designed for use in any type of soil condition. Some of the many applications where it is commonly used include cellular, radio and television broadcasting sites, computer facilities, power substations, communication centers, medical facilities and industrial sites.

Protecting your expensive equipment is essential. TEGS enhances the performance of your electronics, stabilizes signal references and reduces the risk of injuries. The end result is a stable grounding system that provides undisturbed long-term performance while maintaining cost efficiency.

## ***Principles of Operation***

The TEGS effectively utilizes a hygroscopic process to acquire moisture from the atmosphere. The moisture and the nontoxic chemicals inside the electrode react and create an electrolytic solution. This electrolytic solution leaches into the surrounding soil through ports that have been positioned in the electrode. This process improves the soil conductivity and dramatically reduces electrical resistance between the electrode and earth.

TerraDyne also takes advantage of another benefit. The hole bored for the installation is back-filled with TerraFill®, which also assists in substantially lowering the earth's resistance by creating a direct, low resistance, electrical connection between the electrode and the earth. The use of TerraFill will reduce impedance by increasing the effective contact area of the electrode to the soil. TerraFill is an easily applied product manufactured from environmentally safe and stable natural materials. Each kit includes TerraFill as the backfill material.

## ***TerraDyne Innovations***

Through extensive research and development of the electrolytic chemical grounding concept, our engineers have designed the TEGS to enhance the overall performance of any grounding application. The TEGS may be utilized on any project with complete confidence that it will meet or exceed any existing grounding specification.

TerraDyne Electrolytic Grounding Systems are guaranteed for thirty years, with an expected life of 50 years. The systems are available in vertical or horizontal models. Vertical electrodes are usually installed using an auger. Horizontal electrodes are installed in trenches and utilized where the soil is rocky or excavation conditions are poor. The electrodes vary in length from 8 to 300 feet. Custom lengths, accessories and design options are available.