



CMCE

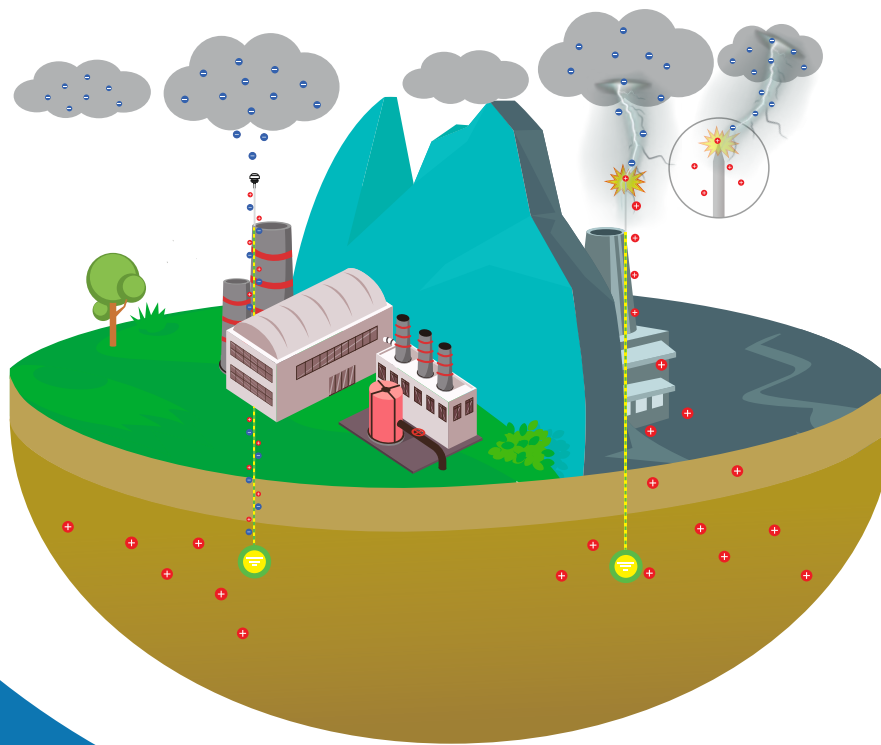
MULTIPLE ELECTRIC FIELD COMPENSATOR



PARAGUAY



sertec S.R.L.
Soluciones inteligentes pensando en usted



CONTEXT

In an increasingly unpredictable climate, reliable lightning protection is crucial to minimize risks and ensure peacefulness. Lightning strikes cause significant material and human losses annually in highly complex infrastructure, industries, homes, vessels, and other facilities. The lightning field has been increasing significantly worldwide, generating areas with higher lightning density (strikes per square kilometer) and typical atmospheric events in regions that previously did not experience lightning strikes. Given this scenario, it is essential to have lightning protection systems that minimize risks and provide safety to people and structures.

CMCE-SERTEC

This is a passive system designed to balance and compensate effects of atmospheric electrical phenomenon using multiple compensators and a grounding system. The operating principle is based on compensating and stabilizing the electric field in its surroundings, avoiding the formation of the upward leader and neutralizing lightning. A protective shield is generated within its coverage area, and excess electrical charges are continuously drained toward the grounding system. In simpler terms, it prevents the sudden increase or saturation of electrical charge in its protective area, preventing the potential difference, necessary for lightning to formation process.



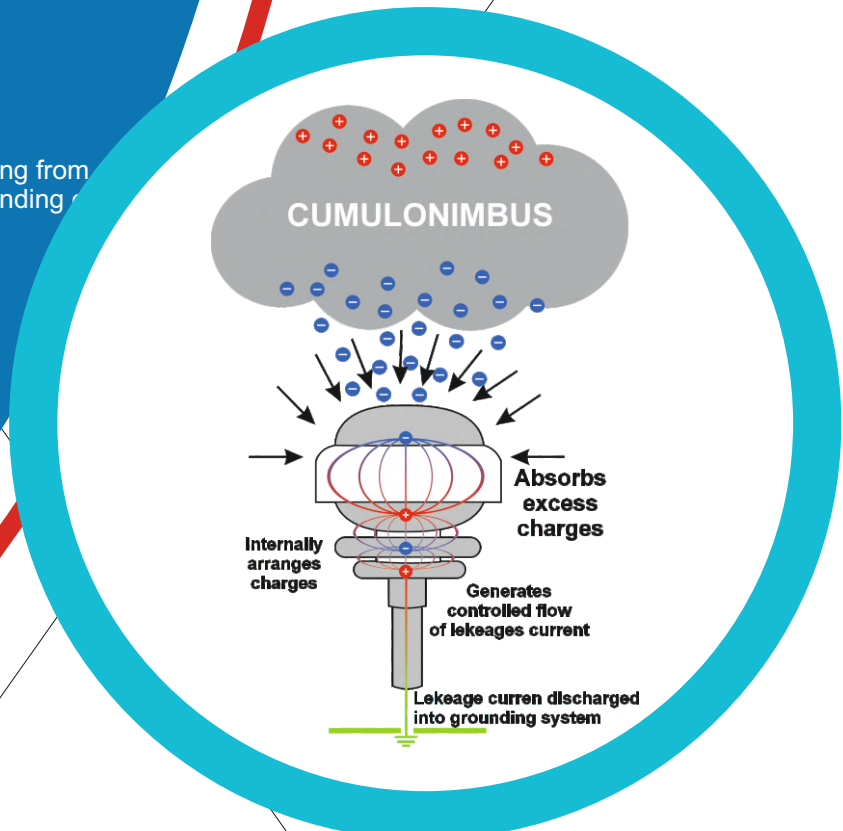
Draining of current to the ground.



Controls and balances the electric field by multiple compensators, neutralizing lightning formation within its protection area.



Protection radius ranging from 25 to 120 meters depending on the model used.



APPLICATIONS



FACTORIES



CONSTRUCTIONS



SPORTS COMPLEXES



TELECOMMUNICATIONS



HOSPITALS



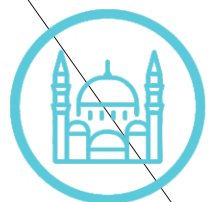
MINES,
PETROCHEMICAL



BUILDINGS AND
SHOPPING CENTERS



AIRPORTS, RADARS,
AND CONTROL TOWERS



MONUMENTS AND
HISTORICAL SITES



MODELS OF CMCE SERTEC

The versatility and adaptability of the different models make it the ideal choice for a wide range of structures and applications.



CMCE 25

Device designed for small traffic lights, small radars, road cameras, control booths, and other structures that can be covered by its protection radius.

Protection Radius: 25 meters.



CMCE 55

Device designed to protect residences, tanks, medium-sized telecommunication towers, storage facilities, and other structures that can be covered by its protection radius.

Protection Radius: 55 meters



CMCE 120

Device designed to protect buildings, industrial plants, mining sites, electrical substations, rural establishments, airports, telecommunications, and other structures that can be covered by its protection radius.

Protection Radius: 120 meters



CMCE AT 120

Device with specific application and thermal resistance up to 400°C for high-temperature areas such as industrial chimneys, distillation towers, structures near refinery burners, among others.

Protection Radius: 120 meters

PROTECTION EFFICACY

99% reduction in direct lightning strikes on protected structures.

In case of lightning strike impact (1%), the CMCE behaves as a thermal fuse, absorbing part of the lightning energy as heat through component melting, minimizing electromagnetic effects. In this case, SERTEC S.R.L. covers only equipment replacement and technical assistance under warranty (not labor costs).



CMCE HIGH VIBRATION

Device with specific application and anti-fall system for vibrating structures and structures near the vibrating source. Especially suitable for drilling towers, asphalt plants, and any industry with vibrating machinery.

Protection Radius: 120 meters



HIGH RESISTANCE

Device with specific application for highly corrosive environments, made of stainless steel with high corrosion resistance. Especially suitable for the chemical industry where corrosive processes are present.

Protection Radius: 120 meters



CMCE BLACK SHIELD

A specific application device, typically for military use, the innovation is based on the high electrical conductivity properties of graphene and the advantage of being undetectable by radar.

Radio de Protección: 120 metros.



CMCE BLACK SHADOW

A specialized version of the CMCE-120, the BlackShadow edition has been developed for environments where the equipment is intended to go unnoticed and blend in naturally with the infrastructure. Its matte finish prevents light reflections, making it the ideal choice for parks, natural areas and architectural structures that wish to preserve a harmonious visual aesthetic without interference caused by glare or glare. Designed to offer maximum discretion without compromising protection.

Radio de Protección: 120 metros.



CMCE UL



With greater deionizing power, for use in buildings, large complexes, mining, electrical sub-stations, sports fields, airports, telecommunications and structures that can be covered by its protection radius
UL-96 certified product.

Radio de Protección: 120 metros.



CMCE TWIN MAX V8

A device that surpasses the high efficiency of its inspiration, the CMCE 120, for application in the most extreme electrical field conditions, such as wind turbines, solar farms, structures located at over 4,000 meters above sea level, and high-level ceramics. It holds a high-voltage laboratory voltage record of 840 kV at one meter without lightning formation.

Radio de Protección: 120 metros.

TECHNOLOGY CERTIFICATIONS

Sertec is a leading company in the field of lightning and atmospheric phenomenon protection, and takes pride in having multiple certifications that endorse the quality and effectiveness of its products. Our lightning protection system CMCE-SERTEC has undergone rigorous testing and assessments to obtain the most recognized certifications in the industry.



ISO 9001-2015 Certification: This certification establishes fundamental quality management principles that help control and improve performance and lead to efficiency, product excellence, and optimized customer service.



ISO 14001-2015 Certification: We care about the environment and strive to minimize our environmental impact. This certification validates our commitment to sustainable and responsible practices.



TESLA Institute: SERTEC devices are approved by the Tesla Institute in Belgrade as an evolution of Tesla's patent, a pure capacitance device capable of operating at different frequencies.



Compliance with IEC, EN, UNE-EN and BS-EN 62305 Part 1, 2, 3, 4 standards.
This document was made based on regulations 61400-24.



Approval within the NATO Cataloguing System (NOC) with the NCAGE code SFKU3: This recognition demonstrates the ability to provide reliable and secure solutions for applications in military and government environments within NATO.



The company manufacture have DUNS Registration Number 955067967.



CE Marking and UKCA Marking on all CMCE models: The devices meet the safety and quality requirements established by the European Union and the United Kingdom, ensuring their compliance with the regulations of these markets.



Type Approval Certificate ELE281223XG. For specific line production.



Lloyd's Register Type Approval Certificate Certificate No: LR2514641TA. For specific line production.



UL-96-A E505360 Certification on a specific model.



ADVANTAGES OF THE CMCE



It doesn't require a power supply.



It's compatible with existing grounding systems, subject to technical approval.



It doesn't generate sparks, recommended for ATEX zones.



It doesn't contain electronic or flux materials.



5-year manufacturing warranty subject to maintenance.



Highly recyclable product with low environmental impact at the end of its useful life.



Extended lifespan, over 10 years with maintenance.



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ADDRESS

OFICINA CENTRAL

Av. Gral Santos 2555 c/18 de Julio
CP:001310
Asunción Paraguay

Sede Irlanda

16 Mount Vincent Cottages
Rosbrien Road
Limerick
V94R266



PHONE

+595 21 302023
+353 83 055 4488



MAIL

sertec@sertec.com.py

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