

# TECHNICAL DATASHEET TWIN MAX



**The CMCE-SERTEC is a revolutionary electro-atmospheric protection system that combines innovative electric field compensation technology with intelligent adaptive capability.**



## Definition

The CMCE (Multiple Electric Field Compensator) is a lightning protection system that prevents the formation of lightning. It is defined as a passive continuous collector of electrostatic currents, which directs them to the ground. Its principle of operation is based on balancing or compensating the variable electric field present in its environment, preventing the conditions for the formation of the upward leader in the CMCE and the protected structure within its coverage radius.

## Operating Principle

Each capacitor has one of its electrodes referenced to ground, which is charged with the same polarity as the ground. The free electrode induces atmospheric charges of opposite polarity to that of the ground, achieving internal balance between its electrodes, which generates a potential difference. This results in a flow of charges to the ground, which are absorbed from the atmosphere, preventing the formation of lightning within its coverage radius.

## Certifications and Compliance

- Complies with IEC, EN, UNE-EN and BS-EN 62305 Part 1,2,3,4.
- Complies with UL 96 (For a specific device)
- Complies with Rohs regulations.
- It has CE marking.
- It has UCKA marking.
- ISO 9001:2015
- ISO 14001:2015
- Conformity to the Commonwealth of Independent States.
- Approved by the TESLA institute based on:
  - IEC 60060-1:2010 High voltage test techniques Part 1: General definitions and test requirements
  - IEC 60060-2:2010 High voltage test techniques - Part 2: Measurement systems
- SERTEC S.R.L. It is approved within the NATO Cataloging System (NOC) with the NCAGE code SFKU3 for our CMCE SERTEC lightning rods.
- DUNS REGISTRATION Number 955067967
- UNE 21186:2011 NFC 17102:2011: (Laboratories with ENAC-ILAC and ISO 17025 Accreditation):
  - High voltage electrical impulse and ignition tests up to a record voltage of 840KV at one meter without formation of tracers.
  - Mechanical, Environmental Tests of Saline Fog, in sulfurous atmosphere, of current, of advance of Priming.
- Laboratory Studies in the GCC-LAB laboratory in Saudi Arabia under IEC 62305 standards.

# PROTECTION EFFECTIVENESS

**99% reduction in direct lightning strikes on protected structures.**

**In the event of a lightning strike (1%), the CMCE acts as a thermal fuse, absorbing some of the lightning energy as heat by melting its components, minimizing electromagnetic effects. In this case, SERTEC S.R.L. covers only the replacement and technical assistance of the equipment under warranty (not labor costs).**

## MECHANICAL CONNECTION TO THE MAST

It incorporates in its axis the mast connection system. The CMCE requires a mast with an inner diameter of 42 mm and an outer diameter of 49 mm, with a through-hole of 8 mm in diameter located 50 mm from the edge of the mast.

## COVERAGE RADIUS

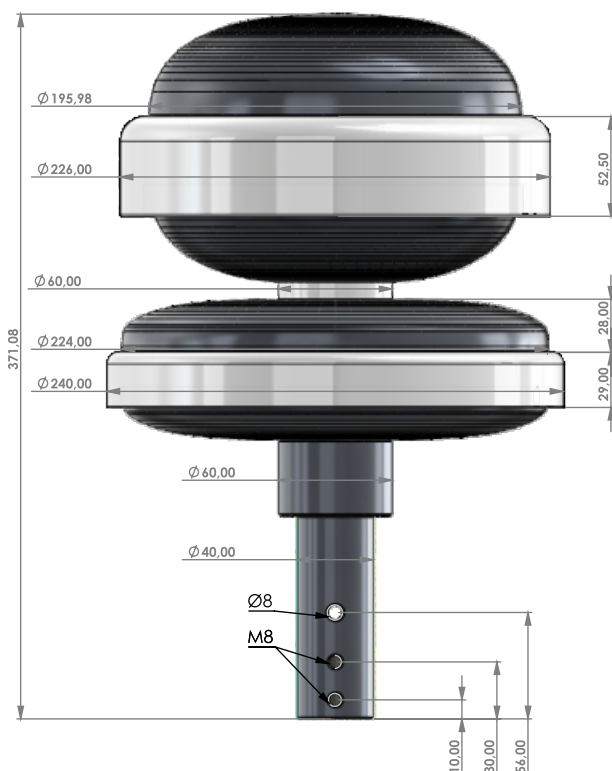
120 meters of radius according to each lightning protection needs assessment.

## APPLICATIONS

CMCE TWIN MAX, exceeds the high efficiency of its inspiring base, the CMCE 120 for application in the most extreme conditions of electric field, wind turbines, solar parks, structures that are more than 4000 meters above sea level and places with a high ceramic level.

## PRODUCT WARRANTY

5 years warranty, subject to annual maintenance. Coverage in case of direct lightning strike on the product. Effects resulting from external induced overvoltages or non-compliance with manufacturer's requirements such as grounding, installation, materials, and correct technical practices (as specified in the installation manual) are excluded from this coverage.



## Weight/Dimensions of CMCE-SERTEC:

Weight: 6,4 kg  
Measures:  $\varnothing 24$  cm x 37,1 cm.