



GLOBAL LIGHTNING
PROTECTION SOLUTIONS

COMPANY PROFILE





OVER 50 YEARS OF LIGHTNING PROTECTION EXPERTISE

Founded in 1973, ELEMKO began with the production and distribution of Integrated Lightning Protection Systems. With over 50 years of continuous presence, the company remains a pioneer in the design and delivery of:

- GLOBAL LIGHTNING PROTECTION SYSTEMS
- EARTHING SYSTEMS
- SURGE PROTECTION DEVICES
- STUDIES & TESTING
- CORROSION PROTECTION

With privately owned facilities in Athens, Thessaloniki and Thiva, and human resources exceeding 70 people, ELEMKO is today among the most dynamic companies in Greece and Europe.



MILESTONES IN OUR 50+ YEARS OF LIGHTNING PROTECTION EXPERTISE

1973



ELEMKO founded
in Metamorphosis,
Attica

1989



Relocated
all activities to
company's own
building in Meta-
morphosis, Attica

1992



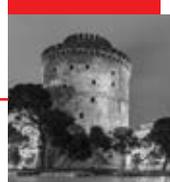
Initiated partic-
ipation in ELOT,
CENELEC & IEC
standardization

1993



Certification of all
company activities
with ISO 9001
by BVQI

1995



Established
a branch in
Thessaloniki

2000



Establishment of
the High Voltage
Laboratory in own
facilities in Thiva

2005



Accreditation
of the laboratory
according
to ISO 17025

2015



Production moved to new
facilities with expanded
production capabilities in
the Metamorphosis Indus-
trial Area, Attica

2016



Establishment of the
consultancy subsidiary
company Earthing &
Bonding Solutions Ltd in
Great Britain

2023



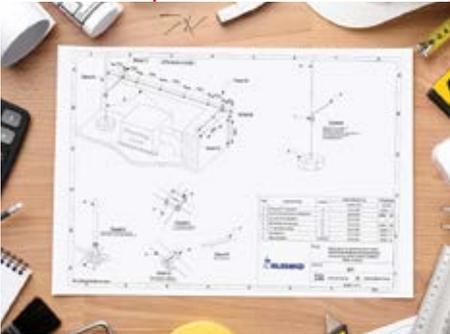
Completion of
the new 200 kA
(10/350 μ s) gener-
ator construction

2025



Distribution center
expanded and relocated
to upgraded facilities
in Krioneri Industrial
Area, Attica

SERVICES



STUDIES

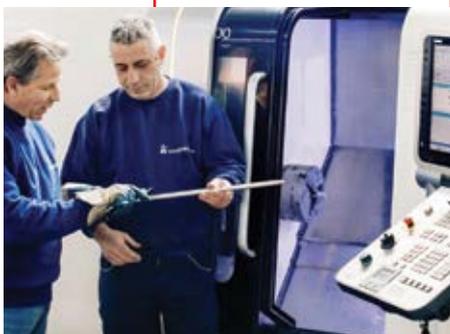
Engineering Studies

Engineering studies are a core activity of the company, fully compliant with European and International Standards.

Expertise:

- Lightning, surge, and earthing system studies for industrial facilities, wind farms, photovoltaic parks, power stations, and medium- and high-voltage substations.
- Detailed engineering design drawings preparation
- Technical specifications and tender documentation.

Many ELEMKO studies have been presented at international scientific conferences and recognized for their innovative character.



DESIGN AND PRODUCTION OF SPECIAL PRODUCTS

ELEMKO's Design and Production department is equipped with state-of-the-art industrial product design software.

Leveraging advanced electrical, mechanical, and electronic equipment, the company is able to design and manufacture custom products tailored to any application, from the simplest components to the most complex systems.



LIGHTNING & HIGH VOLTAGE TESTING ACCREDITED LABORATORY - THIVA

In 2000, ELEMKO established the first Simulation Testing Laboratory in Greece, enhancing the company's prestige and recognition both nationally and internationally.

The laboratory specializes in the testing of lightning protection components and surge protection devices, ensuring compliance with the highest European and international standards.

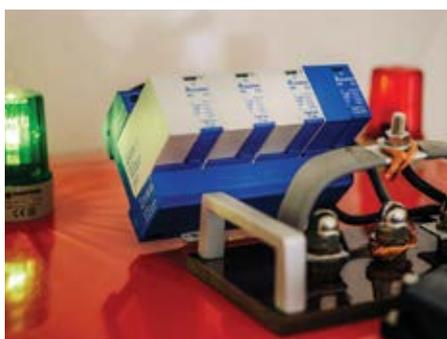
Our laboratory specializes in the field of testing lightning protection components and surge protection devices.



TYPE TESTS

Lighting protection and earthing components according to series of standard EN 62561.

- Lightning protection connection components
- Air Termination Rods
- Earth Electrodes
- Equipotential Bonding Bars
- Pipe Clamps and Equipotential Bonding Components
- Conductors's Fasteners
- Lightning Counters
- Earthing Resistance Improver
- Isolating Spark Gaps - ISG
- Earth Pits



TYPE TESTS

Surge Protection Devices according to series of standard IEC EN 61643

- Surge Protection Devices type T1 (Class I test, IEC EN 61643-11)
- Surge Protection Devices type T2 (Class II test, IEC EN 61643-11)
- Surge Protection Devices type T3 (A1, B3, C1, C2, C3, D1, IEC EN 61643-21)
- Surge Protection Devices for telecommunication (A1, B3, C1, C2, C3, D1, IEC EN 61643-21)

ACTIVITIES SERVICES CAPABILITIES



CONSULTING SERVICES

Design and certification of special components and lightning protection systems

- Product design for specific applications
- Verification of the compliance of special parts (eg natural metal elements) with the technical specifications defined by the standards
- Tests and strength stress test of special parts with lightning and surge current.
- Tests and strength stress test of special parts with environmental corrosion conditions.

Our laboratory operates as an evaluation assessment body for components and devices for lightning protection and earthing. The quality of our services is proven by the accreditation according to ISO 17025. Our laboratory was first accredited in 2005 and remains up to date with an expanded scope that covers all standards of lightning protection and earthing. See the detailed accreditation certificate of our laboratory.

Basic and useful terms:

- Compliance is the technical specification or standard that products shall satisfy.
- Conformity assessment is the process that proves (eg tests) that the product successfully meets the foreseen conformity requirements (eg standard).
- Conformity assessment body is the body (eg laboratory) that must have the technical competence to evaluate the products according to the terms of compliance requirements.
- Accreditation is the most appropriate measure to demonstrate the technical competence of a conformity assessment body, in the terms of the body's ability to evaluate a product on the basis of the required conformity.
- Test report, certificate or any other means of proof issued by an assessment body to certify the assessment of conformity of a product.

OUR
LABORATORY'S
EQUIPMENT
IS ACCORDING
TO THE LATEST
TECHNOLOGY
GENERATORS
AND SYSTEMS.





INNOVATIVE PRODUCTS, RELIABLE SOLUTIONS

SETTING THE
STANDARD
IN EARTHING
& LIGHTNING
PROTECTION
SOLUTIONS

- EARTHING COMPONENTS
- LIGHTNING PROTECTION SYSTEMS
- SURGE PROTECTIVE DEVICES

Offering the most comprehensive range of products.

Featuring over 2000 components for earthing, lightning and surge protection.

Designed for reliable performance and ease of installation.

Supported by rigorous laboratory testing in full compliance with European and International standards.

Utilizing the most advanced electrical, mechanical, and electronic equipment.

Backed by more than 50 years of research, testing, and specialized expertise.





INNOVATIVE LIGHTNING PROTECTION SOLUTIONS

PROTECTION FROM DIRECT LIGHTNING STRIKE

Lightning is a natural phenomenon causing loss of life, property damage, and destruction of cultural heritage every year. Protection is achieved through an external Lightning Protection System (LPS), designed according to European Standard ELOT EN 62305-3, consisting of:

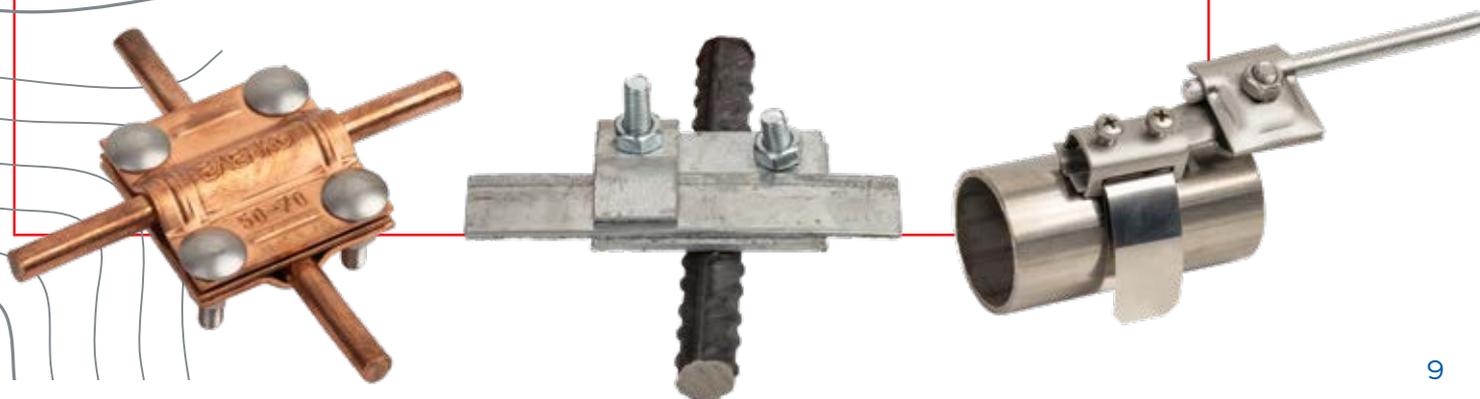
AIR TERMINATION SYSTEM

DOWN CONDUCTORS

EARTHING SYSTEM

Installation uses components compliant with IEC EN 62561. ELEMKO designs and manufactures all necessary LPS components in full compliance with European, and International standards:

- Conductors
- Clamps
- Conductors's fasteners
- Air rods
- Pipe clamps
- Earthing rods
- Protective rods
- Equipotential bonding systems



EARTHING SYSTEMS

Earthing is a critical element of any safe and reliable electrical installation. If not properly designed, constructed, and installed, it can have serious consequences for both the installation and its users.

There are various types of earthing devices, depending on the intended application. The most common types include:

SAFETY EARTHING SYSTEMS

PROTECTIVE AND EQUIPOTENTIAL BONDING EARTHING

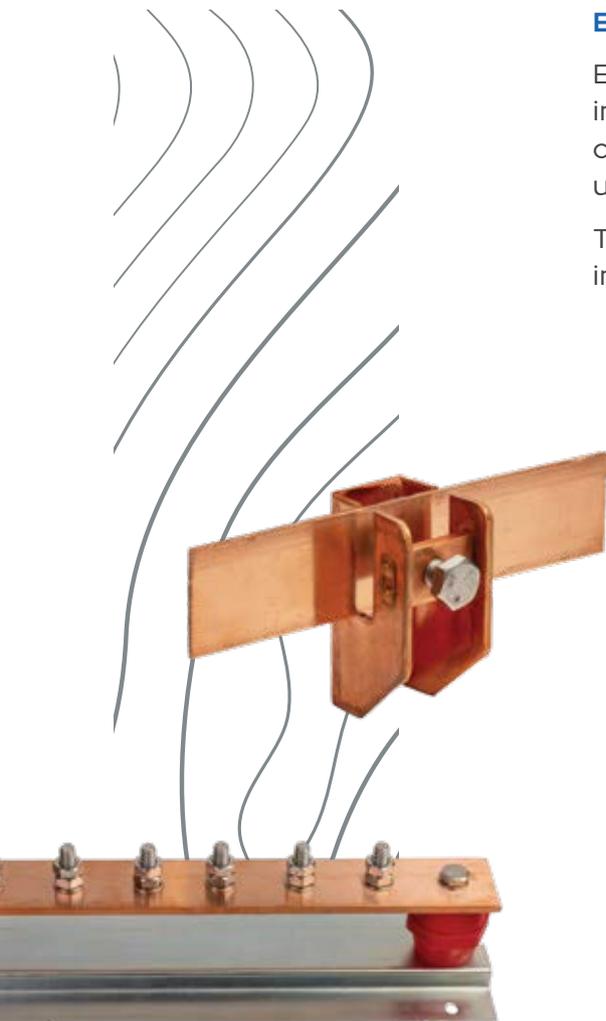
EARTHING OF DATA PROCESS SYSTEM

EARTHING OF LIGHTNING PROTECTION SYSTEM

EARTHING OF SUB-STATIONS OF MEDIUM AND HIGH VOLTAGE INSTALLATIONS

Depending on its use, each earthing is designed according to the respective Standards In ELEMKO we design, produce and provide, according to the requirements of National, European & International standards, all the required components and installation materials of an earthing such as:

- Earthing Rods
- Earthing Plates
- Earthing Strips
- Earthing Round Conductors
- Earthing Clamps
- Earthing End Connectors
- Earthing Bars
- Earthing Pits
- Earthing Improvers





INNOVATIVE LIGHTNING PROTECTION SOLUTIONS

SURGE OVERVOLTAGE PROTECTION

To safeguard critical infrastructure and sensitive operations—such as hospitals, industrial facilities, telecommunications, and air traffic systems—it is essential to install an Internal Lightning Protection System (Internal LPS) that complies with European Standards of EN 61643 series.

The Internal LPS includes equipotential bonding of all conductive parts of a structure, shielding and proper routing of wiring, and the use of surge protection devices.

ELEMKO designs and manufactures all necessary components and devices for the installation of an Internal LPS in accordance with European standards, including:

- Equipotential bars
- Isolating spark gaps
- Surge protection devices for electrical & electronic AC and DC systems
- Surge protection devices for LAN networks
- Surge protection devices for data transmission networks
- Surge protection devices for telecommunication systems
- Surge protection devices for high frequency signaling



TRAINING & WEBINARS



A variety of technical webinars and face to face presentations are offered, designed for seamless access through easy access web platforms, providing convenient and interactive learning opportunities for professionals.



DEVELOPED ENGINEERING SOFTWARE

LIGHTNING RISK ASSESSMENT

ELEMKO provides its customers with specialized risk assessment software based on EN 62305-2, which generates comprehensive reports.

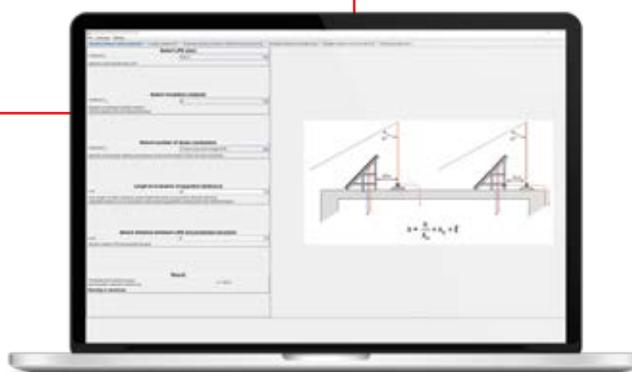
According to the EN 62305-2 standard, the calculation of lightning-related losses requires the evaluation of multiple criteria to determine the total risk. These criteria include construction-related factors that may increase the likelihood of a lightning strike—such as dimensions and geographical location—as well as consequence-related data, including environmental and economic impacts that may result from lightning events.

CALCULATION OF SPECIAL PARAMETERS OF LIGHTNING PROTECTION

In collaboration with the University of Cyprus and the Modelling Laboratory, ELEMKO has developed a software tool that calculates all special lightning protection parameters according to EN 62305-3. Available to all ELEMKO partners, it supports precise engineering design.

Key Features:

- Calculates safety distances between people and the Lightning Protection System.
- Determines clearance for electromagnetic equipment.
- Computes required length of grounding electrodes.



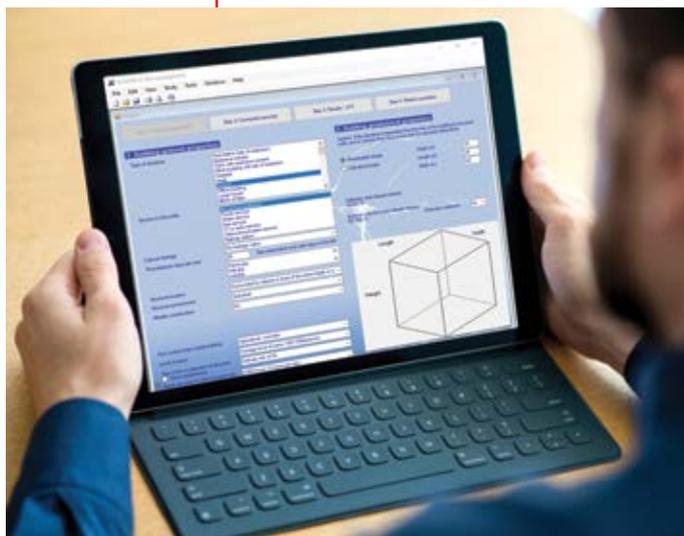
DEVELOPED ENGINEERING SOFTWARE

CALCULATION OF CROSS-SECTION OF CONDUCTORS & ELECTRODES FOR SUBSTATIONS

The software incorporates all parameters required by IEEE 80 and EN 50522, enabling accurate calculation of conductor cross-sections based on short-circuit current, duration, and maximum temperature of conductors and grounding electrodes in substations. Results are delivered in a detailed report, ensuring transparency and compliance with international standards.

CALCULATION OF GROUND ELECTRODE RESISTANCE

In collaboration with the University of Cyprus, ELEMKO developed a software tool based on BS 7430 and IEEE 80 formulas. It calculates electrode ground resistance and designs grounding systems, including required electrode length and number, for homogeneous soil conditions, providing precise guidance in line with international standards.



COMMITMENT TO QUALITY



For over 50 years, ELEMKO has focused on ensuring and continuously improving the quality of its products and services.

Our approach includes continuous staff training, leveraging research from the ELEMKO Research Center, and collaborating with universities and research centers in Greece, Cyprus, Germany, Kingdom of Saudi Arabia, Belgium, Switzerland, the USA, and the UK. We rigorously apply European and International standards for lightning protection, earthing, and surge protection, follow ISO 9001, ISO 14001, and ISO 45001 certified Total Quality Management procedures, and ensure product reliability through our EN ISO/IEC 17025 accredited laboratory.

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