nVent ERICO

We connect and protect

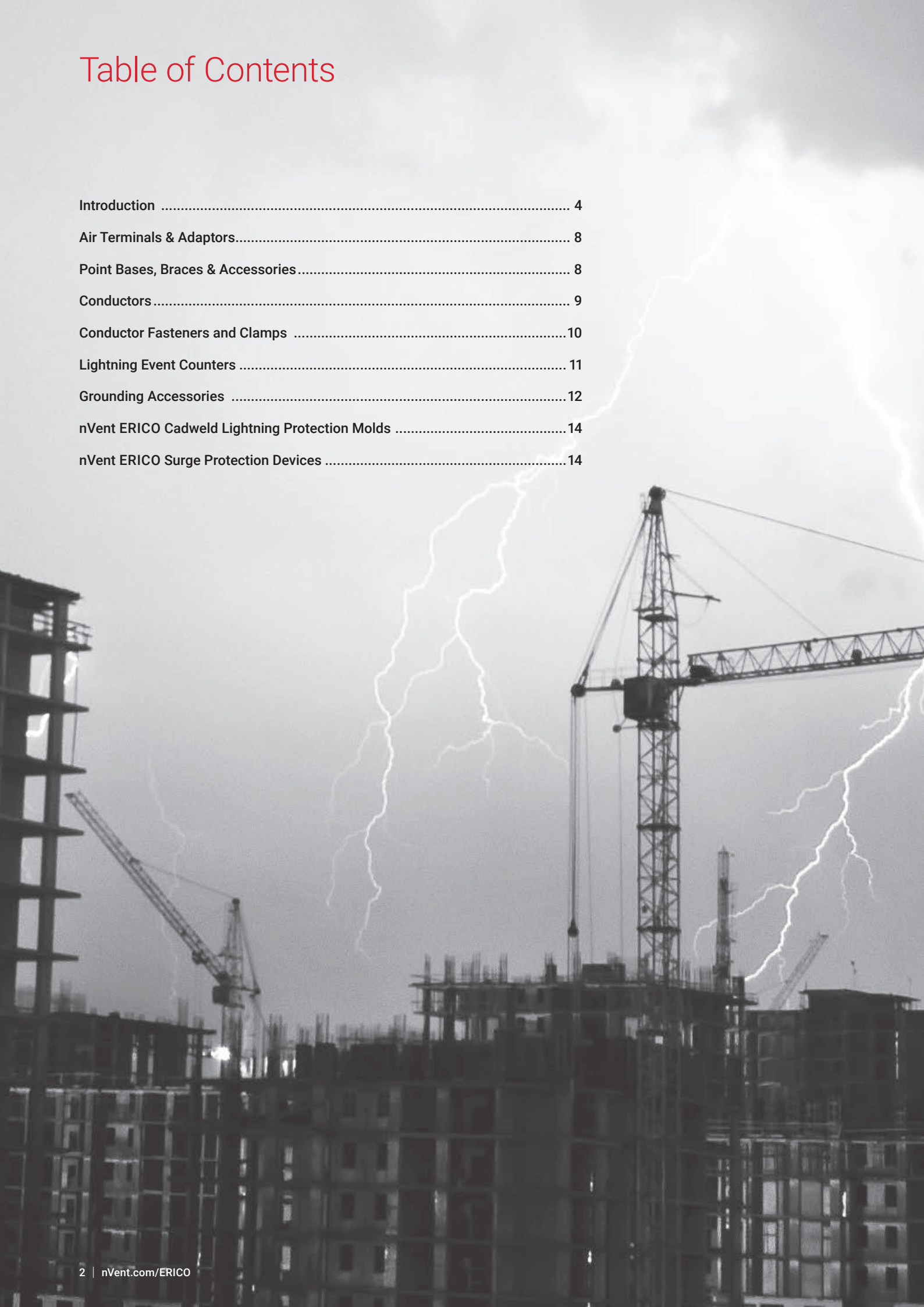
# nVent ERICO System 2000

Featured Lightning Protection Products

nVent.com/ERICO

# Table of Contents





# ARE YOU AT RISK?

## THE PROBLEM

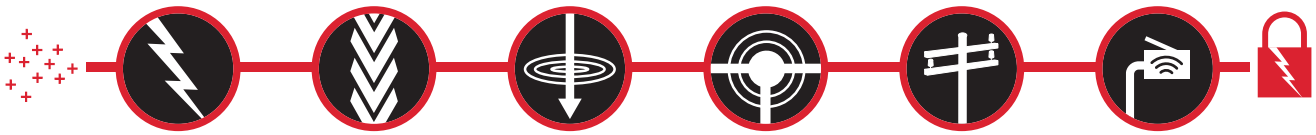
While lightning itself cannot practically be prevented, a lightning protection system is intended to control the passage of a discharge in such a manner that minimizes personal injury, property damage or system disruption. In a world of increasingly complex and sophisticated buildings and equipment, lightning is a constant risk. A single direct strike can result in physical damage to buildings and catastrophic failure of electrical equipment. It can start fires, cause major breakdowns to electrical, communications and utility installations and simultaneously cause substantial loss of revenue.

Achieving an adequate level of protection results in prevention of costly downtime. Proper protection of structures, operations and personnel demands a systematic and comprehensive approach. A lightning protection system or expensive surge protective device (SPD) will not function properly without a good grounding system. A low-impedance grounding system may create hazards to personnel and equipment without proper bonding. These interdependent disciplines are best applied when considering a total facility, rather than an individual portion.

# What we do

## NVENT ERICO PLAN OF PROTECTION

Our entire range of products systemically works to create complete facility electrical protection: **The nVent ERICO Plan of Protection**. This provides a coordinated approach to grounding, bonding, lightning protection and surge protection. Lightning protection makes up the first two steps in this system.



**1** **Capture the lightning strike to a preferred point.**

**2** **Convey this energy to the ground.**

**3** Dissipate the energy into the grounding system.

**4** Bond all ground points together.

**5** Protect incoming AC power feeders.

**6** Safeguard low voltage data/ telecommunications circuits.

The methodology embraces all aspects of potential damage, from the obvious direct strike to the more subtle mechanisms of differential Earth potential rises and voltage induction at service entry points.

Based on our Plan of Protection, we evaluate a site and provide customized recommendations for a system and installation design.

Want to learn more about facility electrical protection and our Plan of Protection?

CLICK HERE ▶

or visit us at nVent.com/ERICO

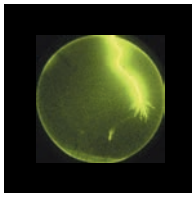
## SUPPORT SOLUTIONS

With more than a century of experience in grounding, bonding, surge and lightning protection, nVent ERICO can provide complete electrical protection from the ground up for any application or worldwide location.

**With a dedicated application engineering support team, nVent ERICO:**

- Evaluates risk, on- or off-site
- Recommends systems and project specifications
- Designs systems compliant with global standards
- Offers technical support
- Provides training
- Commissions and recommends qualified installation

# How we do it



nVent ERICO has robust lightning protection system expertise with a diverse product offering that utilizes a variety of protection methodologies to provide the best, application-specific solution. With decades of research into the phenomena of a lightning strike, pioneering isolated downconductor technology and wind turbine lightning protection systems, **nVent ERICO is committed to the development of lightning protection standards around the world, including:**

IEEE
Institute of Electrical and Electronics Engineers (IEEE)

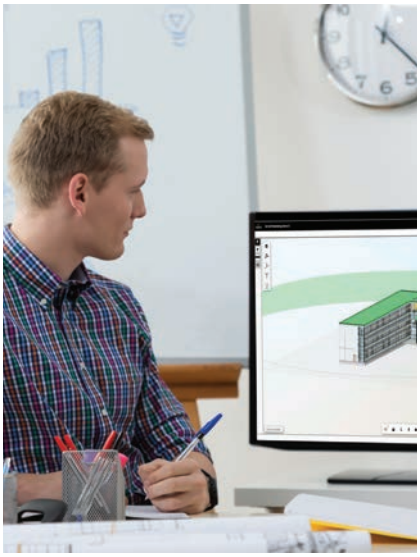
IEC
International Electrotechnical Commission (IEC)

STANDARDS Australia
Standards Australia (AS)

National Fire Protection Association (NFPA)

Our expertise of global standards enables us to design the most appropriate lightning protection system for each application with the most applicable terminal placement methodology, technology and standards.

## DESIGN SUPPORT

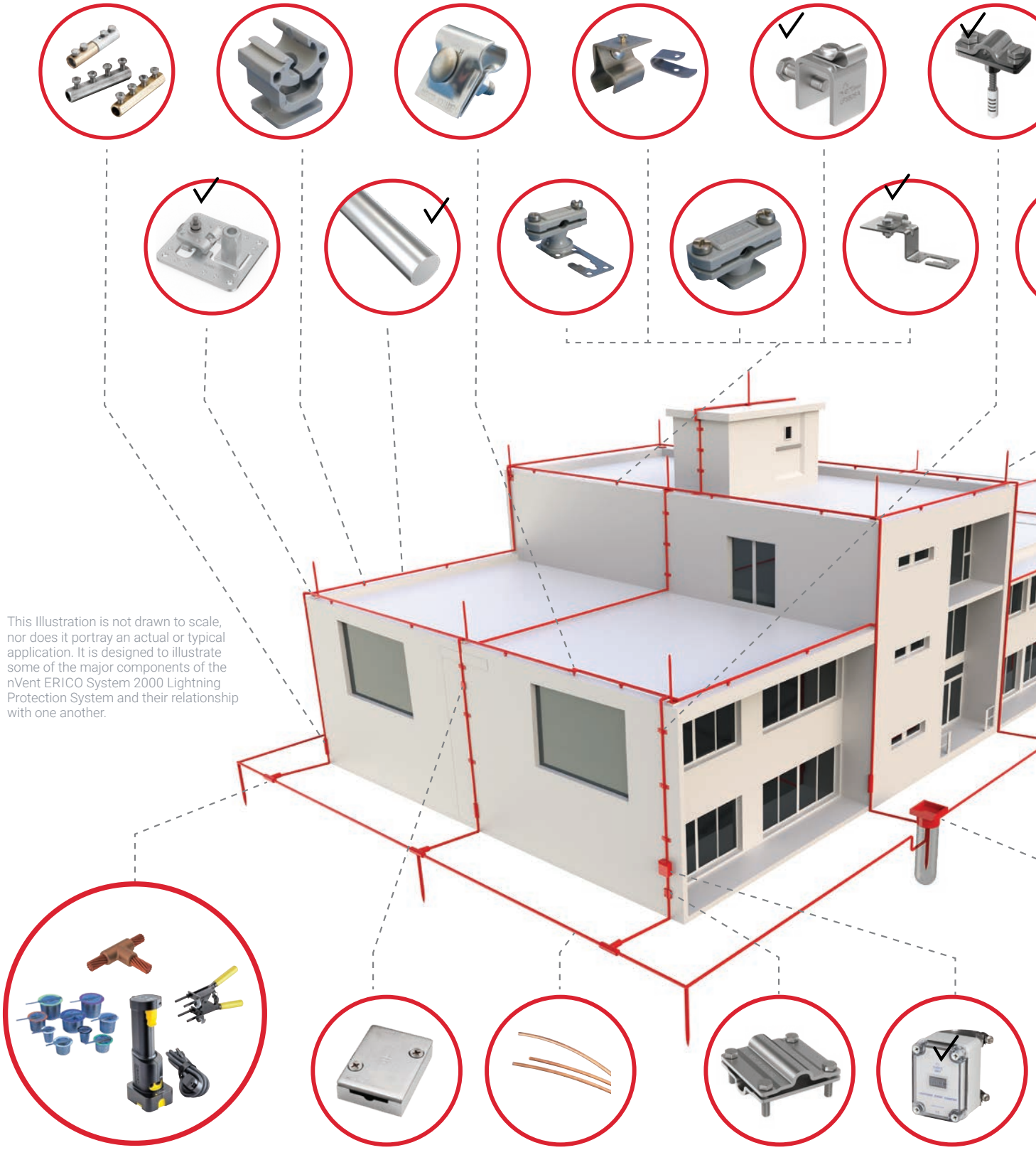


The placement of air terminals in a lightning protection system is critical for optimal protection. Our dedicated teams of engineers are available around the world to provide support for all major lightning protection standards. Using Lightning Protection System Design software or AutoCAD tool enables more accurate and detailed designs for any project.

Our engineering capabilities include:

- Risk assessments, evaluations and design assistance
- Compliance to IEC 62305, NFPA 780, AS 1768, UL 96, Singaporean-CP33 and IEEE 998 standards
- AutoCAD designs
- Complete submittal package including installation drawings, BOM, component cut sheets
- Regional support teams with knowledge of relevant codes
- Site surveys, field testing and reports
- Field support

# System 2000

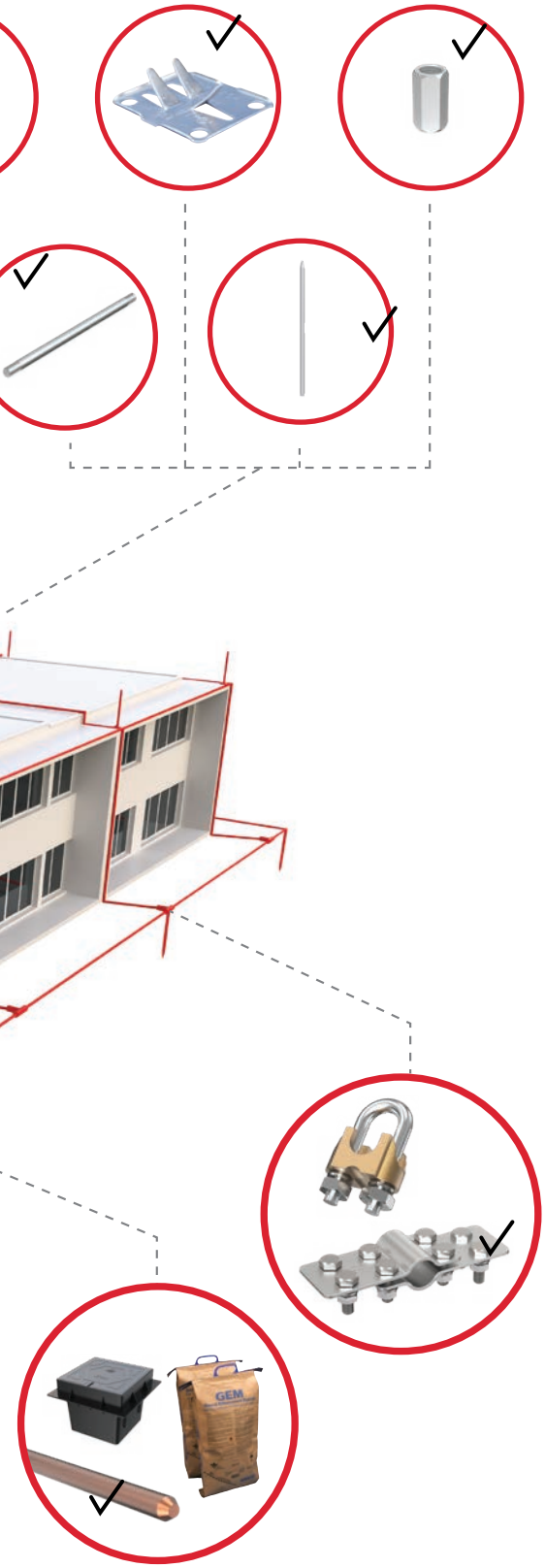


This Illustration is not drawn to scale, nor does it portray an actual or typical application. It is designed to illustrate some of the major components of the nVent ERICO System 2000 Lightning Protection System and their relationship with one another.

nVent ERICO offers the **System 2000** series of air terminals, downconductors and fittings in accordance with National and International Standards including as, IEC®/ EN 62305-3, Australian-AS1768, Singaporean-CP33, and USA-NFPA® 780.

**Features:**

- Wide range of air terminals, bases, conductors, connectors and fasteners
- Air termination components and fittings are available in copper and aluminum
- Downconductors are available in solid round aluminum & copper-bonded steel
- Computer-aided design optimizes the location of air terminals providing the most effective lightning-protection coverage.

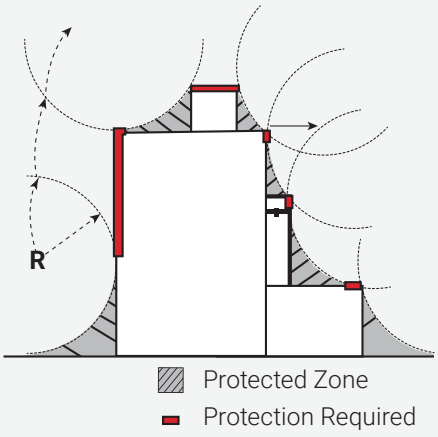



## THE ROLLING SPHERE METHOD FOR AIR TERMINAL PLACEMENT

The placement of air terminals is a critical part of the lightning protection design process. Since the 1750s the most popular methods of lightning protection have involved sharp vertical rods (Franklin), horizontal and vertical conductors (Faraday Cage or Mesh) or a combination of both. Only if air terminals are placed in the optimum location on the structure, it is possible to achieve an efficient and reliable lightning protection system. Historically, a number of methods have been employed, some of which are still in common use in IEC62305 Standards, such as the Cone of Protection (Protective Angle), Mesh and the RSM.

**Ideal for:**

- Designing for simple architecture
- Compliance to global standards utilizing the RSM
- Third-party inspection



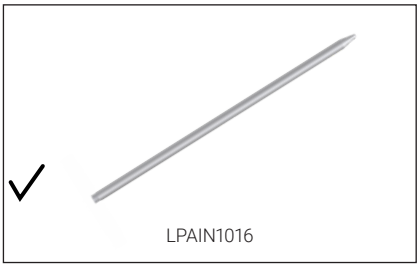

- Based on conventional design principles rolling sphere, cone of protection and mesh method as found in IEC®/EN 62305-3, AS1768, CP33 and NFPA® 780
- Precision manufacturing helps ensure easy assembly and installation

During design, installation and commissioning, Engineers at nVent can provide on-site and off-site assistance to contractors to help ensure that the recommended protection measures are implemented to best practice standards. This helps assure that your lightning protection installation will provide your facility with the optimum level of protection.

# System 2000 Components

## Air Terminals & Adaptors

### AIR TERMINALS



LPAIN1016

| Part No. | Description | Rod Diameter (mm) | Rod Length (mm) | Pack Size | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|---|
| LPAIN1016 | Air Terminal, Metric Thread, M16, Aluminum, Sharp | 16 | 1000 | 1 | EA | 0.53 |

### EXTENTION RODS

LPAM16CTO

| Part No. | Description | Thread Size (TS) | Pack Size | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|
| LPAM16CTO | Extention Rod, Metric Thread, Aluminum | M16 | 1 | EA | - |

Standard N.C. thread each end
CTO - Length "Cut to Order"
Maximum length upto 3500 mm

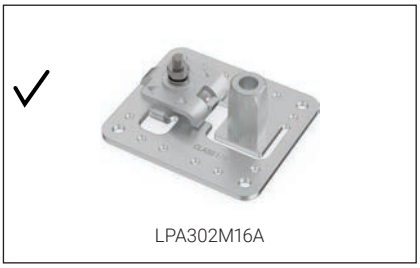
### COUPLINGS & ADAPTORS

LPA2977F7F

| Part No. | Description | Thread Size (TS) | Pack Size | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|
| LPA2977F7F | Female-Female Adaptor, Metric Thread, Aluminum | M16 | 1 | EA | 0.02 |

## Point Bases, Braces & Accessories

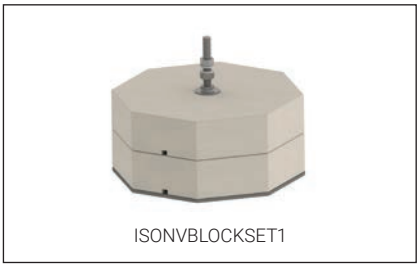
### UNIVERSAL AIR TERMINAL BASE



LPA302M16A

| Part No. | Description | Thread Size (TS) | Pack Size | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|
| LPA302M16A | Air Terminal Base, Stamped Adjustable, Metric Thread, Aluminum | M16 | 1 | EA | 0.160 |

### ISONV CONCRETE BLOCK SUPPORT ASSEMBLY



ISONVBLOCKSET1

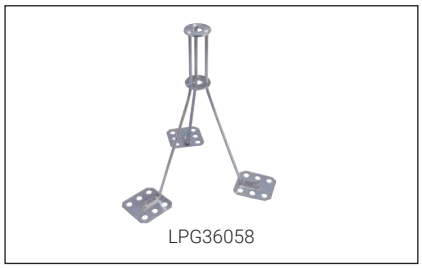
| Part No. | Description | Height 1 (mm) | Height 2 (mm) | Length (mm) | Pack Size | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|---|---|
| ISONVBLOCKSET1 | ISOnV Concrete Block Support Assembly | 90 | 270 | 350 | 1 | EA | 19.9 |

# System 2000 Components

## Point Bases, Braces & Accessories

### GALVANIZED AIR TERMINAL SUPPORT, PENETRATING BASE & NON-PENETRATING BASE

LPG35058

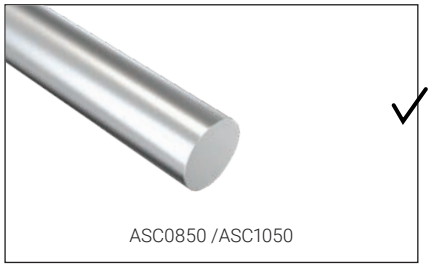


LPG36058

| Part No. Penetrating Base | Part No. Non-penetrating Base | Height (mm) | Maximum Air Terminal Height (mm) |
|---|---|---|---|
| LPG35058 | LPG36058 | 355.6 | 609.6 |
| LPG35158 | LPG36158 | 457.2 | 762 |
| LPG35258 | LPG36258 | 609.6 | 1016 |
| LPG35358 | LPG36358 | 914.4 | 1524 |
| LPG35458 | LPG36458 | 1219.2 | 2134 |

## Conductors

### NON-INSULATED SOLID CONDUCTOR

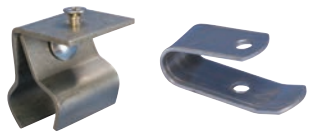


ASC0850 /ASC1050

| Part No. | Description | Strands | Diameter (mm) | Roll | U/M | Spool Weight (kg) |
|---|---|---|---|---|---|---|
| ASC0850 | Non-Insulated Solid Conductor, Aluminum, Bare | 1 | 8 | 50 m | Meter | 7 |
| ASC1050 | Non-Insulated Solid Conductor, Aluminum, Bare | 1 | 10 | 50 m | Meter | 11 |

# System 2000 Components

## Conductor Fasteners and Clamps



LPS815 + CCL04A

CCR608S

CRH0810A

LPS808A

LPS810A

CCS-308

LPS800810A

CCJ70CA

LPA810

LPP899BK

LPP899GY

| Part No. | Description | Conductor Size | Pack | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|
| LPS815 | Standing Seam Stainless Steel Clamp | - | 1 | EA | 0.11 |
| CCL04A | Theft Deterrent Composite Cable Clip | #14 Solid - 2/0 Solid; 2.5 mm² Stranded - 10 mm² Stranded | 1 | EA | 0.003 |
| CCR608S | Cross Round Connector | 6 mm Solid; 8 mm Solid; 8 mm Stranded | 1 | EA | 0.05 |
| CRH0810A | SS Conductor Clamp for Corrugated Roof | 8 mm Solid; 10 mm Solid | 1 | EA | 0.085 |
| LPS808A | Standing Beam Clamp for Solid Round Conductor | 8 mm Solid | 1 | EA | 0.085 |
| LPS810A | Standing Beam Clamp for Solid Round Conductor | 10 mm Solid | 1 | EA | 0.085 |
| CCS-308 | Multi-purpose Grounding Clamp | 8 mm Stranded; 8 mm Solid | 1 | EA | 0.15 |
| LPS800810A | Flush Mount Conductor Clamp | 8 mm Solid; 10 mm Solid | 1 | EA | 0.065 |
| CCJ70CA | Earth Testing Clamp | 8 mm Solid; 10 mm Solid | 1 | EA | 0.4 |
| LPA810 | Stamped Adhesive Cable Fastener, Aluminum | Class I - Class II (95 mm², 4/0 Max) | 1 | EA | 0.02 |
| LPP899BK | Adhesive, Black, 0.3 L | - | 1 | EA | 0.55 |
| LPP899GY | Adhesive, Gray, 0.3 L | - | 1 | EA | 0.55 |

# System 2000 Components

## Conductor Fasteners and Clamps

R3SFT-25

SFT23N

SRL23N8

SRL-23-N10

LPA513

LPA598

| Part No. | Description | Conductor Size | Pack | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|
| R3SFT-25 | Universal Conductor Clamp for Corrugated Roof | 6 mm Solid - 11 mm Solid | 1 | EA | 0.04 |
| SFT23N | Universal Conductor Clamp | 6 mm Solid - 11 mm Solid | 1 | EA | 0.02 |
| SRL23N8 | Snap Close Conductor Clamp | 8 mm Solid | 1 | EA | 0.01 |
| SRL-23-N10 | Snap Close Conductor Clamp | 10 mm Solid | 1 | EA | 0.01 |
| LPA513 | In-Line Cable Connector, Aluminum | Class I - Class II (95 $mm^2$, 4/0 Max) | 1 | EA | 0.09 |
| LPA598 | Bi-Metallic Cable Connector, Aluminum, Brass, SS 304, 25.4mm dia | Class I - Class II (95 $mm^2$, 4/0 Max) | 1 | EA | 0.17 |

Other sizes are available upon request for Cu-bond round conductors & ground rods. Ground clamps are also available for different sizes of ground rods.For more details, contact us or search on our website

## Lightning Event Counters

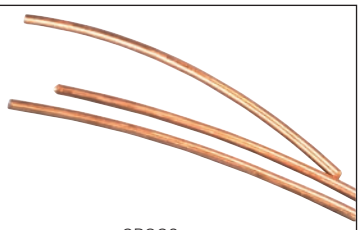
LECIV

LECV

| Part No. | Description | Pack size | U/M | Unit Weight (Kg) |
|---|---|---|---|---|
| LECIV | Mechanical Lightning Event Counter (2 kA 8/20 µs) Trip Threshold | 1 | EA | 0.52 |
| LECV | Digital Lightning Event Counter | 1 | EA | 0.36 |

# System 2000 Components

## Grounding Accessories



CBSC8

✓ 615800A


GEM25A

PIP308 ✓


IP900C

PIT03

ESA308

REP16120L

✓

GRTC03A

GRTC04A ✓

GRTC05A ✓

# System 2000 Components

## Grounding Accessories

| Part No. | Description | Dimensions | Length | Pack Size | U/M | Unit Weight (kg) |
|---|---|---|---|---|---|---|
| CBSC8 | nVent ERICO Cu-Bond Round Conductor | 8 mm Dia | 100 m | 1 | EA | 39 |
| CBSC10 | nVent ERICO Cu-Bond Round Conductor | 10 mm Dia | 100 m | 1 | EA | 62.7 |
| CBSC13 | nVent ERICO Cu-Bond Round Conductor | 13.2 mm Dia | 100 m | 1 | EA | 107.6 |
| CBSC14 | nVent ERICO Cu-Bond Round Conductor | 14.2 mm Dia | 100 m | 1 | EA | 125 |
| CBSC16 | nVent ERICO Cu-Bond Round Conductor | 15.7 mm Dia | 100 m | 1 | EA | 149.6 |
| CBSC18 | nVent ERICO Cu-Bond Round Conductor | 17.7 mm Dia | 100 m | 1 | EA | 192.2 |
| 611350A | Copper-Bonded Ground Rod, Pointed, 254µm | 12.8 mm Dia | 1.5 m | 1 | EA | 1.57 |
| 611370A | Copper-Bonded Ground Rod, Pointed, 254µm | 12.8 mm Dia | 2.1 m | 1 | EA | 2.11 |
| 615800A | Copper-Bonded Ground Rod, Pointed, 254µm | 14.2 mm Dia | 3 m | 1 | EA | 3.85 |
| 611600A | Copper-Bonded Ground Rod, Pointed, 254µm | 16 mm Dia | 3 m | 1 | EA | 5.085 |
| 613400A | Copper-Bonded Ground Rod, Pointed, 254µm | 17.3 mm Dia | 3 m | 1 | EA | 5.72 |
| 612000A | Copper-Bonded Ground Rod, Pointed, 254µm | 20 mm Dia | 3 m | 1 | EA | 7.8 |
| 612500A | Copper-Bonded Ground Rod, Pointed, 254µm | 25 mm Dia | 3 m | 1 | EA | 12.1 |
| GEM25A | nVent ERICO Ground Enhancement Material (GEM) | - | - | 1 | EA | 11.36 |
| PIP308 | Inspection Housing, Polypropylene Inspection Pit | LxWxH 308x308x214 mm | - | 1 | EA | 2.5 |
| IP900C | Inspection Housing, Concrete | LxWxH 320x320x160 mm | - | 1 | EA | 25.9 |
| PIT03 | Inspection Housing, High-Impact Polypropylene | LxWxH 241x207x216 mm | - | 1 | EA | 1.3 |
| ESA308 | Earth Seal Flange | - | - | 1 | EA | 6 |
| REP16120L | Ground Rod Clamp, U-Bolt Saddle, One Conductor, 3/4" dia, #4 Solid-4/0 Stranded, 16 mm² Stranded-120 mm² Stranded | - | - | 1 | EA | 0.285 |
| GRTC03A | Stainless Steel Universal Ground Rod Clamp, For 14.2,16 & 17.3 mm, Tape 25x3 & 50x6 mm | - | - | 1 | EA | 0.45 |
| GRTC04A | Stainless Steel Universal Ground Rod Clamp, For 19.1 & 20 mm, Tape 25x3 & 50x6 mm | - | - | 1 | EA | 0.65 |
| GRTC05A | Stainless Steel Universal Ground Rod Clamp, For 23.2 & 25 mm, Tape 25x3 & 50x6 mm | - | - | 1 | EA | 0.68 |

Other sizes are available upon request for Cu-bond round conductors & ground rods. Ground clamps are also available for different sizes of ground rods.
For more details, contact us or search on our website

# System 2000 Components

## nVent ERICO Cadweld Lightning Protection Molds

### THE ORIGINAL NVENT ERICO CADWELD EXOTHERMIC WELDING SYSTEM


Invented in 1938. Patented in 1939. nVent ERICO Cadweld has been making connections easier for installers from the beginning and leading the industry in quality, performance and innovation ever since.

nVent ERICO continues to innovate with an unwavering commitment to safe, simple, and reliable products. The updated nVent ERICO Cadweld Plus Impulse Exothermic Welding Control Unit incorporates features designed to accommodate multiple power sources and improve safety.

## nVent ERICO Surge Protection Devices

### SURGE PROTECTION


nVent ERICO offers power surge protection solutions in a coordinated approach where the first stage of defense is the installation of primary protection devices at the mains supply service entrance, followed by secondary protection at distribution branch panels and where necessary, at point-of-use applications.

Features can include TD Technology, replaceable modules, thermal protection, local & remote status indication, and short circuit current cartridge fusing.

# Learn More About nVent ERICO

Contact your sales representative for our product catalogues and additional resources

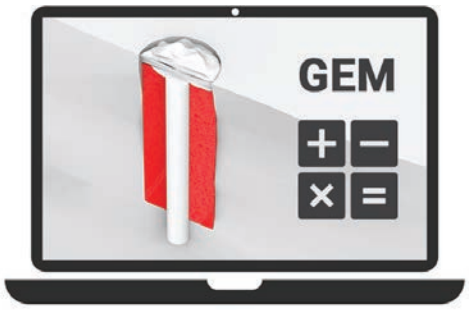
## OUR PRODUCT CATALOGUES

### nVent ERICO System 2000


### Grounding, Bonding and nVent ERICO Cadweld


### nVent ERICO Surge Protection Solutions


## OUR ONLINE RESOURCES




### nVent ERICO Renewed GEM Calculator

Quantify Ground Enhancement Material to solve the toughest grounding issues

Access the GEM Calculator
gem.nVent.com

Visit our online resources to learn more about nVent ERICO solutions and products.

Resources available include:

- Product information
- Catalogues and brochures
- Installation instructions
- Videos and more


## Ready to get started with nVent ERICO?

Contact your local sales representative or visit the contact us page on www.nVent.com

nVent  nVentERICO

nVent.com

**India**
Tel +91 7506015393
ordersefsindia@nVent.com

Our powerful portfolio of brands:

CADDY ERICO HOFFMAN ILSCO RAYCHEM SCHROFF



ERICO-SB-N01998-System2000-UKEN-2409