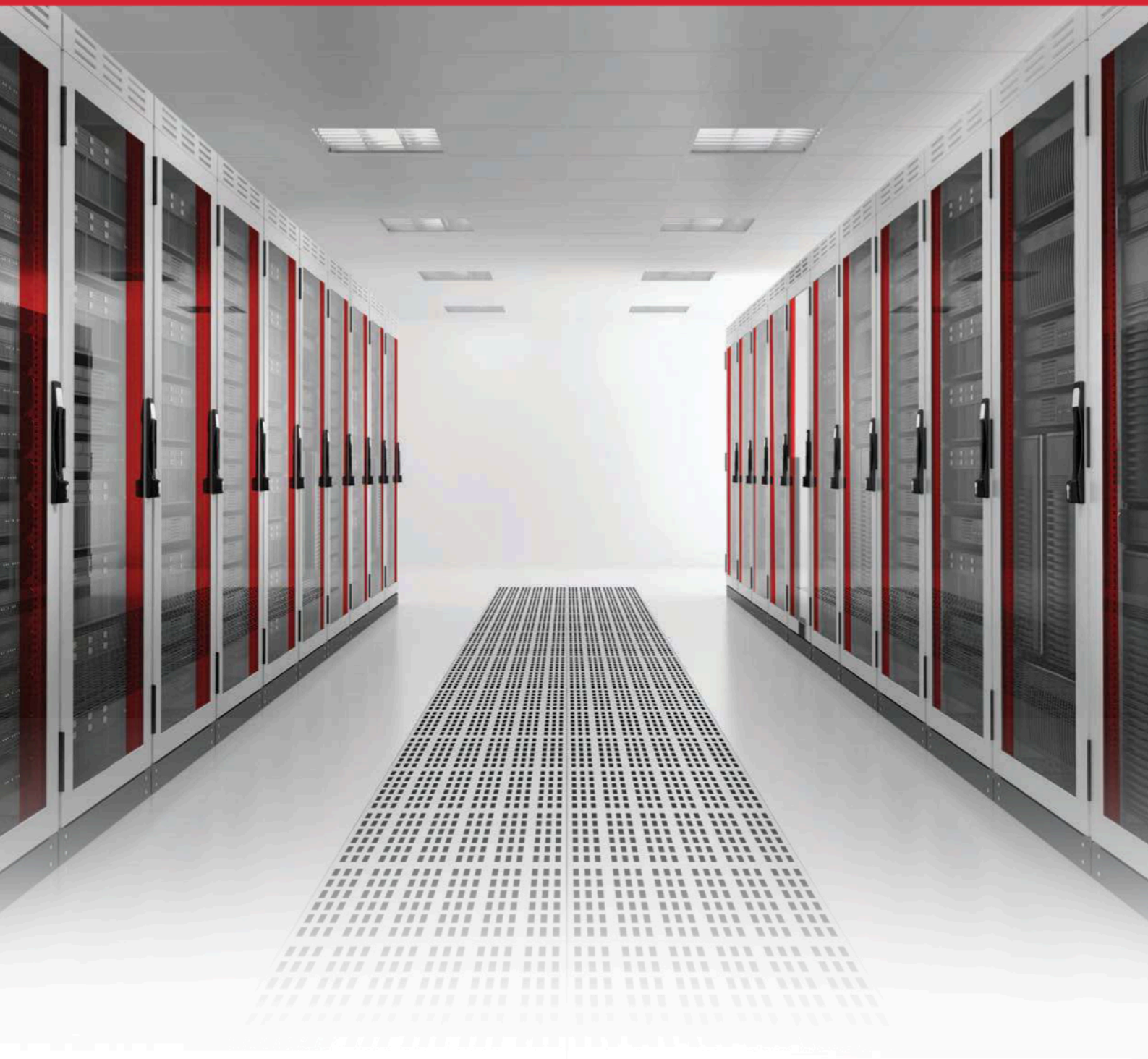
nVent

We connect and protect

Data Center Solutions

nVent CADDY, ERICO, ERIFLEX and ILSCO data center application products

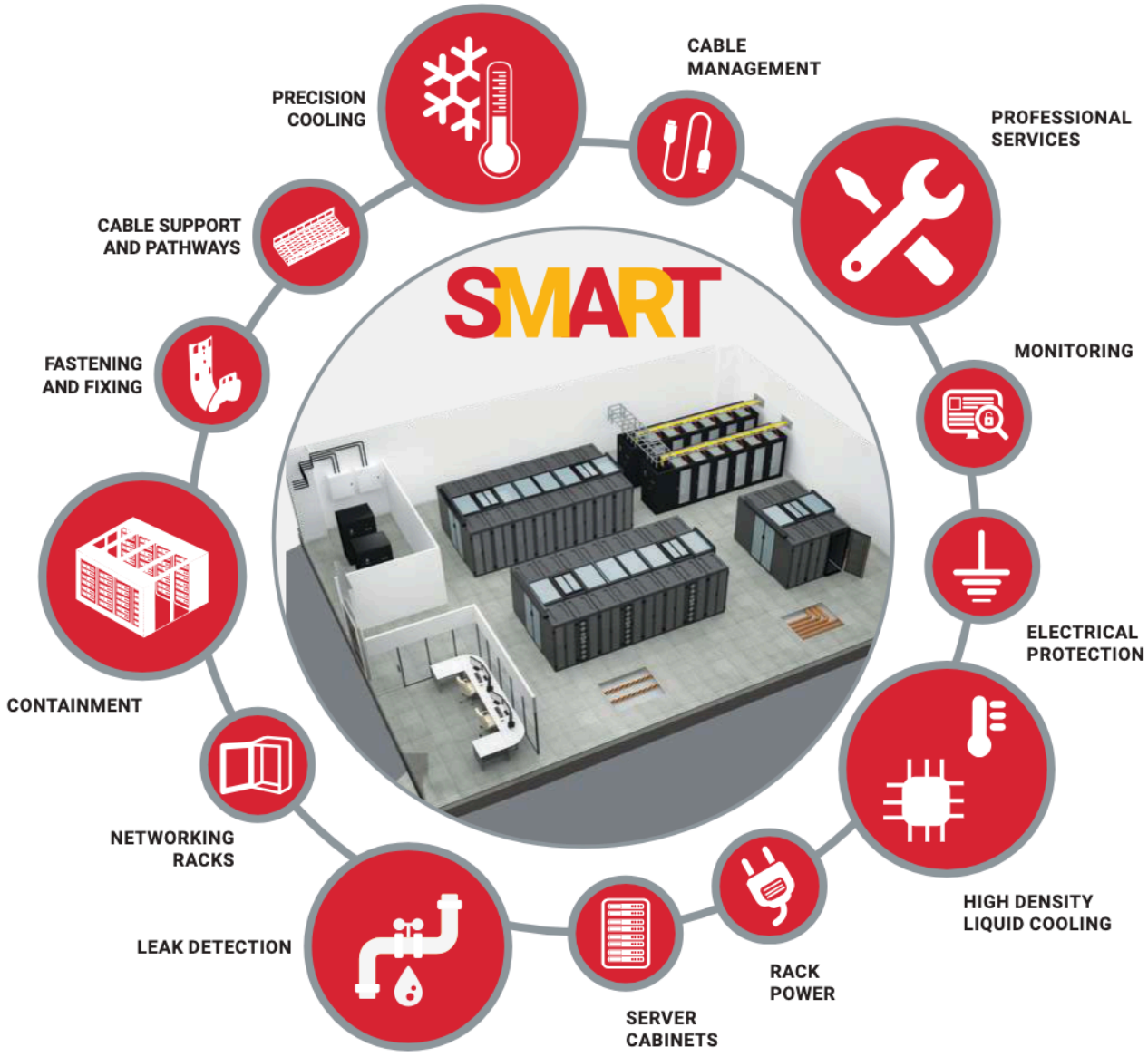


nVent Solutions for Data Centers

Introduction

Optimized solutions for connecting and protecting mission critical data center and wnetworking infrastructure

For datacenter and communication applications, we offer a comprehensive portfolio of power connections & distribution, cable management systems, lightning & surge protection and grounding systems that protect critical systems and help drive resiliency, serviceability and energy efficiency. We offer application design, certification and systems for seismic bracing, indoor and outdoor grounding, lightning protection and surge protection.



We connect and protect a more sustainable & electrified world

nVent provides solutions that connect and protect Mission-critical data center assets, making a significant contribution to data center infrastructure safety, and reliability through driving efficient, resilient, and robust solutions.

Long-Term Reliability

As a company

- Trusted, & reliable data center industry supplier with global expertise and Worldwide Recognized Holistic Solutions.

With respect to products

- Products offer a long service life and are less likely to fail prematurely, exposing critical assets to damage.
- Reliability in the industry has earned nVent spec position.

Safety

Our products are critical to the safety of people, data center staff, and the public.

- Products contain many features that ensure they function safely in operation.
- nVent products meet and exceed the highest quality and performance standards.

Critical Protection for Valuable Assets

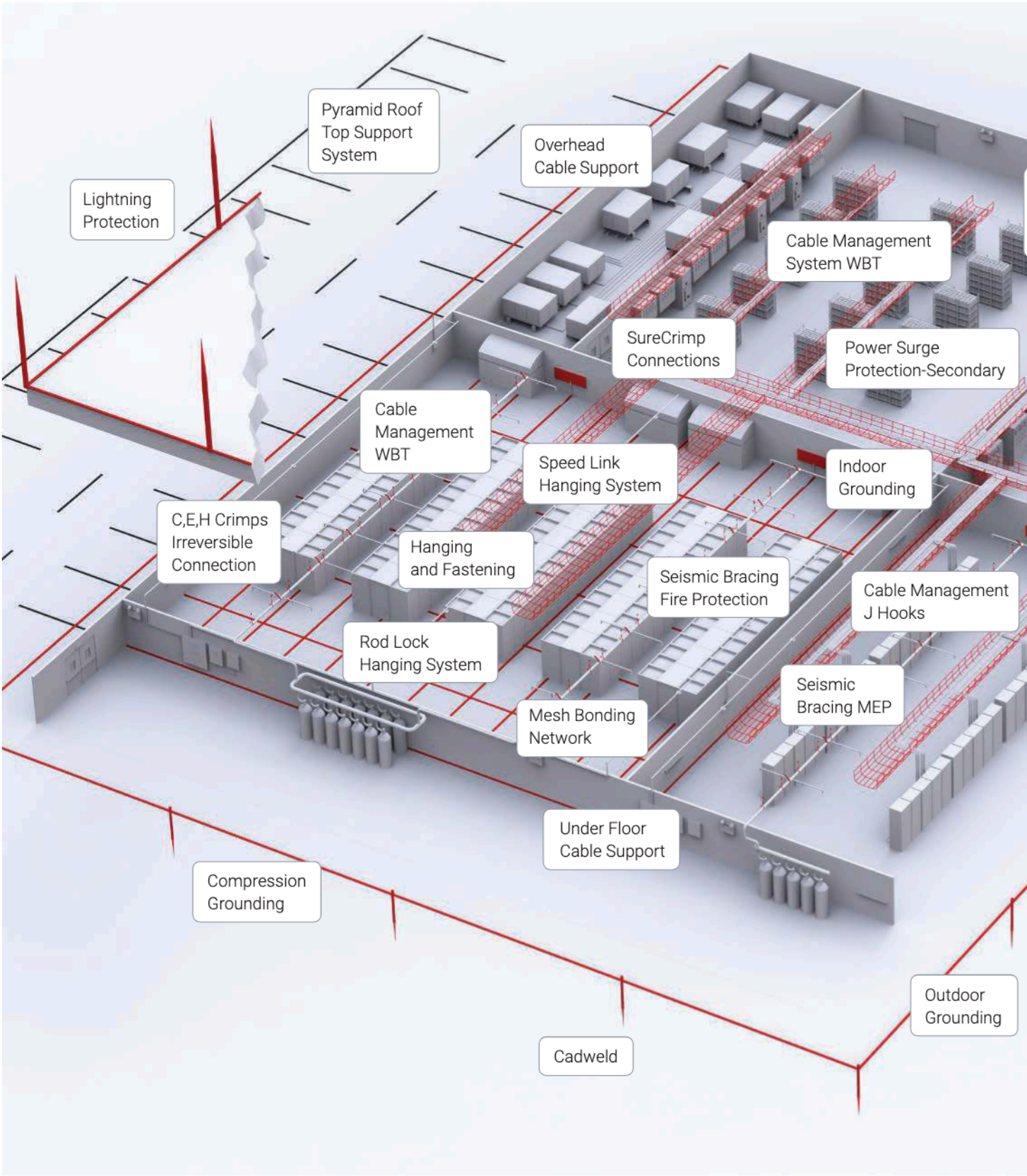
We help protect valuable, mission-critical assets from costly damage.

- Protection for critical assets that are expensive to replace.
- Prevent downtime (electrical outages) – the worst-case scenario for data center facilities.
- Innovative features; to add additional layer of protection against several risks, including theft, lightning, and surge.

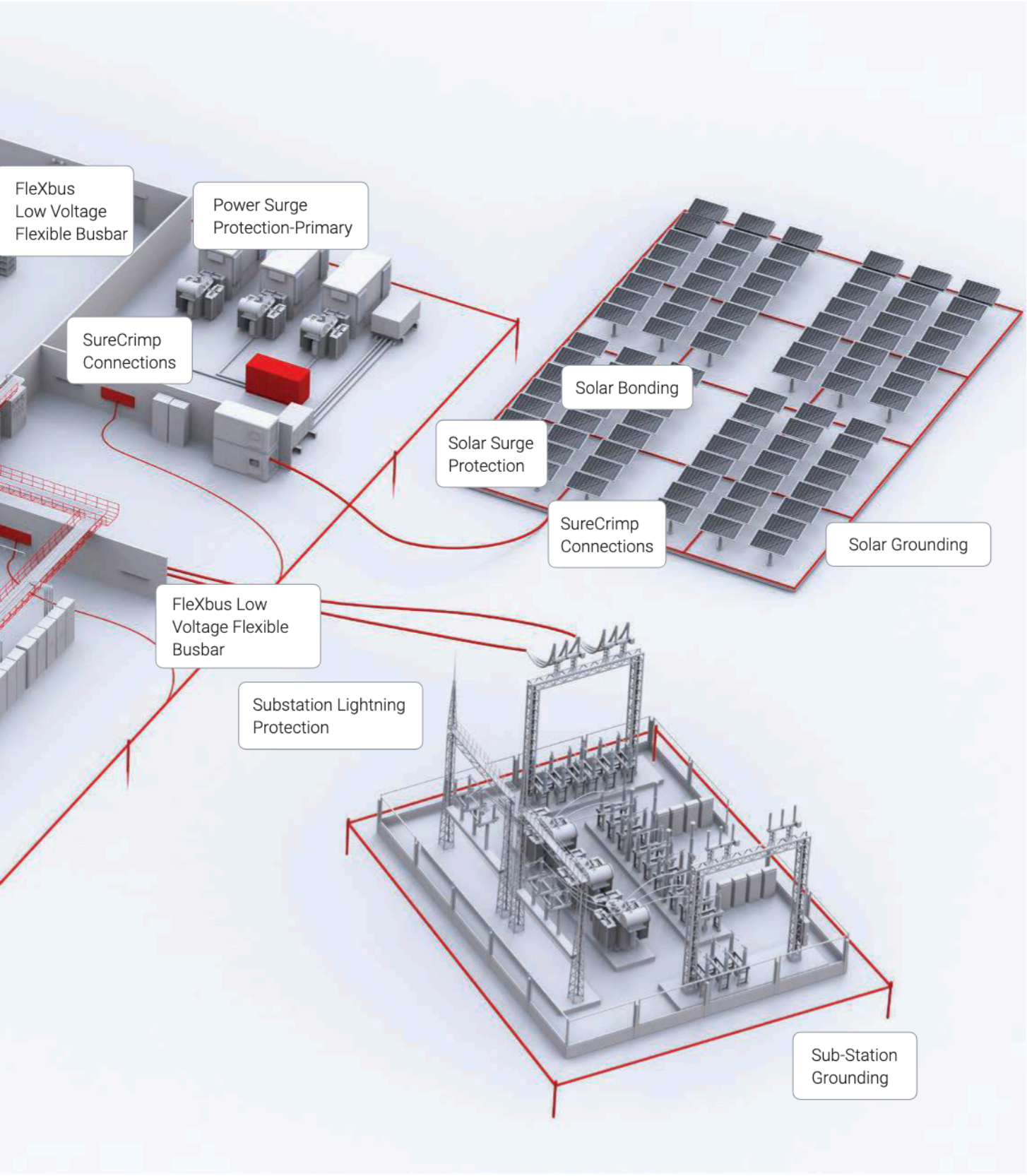
Expertise and Experience in the data center industry

We are positioned to meet the future needs of mission-critical data center assets and the significant integration of new systems and technologies, through our continuous innovations and new products introductions to compliments our holistic solutions.

nVent Electrical Fastening & Connection Solutions



nVent Electrical Fastening & Connection Solutions

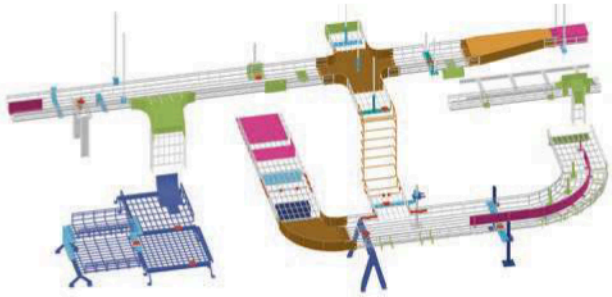


nVent CADDY Cable Management Solutions

1 CABLE SUPPORT/PATHWAY SOLUTIONS

nVent CADDY Cable Tray System

including the new nVent CADDY WBT Performance Cable Tray and accessories.



nVent CADDY Cat HP J-Hook System

Advanced, non-continuous pathway support solution for today's high performance cabling systems.



WBT Shaped Tray



nVent CADDY's Shaped Wire Technology increases cable support by 400% while also increasing tray stiffness. With one of the widest trays in the industry, this product is ideal for high-performance applications such as high-wattage POE and ultra high data rates.

WBT Preform



When properly installed, the WBT Preform transition molds can save time and increase labor efficiency, while providing ease of maintenance for future cable expansions.

WBT Form



WBT Form has a flame retardant polymer surface, providing solid top and side surfaces. This product is a cost-effective option to metallic liners. WBT Form is visually suitable for open ceilings, covering the contents of the pathway.

Limitless Tray Finishes



WBT Tray is available in multiple finishes and materials including powder coat paint, zinc plated, stainless steel – in a large variety of colors. These options make for easy color coding or branding colors.

nVent CADDY Cable Management Solutions

2 SEISMIC BRACING SYSTEMS

To help ensure the availability and operation of safety systems after an earthquake event, many building and industry codes now include requirements for the design and installation of seismic sway bracing for non-structural components, such as fire sprinkler, mechanical, electrical and plumbing systems.



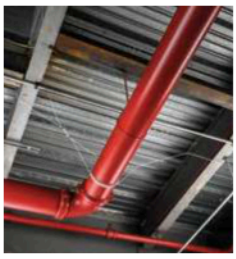
RIGID BRACING

The nVent CADDY line of innovative rigid bracing products was designed to provide superior performance and meet the highest seismic load requirements. The products have been designed with the end user in mind and provide contractors with labor-saving features to promote quick and easy installation. The system of products supports lateral and longitudinal bracing and offers a wide range of structural and pipe attachments.



CABLE BRACING

nVent CADDY cable bracing is a simple seismic bracing method for mechanical, electrical, plumbing (MEP) and fire sprinkler systems, including CPVC pipe systems. Cable bracing is the only option when brace lengths exceed the brace length limitation of 9'–7" (3 m) for strut or when confined/crowded spaces make rigid systems difficult to install. The system includes steel cables complying with the ASCE® 19 pre-streching requirements, attachment fittings, swaged oval sleeves & related tools, as well as pre-assembled kits.







nVent CADDY Cable Management Solutions

3 HANGING/SUPPORT SOLUTIONS

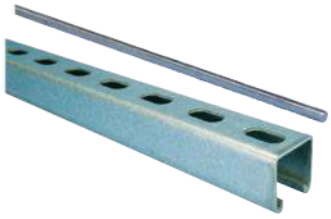
nVent CADDY Rod Lock Threaded Rod Mounting System

The nVent CADDY Rod Lock Threaded Rod Mounting System allows contractors to prefabricate complex assemblies at ground level or offsite, and then easily lift and lock them into place by pushing the threaded rod supports into the nVent CADDY Rod Lock device.



nVent CADDY Strut & Threaded Rod Hardware

nVent CADDY offers a variety of "tool-free" strut and threaded rod solutions to help make installation and adjustments quick and easy.



nVent CADDY Speed Link Support System

nVent CADDY Speed Link is a universal support system designed to reduce installation time. A cost-effective alternative to jack chain, threaded rod, strut and strut nuts, this innovative system has the versatility to meet virtually all your support needs.



4 ROOFTOP/UNDERFLOOR SUPPORT SYSTEMS

nVent CADDY Pyramid is an ideal solution for mounting electrical and mechanical applications to strut. Superior load distribution and a low abrasion foam interface combine to ensure that the roof membrane is protected despite varying roof surfaces and shifting caused by expansion and contraction.

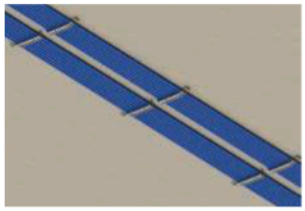


5 FASTENERS (SPRING STEEL)

Cable Snap Clip



PKM - Metal Pressure Clip



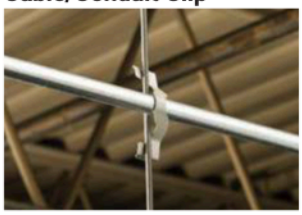
Wire Basket Tray Clip



Conduit to Beam Clip



Cable/Conduit Clip



Cable Tray to Rod Clip



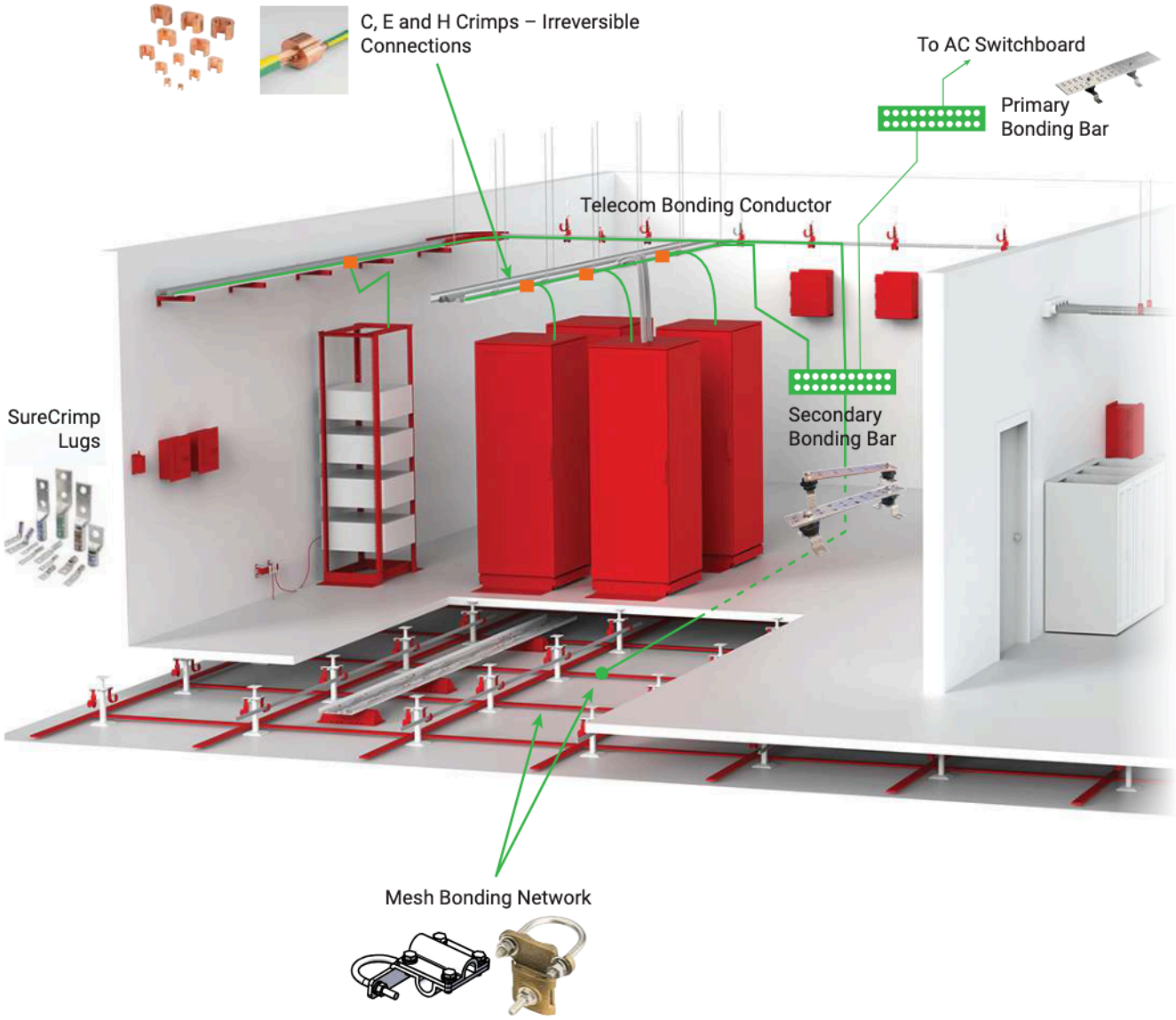
nVent CADDY Rod Lock Spring Steel Strut Nut



nVent ERICO Indoor Grounding Solutions

nVent ERICO indoor grounding solutions include:

- Design Assistance & Training
- Ground Bars
- Irreversible Crimp Connections
- Indoor Grounding System Design
- Mesh Bonding Network



nVent ERICO, ERIFLEX and ILSCO Connection Solutions



nVent ERICO C,E & H Compression Connections



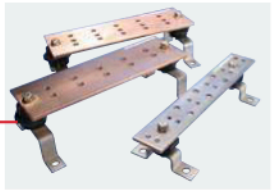


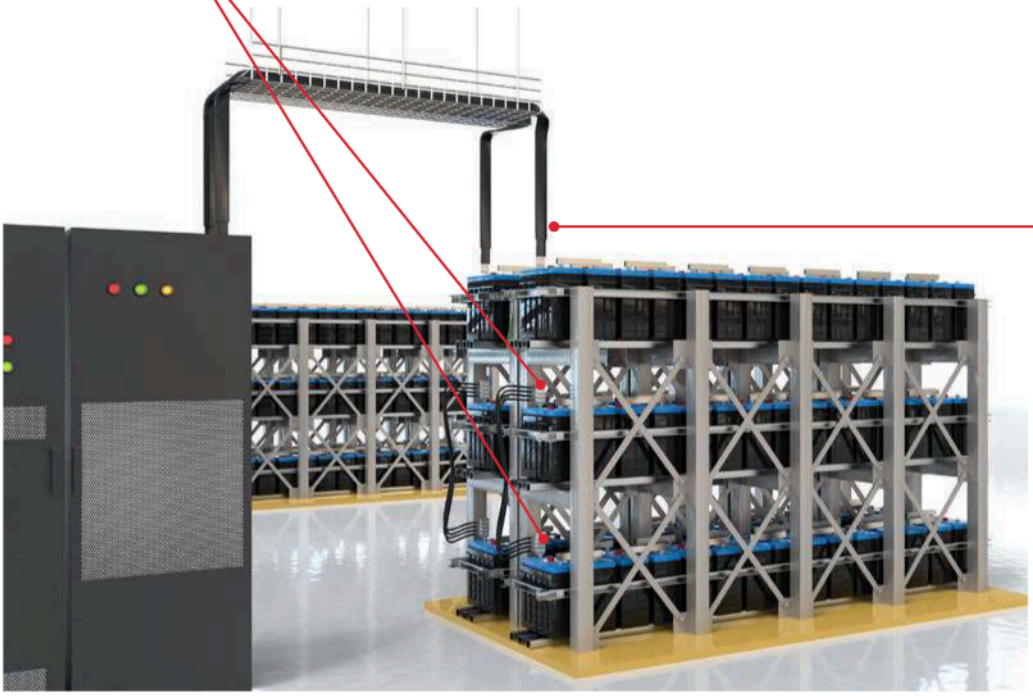
nVent ERICO Split Bolt IK-3N



nVent ILSCO SureCrimp LG from nVent ILSCO Catalog

nVent ERICO Grounding Busbars







nVent ERIFLEX FlexBus

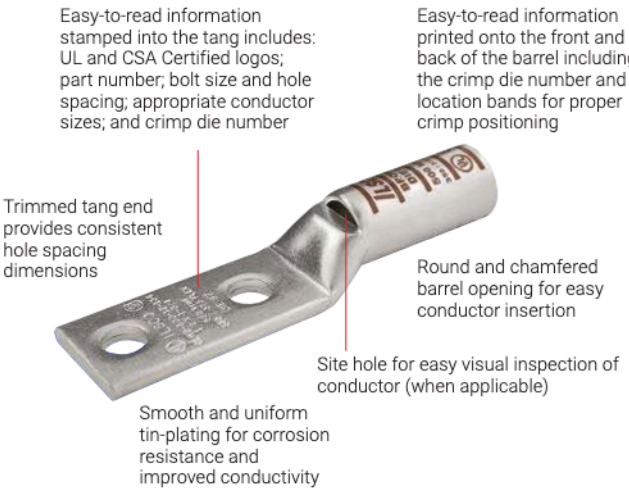
nVent ERIFLEX & nVent ILSCO provide a range of connection technologies for power connections using SureCrimp Lugs or FlexBus. nVent ERICO provides compression and mechanical grounding connections.

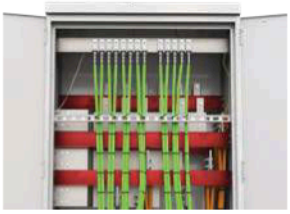
nVent ILSCO SureCrimp Lugs

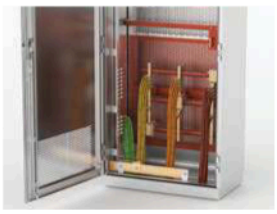
COPPER COMPRESSION



- Accepts multiple conductor classes including fine stranded and building/code wire
- Chamfered wire entry for easy conductor insertion
- Color coded for easy die identification
- Ink marked location bands for accurate crimp positioning
- Electro-tin plated
- Manufactured from high-strength seamless copper tubing
- UL Listed and CSA Certified
- SureCrimp copper connectors are UL Listed with nVent ILSCO's and major competitors' compression tools
- UL 467 Listed for grounding and bonding: #8-#2 solid, 500 kcmil-8







ALUMINUM COMPRESSION



- Chamfered wire entry for easy conductor insertion
- Color coded end caps for easy and accurate die identification
- Ink marking to provide permanent product identification and accurate crimp positioning
- Pre-filled with nVent ILSCO De-Ox oxide inhibiting compound
- Dual rated for Aluminum and Copper conductors
- UL Listed and CSA Certified
- SureCrimp aluminum connectors are UL Listed with nVent ILSCO's and major competitors' compression tools

OPTIMUM CRIMP DESIGN PROVIDES

- Strong, long-lasting connection with tight crimp profile for greater pull-out strength
- Increased contact area reduces resistance
- Potential for flash eliminated

SURECRIMP DIES, PRODUCE STRONG AND DURABLE CIRCUMFERENTIAL CRIMPS

nVent ILSCO's dies are made out of corrosion resistant, hardened, aircraft grade stainless steel, for durability and long life.

Inspecting connections is made easy by allowing you to match the die information on the connector with the embossed die number imprinted on the front and back of the applied crimp.

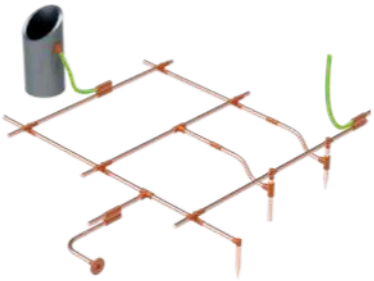




nVent ERICO Outdoor Grounding

NVENT ERICO CADWELD PLUS

nVent ERICO Cadweld Plus exothermically welded connections are engineered to provide a permanent, molecular bond that will not loosen or corrode. The connections are designed to maintain for the life of the conductor and/or installation.



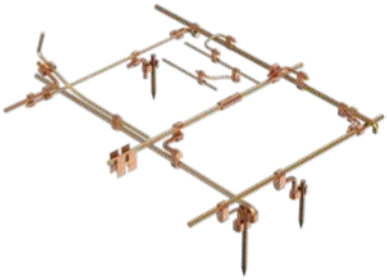


The key benefits of nVent ERICO Cadweld Plus are:

- Ultimate connections that are permanent and will not loosen or corrode
- Connections are made with inexpensive, lightweight equipment without the need for any special skills
- Connections have same current handling capability as the conductor

NVENT ERICO COMPRESSION GROUNDING

nVent ERICO Compression Grounding systems utilize pure wrought copper extrusions. This prevents corrosion due to dissimilar metals and are pre-filled with inhibiting compound.





The key benefits of nVent Compression Grounding:

- Compression tools and die together with connection provide a full system of connections
- Can be used below or above ground
- Irrevisible permanent connections

GROUND RODS AND ACCESSORIES

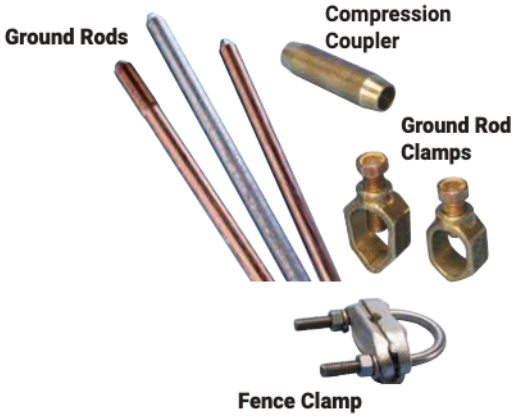
nVent ERICO offers GEM Ground Enhancement Material, a low-resistance, non-corrosive, carbon dust-based material that improves grounding effectiveness, especially in areas of poor conductivity. GEM25A exceeds the requirements of IEC 62561-7.

Also offered is nVent ERICO Quickfill No-Mix Ground Enhancing Backfill, which reduces resistance to ground and enables convenient installations. Quickfill is designed to minimize dust and eliminate mixing and is the ideal material to use in areas of poor conductivity such as rocky ground, mountain tops, and sandy soil.

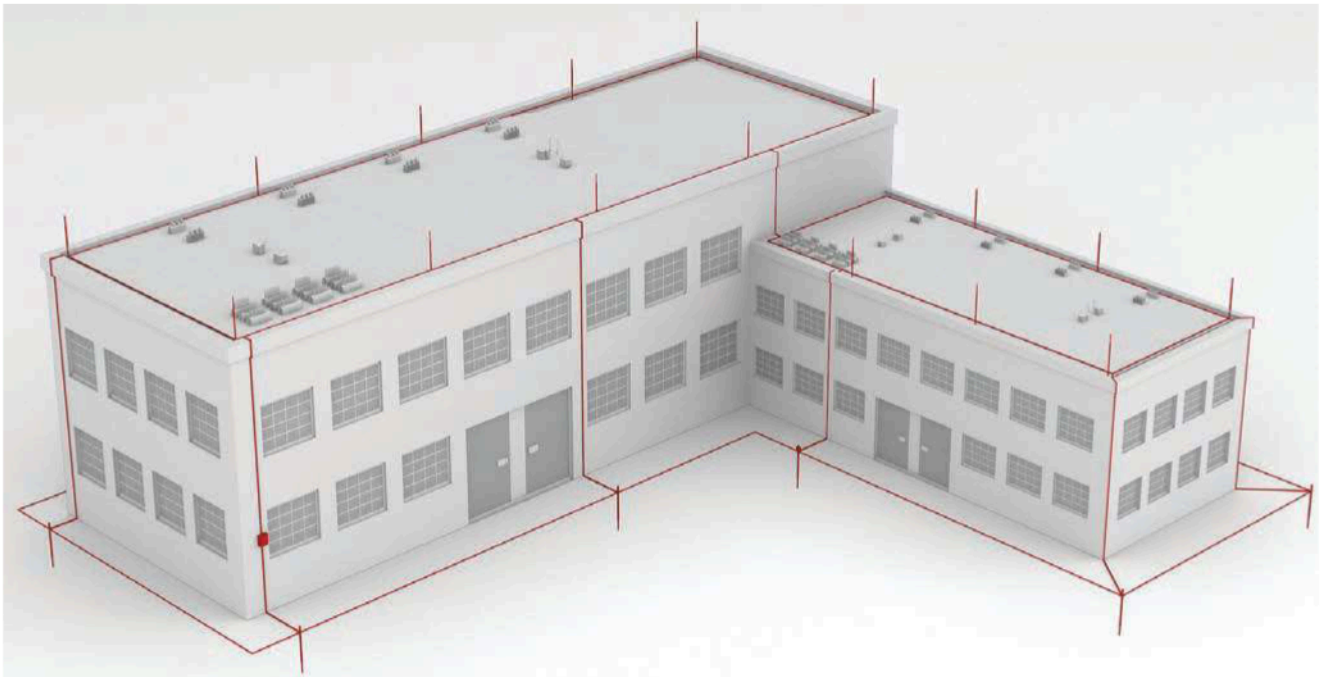
nVent ERICO offers a range of mechanical ground connections suitable both for flat tape and round conductors, and a range of ground test equipment.







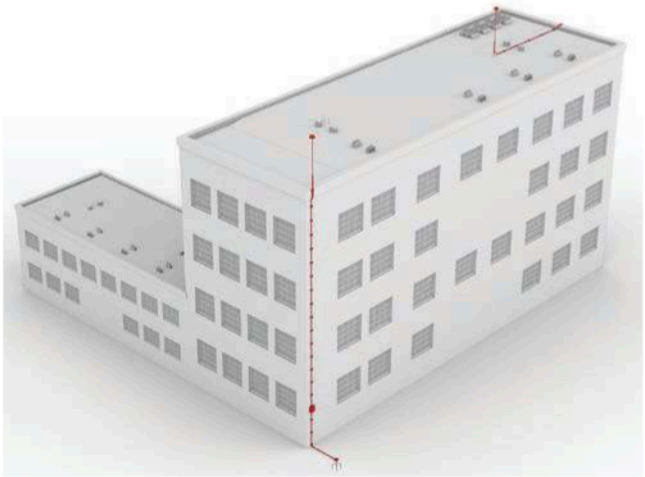
nVent ERICO Lightning Protection Systems



NVENT ERICO SYSTEM 2000

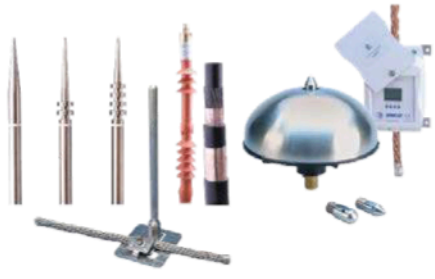
The nVent ERICO System 2000 is an engineered series of air terminals, down conductors, fittings and grounding systems in accordance with European IEC 62305 and USA UL 96, NFPA 780 Standards and many other global standards. Third-party inspections and certifications are available for these types of lightning protection systems.





NVENT ERICO SYSTEM 3000

System 3000 is a technically advanced lightning protection system. The unique features of this system allow the achievement of reliable lightning capture and control.



nVent ERICO Surge Protection

Even with the best grounding and bonding system, electrical transient events and disturbances can cause a loss of electrical equipment and increase downtime. A coordinated surge protection system is crucial for ensuring protection during a major electrical event and prolonging the life of equipment by reducing the impact of low-magnitude transient events.

For both building power and low-voltage applications, nVent ERICO has the products and expertise for a comprehensive surge protection scheme on power and communication lines caused by lightning, building systems and other switching events. Our involvement in the industry predates the creation of the initial IEC and UL low-voltage surge protection standards, and we have been active in all major worldwide surge protective device (SPD) standards committees and industry bodies, including IEEE, IEC and UL.



DTX120 3 phase Imax = 120 kA
Typical Application:
Main Switch Board
Modular Data Center



DTX240 3 phase Imax = 240 kA
Typical Application:
Main Switch Board Modular
Data Center



SES320 and SES320F 3 phase Imax = 320 kA
F Model Provides active Tracking Filter
Typical Application:
Main Switch Board



DT1M – 3 Phase & 1 phase
Iimp = 25 kA
Typical Application: Main Switch Board, Modular Data Center

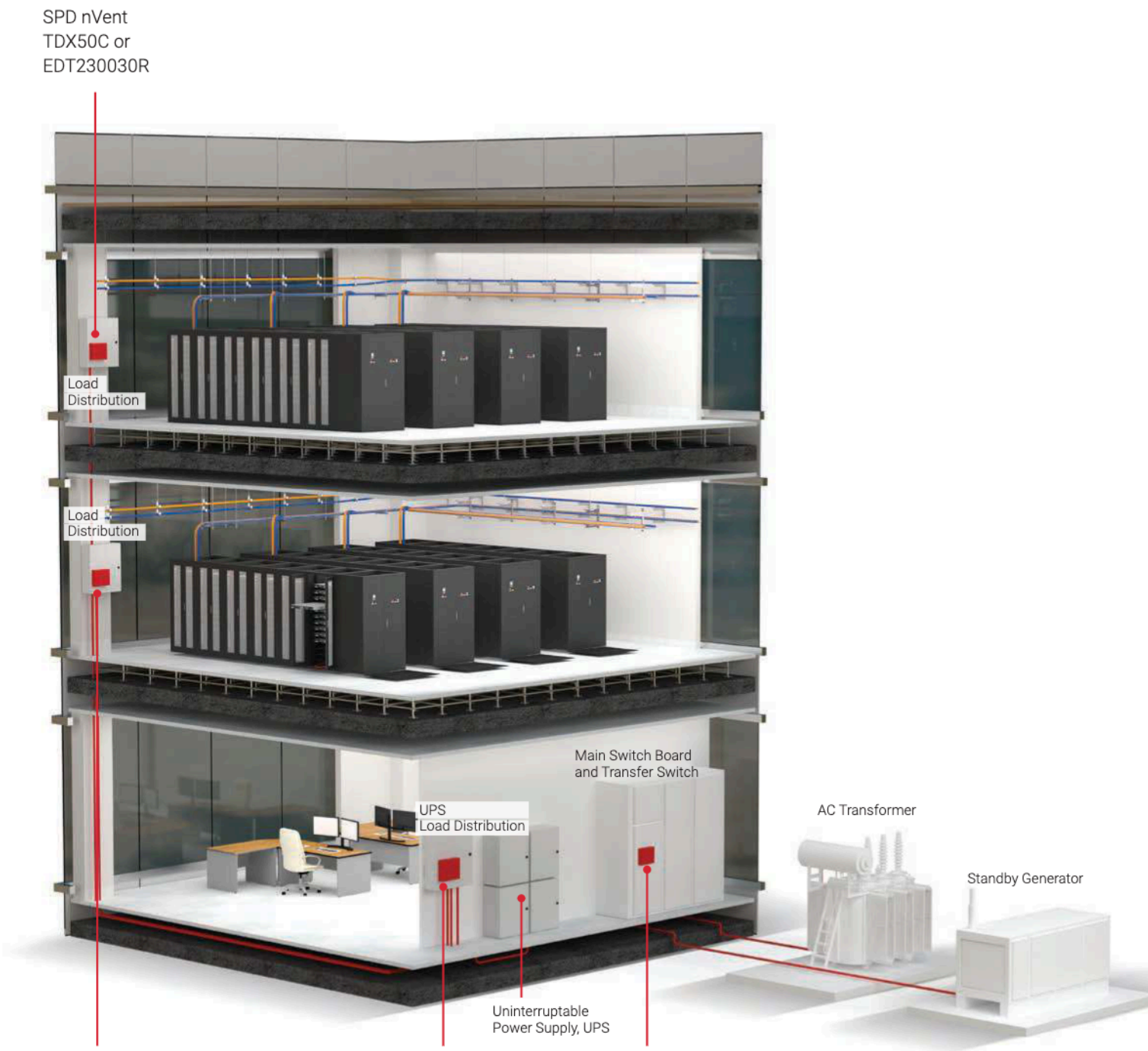


EDT2 – 3 Phase and 1 Phase
Imax = 50 kA
Typical Application: Distribution boards



SES160 and SES160F 3 phase Imax = 100 kA
F Model Provides active Tracking Filter
Typical Application:
Main Switch Board or Distribution Board

nVent ERICO Surge Protection



nVent ERIFLEX FleXbus System

nVent ERIFLEX FleXbus is an innovative and patented connection solution between two electrical equipment installations, such as transformers, switchboards, generators or large Uninterrupted Power Supplies (UPS). Due to its unique concept, nVent ERIFLEX FleXbus is an alternative power connection solution for up to **50%** quicker installation and **20%** reduction in total installed cost at a minimum.



OPERATING ADVANTAGE

- Versatile, customisable, user friendly and no specific tool required. Attractive for short distances, up to 25 meters
- No specialized labor force necessary with a ready-to-use solution
- Very flexible conductor with no bending radius to follow
- Achieve virtually any layout and overcome any imperfections that may be found on-site
- No cable tray necessary to support FleXbus conductors

SPACE AND WEIGHT

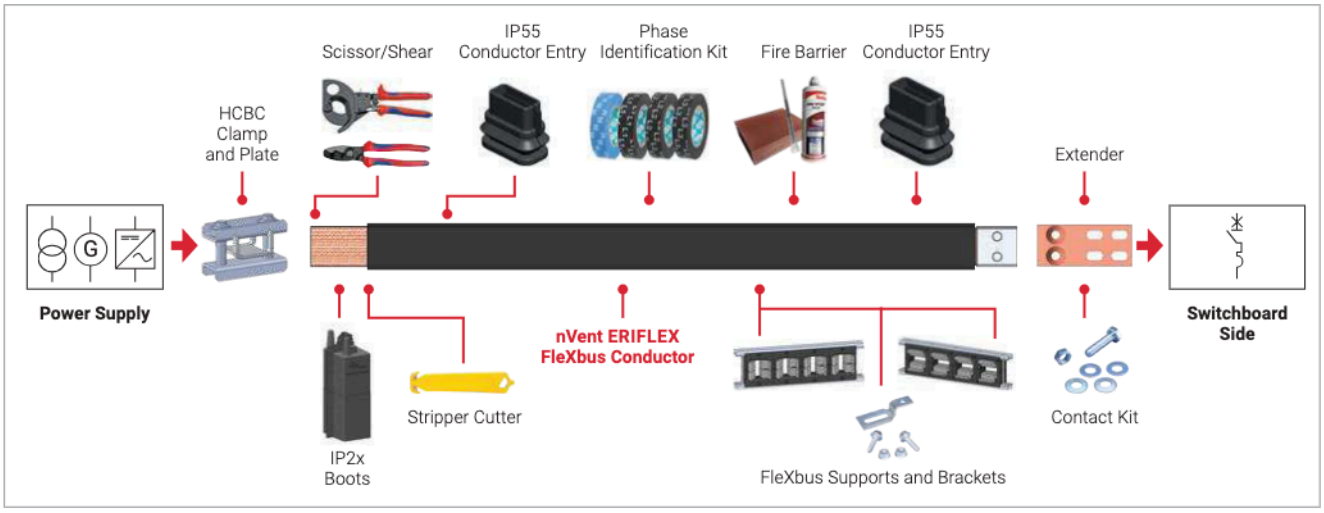
- Only one conductor per phase from 400 kVA (560 A) to 1600 kVA (2250 A)
- Two conductors per phase for 2000 kVA (2800 A) to 3150 kVA (4435 A) when cable solution requires multiple conductors per phase
- Three FleXbus conductors per phase for 5000 & 6300 A
- No need for specific engineering study or strict installation measurement
- Total installation cost reduction of minimal 20%

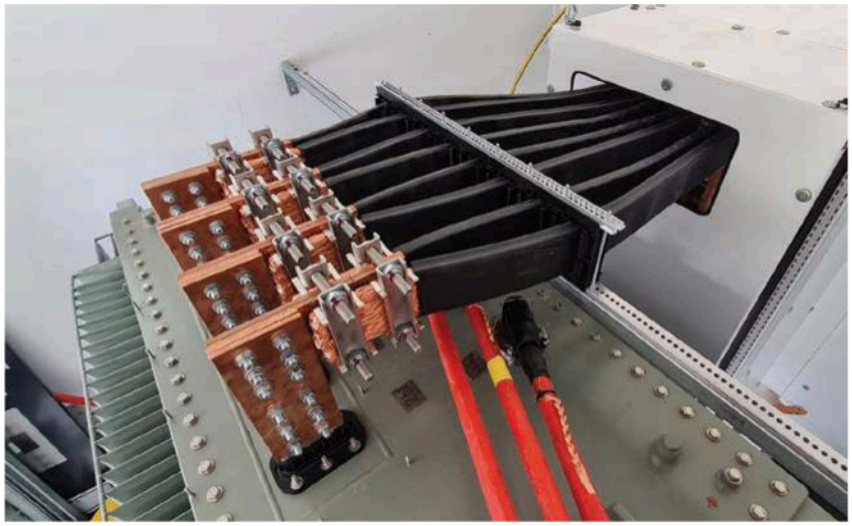
TIME SAVING

- Up to 50% quicker to install than busduct or wireway/ cable tray with multiple cables and lugs

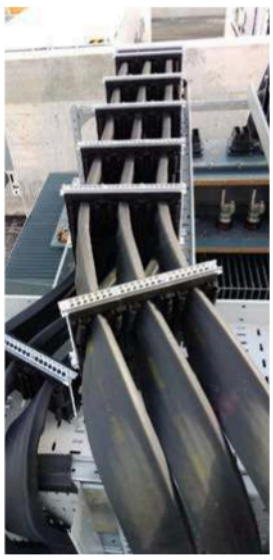
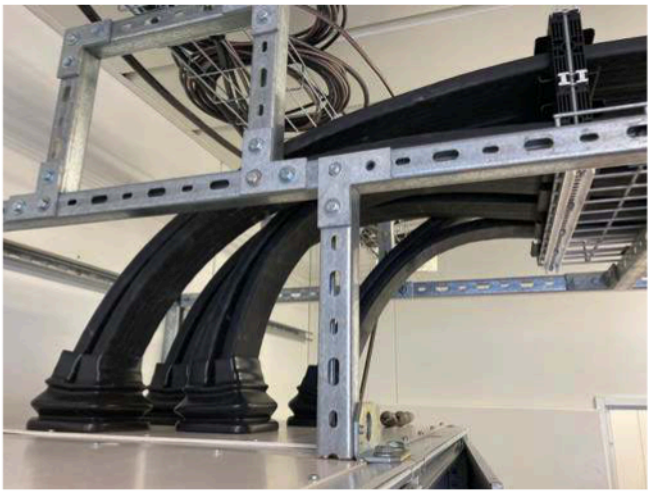
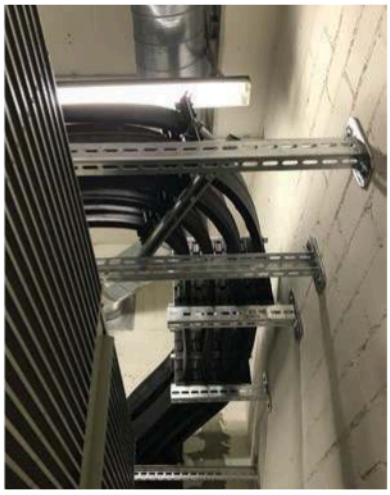
RELIABILITY AND SAFETY

- IEC worldwide tested and certified
- Low-smoke, halogen-free, flame retardant and high-temperature resistant



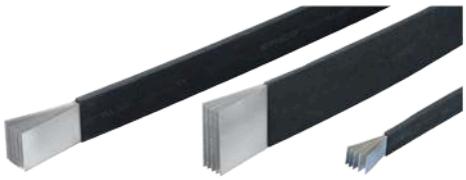





nVent ERIFLEX Lugless and Flat Conductors

nVent offers two flexible flat conductors solutions for connecting electrical components above 80 A inside compact spaces.



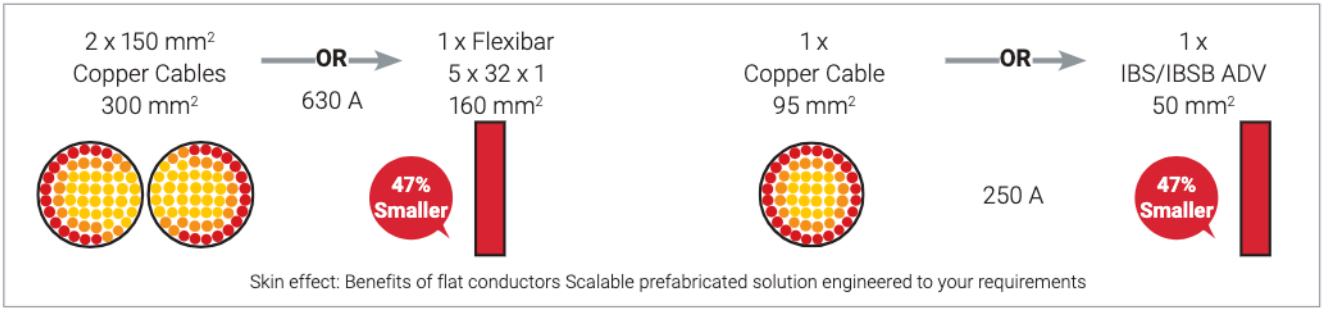


NVENT ERIFLEX FLEXIBAR ADVANCED

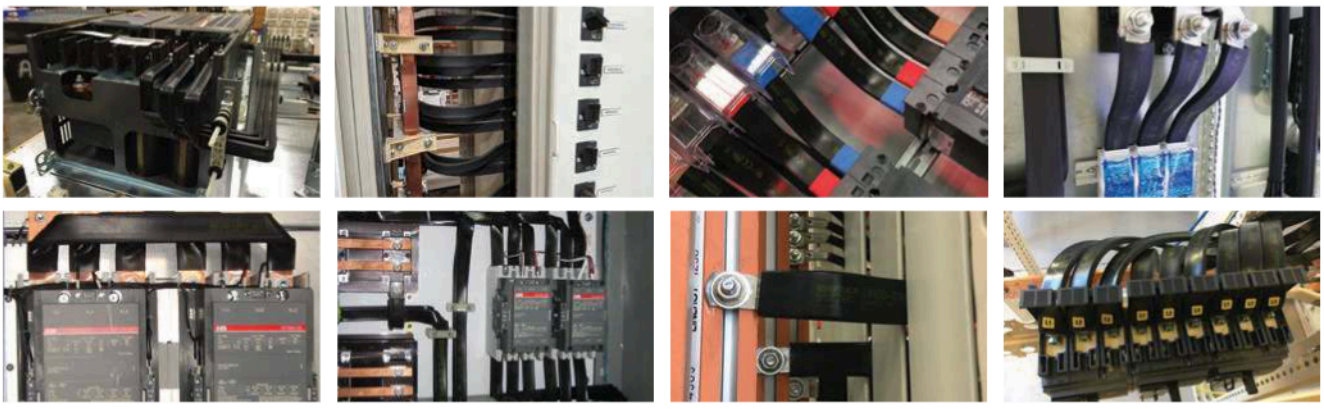
- From 125 A to over 2800 A at 1000 VAC/1500 VDC IEC/UL
- Thin layers of tinned electrolytic copper formed into a stack
- Insulated by a high-resistance, halogen-free, flame-retardant and low-smoke material with reinforced insulation properties, high flexibility and maximum temperature rating of 115°C (267°F)
- No lugs needed, reducing installation time and improving resistence to vibration
- Skin effect allows for weight and material savings compared to wire(s) alternatives leading to higher sustainability
- Tinned copper allows for copper or aluminum conductor connections
- Compliant to IEC and UL standards

NVENT ERIFLEX IBSB ADVANCED

- From 80 A to 700 A at 1000 VAC/1500 VDC IEC/UL
- Braid made of tinned copper strands
- Insulated by a high-resistance, halogen-free, flame-retardant and low-smoke material with reinforced insulation properties, high flexibility and maximum temperature rating of 115°C (267°F)
- Suitable for direct connection to all major brands of molded case circuit breakers
- Ready-to-use and no lugs needed, reducing installation time and improving resistance to vibration
- Tinned copper allows for copper or aluminum conductor connections
- Ideal for high-volume manufacturing
- Compliant to IEC and UL standards



Skin effect: Benefits of flat conductors Scalable prefabricated solution engineered to your requirements



nVent ERIFLEX Power and Distribution Blocks

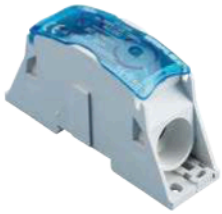
nVent offers two solutions for **receiving and distributing power inside** compact enclosures.



NVENT ERIFLEX DISTRIBUTION BLOCKS

- Range up to 1250A IEC / 950A UL
- Tinned copper or aluminum connecting block allows for the direct connection of copper or aluminum conductors
- No lug needed which makes this solution ideal for high-volume manufacturing
- nVent ERIFLEX Flexibar and nVent ERIFLEX IBSB Advanced
- Compact solution with IP20 rating and halogen-free housing
- Screw retaining cover is hinged and removable as well as transparent for ease of inspection and maintenance
- IEC 60947-7-1 and UL1059 or UL1953 compliance
- High fill ratio leading to better short-circuit performance per IEC and UL
- Significant space-savings over traditional methods used to distribute power within an electrical assembly

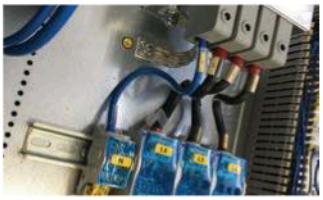
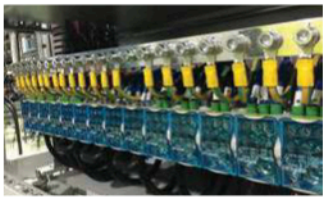
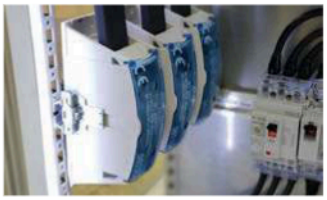




NVENT ERIFLEX POWER BLOCKS

- Range up to 1940A IEC / 1680A UL
- Tinned copper or aluminum connecting block allows for the direct connection of copper or aluminum conductors
- No lug needed which makes this solution ideal for high-volume manufacturing
- nVent ERIFLEX Flexibar and nVent ERIFLEX IBSB Advanced
- Compact solution with IP20 rating and halogen-free housing
- Screw retaining cover is hinged and removable as well as transparent for ease of inspection and maintenance
- IEC 60947-7-1 and UL1059 or UL1953 compliance
- High fill ratio leading to better short-circuit performance per IEC and UL
- Significant space-savings over traditional methods used to connect multiple incoming or outgoing cables








nVent ERIFLEX Earthing Accessories

nVent offers a wide range of solutions for improved **earthing and equipotential bonding** leading to better electrical safety.

NVENT ERIFLEX MBJ BRAIDS



- Prefabricated grounding strap
- Tinned copper
- Integral (solid) palm provides superior electrical performance and durability
- Recommended by the EMC/EMI directives
- Ideal solution for high volume manufacturing
- Compliant to IEC and UL standards

NVENT ERIFLEX CPI BRAIDS



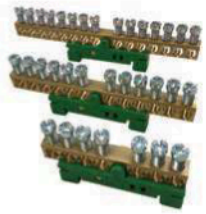
- Prefabricated grounding strap
- Made of 316 L stainless steel
- Ideal for installation in a corrosive environment (e.g., semiconductor exhaust gas)
- Recommended by the EMC/EMI directives
- Ideal solution for high volume manufacturing
- Compliant to IEC and UL standards

NVENT ERIFLEX ISO-TP INSULATORS



- Halogen-free
- High resistance to leakage current
- Great stability of electrical and mechanical parameters
- Fiberglass reinforced
- Compliant to IEC and UL standards

NVENT ERIFLEX EARTHING BARS

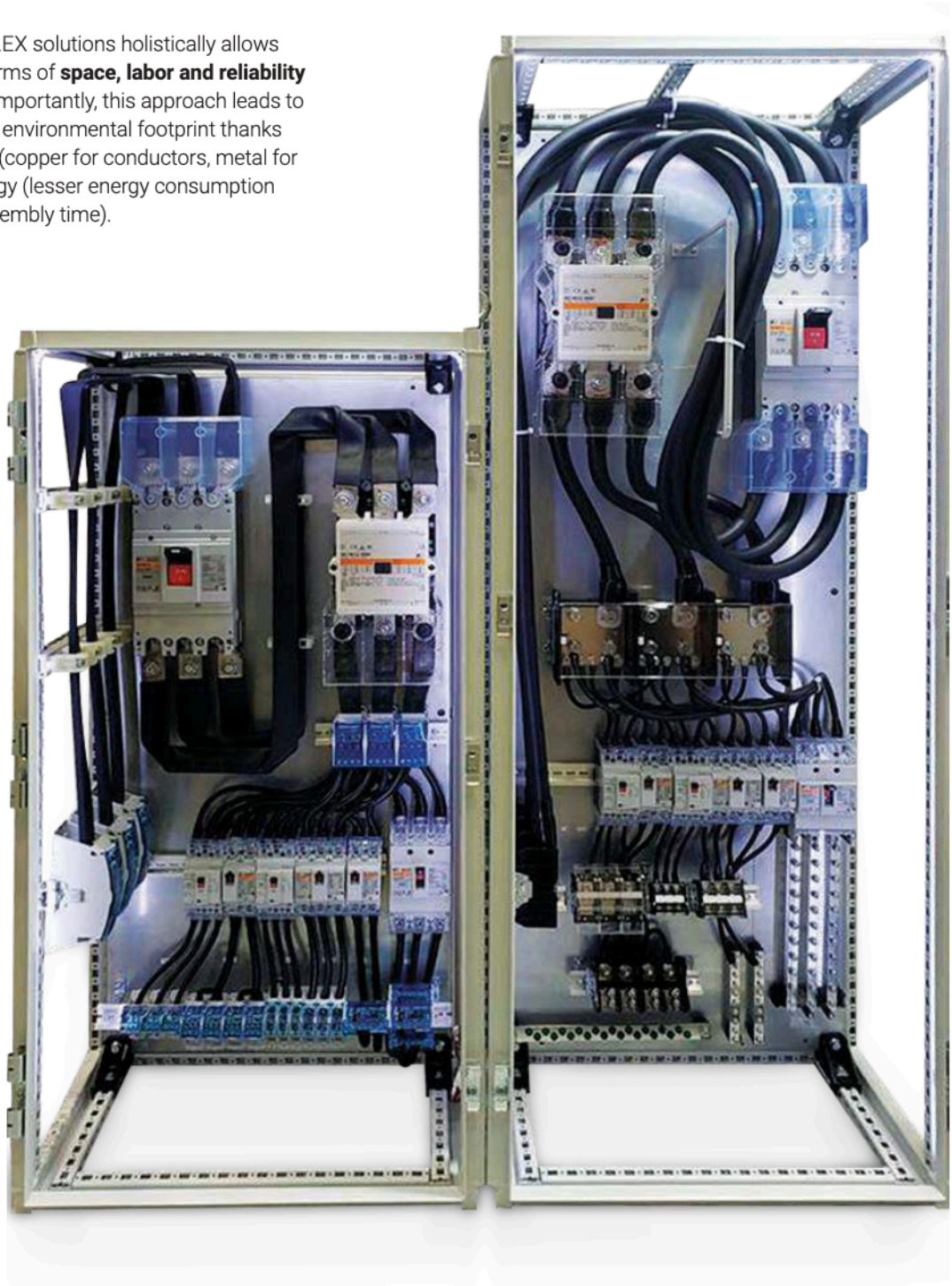


- Available in brass, nickel plated brass or tinned aluminum depending on the configuration
- Direct connection to DIN rail for some models
- No ring lug needed
- Compliant to IEC and UL standards



Combining nVent ERIFLEX Solutions

Combining nVent ERIFLEX solutions holistically allows for greater savings in terms of **space, labor and reliability** as shown below. More importantly, this approach leads to a system with a smaller environmental footprint thanks to **savings in materials** (copper for conductors, metal for the enclosure) and energy (lesser energy consumption because of reduced assembly time).



LOW SMOKE

HALOGEN FREE

FLAME RETARDANT

HIGH TEMPERATURE

TINNED COPPER

Customized Solutions and Training



ENGINEERING AND DESIGN SERVICES

By leveraging nVent solutions and using our engineering expertise, designers and manufacturers can reduce their total installation costs while improving safety and reliability and meeting stringent customer requirements.

Let our in-house experts assist by supporting your system design, providing technical and configuration advice or quoting for complete low-voltage power solutions.

To assist with assembly manufacturing, our nVent team provides:

- **Design support**
- **Our proprietary interactive panel software**
- **Early involvement**
- **Training and assistance during installation**

ELECTRICAL ENGINEERING LAB

nVent has invested in state-of-the-art equipment and expanded the in-house Engineering Electrical Lab to meet evolving regional trends and needs. By increasing capability, nVent can support major development and commercial opportunities.

With the lab, nVent can:

- Support the testing of new applications using nVent brand products
- Participate in the UL Client Test Data Program
- Conduct competitive product testing
- Enhance the internal development of innovative products Support key commercial opportunities
- Reduce time to market
- Test and evaluate to IEC standards

TRAINING

nVent application engineers and researchers have decades of domain expertise and continue to develop new products for improved performance and installation efficiency for the data center industry.

We are trusted to deliver cost-effective, long-term solutions through turn-key, rapid-response engineering, design and integration services for the unique demands of the data center industry.

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nVent

Our powerful portfolio of brands:

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