

Innovative. Sustainable. High-Performing.

These are the products bringing us to the future.



Advancing Nonresidential Building Design

Marking its 20th anniversary, the *Consulting-Specifying Engineer* Product of the Year program continues to be the premier award for new products in the mechanical, fire/life safety, electrical, lighting, plumbing and related nonresidential building systems markets. This annual reader-choice program is designed to provide Consulting-Specifying Engineer's audience with valuable insights into the most innovative and impactful products introduced to the North American market in 2024.

For the 2025 program, manufacturers and marketing agencies nominated eligible products, which were then presented in a dedicated ebook and included on an online voting ballot. Voters assessed each product based on technological advancement, service to the industry and market impact, ensuring a rigorous and credible selection process.

This year's Winners eBook features 20 outstanding products across seven categories, along with one product earning the distinguished Most Valuable Product honor – the highest accolade in the program. The following pages highlight the innovations that are setting new benchmarks for excellence and shaping the future of nonresidential building systems engineering.



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MOST VALUABLE PRODUCT (MVP)



PowerXL DX1

PowerXL DX1 is a high-performance variable frequency drive engineered for precise speed and torque motor control across a wide range of industries. It is the newest addition to Eaton's trusted PowerXL series, designed specifically for applications requiring precise control of permanent magnet, induction or high-efficiency motors. It simplifies installation, commissioning and operations through an intuitive touchscreen interface that improves workflow compared to traditional keypads. This user-friendly design helps operators save time while providing clarity on drive operations.

Key Features and Benefits:

- · With a streamlined design, the PowerXL DX1 simplifies setup, configuration, maintenance and troubleshooting.
- The drive offers speed accuracy of ≤0.01% of rated speed and a wide speed range of 1000:1.
- Integrated safety functions, including SIL 2, PL d and Cat.3 safe torque off, provide enhanced protection.
- Four easily accessible option card slots allow for tailored adjustments, such as different encoder cards or I/O expansion, to meet specific application requirements.

PRODUCT CATEGORIES:

Motor-drive, integrated; motor, variable or switched reluctance; drive, variable frequency (VFD)

PRODUCT INDUSTRIES:

Water, wastewater; energy (coal, hydro, nuclear, wind); food, beverage; oil and gas refining

Actuators, Motors, Drives



integrated drive motors can meet the requirements of various complex industrial environments. They have the reliability of an induction motor and the high performance of a permanent magnet motor. EMR motors can deliver the same power and torque as an induction motor in a smaller frame. These motors have an integrated drive design and can work well with multiple other top brands of general frequency converters. The product scope presently includes 184T-286T NEMA frames, four and six poles, 3 to 50 hp, 480 V, 1,200 and 1,800 rpm.

IE5 efficient EMR-Bulldozer Series ferrite-assisted synchronous reluctance

Ferrite-Assisted Synchronous Reluctance Motors

Wolong Electric America

www.wolong america.com

Actuators, Motors, Drives



www.wolong america.com

WD4000 MV Drives

WD4000 includes a best-in-class 18-pulse phase shift transformer starting at 1,000 hp. It performs with low distortion, which lowers harmonics and exceeds IEEE 519 and most utility codes. This compact design eliminates the need for filters and can control legacy and modern motors. It is superior to two- or three-level inverters and current source inverter designs. WD4000 is a modular design with neutral rebalancing, which means the drive will continue to run if a power module fails to allow a controlled shutdown and fast swap out. The product scope presently includes 4,160 V, 1,000 to 5,500 hp and 130 to 635 A.

Wolong Electric America

Automation, Networking & Measurement



Power Xpert (PXE) Energy Meter

The Power Xpert energy meter (PXE) is a revenue-grade power and energy meter offering a cost-effective solution for energy and submetering applications. This three-phase meter provides high accuracy and advanced features in a standard 4-inch form factor, with expandable modular I/O options. Its new display offers a graphical view of all attached meters in a single dashboard, including ITIC curves and waveforms. Compatible with any Modbus meter, the PXE is easily retrofitted into existing assemblies and is more affordable than other human-machine interfaces or industrial PCs.

Eaton

www.eaton.com

Automation, Networking & Measurement



LC20 Liquid-Cooled Load Bank

The Avtron LC20 liquid-cooled load bank enables commissioning of modern liquid-cooled data centers. These 500-kW units feature corrosion-resistant stainless-steel piping and tanks, with resolution as fine as 5 kW. They can network with up to 200 liquid-cooled or air-cooled load banks. Built for demanding environments, the LC20's heavy-duty frame and rugged components maximize uptime and reliability. The load banks comply with UL standards, ensuring high quality. Their design allows for efficient testing and commissioning of liquid-cooled data center systems.

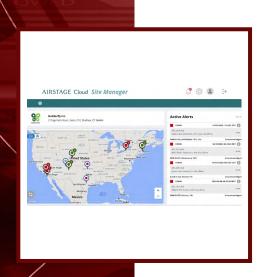
Avtron Power Solutions

avtronpower.com

BRONZE WINNER



Automation, Networking & Measurement



www.fujitsu general.com

AIRSTAGE Cloud

The AIRSTAGE Cloud control platform provides building management systems (BMS) as a service, including monitoring, management and maintenance of all Fujitsu products and third-party equipment, regardless of manufacturer. AIRSTAGE Cloud's architecture avoids the costly, complex programming inherent to industry standard BMS. Plug and play recognition of building equipment makes installation and commissioning simple, enabling HVAC contractors and facility managers to deliver a powerful BMS at a fraction of the cost of a conventional BMS. Due to cost and complexity, most commercial buildings under 50,000 sq ft in size are not equipped with a BMS. AIRSTAGE Cloud solves this issue.

Fujitsu General America

Electrical & Lighting



D2 Series 2-inch Architectural Recessed Downlights

Lutron's new D2 series 2-inch-aperture downlights elevate the lighting experience with discreet, reliable recessed fixtures for quiet ceilings. The series features a precision aiming mechanism, die-cast aluminum trims with nearly invisible edges and integrated wireless control. The Ketra D2 downlight replicates natural light across the black body curve, while the Rania D2 offers exceptional white light from warm incandescent to midday sun. With versatile design and seamless integration, the D2 series sets a new design paradigm for Lutron, keeping the focus on what's most important: the light itself.

Lutron Electronics Co.

www.lutron.com

Electrical & Lighting



holophane. acuitybrands.com

HOLOBAY

HOLOBAY, the next generation of robust round high bays, is designed for demanding industrial, commercial and educational environments. Featuring unmatched electrical, environmental and thermal ratings, it provides the lowest total cost of ownership and energy savings. The fixture combines precisely engineered die-cast aluminum with borosilicate prismatic glass for exceptional illumination, visual comfort and efficiency. A hinged driver door simplifies installation and maintenance. With its ultra-sleek compact size and full suite of control options, HOLOBAY can shine in any setting, from large indoor spaces to harsh industrial environments.

Holophane

Electrical & Lighting



Food Grade Stainless Liquid Tight Transition Fitting

The patent-pending Robroy Stainless Food Grade Liquid Tight Transition Fittings set a new benchmark in hygienic electrical raceway design for hazardous and sanitary environments. Engineered to connect food-grade liquid-tight fittings to conduit bodies, these fittings ensure smooth transitions between liquid-tight flexible metal conduit and rigid conduit while maintaining environmental system ratings and hygienic compliance. Made from 316 stainless steel, they resist corrosion, rust and contaminants, making them ideal for washdown environments. Extended male NPT threads provide a secure, flush connection, eliminating harborage points and ensuring long-lasting, sanitary protection for critical electrical systems.

Robroy Stainless by Robroy Industries

HVAC, Mechanical, Plumbing



s-MEXT Precision Cooling

s-MEXT by Mitsubishi Electric is an all-in-one IT cooling solution that sets new standards in reliability, flexibility, efficiency and precision. Engineered for data centers, telecommunications, server rooms, UPS rooms, battery rooms and high-sensible cooling applications, the system helps keep sensitive information safe from heat and humidity. The ideal solution for small-to-medium-sized data rooms, s-MEXT's split cooling package consists of the indoor high-precision unit connected to a P-Series outdoor unit. s-MEXT controls temperature and relative humidity with pinpoint accuracy, even in wide thermal variations.

Mitsubishi Electric Trane HVAC US

HVAC, Mechanical, Plumbing



applied.com

Rebel Applied Air Source Heat Pump

The Rebel Applied Air Source Heat Pump is a 30- to 68-ton packaged rooftop system using low-GWP R-32 refrigerant. It offers class-leading efficiency with a 20 IEER and high heating capacity. The system's boost compression delivers up to 75% more capacity at 0 F compared to other units. Rebel Applied can be paired with supplemental gas or electric heat sources for operation across various climates. It includes features that minimize electrical infrastructure modifications and its customizable framework adapts to diverse building needs and applications. The system's design eliminates energy-robbing conduction paths and offers exceptional airtightness, further enhancing its efficiency.

Daikin Applied



HVAC, Mechanical, Plumbing



www.cleaver

brooks.com

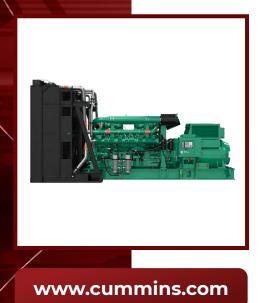
LVR Electric Hydronic Boiler

The Cleaver-Brooks LVR electric hydronic boiler is a compact, zero-emissions solution with nearly 100% efficiency, helping reduce onsite emissions and fossil fuel dependency. Available in sizes from 90 to 540 kW, its carbon-steel construction meets ASME standards. Modular electric-resistance elements and an advanced user interface with power metering ensure optimal performance. The silicon-controlled rectifier provides precise modulation and infinite turndown. Ideal for health care, universities and industrial applications, the LVR offers energy-saving setpoint menus and power-limiting functionality. Side-by-side installation is possible with top-accessed elements. Total system integration reduces installation and maintenance costs, offering low total cost of ownership.

The Cleaver-Brooks Company

engineer

Power



Centum Series Generators

In 2024, Cummins Power Generation unveiled four new additions to its Centum Series of generators: C1750D6E, C2000D6E, C2750D6E and C3000D6EB. The additions are backed by a pair of new engine platforms, the QSK50 (C1750D6E and C2000D6E) and QSK78 (C2750D6E and C3000D6EB), designed specifically to support critical applications such as data centers, health care facilities and waste-water treatment plants. Centum represents a significant shift in Cummins' approach to power system design — space optimization and maximum power output. Created as a direct response to the needs of their partners, the line offers unmatched flexibility, efficiency and sustainability.

Cummins Power Generation



Power



www.eaton.com

Heavy-Duty SmartRack Enclosures

Eaton's Heavy-Duty SmartRack enclosures are designed to meet the growing physical demands of generative AI computing infrastructure in enterprise, colocation and hyperscale data centers. Purpose-built to support larger, heavier AI servers and critical IT equipment, these enclosures help operators future-proof their facilities for upcoming AI innovations. With weight capacities up to 5,000 lbs and depths of 54 inch, the Heavy-Duty SmartRack enclosures can accommodate large AI servers, high-density power distribution units, uninterruptible power supplies, cooling systems, cables and other accessories.

Eaton

Power



Cloud-Connected Uninterruptible Power Supply

The Eaton Tripp Lite series cloud-connected uninterruptible power supply (UPS) offers a compact, low-maintenance solution for battery backup and surge protection. Equipped with cloud-enabled remote monitoring, it simplifies power management for applications such as retail point-of-sale systems, casino gaming machines and banking ATMs. The UPS allows users to manage, control and monitor their single unit or an entire fleet through integrated cloud-based monitoring. With Eaton's Brightlayer remote monitoring dashboard, users can monitor UPS status and battery levels in real time via mobile app or web browser, saving time and expense by reducing on-site visits.

Eaton Tripp Lite

Safety & Security



FireLock Style 009V Installation-Ready Rigid Coupling

The Style 009V is a new best-in-class installation-ready rigid coupling for fire sprinkler systems, available in sizes from 1½ to 12 inch. It features one-touch technology for easy, accurate and fast installation, requiring only one touch per bolt. An install indicator provides visual verification of proper installation, eliminating guesswork and reducing risk. The next-generation gasket design uses consistent lubricant coating to grip the coupling while allowing smooth adjustability before tightening. With its optimized design and range of features, the Style 009V enhances confidence in fire protection systems.

Victaulic

Safety & Security



Circuit Defender Shielded Circuit Integrity Cable

The Circuit Defender shielded circuit integrity cables offer 2-hour fire resistance and comply with crucial fire safety codes and regulations. Manufactured for critical applications, these cables excel in fire protective signaling circuits, smoke detectors, voice communications, audio, control, initiating and notification circuits. They have been qualified and listed to meet the demanding requirements of UL 2196 and CAN/ULC-S139 Test for Fire Resistive Cables, ensuring reliable performance in extreme conditions.

Southwire



Safety & Security

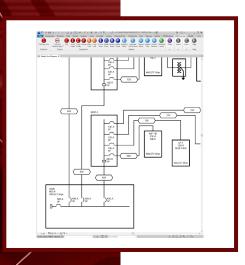


ACEND Notification

Siemens' ACEND Notification is a next-generation portfolio of indoor notification appliances designed for efficiency, flexibility and reliability. The portfolio includes horns, horn strobes, speakers, speaker strobes, low-frequency sounders and low-frequency sounder strobes. ACEND features industry-leading low current draw for visuals and has up to 35% lower current draw than Siemens SL2 devices. It is compatible with Siemens' current portfolio of addressable systems and has flexible, field-adaptable hardware. The system is also Siemens EcoTech certified for recycled materials and sustainable packaging.

Siemens Industry

Software



www.design master.biz

ElectroBIM 2.2

ElectroBIM 2.2 in Revit revolutionizes how electrical engineers use building information modeling (BIM) technology. The software introduces cutting-edge features like Generate Riser, which automates riser drafting and Voltage Drop Automatic Wire Upsizing, which delivers precise engineering calculations with minimal effort. This release also supports metric units, facilitating work on global projects and enhancing cross-border collaboration. These innovations, combined with previous enhancements, streamline workflows and propel BIM for electrical engineering forward. ElectroBIM continues to set industry standards, redefining efficiency in electrical design.

Design Master Software

Software



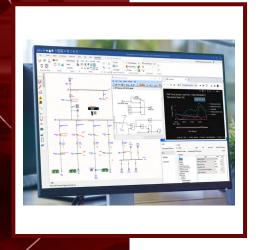
SIGMA Unity

SIGMA Unity is Avtron's most powerful and versatile load bank software to date. Designed to meet the testing needs of any application, it offers an unrivaled set of features that remain easy to use. From intuitive setup to advanced reporting capabilities, SIGMA Unity delivers everything needed for efficient and comprehensive load bank testing. It offers customizable test programs for diesel generator testing, commissioning data center HVAC systems and developing new power systems. With SIGMA Unity, users can capture multiple data points during tests, enabling the creation of detailed, advanced reports to verify power performance.

Avtron Power Solutions



Software



www.etap.com

ETAP 2024

ETAP 2024 marks a significant advancement in power system analysis and design, featuring enhanced functionality and new capabilities like Electric Copilot. The software boasts an array of integrated power analysis modules, model-driven automation and situationally intelligent operations solutions. A redesigned, intuitive user interface elevates the user experience. ETAP 2024 introduces 12 new or enhanced features supporting renewable energy integration, distributed energy sources and energy storage, underscoring the company's commitment to sustainability. These improvements represent a substantial leap forward in power system software technology.

ETAP

