



In harsh industrial environments electrical products are tested to their limits; constantly being subjected to challenging weather conditions, high temperatures, corrosive chemicals, heavy vibration, dust, and moisture. Purchasing quality electrical products that will stand up to their environment is only half of the specification process. Selecting an industry leading manufacturer who understands what it takes to keep your facility running is just as important.

Emerson's Solution

No other electrical manufacturer supports and equips electricians like Emerson. With every Appleton™ brand fitting, lighting fixture, plug and receptacle, enclosure, and control station manufactured, we recognize that whole industrial sectors rely on the work of electricians and the equipment they install to keep power flowing reliably and safely to critical equipment. We build the products you need to get the job done.

Key Considerations

What specific characteristics set an electrical manufacturer apart in harsh industrial environments? Ultimately it comes down to a few factors:

- Knowledge of the Industry
- Product Features
- Product Quality
- Depth and Availability of Product Lines

1. Knowledge of the Industry

Supplying electrical products that stand up to harsh working environments takes years of customer research and development in industrial sectors such as power generation, utilities, mining, oil and gas, water and wastewater, and heavy industry.

Assessing a prospective manufacturer based on specific industry experience ensures they will have all of the in-house tools, resources, and knowledge needed to produce quality electrical products that withstand environment challenges without failures, significant delays, or unexpected costs due to production downtime. For example, is the environment dusty, such as in mining; or are extreme temperatures an issue, like in a steel foundry? Is the manufacturer already familiar with your industry's regulations to ensure the product meets those demanding codes and standards? This is especially important if the electrical products are manufactured/configured to order or require a high level of long-term protection against environmental elements that can cause failures.

While some experienced manufacturers can produce products for multiple industries, it's important to partner with the one that understands your needs and how to leverage industry changing technology to deliver best-in-class solutions.



Emerson's Solution

The Appleton Electric Company was founded in 1903 by Albert Ivar Appleton. In 1986 it was acquired by Emerson and is now part of their Automation Solutions business. The Appleton brand has long been the hallmark for the protection of people and equipment while delivering reliable power. Count on certified protection for any environment, from ordinary commercial settings or harsh industrial locations to hazardous environments, in any region of the world. Our fittings, lighting, and power distribution solutions are designed to operate without incident: because failure is not an option.

2. Product Features

It's important for electricians faced with installing equipment and electrical systems into harsh industrial environments to understand which industry standards to follow and which type of products to deploy, preventing the need for replacement due to corrosion and damage from the environmental elements. Ease of assembly, retrofit, and maintenance are also critical to prevent unnecessary downtime, and increase safety for the installer.

Ease of assembly

- Products can be installed quickly and efficiently, offering versatility for various infrastructure requirements
- Captive screws prevent loss and eliminate the need for handling small parts
- Mounting feet on bodies and boxes enable flexibility with either conduit or cable fed sites
- Simplified installation processes of LEDs offering quick connect systems
 - » Fixture mounting hood with swing away design (captive bolt and nut) – remains in place when servicing/installing new fixtures

Ease of retrofit and maintenance

- Products designed and tested for intermateability with other manufacturers brands
 - » LED luminaire bodies compatible with existing competitor mounting hoods for easy retrofit
 - » Plug and receptacles that intermate with other manufacturers per UL 1686
- Available with replaceable parts/components; saves time and expense of having to replace the entire product
 - » Replacement LED drivers and accessories
 - » Replacement gaskets and covers for fittings, plugs, and receptacles
 - » Control switches, pilot lights, and buttons can be changed or replaced

3. Product Quality

A range of environmental factors such as water, dust, extreme weather, EMI (electromagnetic interference), pressure, or vibration can create challenging conditions where the products you install must operate without failure or malfunction. In industrial environments, where reliable electricity is required for your facility infrastructure to power automation and load sensitive equipment, choosing the right electrical product manufacturer is critical to ensure that your facility is up and running efficiently.

So how can you determine which electrical products will withstand these conditions? Here is a list of qualities that are essential to reliable performance, product flexibility, and long-term durability that the manufacturer should provide:



Corrosion protection

- Extends product life, protects internal wiring and components, lowers maintenance costs
- Superior corrosion protection with durable finishes, tested and proven to provide long life for both iron and aluminum materials

Tested to withstand conditions

- Electrical products are thoroughly tested to prove performance in harsh industrial environments
- Testing done for vibration, hose down, dust, and other environmental factors

Temperature performance

- Offers products with ambient temperatures suitable for use in extremely hot and cold climate areas inside or outside facilities

Safety features

- Incorporates industry and user safety into product designs to protect against accidents like safety retention cables to prevent drop hazards, polarized plugs and receptacles to prevent mix-matching voltages, and interlocking mechanisms to prevent disengagement while under load

Appropriate certification

- Full range of electrical products certified for the different conditions within your facility (Ordinary – Unclassified – Location, Hazardous Location – Class, Division and Zone)

- Product ratings for varying environmental conditions (NEMA, IP, ABS, and Dark Sky)

Emerson's Solution

Emerson is the only manufacturer in the electrical industry that applies a triple coat finish to most of its Appleton brand iron products and an epoxy powder coat to its aluminum products. The result is an unsurpassed barrier to harmful corrosion and other environmental elements. Emerson takes product lifetime seriously, and in doing so submits Appleton brand electrical products to a barrage of testing for extreme conditions, such as dunk tanks, hose downs, vibration testing, and dust chambers. This comprehensive product development approach towards battling corrosion and the elements makes Appleton products the ideal choice for harsh industrial areas and outdoor marine applications.

4. Complete Line Offering

The last key in choosing the right electrical product manufacturer for your facility is the breadth and depth of products they offer. This eliminates having to source from multiple vendors. Look for a full range of breadth and depth of product offerings, including:

- Trade sizes up to 6" NPT and M130 on select fittings
- Range of amperages to handle light to heavy power loads
- Full line of LED solutions for your entire facility
- Variety of material options such as iron, aluminium, stainless steel, and fiberglass reinforced polyester

Whether you are designing an electrical infrastructure or replacing existing product, sourcing is a major component

that can make or break the designing and commissioning of a new install. Without a reliable supplier who can provide a broad package of electrical equipment when and where you need it, the likelihood for troublesome project delays and added expenses is high.

Eliminate delays by choosing an electrical manufacturer with a wide distribution base that represents their full line; thus, ensuring they can accommodate all new or ongoing project needs. The distribution base should have a local stock for emergencies, as those usually happen at the worst possible times. You want a supplier who is ready to assist you in procuring the right electrical product, on time, and at the best possible price.

Conclusion

Select an electrical manufacturer who understands your industry and the types of environmental factors that can lead to product degradation. They should offer a full breadth and depth of products for ordinary, harsh industrial, and hazardous locations to cover a wide variety of facility applications. Keep to your project timeline by working with a manufacturer that streamlines the specifying and procuring process for installs and upgrades. The right manufacturer has decades of experience and innovative new products. Choosing an electrical manufacturer who is an industry leader ensures the products you install deliver long-term solutions to help better operate your business, optimize the systems you install, and allow you to maintain an electrical infrastructure that provides greater reliability today, and in the future.



Emerson's Solution

Emerson designs and manufactures world class Appleton brand electrical products for electricians that demand superior performance and exceptional reliability in ordinary locations or harsh industrial and hazardous environments, where other products are prone to malfunction or failure. Emerson does this by applying more than a century of experience into manufacturing. With Appleton we offer the broadest line of field-proven, time-tested electrical products in the industry to accommodate virtually every industry need, supported worldwide through an extensive authorized distributor network. Our worldwide presence demands mastery of the International Electrotechnical Commission (IEC), ATEX Directive and the North American (NEC/CEC) standards and codes. It is Emerson's goal to help you drive safety and productivity throughout your facility, while reducing labor costs, and increasing production uptime with more ways to deliver power in the most challenging environments.

**United States
(Headquarters)**
Appleton Grp LLC
9377 W. Higgins Road
Rosemont, IL 60018
United States
T +1 800 621 1506

Canada
EGS Electrical Group Canada Ltd.
99 Union Street
Elmira ON, N3B 3L7
Canada
T +1 888 765 2226

Europe
ATX SAS
Espace Industriel Nord
35, rue André Durouchez,
CS 98017
80084 Amiens Cedex 2, France
T +33 3 2254 1390

Latin America
EGS Comercializadora Mexico
S de RL de CV
Calle 10 N°145 Piso 3
Col. San Pedro de los Pinos
Del. Álvaro Obregón
Ciudad de México. 01180
T +52 55 5809 5049

Australia Sales Office
Bayswater, Victoria
T +61 3 9721 0387

Korea Sales Office
Seoul
T +82 2 3483 1555

China Sales Office
Shanghai
T +86 21 3338 7000

Chile Sales Office
Las Condes
T +56 2928 4819

India Sales Office
Chennai
T +91 44 3919 7300

Asia Pacific
EGS Private Ltd.
Block 4008, Ang Mo Kio Ave 10,
#04-16 TechPlace 1,
Singapore 569625
T +65 6556 1100

Jebel Ali- Dubai Office
Emerson, Building A
Appleton Group
Jebel Ali Free Zone- South
T +971 4 811 81 00

Middle East Sales Office
Dammam, Saudi Arabia
T +966 13 510 3702

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