The Complete Electrical Solution for Industrial Environments
Extreme environments demand superior performance, which is why you will find Hubbell products and systems installed in many of the most arduous and safety-critical locations worldwide.
The Hubbell Harsh & Hazardous group combines dedicated, market leading brands within the Hubbell portfolio to provide a complete package for companies operating in some of the toughest environments on the planet.

We are committed to providing quality products and services that will meet and exceed your expectations. Our principal activity is the design and manufacture of rugged and hard wearing products. These include telephones and communication products, lighting, control gear and electrical connection products; all designed to operate primarily in extreme outdoor, hazardous and corrosive areas.

As a group, we encourage engineering excellence. We are driven to utilize leading edge technologies and manufacturing techniques to help you fulfill your specific requirements. Our product ranges are designed and certified to many of the leading global standards:
Austdac was formed in 1983 to provide IS telephone systems and communications equipment to the Australian coal industry, the business has grown over time and we now supply communications, gas monitoring systems, safety equipment, intrinsically safe lighting, power supplies and conveyor control equipment to coal mines and general industry in Australia and around the world. We can provide a complete range of solutions from deep underground, all the way up to the surface.

**Conveyor Control & Monitoring**

Austdac’s conveyor control systems are designed in compliance with Australian conveyor codes. They permit full current isolation including lanyard switches, cable and pre-start warning equipment and all accessories and fittings.

The conveyor system is intended to suit all applications using a combination of audio and visual pre-start alarm systems, incorporating emergency stop, remote isolation, fault indication, and lockout position on conveyor belts over eight (8)km long.

This has several benefits:
- Safety Integrity Level 3 (SIL) rated emergency stop equipment
- Complies to international safety standards (IEC 61508) and Russian safety standards
- Monitoring and emergency stop facilities available on same line
- Can monitor and control up to 128 discrete points, either digital and/or analogue

**Safety Equipment**

Our equipment can help the mining industry not only operate in a safer mode by integrating a total communication and monitoring system, but also to help increase productivity and reliability within the mining industry as a whole.

- SCSR maintenance test CSE unit
- Range of self-contained oxygen self rescuers
- Escape guidance ropes

**Gas and Monitoring Equipment**

- Gas monitoring equipment that uses electronic sensors for confined space entry
- Carbon monoxide and smoke detection
- NGVG3
- I.S. vehicle gas monitoring
- Trolex range of sensors for gas monitoring and ancillary equipment
Power Supplies, Lighting and Monitoring

- Ex e and I.S. lighting for hazardous areas
- Power supplies and batteries, Ex em and intrinsically safe versions
- Uninterruptable power supply
- Longwall and lighting systems
- Specialized cables that have robust and weatherproof quick release connectors for areas where robust cables are necessary

Intrinsically Safe Telephone System

The Austdac IS telephone systems are certified to IEC and ATEX Ex ia standards and designed to be used in any Underground Coal Mine in the world, we have compliance to ACMA for Australia, pending approvals for other countries as required. The system can be configured from 2 to 80 lines in a single rack, there is no limitation on the overall system capacity. System features include:

- Full monitoring of the system, including the telephone cables for open, short circuit, voltage and current drawn.
- Visual display on each barrier for on/off hook emergency; 2 phones per barrier
- User friendly GUI for the control room monitoring and Emergency Communications
- Visual ring indicator and speakers built into each IS telephone

Longwall Equipment

The Austdac Longwall communication and monitoring system is adaptable to meet any customer design criteria. Our system has been designed and tested to suit your longwall, providing better solutions for your environment and layout.

Our emergency stop system is internationally accredited to SIL3 safety rating by TÜV. It is designed to SIL (Safety Integrity Level) 2 or 3 if required. The safest and most reliable emergency stop system on the market. The unique SILBUS transmission method allows for the combined transmission of high integrity SIL3 longwall emergency stop signals with monitoring and control signals for gas monitoring as well as analogue values such as bearing temperature and vibration.

These stations can have a remote isolation facility and an interrogate button to allow the operator to access pre-recorded "longwall stoppage" messages. Face and BSL E-Stops feature large, easy to operate STOP button in robust stainless steel enclosure. BM-Amplifiers are available for voice communication and pre-start signalling. Termination units monitor and control the pre-start alarm signal down the face.

www.austdac.com.au
Chalmit was originally founded in 1910 to manufacture and supply equipment for the large marine market based on the River Clyde. Today, Chalmit is a world leading supplier of premium quality fluorescent, LED and HID lighting products for use in hazardous area, industrial and marine environments. To meet the demands of global project specifications we can provide a complete product range that complies with all international codes and standards.

Chalmit luminaires are designed to operate in potentially explosive and corrosive atmospheres. Our products will function as required, when required no matter what the environmental conditions. Energy efficiency and photometric excellence are fundamental criteria in the Chalmit design philosophy.

Although Chalmit is predominantly involved with hazardous area and specialized industrial lighting, we are totally committed to the promotion of good and efficient lighting practices and we continuously strive to raise the standards in safety, performance and education in lighting.

**Evolution - Photometric Excellence**

Chalmit luminaires are designed to ensure that they are simple to install and easy to maintain. This results in a reduced installation time and a significant saving for overall site maintenance costs.

The Evolution range embodies this design philosophy. Featuring a unique single bolt opening mechanism, the floodlight ensures easy access to lamp and control gear. Inspection and maintenance of the flamepaths is not required as they not are exposed. Instead, the unique design locates these within the IP67 sealed area of the control gear. In this respect, the Evolution can effectively be classed as maintenance free.

The Evolution II (pictured below) also benefits from an asymmetric reflector design. This means installation with an aiming angle from 0° to a maximum of 20° compared to a typical 45° angle for symmetric floodlights.

This has several benefits:

- Increased photometric efficiency
  - Higher lighting levels due to better utilization of light
  - Fewer floodlights to meet required lighting levels
  - Reduced energy consumption
- Increased energy efficiency
- Reduced glare & light pollution
  - Lower cut off angle
- Light where you need it
- Better Uniformity of light
**Leading LED Design**

In addition to innovative floodlight products, Chalmit has also been pioneering the use of LED technology in extreme environments. We have been involved in the real life application of LED based luminaires since the early 1990’s and have a proven track record of many reliable installations.

Our NexLED bulkhead utilizes the latest in LED technology to provide instant illumination even after a re-strike. As the LED market evolves, so does the NexLED, with ever increasing light output. The NexLED requires no re-lamping making it virtually maintenance free and is unaffected by low temperatures. This combination makes the NexLED ideal for extreme environmental applications (-45°C to +55°C).

New initiatives in LED design have enabled the development of the SOLAS emergency projector. Designed to provide safety critical lighting in emergency evacuation situations, SOLAS provides powerful illumination during the launching of lifeboats to ensure the way is clear of hazards. A non-emergency version is also available. This can work as a mains powered spotlight to provide continuous maintenance free operation for a wide range of applications.

The Nevis Zone 1 bulkhead is the latest product to have been upgraded to utilise high power LEDs. Built around the existing robust Nevis enclosure, the LED package is equivalent to a 70W HPS lamp in both lumen output and distribution, but at much less power, which is a bonus were circuit loading could be a problem. With a T-Class rating of T6 and an ambient temperature range of -55°C to +55°C, the Nevis is a product which could virtually be used anywhere.

LEDs bring the benefits of instant light at switch on and full output at minus temperatures where traditional lamps can suffer depreciation.

**HID and Fluorescent Lighting**

Chalmit is the worlds leading supplier of HID luminaires for harsh and hazardous environments. Our marine grade aluminum wellglass, floodlight and bulkhead ranges have been used in some of the toughest environments in existence.

We are widely regarded as the experts in extreme low temperature installations with a proven track record in Sakhalin Island, Siberia and Kazakhstan. However Chalmit luminaires are equally at home in high ambient environments such as the Nigerian delta or the arid deserts of the Middle East.

[www.chalmit.com](http://www.chalmit.com)
GAI-Tronics designs and manufactures rugged communications equipment and solutions for demanding environments worldwide; supplying PA/GA systems, evacuation systems and intercom equipment to industry and the public sector. The ability to withstand unforgiving extremes of temperature, moisture, contamination, sunshine, wind, dust and salt, make GAI-Tronics equipment perfect for remote and hazardous applications.

All products meet stringent safety specifications and are approved and certified by leading international regulatory bodies. Founded in 1946, GAI-Tronics equipment can be found on rail and road networks, oil and gas installations, sterile areas and public assistance locations. GAI-Tronics’ intercoms, paging systems, and telephones have been heard loud and clear for 60 years.

Public Address, General Alarm & Evacuation Systems

GAI-Tronics’ range of hazardous area products and systems include life-critical alarm notification and emergency evacuation for Zone 1, Zone 2 and standard industrial areas. All public address, alarm, evacuation and intercom systems are designed and built in-house.

NOVA PA/GA Systems address multiple zones, multiple networks and multiple speech path applications such as large petrochemical facilities.

Elemec plus™ systems address self-contained applications such as platforms and FPSOs.

ADVANCE SmartSeries™ systems combines public address with multi-station intercom capability.

GAI-Tronics PA/GA systems have a selection of unique features and can be interfaced with Page/Party® and all GAI-Tronics industrial communications systems. All GAI-Tronics PA/GA systems allow for real-time remote status monitoring.

The real-time state of the system’s alarm, page zones, and beacon outputs, together with the control inputs is monitored via portal software system configuration and is accomplished in a similar manner via console software. This enables the user to monitor all inputs from other devices such as the fire & gas system, therefore extending the monitoring capacity of the system.

The D600i Class D amplifier comprises 2 x 300W channels, each capable of independent operation. Its own internal power supply reduces the risk of single point failure. Fault protection and ultrasonic load sensing are contained within the amplifier, as are thermostatically controlled fans. System expansion is easily achieved by simply adding more amplifiers without the need to change the controller hardware.

GAI-Tronics’ PA/GA systems are designed to comply with DNV/ABS/SOLAS/CCS/UKOOA/NFPA.
Industrial Telephones

GAI-Tronics telephones are weather resistant and include features specific to their intended environment. Connectivity options include analogue, wireless, GSM or Voice over Internet Protocol (VoIP). Headset options and varied handset cord lengths are available.

Hazardous Area Telephones are approved for use in Zone 1, Division 1 and any other environment where volatile gases and dust are a major consideration, including the world's first Zone 1 VoIP telephone.

Industrial Telephones are suitable for the extreme operating environment where dirt and high noise is common, and incorporate large buttons on sealed keypads for use with gloved hands.

RED ALERT® Emergency Telephones have been designed for maximum environmental sustainability, high audio quality and unparalleled monitoring capability. In addition to providing hands-free, two-way communications, a RED ALERT® telephone can tell its location, report call activity, activate up to two peripheral devices, and let you know when it is experiencing problems. When used with TMA (Telephone Management Application) software, RED ALERT® telephones will lower system test and maintenance time while greatly decreasing liability issues associated with undetected, faulty equipment. No other telephone provides greater features, value, and reliability.

Intercom / Paging

GAI-Tronics intercom and paging systems are designed for use in all industrial and hazardous environments.

Digital Intercom stations provide communications between two points, such as drill operator and rig personnel. Comprised of a central controller or intercom server and various outstations, the system’s digital architecture is used to link the stations with the intercom server.

Page/Party® communication systems allow for location of individuals anywhere within the facility by accessing the page function. Two-way conversation can then occur by using the party line feature, allowing two or more people to converse without being heard over the speakers. Alarms and telephone interfacing can be added to the system.

SmartSeries™ Page/Party® stations interface with an ADVANCE Control Unit, exchanging information, including health check and the status of an associated speaker. Stations are also equipped with GAI-Tronics' SmartVolume feature to automatically adjust speaker volume by measuring ambient level noise.

Common-talk communication systems are simple to use with push-to-talk, release to listen operation, to page across all other units. The systems consist of an explosion proof case which houses the electronics, and loudspeaker which also functions as the microphone.

www.gai-tronics.com
For those who demand quality, reliability and above all, safety, Hawke International is the obvious choice.

Hawke International has provided peace of mind to contractors, installers and end users for over 55 years. Our innovative range of cable connection and termination products, specifically designed with the customer in mind, have gained worldwide approval and credibility for the testing conditions found in hazardous locations and hostile environments.

Our customers’ requirements for sustained safety and reliability under extreme conditions are Hawke's primary objectives. Furthermore our superior designs allow ease of installation, use long life materials and are manufactured to rigorous quality standards. All this provides the customer with unparalleled benefits of the lowest lifetime cost of purchase.

Hawke International recognizes that the demands of the customer base never stand still and we are therefore committed to the ongoing development of our products and features to provide improved safety, versatility, reliability and ease of use.

**Ex Enclosure Range**

Hawke have been producing Exe enclosures for over 40 years and are very highly regarded for their quality and exceptional strength – something extremely important in the demanding environments of the Oil & Gas, Petrochemical and other Harsh and Hazardous industries.

**Glass Reinforced Polyester PL Range**

These enclosures are a self colored black anti-static glass reinforced polyester design that meet the requirements of Exe IIC and Extb IIIC to IEC/EN 60079-0, IEC/EN 60079-7, IEC/EN 60079-31.

The PL6 Series Enclosures are of a robust design with a very high impact strength of up to 20Nm and have excellent electrical insulation properties.

**Stainless Steel S Range**

These enclosures are a stainless steel design that meets the requirements of Exe IIC and Extb IIIC to IEC/EN 60079-0, IEC/EN 60079-7 and IEC/EN 60079-31. The material qualities and electropolished finish provide a very high corrosion resistance.

Should you require a stainless steel enclosure outside of our standard range of products Hawke can offer a bespoke enclosure design service.
**Ex Connector Range**

Hawke connectors are ideal for use where temporary but safe disconnection of power is critical. Our Ex range of connectors permit safe and rapid service, repair and replacement of key plant, provide quick connection to temporary and permanent equipment and greatly reduce hook-up time in capital-intensive processes.

Hawke's range of connectors cover three main application areas: Instrumentation, Control and Power.

**InstrumEx** - This revolutionary design allows the live mate and de-mating of signal and low power in hazardous areas safely and quickly. The InstrumEx connector is available with two insert options: the 4-way option will accept cores ranging between 0.5mm² and 2.5mm² and can operate up to a maximum current of 10A (AC1) at 250V AC & 2.5A (DC1) 60V DC. The 8-way option, designed predominantly for ethernet applications, will accept cores ranging between 0.14mm² and 0.37mm² and can carry 1A (AC1) at 60V AC & 0.5A (DC1) 60V DC. InstrumEx connectors include an integral Hawke cable gland for easy termination of both armored and un-armored cables.

**ControlEx** - The 4th generation of ControlEx connectors include many features and refinements as a result of consumer feedback, which makes them particularly suitable for control and low/medium power applications. The robust stainless steel body can hold up to 60 contacts and will accept conductor sizes ranging between 0.5mm², 35mm², operating up to 125A and 660V and is interchangeable with the 3rd generation products.

**PowerEx** - The PowerEx range of connectors have been designed specifically for the extremely demanding requirements of higher power applications. Inserts are available with 1 to 4 contacts with a conductor acceptance range of between 50mm² and 630mm² operating up to 780A and 750V as standard. Other voltages are available on special request.

**Cable Glands**

Designed to terminate cables, Hawke glands provide a weather and gas-proof sealed connection between the cable and its associated equipment. The cost of a cable gland is insignificant when compared to that of other equipment. However, the cost of failure is high. Though some cable glands may just be “fit for purpose” what would be the potential cost of failure?

Hawke cable glands have many patented features which bring numerous benefits to owners, operators and installers alike. Features such as the reversible armor clamp (RAC) ring, deluge seal (preventing water ingress into the gland as well as equipment), diaphragm seal (which prevents cable damage to soft bedded cables), and the Hawke back seal (with extremely wide cable acceptance and exceptional pull out resistance) all help reduce installation time, inspection time and reduce overall lifetime costs.

Hawke provides specific glands for Group I (Mining), Group II (Hazardous Area) and Industrial applications.

www.ehawke.com
Established in 1913, Killark has become a global provider of harsh and hazardous location products. The Killark range encompasses industrial and explosion proof fittings engineered to withstand the toughest extremes in climate from the dry and arid Middle East, tropical Asia to frozen Northern Canada.

Safety and reliability has been the cornerstone of our business for almost a century. Killark is dedicated to meeting customer needs, with engineering solutions, new product development and on-time delivery in every phase of the project.

This commitment underpins our proven ability to supply lower cost total system solutions and savings over the entire lifetime of a project.

**Enclosures / OEM Solutions / Controls**

At Killark we understand that each of our customers have different needs. Our committed employees work in combination with our clients engineering staff to ensure our enclosures meet and surpass their expectations.

Our extensive range of bolted and threaded enclosures are utilized daily for use with control, monitoring, detection, and automation products.

The Killark product portfolio of control products come in both metallic and non-metallic designs. The size and depth of the control product range enable us to provide the best solutions to your control problems.

**Distribution and Control Equipment**

Killark offers solutions to your distribution and control applications to both North American and IEC Standards. From lighting, trace heating and power distribution applications to complex PLC control systems, our applications engineers have a competence to take a project from conceptual to finished goods.

The versatility of our product range allows us to use multiple enclosure coupling techniques to cater to all demands of our clients.

From single point protection to rack applications, Killark provides cost effective solutions with high quality, reliability and ease-of-maintenance built in.
Killark luminaires are suitable for the extreme environments. Available in copper-free aluminum, fiberglass reinforced polyester, or stainless steel. Killark lighting fixtures meet and exceed the requirements for corrosive, vibration, or explosive atmospheres.

Housing styles include floods, wallpacks, linear fluorescent, and enclosed/gasketed area lighting with a range of mounting styles and Killark’s exclusive patented swing-barrel nut attachment system.

Killark’s lighting products encompass the latest in long life energy and labor saving LED, Induction, and fluorescent technologies in a variety of housing types for virtually any application - the range of Killark lamp sources include:

- LED - up to 130W solder-less connected field replaceable boards
- Class I, Div. 1 LED 2 head emergency
- HID - 35W HPS to 1000W Metal Halide; Induction to 165W
- Fluorescent - Linear and Compact
- Signaling - LED and Xenon

Plugs and Receptacles

Ranging from 20 Amp bladed style to 200 Amp pin & sleeve configurations, Killark provides numerous solutions for safely supplying power to fixed and portable equipment in hostile environments.

Interchangeability with the other manufacturers configurations provides user flexibility for real world applications. The range also has exclusive features such as breech-lock caps with a “3rd Hand” notch.

Devices include plugs, receptacles, panel receptacles, and connectors to extend the reach of portable equipment. For personnel safety, ground fault protected receptacles, both portable and fixed, are available.

Connectors and Fittings

A major factor in all harsh and hazardous environments is the ability to provide reliable cable terminations and conduit connections.

Copper-Free Aluminum Connectors are designed to terminate jacketed interlocked cables (MC), corrugated continuously welded metal clad cables (MC-HL) and non-armored cables (SO, TC).

Iron and Aluminum Fittings for rigid and IMC conduit raceway systems. Third party certified to NEC, CEC, ATEX and IEC standards which enables equipment and installations to be suitable for global applications.

www.killark.com
Victor was founded in 1929 to supply hazardous area equipment including lighting, cable couplers and connectors to the mining industry. From these beginnings Victor Lighting has evolved to develop luminaires for a wide range of hazardous areas above ground including the oil and gas industry. Over 80 years of experience in manufacturing hazardous area equipment, ensures that Victor luminaires are built to the highest standards of quality and reliability.

As a company we have used our knowledge of hazardous and industrial environments to inspire a number of unique design concepts. The result is a range of innovative lighting solutions that combine quality and durability with excellent photometric output. Offshore or onshore, we believe there is a Victor luminaire to meet your lighting requirements no matter how arduous your environment.

Unique Lighting Solutions for Hazardous Areas

The Trident range of Exe luminaires brings an innovative design solution for the lighting of hazardous areas. With its distinctive profile, the Trident is lightweight yet robust and can be mounted in any orientation. It is able to withstand the extremes of climate conditions faced by energy operators around the world.

- Small gasket area = Exceptional ingress protection
- Unique cassette system allows quick, easy re-lamping
  - No need for mains isolation
- Unparalleled UV protection
- Dedicated pole mount version
- IP68 version available

The unique ‘Third emergency lamp’ approach provides additional flexibility in lighting design and management. A non-emergency Trident VL125 can become an emergency VL126 luminaire simply by retro-fitting the ‘lamp in lid’ 11W compact fluorescent assembly.

This design also guarantees lamp integrity as it is only used in emergency situations.

The Trident VL125 is now offered with optional clear lid assemblies to assist IEC 60079-17 Hazardous Area Visual Inspection.
Innovative Wellglass Design

Victor wellglass luminaires also incorporate unique features designed to make installation and maintenance quicker and easier. The Monarch II lamp chamber utilizes the restricted breathing Ex nR concept and lamp access is by means of the screwed cover glass, whilst the control gear area is separated from the lamp chamber by a barrier and is non-sparking Ex nA, meaning that no special cable glands are required.

The luminaire also makes use of the swing-barrel nut system. This allows users to easily install the mounting base first and complete the mains wiring without the need to support the body and lamps during installation. This simple design saves on both time and labor costs during installation and maintenance activities. The swing-barrel nut system can be tightened with an ordinary screw or nut driver without the need for special tools.

High Performance and LED Solutions

Lighting technologies such as LED’s continue to evolve and change leading to increased efficiency and lumen output. Victor Lighting is working with renowned manufacturers to develop a range of performance LED based solutions; this included the Vanguard bulkhead which was designed primarily for Helideck Lighting. The Vanguard used high output green LED’s and complies with the latest ICAO & CAP437 regulations for Helideck Lighting.

Floodlighting

Victor’s range of marine grade aluminum floodlights are designed with simple installation and maintenance in mind. Features include a separate, easy access Ex e terminal chamber and hinged covers with captive screws for quick and safe lamp replacement.

Our floodlights are also designed to be efficient and boast some of the best photometrics of any floodlight on the market.

www.victor-lighting.com
BURNDY is a leading manufacturer of electrical connectors, installation tools and cable accessories for standard, harsh and hazardous environments.

We have over 85 years of extensive experience in producing power and grounding connectors, mechanical, battery and hydraulic installation tools, and wiring accessories such as cable ties and heat shrink tubing.

BURNDY is a major participant in the OEM, commercial and industrial construction and maintenance segments of both the domestic and international electrical construction materials market.

Today, BURNDY is known for providing individual customer solutions for difficult applications along with offering standard connectors and tools.

For cables from 26 AWG to 2500 kcmil and 0.3 to 1000 mm² we can tap, terminate or splice it for you. Our in house lab capabilities allow R&D efforts to support new product development as well as user defined requirements.

**BURNDY® HYGROUND® Compression Grounding**

In Harsh and Hazardous locations safety is a primary concern. Proper grounding is a large part of safety as managers look to protect their people, plants and equipment. BURNDY HYGROUND can provide huge cost savings and peace of mind.

BURNDY HYGROUND is the safest, most cost effective, time effective and easily inspected grounding system available today. A compression connection can be made in three minutes, or about half the time of a similar exothermic connection.

This compression system can be safely installed in areas containing hazardous chemical or gasses.

**BURNDY® Installation Tooling**

To complement our connection solutions, BURNDY also supplies a wide range of hydraulic, battery and mechanical tools and accessories. These devices are designed to assist in safe and rapid installation. This allows you to keep your entire job site work on schedule no matter what the weather conditions.

www.burndy.com
Vantage Technology is the premier manufacturer of third-party certified electrical connectors for use in hazardous environments.

Industry Leading Features
- Power connections 15 up to 260 Amperes
- Control connections up to 100 contacts
- 250 - 600 Vac at 50/60/400 Hz
- Live make-break
- Rugged environmental construction

Proven Reliability in Hazardous (Classified) Areas
- Class I, Division 1
- Class I, Zone 1
- Class II, Division 1
- II 2 GD Ex d IIC T 70°C IP 66/67

Third Party Certifications from UL, CSA, MSHA & KEMA to comply with U.S. National Electric Code and the European ATEX Directive means Vantage explosion proof connectors meet hazardous area safety and installation requirements throughout the world.

XP Star-line Victory Series
- GD and GB - Power
- BM - Mining
- AF - Control
- GD - Hangar and Ground Power
- EP / ER - Power
- PX / YX - Power

XP Star-line Millennium
- SD & SB - Power
- SF - Control

Value Added Solutions
Vantage explosion proof connectors assure safe, reliable interconnects. From the North Slope to The Gulf, on land-based facilities or offshore drilling platforms, in aerospace, petroleum, process manufacturing, chemicals, LNG, mining and other industries, Vantage provides the quality solutions you demand.

The Mission at Vantage is to be the premier manufacturer of third party certified explosion proof connectors while providing the best customer service. We pride ourselves in having the personnel, experience and knowledge to meet these goals with: technical service, reliable delivery, engineering support, third party certification and new product development.

www.vantagexp.com
When you are in need of mobilizing and protecting expensive cables and hoses, drag chains are the best solution. Gleason offers a high quality PowerTrak® carrier to fit your application, utilizing stainless steel, zinc plated steel or nylon construction. With PowerTrak® you can be assured of receiving a ruggedly reliable product designed for your Harsh and Hazardous environments.

Gleason Cable/Hose Reels

Gleason’s large variety of reels includes models for electric power cables, small multi-conductor cables for control or communication, as well as reels to manage your hydraulic or pneumatic hoses. These reels all feature heavy-duty construction which will provide high quality, reliable service in your Harsh and Hazardous environment.

Gleason Static Discharge Reels

Gleason’s anti-static reels are your safety solution with cable that prevents sparks from static electricity generated by movement and flow of flammable liquids. Bonding between containers during liquid transfer and connecting drums to an earth ground prevents the risk of a fire hazard.

Gleason Festoon Systems

Gleason festoon systems are available in both C-Rail and I-Beam styles and feature a wide variety of sizes, a choice of material finishes such as painted carbon steel, galvanized steel or stainless steel, as well as the option of either steel or nylon main running wheels.
Formerly produced by Siemens-Canada, these rugged, high performance DC Devices are now manufactured in our Archdale, NC facility. They are in great demand by industries needing reliable solid-state adjustable speed drives, uninterruptible power supplies, fuel cells, crane controls, transit and rail vehicles, gas and oil well drilling equipment, mining machinery, and more.

**Type 720 Series - 200 600V DC Contactor**
- UL recognized/CSA certified
- NEMA Size 4 ½
- Polarized arc chutes - standard or high capacity
- Main Contact Options: SPNO, SPDT, and Series Field Reversal
- 5 Million mechanical operations
- Front access for serviceability
- Silver alloy main contact tips
- AC or DC operation
- High dielectric and mechanical strength

**Type 264 Series - 400 600V DC Contactor**
- UL recognized/CSA certified
- Permanent magnet (polarized) arc chutes
- Main Contact Options: SPNO, SPDT, and Series Field Reversal
- 2 Million mechanical operations
- Front access for serviceability
- Silver alloy main contact tips
- AC or DC operation
- High dielectric and mechanical strength

**Type 700 Series - 1250A 1000V SPNO DC Contactor**
- UL recognized/CSA certified (1000A 600 VDC)
- Non-polarized arc chute design
- Optional Over Current Hold-In
- Bifurcated main contacts
- Silver-plated current carrying-parts
- High dielectric and mechanical strength
- Special ratings available - Consult ICD
- High dielectric and mechanical strength

**Type 716 Series - 1600A 1500V SPNO DC Contactor**
- Non-polarized arc chute (series blowout coil) design as standard
- Optional polarized arc chute (permanent magnet type) design available - Consult ICD
- Silver alloy main contacts
- Arc chute safety interlock
- Trifurcated main contacts
- Silver-plated current-carrying parts
- High dielectric and mechanical strength
With over 85 years of extensive experience in the manufacture of electrical enclosures, Wiegmann specializes in extreme/corrosion environmental protection. Enclosures are offered in 316SS, 304SS and in non–metallic for severe service applications, as well as in carbon steel for more traditional duty.

**Ultimate™ Drive Enclosures** are designed to control the environment that surrounds Variable Frequency Drive Motors. Sizing software matches user specific needs to exact environmental / enclosure requirements.

**Ultimate Enclosures** in 316 or 304 stainless steel with formed-in-place polyurethane gasket and continuously plasma welded seams. Available with or without a slope top, the 20 degree slope helps to deflect contaminants. Viewing windows can be specified.

**Floor Mount NEMA 4X Stainless Steel Double Door Enclosures** with continuous hinge, FIP gasket, 3 point latching handle and lifting eyes.

**JIC NEMA 4X Stainless Steel Single Door Junction Boxes** with FIP gasket, seam welded design and continuous or lift off hinge.

Hubbell Products (Burton) manufactures and supplies a range of electrical switch-gear and control equipment suitable for industrial conditions and hazardous environments.

**Fuse Switches**
Fuse switches isolate and protect electrical installations. Designed for long, trouble-free service the switches operate safely under normal load, overload and short circuit conditions.

Our UFST range of **tin-plated** fuse switches has been specifically introduced to perform safely in atmospheres containing **sulphur**. The formation of silver sulphide, which can cause overheating or can create short-circuit conditions leading to failure of the device, is prevented due to the specially prepared contacts on these fuse switches.

**Hubbell UFS Range**
- Fully complies to BS EN-60947-3
- 10 sizes up to 800Amps
- 3, 4 & 6 pole versions

**Hi-Tech Contactors**
Hubbell contactors are used across a range of hazardous industries; switching and controlling electrical apparatus. Generously rated, the contactors operate with unimpaired efficiency whilst the simplicity of design offers easy maintenance. Inspection of the contacts, which have an expected life of at least half a million operations, and coil replacement (if necessary) are carried out from the front.

- Fully complies to BS EN-60947-1
- 11 sizes up to 700kW
- Type 2 co-ordination
- DC applications
Founded in 1945, Cableform provides safe, reliable, and environmentally sound DC control solutions used in harsh industrial environments. As the world’s leader in the design and supply of Digital DC Motor Control Solutions for severe duty cranes, hoists, traction, and magnet control applications in steel, mining, tunneling and traction industries, Cableform continues to develop innovative and patent protected solutions in partnership with our customers and vendors to increase the safety, reliability, efficiency and performance of equipment and processes.

**Mining Vehicle Traction Controls: Digital Control of DC Traction Motors**

The third generation of Large Motor Controls brings mine-proven solid-state performance and reliability to equipment powered by large DC motors. LMC™ controls use microprocessor-driven IGBT (Isolated-Gate Bi-polar Transistors) devices for the control of traction motors and other systems in scoops, haulers, shuttle cars, locomotives, personnel carriers and utility vehicles. They are built for equipment drawing power from trolley lines, batteries, trolley/battery combinations, reeled cable and AC/DC supplies. LMC™ controls power DC motors running on supplies from 72 through 600 volts DC. They produce up to 1300 amps in motors, without a bypass, and generate maximum motor torque at all speeds.

**Onboard Battery Chargers**

Compact charger for installation on underground mining vehicles running on 300 volt DC trolley line to charge either 128 volt or 250 volt DC batteries while the vehicle trolley pole is connected. Solid-State design means no noise or interference with other vehicle operating or communication systems.

**Linear Accelerator Units**

3700 Series Solid State Linear Accelerator is housed in a rugged die cast box. Its advanced inductive system removes the troublesome potentiometer while producing a more accurate demand signal.

**AC/DC Shuttle Car Control**

Solid-state reversing of the series-wound motor allows the inductive field winding, which is in series with the armature, to protect the armature against DI/DT current surges -- it’s simple; it's automatic.

**DC Modular Solid State Motor Controller**

SS900 Series Motor Controller is solid state reversing -- made of true series-wound motor configurations. Its protective motor design is modular and flexible.
Metron Eledyne is a leading global provider of fire pump controllers, power distribution equipment and custom controls. These products are used in commercial, residential and industrial buildings, oil and gas plants and petrochemical facilities. Metron Eledyne occupies a modern engineering facility in Grantham England and enjoys a worldwide reputation for its chemical and petrochemical projects.

FD4e Series Fire Pump Controller
- NFPA20, FM1321/1323 & UL218
- Safe Area
- NEMA 2, 4, 4x in 304 or 316
- 10 Programmable lamps
- 10 Programmable inputs
- 10 Programmable volt frees
- 10A or 20A battery chargers
- 0-55°C temperature range
- Sea Water plumbing option

MP600 Series Fire Pump Controller
- NFPA20, FM1321/1323 & UL218
- Safe Area
- NEMA 2, 4, 4x in 304 or 316
- Direct on line
- 3 Programmable lamps
- 6 Programmable inputs
- 6 Programmable volt frees
- Maximum voltage, 7.2kV
- Maximum power, 1900hp
- 0-55°C temperature range
- Sea Water plumbing option
- Current limiting fuses
- Vacuum contactor switching

FD2e / Ex P IIB T4 Series Fire Pump Controller
- NFPA20
- IP66 Fully customizable
- 10A or 20A chargers
- PLC or relay based
- PLC to SIL level 1 standards
- Can include DC/AC isolation
- 0-55°C temperature range
- Sea Water plumbing option
- ATEX ITS03ATEX11282X
- IECEx ITS08.0044X
- NFPA496
- For use in Hazardous area Zones 1 & 2 (Class I Div 1)

MP300-800 / Ex P IIB T4 Series Fire Pump Controller
- NFPA20
- NEMA 4, 4x in 304 or 316
- MP300 Direct on Line
- MP400 Primary Resistance
- MP420 Part Winding
- MP430 Star/delta open transition
- MP435 Star/delta closed transition
- MP450 Autotransformer
- MP700 Electronic Soft starting
- MP800 Variable frequency drive
- Sizes range from 15 to 1500 horsepower, 200 to 700 volts at 50 or 60 Hz
- For use in Hazardous area Zones 1 & 2 (Class I Div 1)
As a group, Hubbell Incorporated designs and manufactures a wide range of quality electrical and electronic products for non-residential and residential construction, industrial, and utility applications.

Hubbell Harsh & Hazardous is part of the Electrical Systems division. There are also many other Hubbell brands you may recognize. Further details on each brand can be found at www.hubbell.com.

Other Hubbell Electrical Systems Brands:

Hubbell Power Systems Brands:

Hubbell Lighting Brands:
Our brands are all long established and well respected businesses within each of their industries. To find out more about a specific brand visit the websites listed.