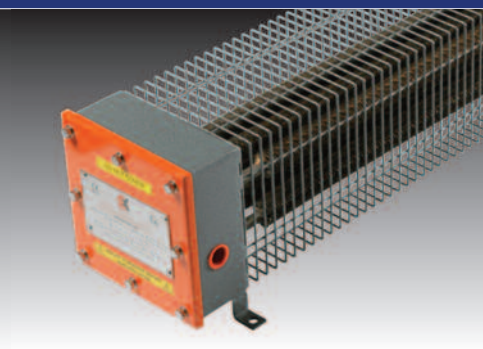




Hazardous Area Solutions



from **APHASLAM**

Industrial Electrical Equipment Specialists

AP Haslam
represent
these
major
industry
brands...

**APPROVED
DISTRIBUTOR**

Weidmüller 
The Interface Partner

WISKA ®

MERSEN

FLEXICON
FLEXIBLE CONDUIT SOLUTIONS

rayTEC®

SCHRACK
TECHNIK

 **Cembre**
MAKING THE RIGHT CONNECTIONS

CS
SEALING SYSTEMS

BACO
CONTROLS

 **geissel**

...and many others

APHASLAM

Industrial Electrical Equipment Specialists

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WE HELP YOU

AP Haslam has offered a full range of Ex services for over 30 years, bringing expertise, application and know-how to customers seeking tailored, high quality ATEX solutions.

From enclosures to lights, AP Haslam can bring their experience to help you and your customers find the solutions you need.

As an **appointed assembler of ATEX products** for Weidmüller, our customers can be confident that AP Haslam are independently audited to ensure we adhere to the relevant ATEX Directives and are compliant to the highest ATEX standards.



**We build
for you**

In recent years, we have also become the 'go-to' experts for **hazardous area ATEX lighting**, representing Raytec amongst others.

So confident are we of our products and service, we will provide our complete **Lighting Consultancy** for **FREE**.

AP Haslam are often asked to explain the rules around 'ATEX', 'Ex' and the identification of areas as being Zoned as 'Hazardous'.

This guide is offered as a source of possible areas of attention, a pointer towards Ex products – and the opportunities for you to pursue in the market.

AP Haslam – providing solutions to all your electrical installation requirements.

YOUR CONTACT

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Hazardous Area Specialist**



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WHAT IS ATEX?



A potentially explosive atmosphere (**ATEX** – **AT**mosphères **EX**plosives) exists when a volatile mixture of air, gas, vapour, mist or dust combines in a way that can ignite under certain conditions.

Typical circumstances occur in offshore oil & gas platforms, petrochemical plants, mines, distilleries and flour mills, amongst others.

Bosley Wood-flour Mill explosion (July 2017)
(photo: Cheshire Fire and Rescue)



The **European ATEX Directive** defines the essential health and safety requirements – and conformity assessment procedures – to be applied before products are placed on the EU market.

Here's your guide to the ATEX Zones:

Zone 0 (Gas & Vapours) + Zone 20 (Dust)



An area where an explosive atmosphere is present **continuously** for long periods.

Zone 1 (Gas & Vapours) + Zone 21 (Dust)



An area where an explosive atmosphere is likely to occur under normal operation **occasionally**.

Zone 2 (Gas & Vapours) + Zone 22 (Dust)



An area where an explosive atmosphere may occur under abnormal operation and only persists for a **short** period.

Know your hazards

GASES

Compressed, flammable gases:
acetylene, hydrogen, ethane,
methane, propane, butane.

Toxic compressed gases:
chlorine, fluorine etc.

Aerosol propellants.

LIQUIDS

Paints, petrol, polyester resin,
volatile chemicals.

SOLIDS

Dust from woodwork, flour-
milling, machining, grinding,

Steel, Aluminium: solid & dust

Nitro-glycerine, blasting caps,
fireworks, igniters, fuses,
flares, ammunition etc

Typical Hazardous Area locations

Chemical Refineries
Oil Refineries
Pharmaceutical Plant
Gas Storage
Breweries
Distilleries (*Gin, Whiskey*)
Flour Milling Plant
Cereals, Grain, Food Silos & Storage
(*Agriculture & Food processing*)
Spray Booths
Battery Storage
Paint Storage

Solvent Processing (*Perfumes, etc*)
Woodworking plants and workshops
Sewage processing plants
Gasometers and compressed gas tanks
Sugar factories & refineries
Malt houses
Covered car parks
Petrol Stations, Maintenance Garages and
Vehicle Inspection Pits (*see diagram*)
Workshops for body repair and servicing of
motor vehicles
Truck refuelling and servicing depots

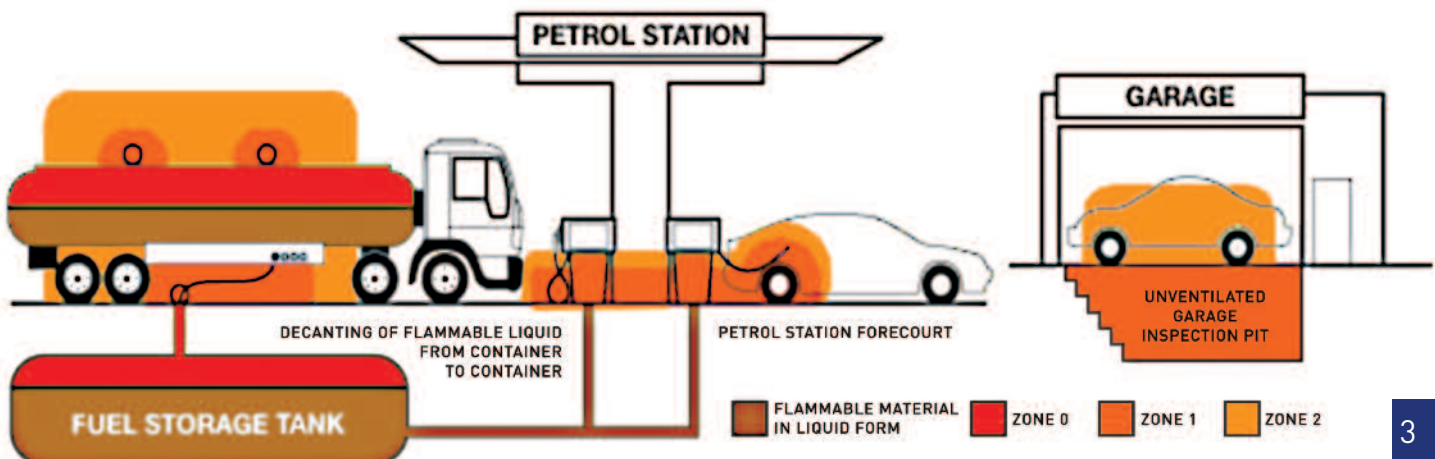
Typical Hazardous Substances

Alcohols (*production by distillation*)
Acetylene (*manufacture / storage*)
Acids (*use or storage*)
Ammonium nitrate
Batteries (*charging workshops*)
Blended ammonium nitrate (*deposits of*)
Candles or other wax objects, etc. (*moulding of*)
Cereals, grain, food products & organic
products releasing flammable dust
Charcoal (*deposits or warehouses of*)
Coal, coke, etc (*warehouses and deposits of*)
Detergent (*manufacture of products*)
Easily flammable solids
Fabrics, knitted articles, tulle, guipure
lace, etc (*manufacturing workshops*)
Fibres of vegetable or animal origin,
artificial or synthetic fibres (*processing of*)
Flammable amines (*storage of*)
Flammable liquids (*installations for
processing / storage*)
Fruit or vegetables (*ripening, de-greening,
whitening, disinfestation rooms*)

Liquefied fuel gases (*filling stations, or
distribution of*)
Liquid oxygen (*deposits of*)
Organic peroxides (*use, manufacture,
storage of*)
Oxidising substances (*manufacture, use,
storage of*)
Processing of vegetable fibres
Refrigeration or compression (*installations*)
Shoes or leather/skin products
(*manufacture of*)
Steeping lighters (*deposits of*)
Tar, pitch, resins, etc. (*mixture or hot
processing of*)
Textile dyeing and printing
Use or storage of toxic substances or
preparations
Varnishes, paints, primers, glues,
rendering (*application, baking, drying*)
Vegetable oils (*extraction of*)
Wood, paper, cardboard or similar
combustible materials (*deposits and
workshops where these are worked on*)

EXAMPLE OF HAZARDOUS AREA ZONES

This diagram shows how hazardous area zones may occur in typical circumstances



LED LIGHTS



AP Haslam have a long history producing Ex solutions – and are now partnered with UK manufacturer, Raytec, Ex lighting specialists with over half a million products in service throughout the world.



The Spartan 'High Bay' is designed for the high ceilings of large hazardous areas, space that requires powerful, ceiling-mounted, white-light illumination. Its unique modular design, with a removable PSU chassis, allows for flexible installation with easy access for servicing.



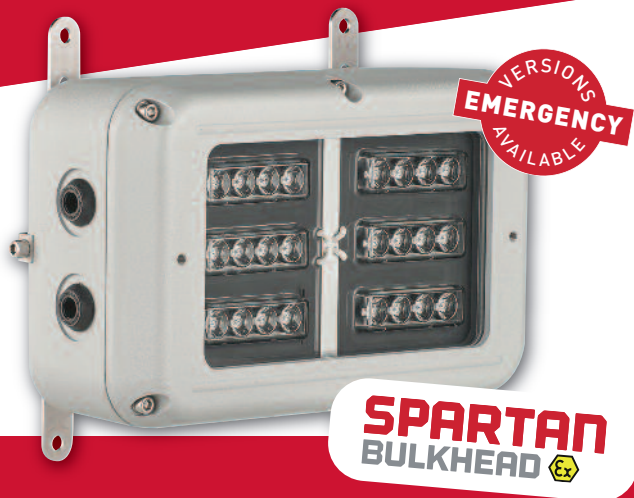
The Spartan 'High Power Flood' is also designed for large and open areas containing hazards, offering top performance and white-light illumination. DALI*/dimming capabilities are standard and it also comes with the adjustable, modular design, with removable PSU chassis allowing for flexible installation and servicing access.

* (DALI) Digital Addressable Lighting Interface

Raytec LED Spartan luminaires for hazardous areas have so much to offer:

- Use of field-proven, long-life LED technology
- Availability for **Zone 1 and 2** and industrial applications
- Use CoolXtrude™ thermal management technology to ensure a lifetime of 10+ years
- **Emergency** versions available for **Bulkhead** and **Linear** units
- **High Bay** and **High Power Flood** units can provide an output of up to **25,000 delivered lumens**
- All units are ATEX and IEC Ex approved and ISO9001 & ISO14001 certified
- All units come with a full, no-quibble 5-year warranty.

AP Haslam has the ideal solution for all your Ex lighting issues with Raytec's outstanding range of high-performance, hazardous area LED luminaires.



The Spartan 'Bulkhead' boasts the same durability and functionality that characterizes the entire range. Uniquely, the low-profile design is compact, making it ideal for restricted space applications requiring easy access to the rear entries which provide protection against cable damage.



The Spartan 'Linear' range is designed for both new and retrofit installations requiring a white-light source. Fluorescent unit retrofits are facilitated by all dimensions, fixing centres and gland entries, whilst remaining fully compatible with existing 18W and 36W units.

LED LIGHTS



TREVOS

Established in 1990, TREVOS s.a. is a world-renowned, all-Czech producer of fluorescent and LED lighting, with a broad range of industrial and indoor fittings.



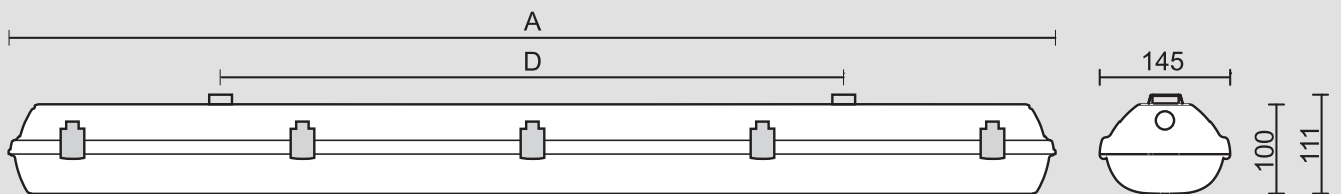
PRIMA LED Ex PCc

Where there is a danger of an explosion of caused by gas, dust and combustibile fumes, the **PRIMA LED Ex PCc** light fitting is resistant to dust, moisture and water splashes.

Intended for environments with Risk of Explosion Group II, Category 3 (Zone 2, 22), both the body of the fitting and the diffuser are made of impact-resistant Polycarbonate (PC).

The **PRIMA LED Ex PCc** delivers up to 45 % lower electricity consumption when compared to fluorescent tubes – and meet the requirements of the European Community Directive No.2014/34/EU.

- **Light fitting protection:** IP66
- **Maximum ambient temperature:** up to $t_a = 55^\circ\text{C}$
- **Lifetime:** 50,000 hours / L80B20
- **Body:** Grey Polycarbonate
Diffuser: Translucent Polycarbonate
- **Constant luminous flux:** even in ambient temperature of -25°C
- **Full range of sizes/outputs available:** 8 versions, from 1272 x 700mm (3200lm) to 1572 x 940mm (11000lm)
- **Standard model :** CRI \rightarrow 80: 4000 K
On request : CRI \rightarrow 80: 3000 K, 5000 K
- **Clips:** S/steel+polyamide+15% glassfibre
- **Certification:** ATEX AR19ATEX004, CB
- **Manufacture:** Czech Republic



Reference	Lumens	Watts	Amm	Dmm
14810 PRIMA LED Ex	3200	22	1272	700
14820 PRIMA LED Ex	4400	30	1272	700
14830 PRIMA LED Ex	4000	27	1572	940
14840 PRIMA LED Ex	5500	37	1572	940

Reference	Lumens	Watts	Amm	Dmm
14850 PRIMA LED Ex	6400	42	1272	700
14860 PRIMA LED Ex	8800	58	1272	700
14870 PRIMA LED Ex	8000	53	1572	940
14880 PRIMA LED Ex	11000	71	1572	940

No obligation Survey Report

Worried about how your finished lighting layout will look?

AP Haslam's Lighting Designers can provide a full, no obligation Survey Report on your site with 3D diagrams and illuminance mapping to demonstrate what your final installation will look like.

The AP Haslam Lighting Design Service includes:

- Full Site Modelling
- 3D Lighting Positions
- 3D Illuminance Mapping
- 2D Lighting Positions
- 2D Illuminance Mapping

Call us today

T: +353 (0)1 453 2522
E: sales@aphaslam.ie

The Survey

This involves taking measurements, reviewing your environmental obligations and, of course, determining the number of lumens needed to achieve the optimal illumination for your project.

If this is at the development stage, we will work with your sub-contractors and undertake 3D and 2D modelling from your plans.

The Report

We will supply you with a free, no obligation survey report and recommendations, which you are free to use as reference to source a second opinion.

The Revisit

Based on our survey report we will make a return visit to your premises and address any thoughts, comments or questions our survey might have raised. It's part of the service.

The installation of a sustainable lighting scheme is an investment for you and your business – that's why we invest time in making sure we get it right.

Give your next project
the 'green' light.

A FREE Service from
AP Haslam

SIGNALS & SOUND

Categories in the Moflash Ex range of intrinsically safe signalling devices:

- Ex Beacons
- Ex Sounders
- Ex Combi Sounder/Beacons
- Ex Beacon / Sounder Combined Unit with either Junction Box or Push Button
- Ex Manual Call Points
- Ex Push Buttons
- Ex Status Lights
- Ex Junction Boxes

Exclusive to AP Haslam, this leading manufacturer provides explosion-proof signalling devices for industrial installations where explosive atmospheres and harsh environmental conditions prevail.

The Beacons offer a choice of two light sources – Xenon (strobe) or LED outputs – can be fitted with a telephone initiation function and can be used as telephone-ring indicators when installed in very noisy environments.

The Sounders incorporate a three stage alarm option with sixty-three tones to choose from and also can be fitted with a telephone initiation function.

All products are available in either of two durable material options: **GRP** (Glass Reinforced Plastic) or **Stainless Steel**.

Moflash EX range of Beacons and Sounders carry ATEX: II 2G EXd IIC T4 – T6 (Incorporating IIA, IIB & IIC) Zone 1, 2, 21 & 22 approvals for use in potentially explosive atmospheres, hazardous areas and very harsh environmental conditions.

EXPLOSION PROOF BEACON EX BEACONS

Choice of two types of light source – Xenon (strobe) with multiple flash rate and power ratings or an LED array with three status type indication options and two power ratings. The design allows for termination inside the enclosure. 115/230 AC or 12-48V DC.

Telephone initiation function and/or second ring output indicator for telephones in very noisy environments.



HAZARDOUS AREA EX SOUNDERS

Sounders incorporate a three stage alarm option with sixty-three tones to choose from – includes four tones that can be recordings or customised by the installer – as well as the ability to be fitted with a telephone initiation function.

The Ex Sounder range is suitable for applications in the following ATEX environments: Oil and Gas, On-shore and Offshore, Chemical, Petrochemical, Refineries & Marine locations.





EXPLOSION PROOF COMBINATION SOUNDER / BEACON

The unit incorporates a four stage alarm option with sixty-three tones to choose from, including four tones that can be recorded or customised and pre-set by the installer.

The unit also incorporates a visual warning signal with a choice of two types of light source: either Xenon (strobe) with multiple flash rates and power ratings or an LED array with three status type indication options.

Telephone initiation function and/or second ring output indicator for telephones in very noisy environments.

GRP or Stainless Steel material options.



HAZARDOUS AREA COMBINATION SOUNDER / BEACON WITH JUNCTION BOX OR PUSH BUTTON

A combined audible & visual warning signal in one unit, with the option of either a **push-button** for manual activation – or **junction** box with extra space for final connections to a fire or telecom system and additional cabling is required to monitor external devices.

GRP or Stainless Steel units are assembled on a heavy duty 316 stainless steel, pre-drilled, mounting plate – pre-wired as standard.



HAZARDOUS AREA EX PUSH BUTTONS

GRP or Stainless Steel enclosure options, compatible for use with a PLC, DCS and ESD systems via 4-20mA output and ideally suited for fire alarm systems – an addressable option with diode fitted is available.

Units have either a key-reset or self-reset with and optional visual LED indication; Red, Green (or both) can be fitted. Internal termination.

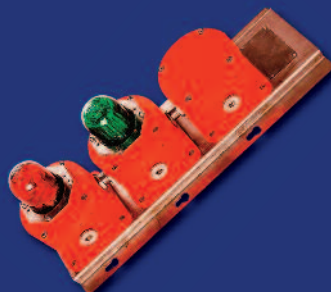


OTHER INTRINSICALLY SAFE HAZARDOUS AREA PRODUCTS

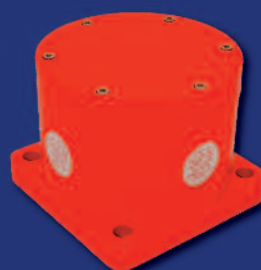
Ex Manual Call Points



Ex Status Lights



Ex Junction Boxes



Intrinsically Safe Signalling Devices





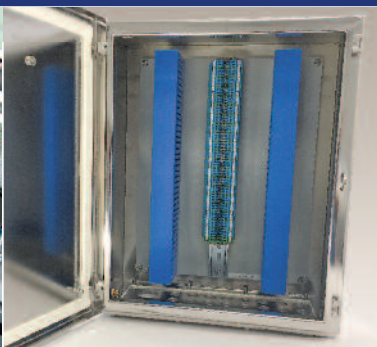
High quality ATEX solutions – built for you by AP Haslam

Fully automatic CNC machining with fast throughput times and consistently excellent product quality.

View our video by scanning the QR code on your mobile device



- ▲ Fully accredited assembler for Weidmüller enclosures – with a wide range to choose from.
- ▲ Available in Aluminium, Plastic or Stainless Steel.
- ▲ Rapid turnaround times.
- ▲ CNC machining ensures accuracy and repeatability.
- ▲ Independently audited and fully ATEX & IECEx compliant.



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ENCLOSURES

Fully Certified ATEX and IECEx compliant boxes – built for you

AP Haslam's Workshop EX assembly services combine application expertise with years of industry know-how to offer you automatic CNC machining of your EX enclosures, fitted with all necessary terminals and cable glands to your specifications.

The Weidmüller K Range

This extensive aluminium enclosure range features 19 different sizes in two surface finishes, powder-coated and natural.

The Weidmüller POK Range

Made from a high-quality glass-fibre reinforced polyester, these enclosures are ideal for environments where corrosion and impact resistance – and a high IP protection class – are required. Available in 17 sizes, there are two standard finishes, Grey and Black.

The Weidmüller STB Range

The Small Terminal Box (STB) is suited for the energy, process or transportation industries and is ideal where space is limited.



**We build
for you**

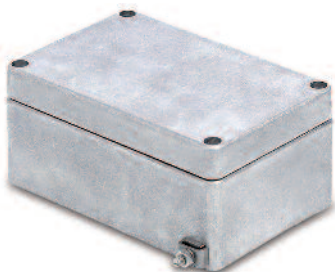
The Weidmüller TB Range

Featuring excellent performance under the most difficult environmental conditions, these enclosures comply with the stricter requirements of potentially explosive atmospheres found in the process or power generation industries.

An electro-polished surface adds further protection against dirt and moisture and is best suited to areas such as power generation including oil, gas & petro-chemical industries.

A 'Multi Hinged' version of this enclosure is also available – the Weidmüller TB MH.

The Weidmüller K Range



The Weidmüller POK Range



The Weidmüller STB Range



The Weidmüller TB Range



EQUIPMENT



Explosion-Proof Plugs & Sockets

ATEX plugs suitable for Zone 1 & Zone 2 Hazardous Area applications are available in an extensive range of power outputs and pin configurations.

Explosion and flameproof plugs and sockets are standard equipment in hazardous locations where safety is an essential specification and performance factor.

All plugs can be used with EN/IEC 60309-2 industrial pin sockets outside hazardous environments.



Explosion-Proof Controls & Switches

We supply a wide variety of push buttons, selector switches, control and load break switches – and LED pilot lights for hazardous industrial environments.

AP Haslam Workshop will also build bespoke, ATEX-certified control stations to provide safe circuit control and/or selection in potentially explosive atmospheres.

These control stations are ideal for the control of equipment at power, chemical and petrochemical plants and refineries – and many other industrial applications with Hazardous Areas.

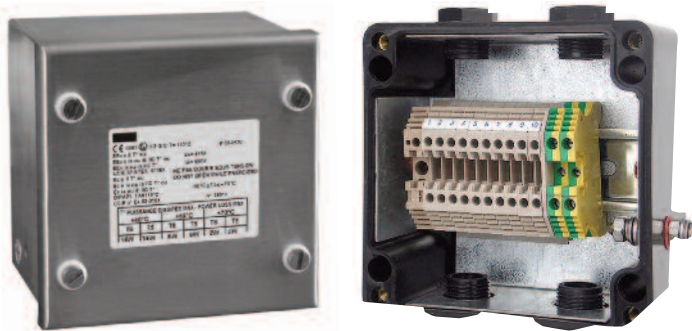


Explosion-Proof & Fire-Rated Junction Boxes

We offer a wide range of Junction Boxes.

Reinforced Polyester and Stainless Steel Junction Boxes for electrical and power applications are available from AP Haslam's Workshop.

We provide bespoke applications for all Hazardous Areas and comply to Zone 1 and 2 (Gas) and Zone 21 and 22 (Dust).



Explosion-Proof Glands, Adaptors & Blanking Plugs

WISKA offer a wide variety of Ex-cable glands in plastic, brass or steel to provide optimal explosion protection and are the perfect option for applications in Hazardous Areas.

Through AP Haslam, WISKA provide explosion-proof cable glands with various types of ignition protection according to ATEX guidelines, IECEx standards, Inmetro requirements and EAC norms.



EQUIPMENT

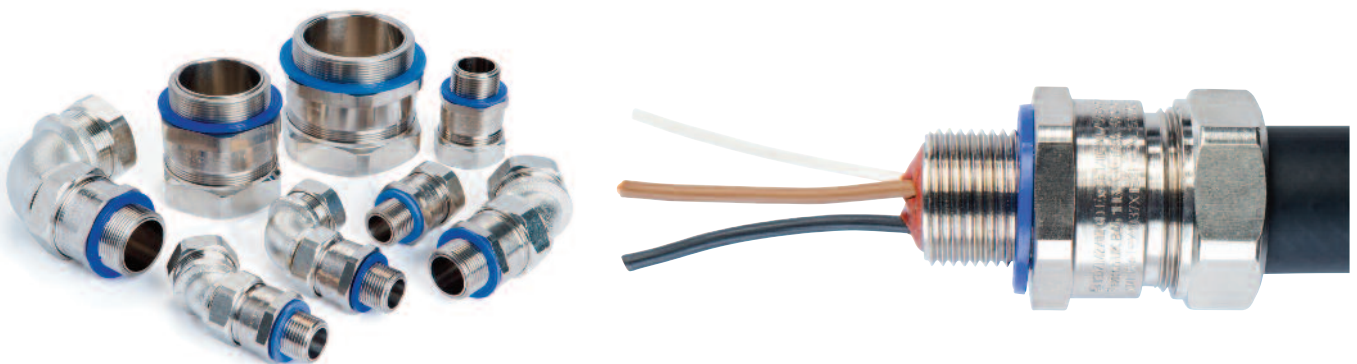


Hazardous Area Conduits

By using **flexible conduit**, multiple cables can share the same space and hence reduce the number of entry points required into a control box and termination area, minimising risk in the presence of gases, vapours and dust.

With a full range of sixteen different conduits, **Flexicon** bring the latest solutions and technologies to liquid-tight cabling installations, enhancing safety and system integrity, reducing installation time – and extending service life with corrosion resistance in the harshest environments.

Application guidance and expert advice is available, whatever your challenges.



Explosion-Proof CCTV Cameras and Equipment

WISKA offers ATEX-compliant **CCTV cameras** with an integrated connection compartment that makes an additional junction box unnecessary. The explosion-proof product range is distinguished by no external cabling. Wash-Wipe and pan-tilt-zoom functions are available. The product range includes explosion-proof camera stations as well as dome cameras for Zone 1 applications.



Explosion-Proof Trace Heating Elements

ATEX-approved for commercial / industrial **trace heating**. Both **constant wattage and self regulating cables** are available for internal & external freeze protection and low temperature maintenance. Flexible, robust and easy to install, with the ability to withstand temperatures up to +200°C.

A range of explosion-proof, ATEX-approved **junction boxes** and both **air-sensing and pipe-sensing thermostats** are also available, suitable for the safe interconnection and surface temperature control of trace heating cables. ATEX-approved for Zone I and Zone II Hazardous Areas. Gas Groups IIA, IIB and IIC. Protection exd. IIC T6.

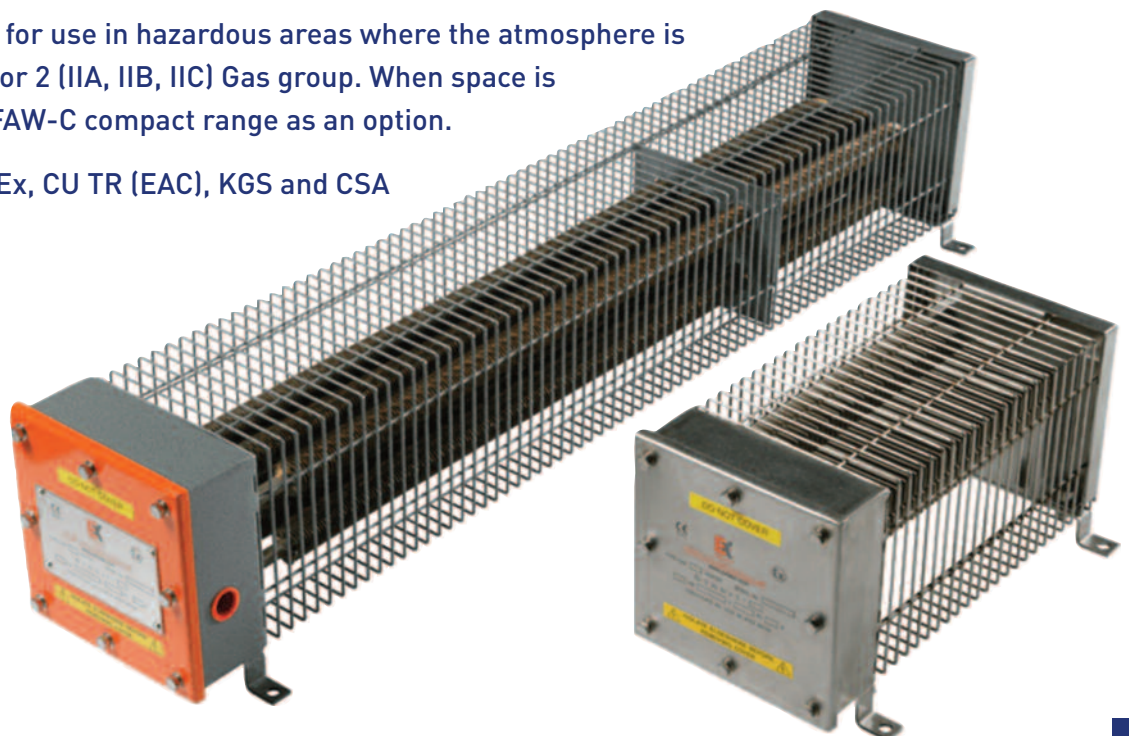


Explosion-Proof Space Heaters and Air Warmers

The FAW range offers a versatile, lightweight **air warming solution** for small work and storage areas, and is suitable for use with 1 phase or 3 phase power supplies up to 660 volts. The range can also be configured for use with DC power supplies.

This range is certified for use in hazardous areas where the atmosphere is classified as a Zone 1 or 2 (IIA, IIB, IIC) Gas group. When space is limited, we offer our FAW-C compact range as an option.

Certified to ATEX, IECEx, CU TR (EAC), KGS and CSA standards.



EQUIPMENT



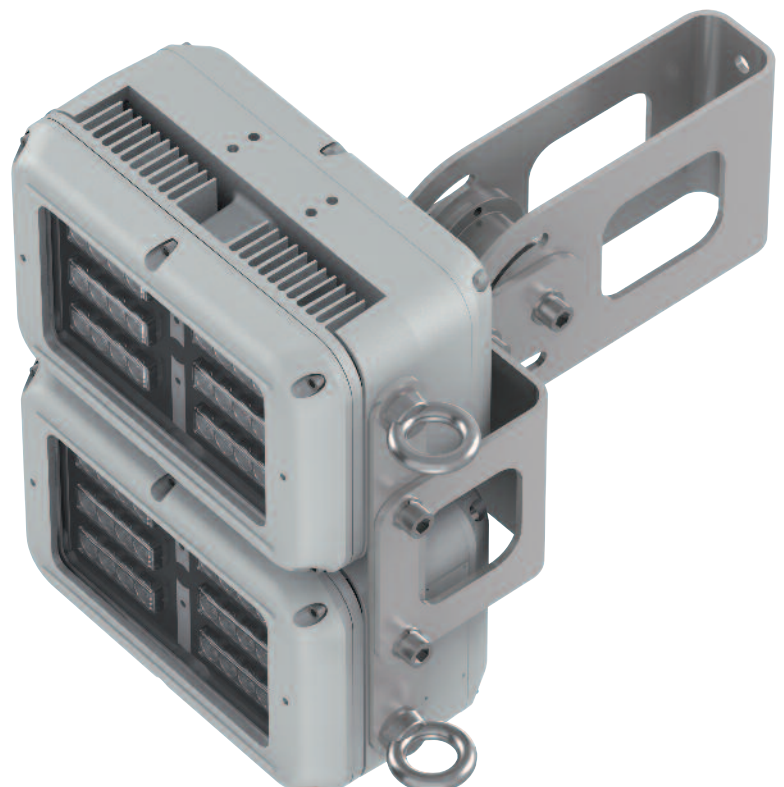
Hazardous Area / Clean Room LED Panel lighting

Ceiling panel lighting to ATEX-compliance standards in white painted metal sheet or, on request, stainless steel. Opalic tempered safety-glass contains LED sources to 4000K. Installation to false ceiling or wall, these light fixtures are suitable for areas with a danger of explosion (Zones 2 & 22).



Specialist and Bespoke Lighting for Hazardous Areas

Coloured, wildlife-friendly (left), Safety shower (centre), and vibration-proof, self-levelling Crane Luminaires are examples of specialist LED lighting units available to order from **Raytec**.



Explosion-Proof Sensor

Daylight sensor for Hazardous Area Applications with aluminium alloy enclosure and powder paint finish. The diffuser is made from borosilicate glass and the unit can be either ceiling- or wall-mounted.

- Ambient temperature range for operation:
-20°C to +55°C
- ATEX certified to Zones 1 & 21
II 2G Ex d IIC T6 Gb
II 2D Ex tb IIIC T80°C Db IP66 IK08
- Voltage: **220-240V AC**
- Switching load:
400W (Capacitive) or **800W** (Resistive)



Explosion-Proof Protected WiFi Fob Enclosure

The AP Haslam Workshop handles requests for electrical items that need to be used within hazardous environments.

This radio key fob was not ATEX certified and therefore not suitable to stand alone in a hazardous area. This fob was installed within an EExd enclosure featuring a tempered glass front window to allow the fob signal to work effectively – while still protecting it in the hazardous area.

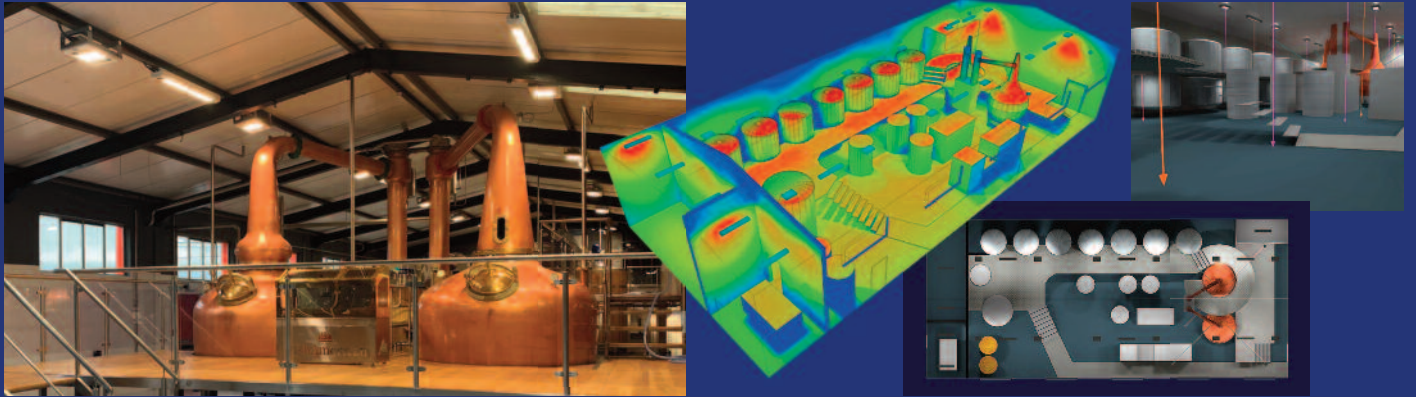


**We build
for you**

CASES



Achill Island Distillery – Lighting Design Service



Tullamore Distillery – LED lighting installation in new warehousing



O'Connell Monument – Emergency LED lighting



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