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PRODUCT CATALOGUE

QUALITY | SAFETY | PRODUCTIVITY

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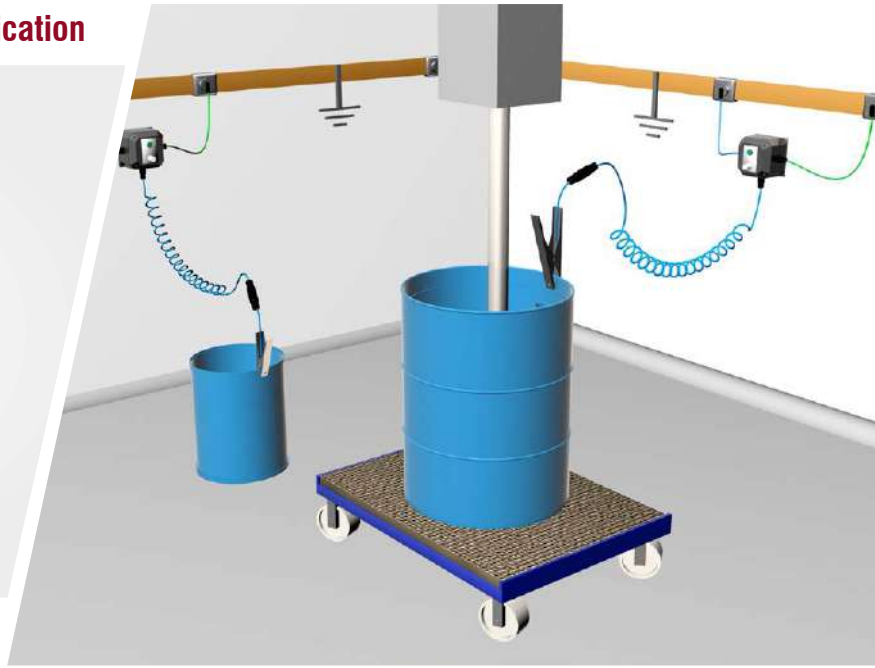
Bond-Rite® REMOTE

Continuous Ground Loop Monitoring with Visual Indication



Bond-Rite Remote *Static Dissipative GRP Enclosure*

The Bond-Rite REMOTE indicator station houses the ground loop monitoring circuit and a bright green LED which pulses continuously when it detects that the resistance between the conductive metal equipment to be grounded and the site's verified earth ground (e.g. copper tape) is 10 Ohms or less.

Once connected the Bond-Rite REMOTE continuously monitors the loop resistance of the circuit between the equipment and the verified ground point (e.g. wall-mounted earth bar).

The pulsing green LED provides process operators with a continuous visual reference point that enables them to monitor the ground status of conductive metal equipment capable of accumulating static electricity.

The standard GRP enclosure is static dissipative and suitable for general processing environments. The stainless steel enclosure is designed to cater for hygienic or corrosive environment specifications.

Both enclosures provide a minimum IP 65 degree of ingress protection and are suitable for both indoor and outdoor installation.

The Bond-Rite REMOTE can be powered with an intrinsically safe 9V battery (included) or an external 230/115 V AC power supply which can power up to 10 individual indicator stations.

The Bond-Rite REMOTE is an ideal solution for applications and installations where interlocks with the process are not possible or required.

Please Note:
The Bond-Rite REMOTE does not check if the site's verified earth grounding point is connected to the general mass of earth. It is the responsibility of the site owner to ensure that their installed ground network is connected to general mass of earth in line the relevant national standards.

Typical Applications

- Filling and dispensing to/from metal containers, including drums, waste drums, mixing vessels
- Grounding equipment used in mixing and blending operations

Bond-Rite® EZ

Portable Static Bonding Assembly

Bond-Rite EZ

The Bond-Rite EZ is a flexible device that bonds two conductive metal objects at risk of static charge accumulation.

When the Bond-Rite EZ establishes a 10 Ohms or less resistance between both conductive objects the green LED indicator illuminates, pulsing continuously.

Once connected the Bond-Rite EZ continuously monitors the resistance between both metal objects.

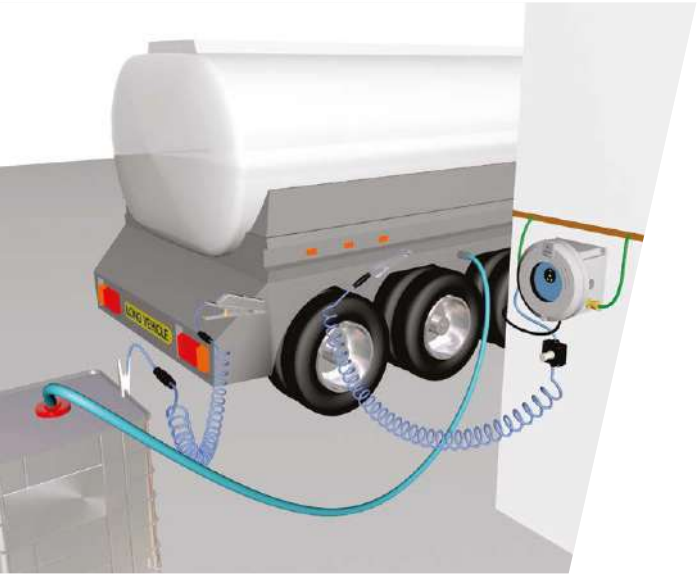
In addition to bonding, the Bond-Rite EZ can be used by competent electrical personnel to ground objects at risk of electrostatic charging.

In such scenarios, the competent electrical person must be sure that the grounding point, e.g. wall mounted bus-bar, has a verified connection to the general mass of the earth.

The Bond-Rite EZ houses the ground loop monitoring circuit and a bright green LED in a rugged stainless steel enclosure.

10 Ohms loop resistance monitoring based on National, International and Recommended Practices*.

Once the process is complete and any interconnecting pipework has been removed, to avoid damage/injury, the clamp should be carefully removed and placed on the appropriate stowage point.



Example of grounded truck bonded to IBC

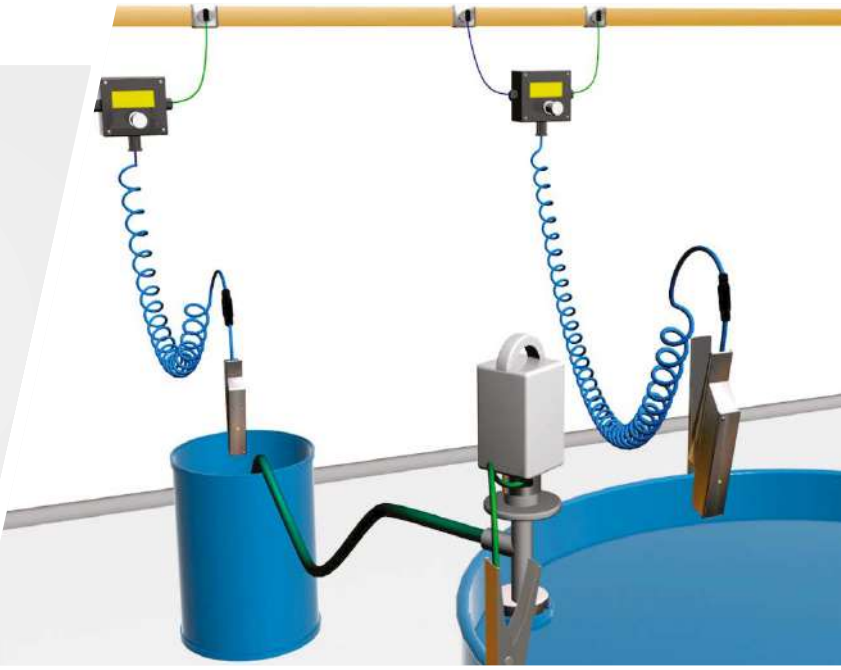
***IEC TS 60079-32-1**
"Explosive atmospheres: Electrostatic hazards, guidance"

***NFPA 77**
"Recommended Practice on Static Electricity"

* Always check for and read the latest version of the International Standards, Guidance and/or Recommended Practices.

Bond-Rite® CLAMP

Self Testing Static Grounding Clamp



Bond-Rite CLAMP

The Bond-Rite CLAMP contains a bright green LED which pulses continuously when it detects that the resistance between the equipment to be grounded and the site's verified earth ground is 10 Ohms or less.

The Bond-Rite CLAMP continuously monitors the resistance of the circuit between the equipment and the verified ground point (e.g. wall-mounted earth bar).

The pulsing green LED provides process operators with a continuous visual reference point that enables them to monitor the ground status of conductive metal equipment capable of accumulating static electricity.

The Bond-Rite CLAMP is an ideal solution for applications and installations where interlocks with the process are not possible/ required.

Typical Applications

- Filling and dispensing to/from metal containers, including drums, waste drums, mixing vessels.
- Grounding equipment used in mixing and blending operations.

Please Note: The Bond-Rite CLAMP does not check if the site's verified earth grounding point is connected to the general mass of earth. It is the responsibility of the site owner to ensure that their installed ground network is connected to general mass of earth in line the relevant national standards.

Bond-Rite Clamp:
Pulsing LED confirms equipment is grounded

Certification

Battery
9 V Lithium-Manganese
(battery included)

Monitoring Set Point
Nominally ≤10 Ω (±10%)

Sole-Mate™ II

Static Dissipative Footwear Test Station

Sole-Mate II Static Dissipative Footwear Test Station

The Sole-Mate™ II is a user friendly device that is designed to test the condition of static dissipative footwear prior to entering safety critical hazardous areas exposed to potentially ignitable atmospheres.

International Standards (detailed on the next page) recommend regular testing of static dissipative footwear. The Sole-Mate II provides a time efficient and cost effective method of ensuring personnel operating in hazardous areas are wearing static dissipative shoes that are capable of mitigating electrostatic charge accumulation on their bodies.

The Sole-Mate II tests the condition of the shoes by measuring the resistance of the electrical loop through the operator and their footwear. If the resistance of the shoes is too high, the Sole-Mate II will indicate that the shoes have failed the test via a red lamp and buzzer alarm. If the shoes pass the test a green lamp will indicate to the operator that the shoes are fit for purpose.

Additionally, users can interlock the tester with audible alarms or entry doors into hazardous areas so that personnel not wearing suitable footwear cannot enter the hazardous area.

All Sole-Mate II units are supplied with 3 m cable to wire into a mains supply. The US unit is supplied with 6 ft cord and US 3 prong plug.

Earth-Rite® II RTR™

Static Earthing for Road Tankers

Earth-Rite II RTR *Road Tanker Earthing System*

The Earth-Rite II RTR is designed to ground a road tanker during loading and unloading operations in order to dissipate any static electricity which could accumulate on a road tanker during these processes.

CLC/TR 60079-32-1 “Explosive Atmospheres: Electrostatic Hazards - Guidance” highlights road tankers as being capable of accumulating electrostatic charge during product transfer operations.

To mitigate against the accumulation of static on the body of the road tanker, it recommends that trucks be grounded during the transfer procedure.

The Earth-Rite II RTR static grounding system is designed to provide grounding of road tankers to mitigate against static discharges from the main body of the road tanker.

The system consists of a red/green LED ground status indicator and dry contacts that can be interlocked with the process or an additional strobe light.

The Earth-Rite II RTR includes:

- **Flameproof and GRP Enclosures** incorporating Intrinsically Safe Static Ground Monitoring System
- **Ground Connection Junction Box** with Clamp Stowage Point and Quick Release Connector
- **Heavy Duty Stainless Steel Universal Grounding Clamp** with Hytrel® Extendable Cable and Quick Connectors

Earth-Rite® DGS

Dual Grounding System

Earth-Rite® DGS Static Grounding System

Protecting plant and personnel from the hazards associated with electrostatic discharge is usually the responsibility of HAZMAT professionals and engineers. Effective grounding and bonding procedures are always the first step in controlling static with special solutions being called for to suit individual applications.

There are times when one or two plant items need to be grounded simultaneously and both of their grounding connections monitored to less than 10 Ohms as required by International Standards Guidance and / or Recommended Practices. The Earth-Rite DGS is the ideal solution for grounding up to two bulk transportation vehicles or other objects to be grounded simultaneously.

The Earth-Rite DGS includes:

- **Flameproof Ex (d) aluminium enclosure** (suitable for installation in Zone 1, Gas and Dust) with dual Intrinsically Safe Continuous Ground Monitoring Circuits (Ex ia suitable for use in Zone 0, Gas and Dust)
- **A very simple "GO / NO GO" user interface** for each grounding channel. A single RED LED indicates to the operator a "NO GO" situation Three flashing high intensity GREEN LEDs per channel indicates to the operator when the ground monitoring circuits have detected a resistance of 10 Ohms or less
- **2 Ground Connection Junction Boxes** are provided and are complete with a stowage pin, VESX90-IP grounding clamp and a 2 conductor Cen-Stat protected spiral cable and quick connectors (3m, 5m, 10m, 15m or 30m lengths are available)

Interlocking the grounding system with the process equipment being used enhances the safety and operating procedure before the process starts. If the ground is lost then Earth-Rite DGS can shut down the process for one or both of the channels. Interlocking the grounding system with strobes provides personnel working in the surrounding area with a clear view of when the grounded process is underway and protected.

Typical Applications

- Two metal drums
- Two Ex IBCs
- Two rail cars
- Transloading (railcar to truck or truck to rail car)
- LACT (Lease Automatic Custody Transfer) skids

Or any combination of the plant items above.

Please read the latest version of the following **International Standards, Guidance** and / or **Recommended Practices** for more useful information on static hazards and solutions:

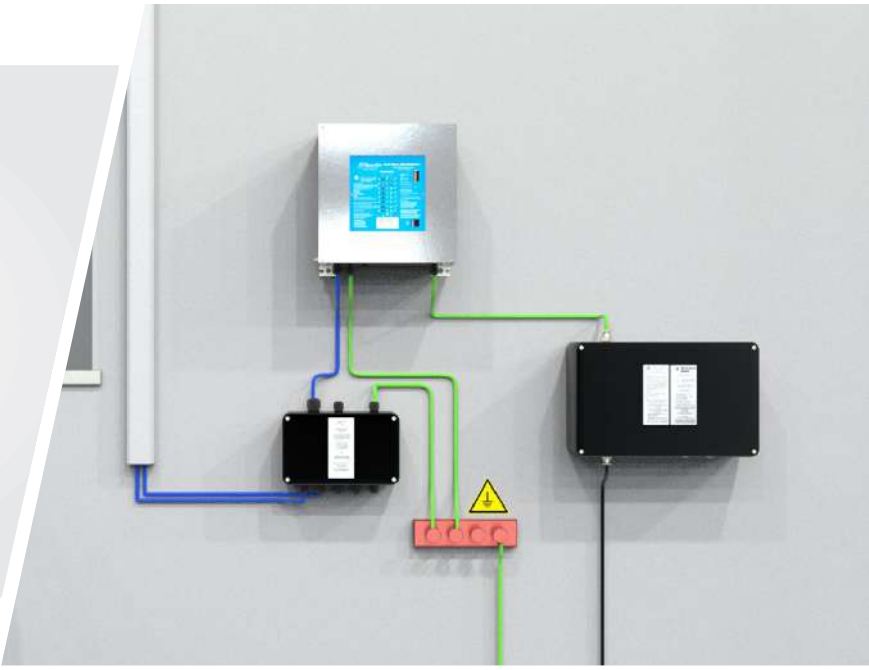
IEC TS 60079-32-1 Explosive atmospheres. Electrostatic hazards, guidance

NFPA 77 "Recommended Practice on Static Electricity"

API RP 2003 Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents.

Earth-Rite® MULTIPOINT II

Static Grounding System



Earth-Rite MULTIPOINT II *Static Grounding System*

To ground and monitor multiple items of equipment at points like multi drum loading stations and mixing stations, IBC loading stations and railcar loading gantries, a large number of conventional static grounding systems would be required to minimize the accumulation of static electricity. In addition to flammable liquid and gas operations, powder processing equipment that typically includes interconnected pipes, fluid bed dryers, hoppers and micronizers would require multiple grounding systems. With the Earth-Rite® MULTIPOINT II up to eight individual items of potentially isolated equipment can be ground monitored simultaneously with a single static grounding system.

The Earth-Rite MULTIPOINT II is an ATEX / IECEx / cCSAus certified static grounding system which identifies when equipment exceeds ground resistance levels outlined in recommended practice documents like IEC TS 60079-32-1 and NFPA 77.

The system consists of a hazardous area monitoring unit that contains eight pairs of red and green LED indicators that verify when the equipment at risk of static charge accumulation has a resistance of 10 Ohms or less to the plant's designated true earth grounding point.

For applications where ground monitoring indication is required at the point of operation (e.g. drum filling) local ground status indicator stations can be specified.

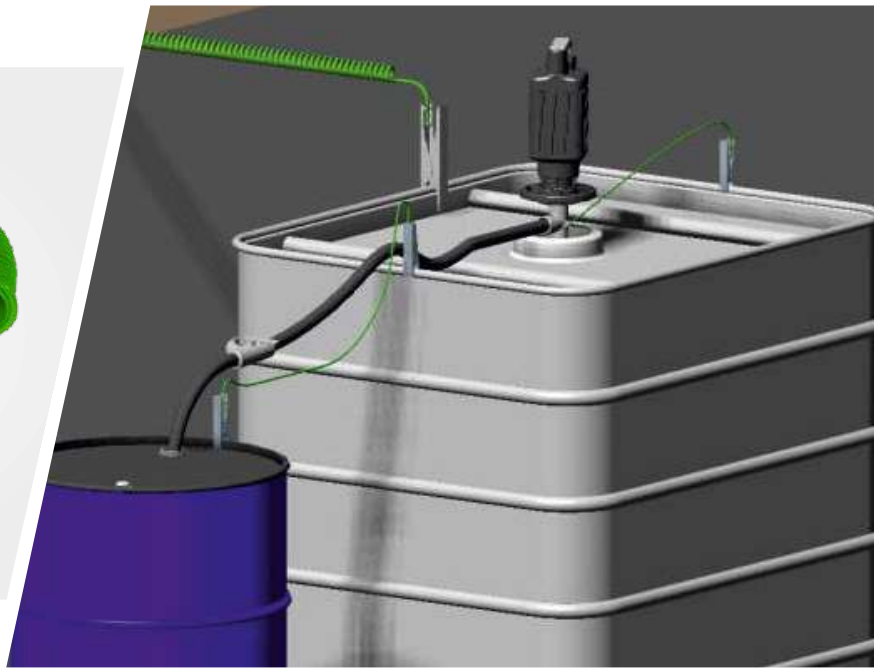
Each monitoring channel interfaces with it an individual volt free contact as standard. In addition to the 8 individual volt free contacts a group relay is provided so that multiple ground monitoring channels can be setup to provide a permissive / non-permissive condition to external equipment (e.g. PLCs, pumps, valves, sounders).

Earth-Rite MULTIPOINT II applications include:

- multiple railcar loading points
- multiple drum / tote loading points
- liquid / powder mixing and blending
- powder conveying equipment
- fluid bed dryers
- silo / container filling and emptying
- hoppers and dust collectors
- powder micronizing, pulverising and grinding equipment

Cen-Stat™

Static Grounding Clamps, Cables and Reels



Cen-Stat *Static Grounding Clamps and Cables*

Equipment can only be grounded by ensuring a low resistance connection to verified true earth grounding points (e.g. wall-mounted earth bar). Other equipment used in the process can be bonded to the equipment that is grounded.

Static grounding systems like the Earth-Rite® range combine interlock control and visual indication to verified ground connection points and offer the highest levels of protection over electrostatic ignition risks. However, equipment specifiers may select passive grounding devices, like single pole clamps, to ground and bond plant equipment.

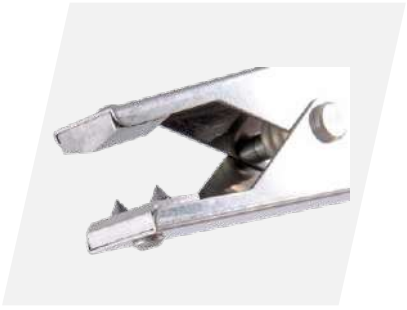
ATEX, FM and IECEx approved clamps tested for:

- Clamp Pressure
- Electrical Continuity
- High Frequency Vibration
- Mechanical Pull

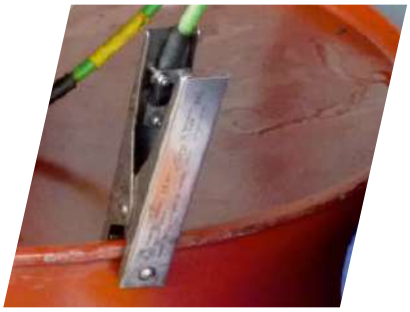
IEC TS 60079-32-1,13.4.1 states:

Where wire conductors are used, the minimum size of the bonding or earthing wire is dictated by mechanical strength, not by its current-carrying capacity. Stranded or braided wires should be used for bonding wires that will be connected and disconnected frequently.

Temporary connections can be made using bolts, pressure-type earth (ground) clamps, or other special clamps. Pressure-type clamps should have sufficient pressure to penetrate any protective coating, rust, or spilled material to ensure contact with the base metal with an interface resistance of less than 10 Ω.



Tungsten carbide teeth are designed to penetrate rust, coatings and product deposits to provide a low electrical resistance connection.



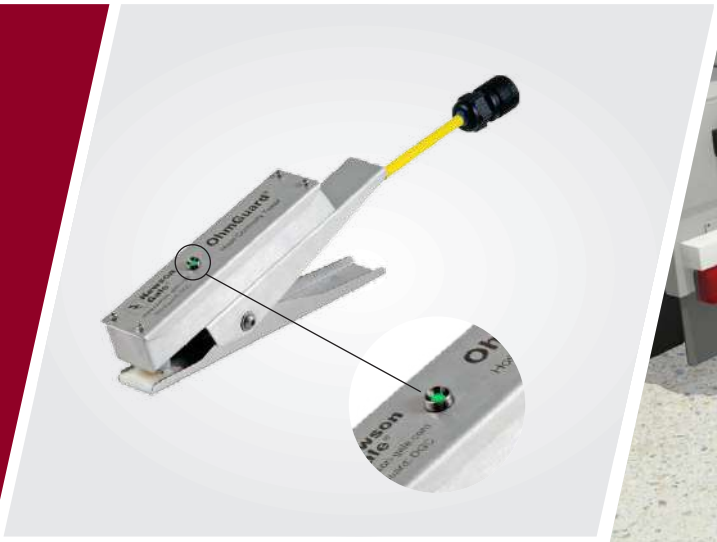
Static grounding clamps must be capable of breaking through coatings, product deposits and rust to ensure a good electrical connection to process equipment. Operators should be trained to toggle the clamp back and forth to bite through the coating and establish a visual connection to the base metal.

ATEX IECEx
Global certification available

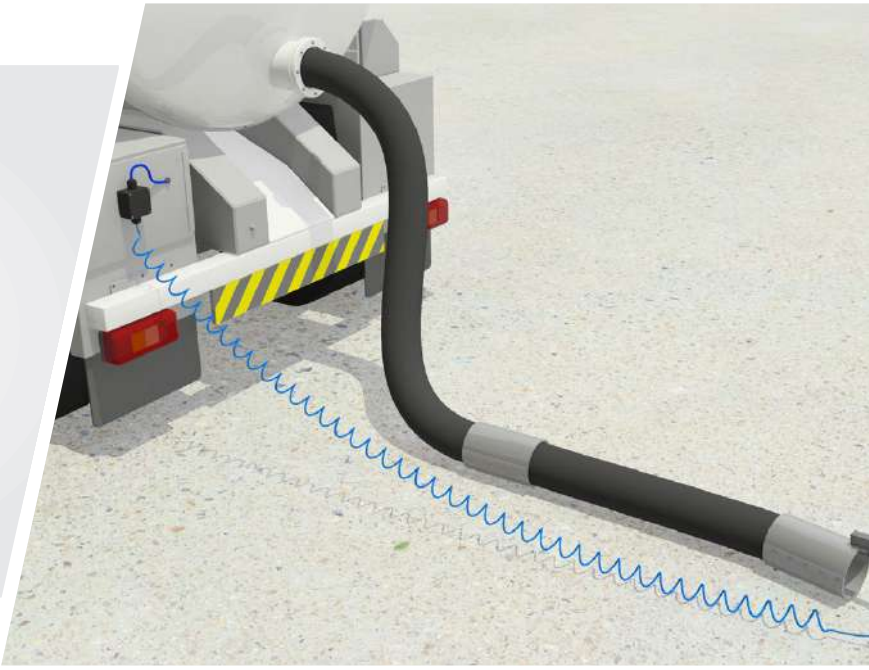
Request Online

OhmGuard®

Intrinsically Safe Electrical Continuity Tester



OhmGuard Intrinscially Safe Electrical Continuity Tester



The OhmGuard is easy to operate and does not require any specialist training

The OhmGuard®electrical continuity tester is designed to test hoses used on vacuum trucks, road tankers and plant equipment prior to the transfer of flammable or combustible products. It can also be used as an effective method of checking static bonding assemblies and conductors relative to verified grounding points.

The OhmGuard indicates if the resistance through the metal components of hoses (e.g. internal wire helixes, metal couplings) are below specified resistance thresholds.

The OhmGuard is easy to operate however operator training is essential and is the responsibility of the customer / end user facility.

Basic clamps and cables can be regularly tested to indicate continuity between grounded equipment and locally verified ground sources.

Rugged Stainless Steel housing with Tungsten Carbide Teeth

Applications:

- Testing vacuum truck hoses prior to spill cleanup or material recovery operations
- Testing bulk road tanker hoses prior to the delivery of flammable products (e.g. solvents) to storage tank farms
- General resistance testing of chemical and petrochemically compatible hoses
- Spot testing of bonding assemblies and conductors in the field

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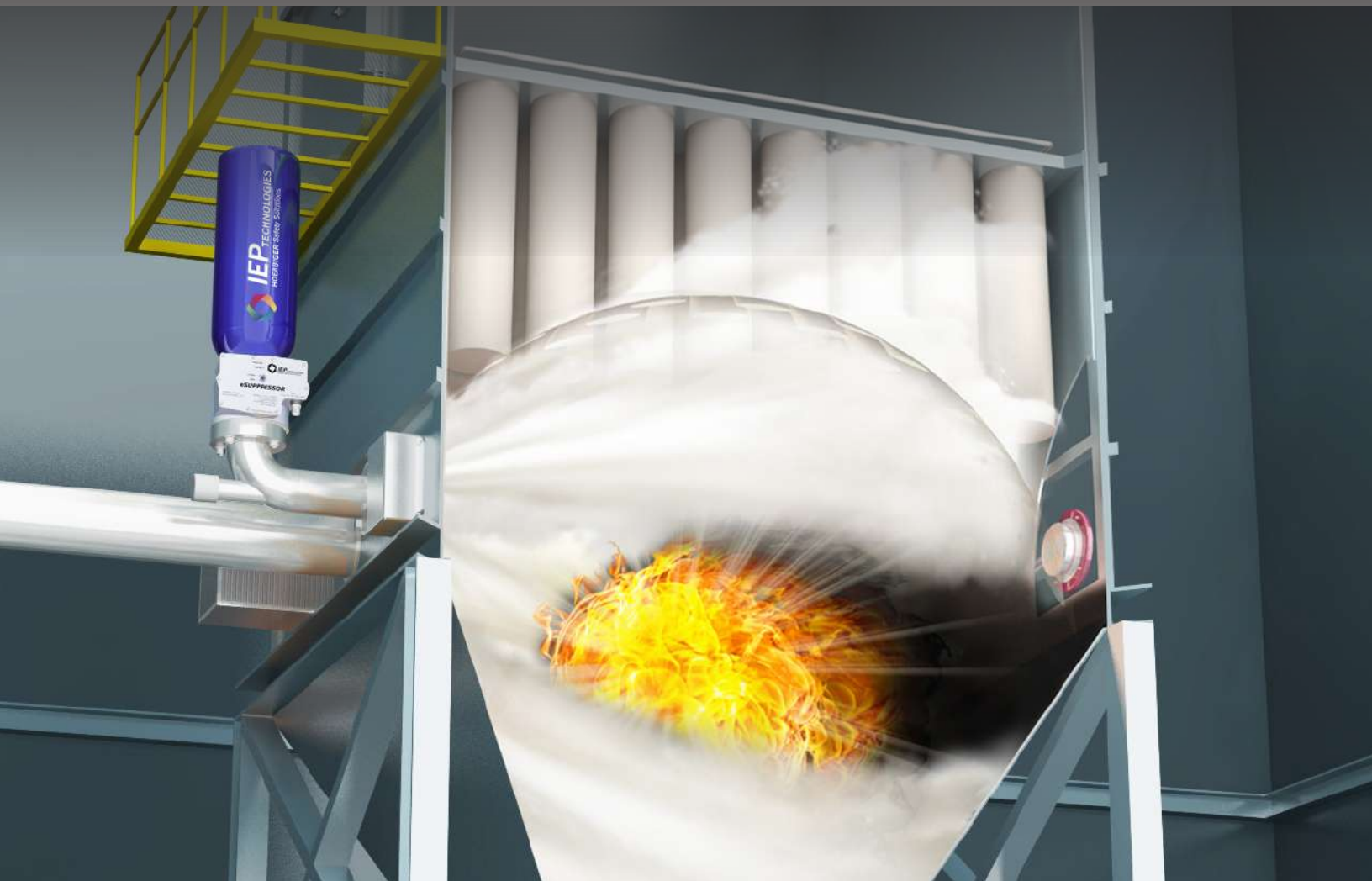
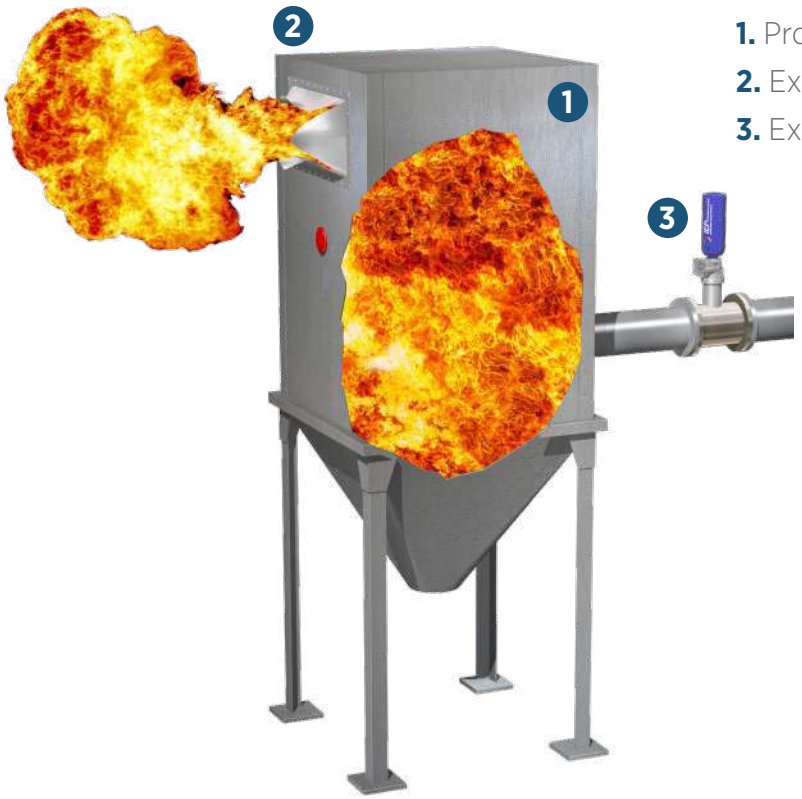


IEP Technologies Explosion Vent Panels

Relieve Explosion Pressure Safely.

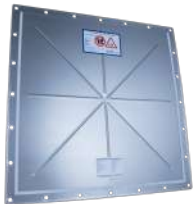
An IEP Technologies Explosion Vent is a relief device that ruptures at a predetermined pressure to allow the fireball and explosive pressure to vent to a safe area. Rupture style vents are economical to install and these highly efficient vents fit into the walls of a process volume. They are available in a variety of sizes, configurations and materials to ensure fast reliable operation during an explosion event. IEP Technologies also offers a range of Flameless Vents which are designed to quench the flame front and relieve the pressure. This vent is typically used in applications which cannot be vented to a safe, outside area. Either vent type is typically installed in conjunction with an IEP Technologies Isolation System.

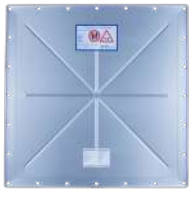


1. Protected Equipment
2. Explosion Vent
3. Explosion Isolation


Explosion Vent - GE


Explosion Vent - GE


Explosion Vent - KE


Explosion Vent - KER

IEP Technologies Flameless Venting Solutions

Relieve Explosion Pressure While Quenching the Flame.

In applications where standard explosion venting cannot be used due to the protected vessel being located indoors or where venting to a safe place cannot be accomplished, Flameless venting may provide a cost-effective alternative. IEP Technologies offers several Flameless venting solutions designed to support a wide range of applications. In cases where Flameless or standard venting are not suitable, an IEP Technologies suppression systems can be offered as an alternative protection option.

EVN
Flameless Vent

IV8
Flameless Vent

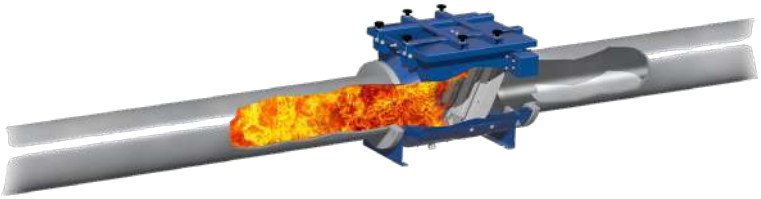
IEP Technologies Explosion Isolation Systems

Isolate Explosions – Chemically or Mechanically.

IEP Technologies Isolation Systems are designed to detect an incipient explosion and react to minimize the risk of the deflagration from traveling between interconnected equipment within your process. The Chemical Type isolation method discharges an explosion suppressant into pipeline/ductwork mitigating the passage of flame and burning materials to interconnected equipment. The Mechanical Type isolation method can be designed using either an "Active" product such as the IEP Technologies high speed knife valve or a "Passive" product such as our Flap Valve. Each of these provide a mechanical barrier which isolates the deflagration event.

Active Isolation

Passive Isolation



IsoFlap™ Isolation
Flap Valve

IsoDisc™ Isolation
Valve

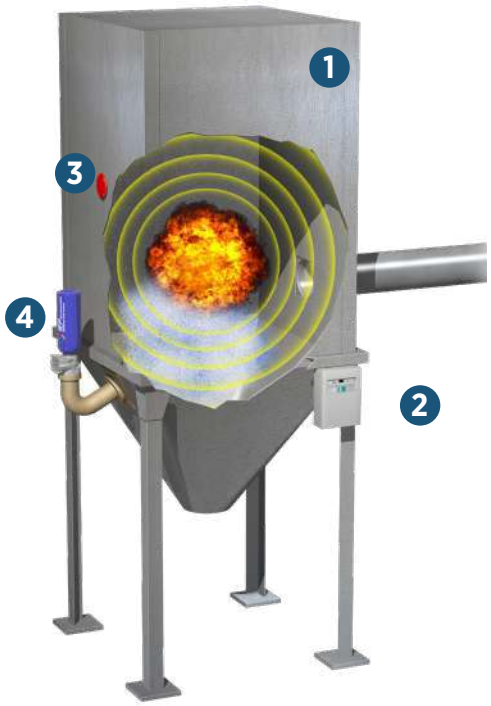
Infrared Detector

Ventex
Isolation Valve

IEP Technologies Explosion Suppression Systems

Detect and Suppress Explosions in Milliseconds.

In a matter of milliseconds, your IEP Technologies Explosion Suppression System is designed to detect the buildup of pressure during an explosion and discharge an explosion suppressant into the enclosed space before destructive pressures develop. The suppressant works by interfering with the explosion's reaction, by removing heat from the deflagration's flame front and thereby lowering its temperature below that needed to support combustion. The explosion suppressant also creates a barrier between the unburnt combustible particles to prevent the further transfer of heat.



1. Protected Equipment
2. Control Panel
3. Pressure Detector
4. Explosion Suppressor


eSuppressor™


MEX-3™ Pressure Detector


EX-8000 Control Panel


EX-200™ Control Panel

IEP Technologies Spark Detection Systems

Operating principle of a spark detection and extinguishing system

Atexon spark detection and extinguishing systems by IEP Technologies are designed to prevent dust explosions and fires by detecting sparks and extinguishing them automatically. The small amount of extinguishing water used, approximately five litres, will not damage filters or other production machines. Once the danger has been removed, the system automatically halts the extinguishing process and is ready to prevent the start of another fire immediately. Applications for the Atexon Spark Detection system include dust extraction systems, conveyor chutes and production machines such as planers and board presses. These can be found in a wide range of industries including; Wood, Bioenergy, Recycling, Paper, Food, Textile and Plastics.

Mounting principle of the spark detection and fire extinguishing system

1. The spark detectors detect ignition sources within a millisecond.
2. The extinguishing unit extinguishes sparks and embers using a small amount of water.
3. The signal router guides and monitors the extinguishing event.
4. The AXN18 control panel monitors the status of the system.
5. The signal device outputs an alarm using a siren and a strobe light.
6. The blower controller stops the blowers in case of overheating or a spark shower.
7. The overheat sensing cable monitors the temperature of the blower bearings and the blower perimeter.
8. The pressure booster controller supervises the water pump and the heat tracing cables.
9. The pressure booster ensures the correct delivery pressure and prevents air pockets in the extinguishing water.

Control Panel
AXN18

Extinguishing Unit
EXT11-EX

Spark Detector
SD300-EX

Booster Station

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INTRODUCTION TO FRASER ANTI-STATIC

Fraser Anti-Static has been a specialist manufacturer of static control equipment since the company started in 1991. This specialisation has allowed us to focus on what our customers want. Today we are presenting a range of equipment which has been designed to solve our customers' problems - not just in performance, but also in terms of reliability, ease of use and cost-effectiveness.

QUALITY | SAFETY | PRODUCTIVITY

CONTENTS

SHORT RANGE STATIC ELIMINATION

The Fraser Short Range Static Eliminators use the latest electronics to provide high performance and cost-effective operation.

There is a choice of the latest 24 V DC Bars and more traditional AC Bars powered by transformer-style power units. All Bars are filled with epoxy resin, making them suitable for food, medical, pharmaceutical and cleanroom applications. This robust construction with stay-sharp emitters ensures a long life of high performance.

3014 Bar

- The 3014 is a compact 24 V DC Bar designed as an alternative to traditional AC static eliminators.

3024F

- 24 V DC with built-in electronics, shockless and powerful short range ioniser.

X-12F

- Compact, high speed, intelligent and reactive. A premium short range DC Bar.

1100 Bar

- A compact static eliminator Bar for use where the 1250-S is too big.

1260 & 1265

- Compact and versatile, ideal for small objects and spaces.

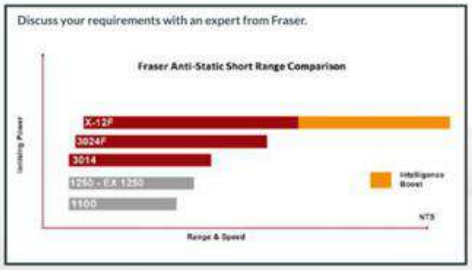
3024 ULTRA-COMPACT

- An ultra-compact, powerful 24 V DC static eliminator, ideal for installation in areas where space is at a premium

1250-S Static Eliminator Bar

- The 1250-S Bar used with HP Power Units are especially suited to multi-Bar applications. They are available in lengths up to 6 m.

Discuss your requirements with an expert from Fraser.



facts

Short Range Static Eliminators neutralise static on sheet, web and similar processes throughout the plastics, packaging and converting industries. Ideal location is 20 - 150 mm from the object to be neutralised.

LONGER RANGE STATIC ELIMINATORS

When fast and powerful ionisation is necessary at distances of up to 1.5 m, long range static elimination is required.

Fraser have developed Anti-Static Bars that cover ranges from 100 mm to 1500 mm without air-assistance, making them perfect for winders and applications with changing geometry, where long range control is needed. This allows us to deliver effective ionisation to the source of the problem.

Our Blowers additionally make this possible even when it is in a confined, hard to reach place.

For more information on the appropriate long range static elimination solution for your needs, please call or email our team today.

3024L

- Compact with built-in electronics, ideal for distances between 100 mm to 500 mm.

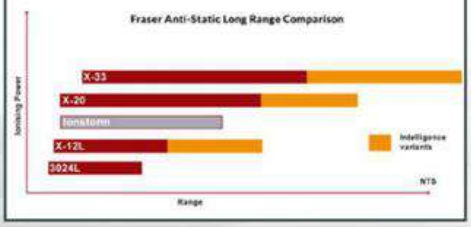
X-12L

- X-SERIES intelligence boosts the performance of this 12 kV Bar for medium range applications.

X-20

- Serving a whole new market sector operating at 20 kV, this is a high power static eliminator for medium/ long range applications.

Discuss your requirements with an expert from Fraser.



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Technical Eqpt. Tdg. LLC.

X-33

The most powerful Long Range Static Eliminator operating at distances from 200 mm to well over 1 meter. With 33 kV and Intelligence incorporated in the bar, the X-33 is unrivalled in quality, performance and value.

2050 Blower

- A compact ionised air blower especially suited to technology applications. Available in 250, 500, 750 and 1000 mm lengths.

2010 Blower

- Industrial ionised air blower available in lengths up to 2 meters.

IONSTORM

- Flexible and adaptable, fully controllable output.
- Bars can be manufactured in series for greater effective area coverage.

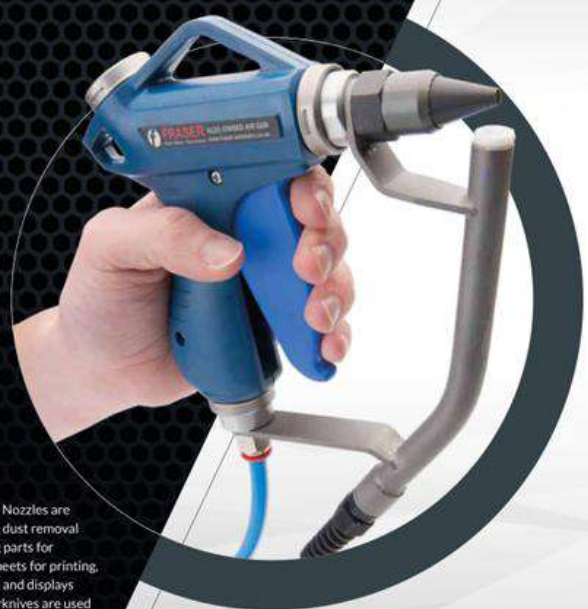
DUST REMOVAL AND CLEANING

Dust and particulate contamination adversely affect yield and quality, causing additional costs in many production environments. Static attracts unwanted airborne particles to the product in all sorts of industries, including electronics, printing, painting, converting, moulding, pharmaceutical and many more.

Fans and blowers can be used to neutralise the static on the product but they will not generally remove the contamination.

With Fraser's range of powerful ionised air equipment, we are able to neutralise the static attraction and remove the contaminant at the same time.

4125 Airgun



Ionised Airguns and Nozzles are ideal for demanding dust removal including: preparing parts for painting, cleaning sheets for printing, cleaning electronics and displays during assembly. Airknives are used to handle larger applications.

4125 Airgun

- The 4125 Ionised Airgun produces ionised air at a thrust of 5.2 N at 5 Bar air pressure for maximum cleaning power.
- Available with bottom or top air entry.

4300 In-line Ioniser

- The 4300 is a convenient way to introduce ionisation into an existing air supply for cleaning or sheet separation applications.

4400 Air Nozzle

- A compact, highly efficient ionised air jet which consists of a 1260 single point Ionising Bar and a proprietary air nozzle.

4510 Air Jets

- Used in many applications, including long distance static neutralisation, dust removal and cleaning, sheet separation.

4800 Ionised Air Nozzle

- The 4800 DC is the most powerful ionised air nozzle available – in both ionisation performance and cleaning capability.

4900 Roto-Clean

- Using patented rotary nozzles integrated within a circular static eliminator; Roto-Clean provides high thrust and multi-directional ionised air for cleaning both complex 3D and simple shapes.

5100 Airknife

- Ideal for large plastic parts – removing the dust and eliminating the static electricity to prevent re-attraction.

5500 Ionised Airknife

- High performance fan-driven Ionised Airknife for static neutralisation and cleaning of mouldings, glass, automobiles and other large objects.

In Situ

- 5500 fan driven airknives are used for larger installations, for example in the automotive industry.

EX HAZARDOUS AREAS

Hazardous environments require specialist ATEX equipment for detecting and neutralising static.

Fraser Anti-Static Techniques have developed a range of EX certified static control and static measurement products which perform perfectly in hazardous or dangerous environments.

The risk of fire is a very important consideration in the coating, gravure printing and other industries where combustible solvents are used. The static charge on a film can cause a spark discharge which ignites the solvent and creates a fire or explosion.

Contact Fraser to get advice on the range of ATEX certified products available to measure and control static charge and prevent fires.

EX Brushes

- EX-HPSD Passive Eliminator offers unrivalled cost-effectiveness in hazardous areas. Particularly effective on high speed, high charge applications.
- Non-contact application.

EX Power Unit

- UL certified high load power unit for EX1250 Bars. Must be installed outside the controlled area and so has a choice of monitoring options including remote.

EX715

- The EX715 is ATEX and IECEx certified for use in hazardous areas.
- It allows the Engineer to determine risk and monitor the effectiveness of actions taken.

AC POWER UNITS

Producing high voltage, low current in a controlled and safe way is the primary function of each Fraser Anti-Static Power Unit.

Our power units allow multiple AC products to be connected, requiring only a straightforward mains input.

There are a range of power units available depending upon size, load, capacity and total number of outputs required.

HP50 / F

- Powers up to 4 eliminators
- High load option with max 30 m of combined bar and cable
- Optional remote monitoring for high voltage status and bar cleaning requirements
- Current limited for safety
- UL Approved

HP50-2

- Compact size for small machines
- Powers two static eliminators
- Maximum load 12 m of combined bar and cable
- 115 V 50/60 Hz or 230 V 50/60 Hz options
- UL Approved

EXHP

- High load 6 kV power unit for ATEX certified EX1250 Bars.
- EX rated version of HP50 with optional remote monitoring.
- Power unit must be situated outside of ATEX area.
- 115 V or 230 V, 50 or 60 Hz options.

HP50-ION

- High load version of HP50 with additional Performance Monitoring System.
- ATEX certified option available for use with EX1250 Static Eliminators.
- LED Display for high voltage, bar condition and charge on material.
- Alarm for fault condition.
- Remote monitoring option for high voltage status and bar cleaning requirement.

HP Connector Box

- Four into one Connector Box suitable for all Fraser HP Power Units.
- Provides cable disconnect options.
- Allows additional eliminators to be connected within power unit load capacity.

HP-ILC

- Single one to one Inline Connector for cable disconnect or extension .

MEASUREMENT OF STATIC

Static Electricity is a problem in many industrial areas. It slows production, reduces product quality, attracts contaminants and gives shocks to operators.

It is a well-known phenomenon throughout the plastics, packaging, electronics, printing, paper, medical, pharmaceutical and textile industries. Static can create the additional hazard of fire and explosion risks where solvents and explosives are used.

The 715 and EX715 Static Meters enable engineers to investigate these problems safely and give a scientific basis for analysis and action.

The 715 Static Meter measures up to 200 kV and is used to investigate static problems in nearly every industry. For hazardous areas see EX715, below.

EX715 Static Meter

- The EX715 is the only ATEX and IECEx meter available for use in certified areas. It has two auto-scaling ranges, 0-20 kV and 0-200 kV.

740 SRM

- The 740 Surface Resistance Checker is a pocket-sized instrument providing fast and repeatable measurements of conductive, static dissipative and insulative surfaces. It can also measure resistance to ground.

720 Static Bar Checker

- The 720 Static Bar Checker allows operators and maintenance personnel to quickly verify that AC static eliminator Bars are working.

BRUSHES/PASSIVE SOLUTIONS

Passive static eliminators do not need to touch the material being neutralised, but must be close to it - typically 2-3 mm.

While they cannot eliminate 100% of the static charge, an 80% neutralisation is typical, depending on the application, which is sufficient for many applications.

They are cost-effective anti-static tools, especially suitable for occasional or unexpected problems. See also EX-HPSD Static Dischargers which have been certified for use in hazardous areas.

101, 102 & 201 Anti-Static Brushes

- Designed for neutralising webs and sheets. They are custom made to the required length, with a choice of carbon or conductive nylon fibres and available in 18, 30, 50 and 80 mm fibre.

660 Brush

- An anti-static strip brush with soft stainless steel filaments. It is available in 1 m lengths or can be custom made for larger requirements.

801 Anti-Static Tinsel

- A low cost and versatile method of static control used in thousands of factories.
- Available in boxes of 22 m.

850 & 850E Cord

- Contains conductive micro-fibres which ionise the air and eliminate the static charge. It is available in reels of 10 m and 25 m. 850E is an elasticated version available in 10 m reels.

406/7 & 409/11 Tape Brushes

- Versatile and flexible.
- No fixing required.
- Highly conductive and easy to install.

THE **IONFIX** RANGE OF STATIC GENERATORS

The IONFIX range of static generators from Fraser Anti-Static Techniques has been designed for creating temporary adhesion in industry.

This is a dynamic market including hundreds of applications throughout the plastic, packaging, paper and process industries. Using static electricity for temporary adhesion is increasingly popular because it is fast, clean, controllable and economic.

Fraser generators and electrodes provide the user with a complete temporary adhesion system that is easy to use, highly reliable and safe. Flexible interface design facilitates full integration with modern machinery and control systems.

There are three models in the IONFIX Range:

IONFIX COMPACT

A compact 30 kV, 20 W generator designed to power smaller systems and applications like In-Mould Labelling. Its innovative power distribution gives a full 20 W of power from 20 kV up to 30 kV.

IONFIX 30 KV GENERATOR

A 30 kV generator with 150 W of power available.

IONFIX 60 KV GENERATOR

60 kV and 150 W makes this suitable for the most demanding applications.

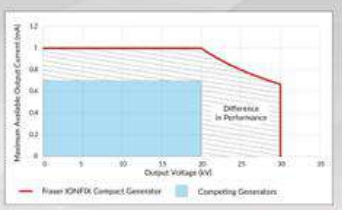
All three models offer the user many benefits enabled by modern power electronics:

- Easy to use, logical settings with dedicated controls on case for on / off, voltage and current.
- Constant current mode with fully adjustable current limitation.
- Industry compatible remote interface to link with process controls / PLC, controlling on / off and output adjustment.
- Simple, clear displays on the case for settings and user interface options.
- Connections for up to 4 generator electrodes. All connections designed for 60 kV.
- All generators are available with a 90-250 V 50 / 60 Hz AC supply input.
- A 24 V DC supply input version of the Compact Generator is available.
- Fixing brackets permit wall mounting, bench mounting or under bench mounting. The display and control panel can be turned 180° for mounting variations.
- The Generators are protected against:
  - Variations in the supply voltage (under/over-voltage lockout).
  - Continuous short-circuit of the output (current limit / control feature).
  - Arcing of the output due to damaged cables or electrodes.
- All models available in positive or negative polarities.

IONFIX COMPACT GENERATOR

More powerful, with higher voltage and greater distribution of current than any comparable product. The IONFIX Compact Static Generator from Fraser Anti-Static Techniques leads the market in Static Generation.

- Adjustable output from 0 - 30 kV.
- Four electrode connections.
- 90-250 V 50 / 60 Hz, IEC socket, or 24 V DC electrical supply.



Innovative power distribution offers 20 W at 20 kV or 30 kV.

IONFIX PRO 30 KV & 60 KV GENERATORS

30 kV Generator

- Output fully adjustable from 0 - 30 kV with 150 W available power.
- Four electrode connections.
- 90 - 250 V 50 / 60 Hz, IEC 320 socket.
- Optional Anybus Fieldbus and Ethernet connectivity.
- Flexible menu system allows customer configuration of generator settings including:
  - remote interface signal levels.
  - Fieldbus module settings (when enabled).
  - generator settings security lock.

60 kV Generator

Featuring the same design and dimensions as the 30 kV model but with 0 - 60 kV adjustment and 150 W of power available.

Both models can be mounted from above or below.

CHARGING ELECTRODES

7160

- High performance Static Generator Bar.
- Resistively coupled for spark free operation.
- Tungsten emitters at 10 mm pitch.
- For use at 30 or 60 kV.
- T5 / T2.5 versions for more intense operation.

7090

- 20mm diameter.
- Designed for pin-point charging.
- 3 tungsten emitters.

7093

- Designed for edge pinning on plastic films.
- Suitable for high temperatures.
- Replaceable tungsten emitters.

7095-4

- 36mm Long.
- 4 tungsten emitters.
- Designed for intense, short applications.

7095-8/12

- 56mm/76mm Long.
- 8/12 tungsten emitters
- Designed for intense, short applications.

7095-12-HT

- 75mm Long.
- 12 tungsten emitters.
- Designed for high temperatures <100°C.

7097 Static Wand

- The 7097 stand wand is a hand-held device for applying a static charge in applications such as manual IML.

7081

- Designed for low intensity applications at up to 30 kV.
- Compact and economical.

IML-77 Range

- Designed to give the IML processor versatility to meet the demands of each job.

IML-77 Range

- Ideal for use with the IONFIX compact.

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GASTEC Gas Detection & Calibration Solutions

Detector tubes, sampling pumps, breathing air testing, calibration gas generation and H2S monitoring.

Al Ghwasa Technical Equipment Trading LLC is a trusted supplier of **GASTEC** solutions for gas detection, industrial safety, environmental monitoring, marine applications and maintenance support across the region. Our portfolio combines high-performance instruments with precision calibration and monitoring technologies—helping you ensure safety, compliance and operational reliability where it matters most.

GV-100 / GV-100S
Sampling Pump

Detector Tubes

CG-1
Compressed Breathing Air Kit

GHS-8AT
H2S Logger

PD-1C
Calibration Gas Generator

Product Scope

1. 

Detector Tubes

Fast, reliable gas measurement using colorimetric detector tubes.

2. 

GV-100 / GV-100S Sampling Pump

Manual sampling pump for accurate air sampling with detector tubes.

3. 

CG-1 Breathing Air Kit

Complete solution for compressed breathing air quality testing.

4. 

PD-1C Calibration Gas Generator

Stable, precise calibration gas generation on demand.

5. 

GHS-8AT H2S Logger

Continuous H2S monitoring with data logging and alarm functions.

Where These Solutions Fit

 Industrial Safety

 Confined Space Checks

 Breathing Air Verification

 Calibration Support

 Sewer / Odour Monitoring

 Marine & Refinery Maintenance

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Detector Tubes &
GV-100 / GV-100S Sampling Pump

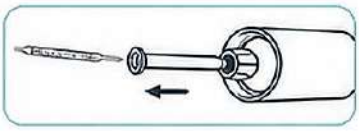
GV-100 / GV-100S
Manual Sampling Pump

The GASTEC detector tube system provides a simple, reliable and cost-effective solution for fast on-site measurement of gases and vapours. Colorimetric detector tubes react with target gases to form a stain whose length is proportional to the concentration—read directly on the scale. Paired with the **GV-100 / GV-100S** manual sampling pump, it delivers accurate results anytime, anywhere.

GASTEC Detector Tubes

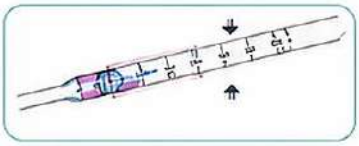
How the System Works

1. **Connect**
   Insert the detector tube securely into the pump.



2. **Sample**
   Draw the measured air sample using the manual pump.

3. **Read**
   Read the gas concentration directly from the stain length on the scale.



Why Clients Choose This System

- **Fast, direct-reading results** — no additional instruments
- **No electricity required** — ideal for remote locations
- **Portable & rugged** — built for field environments
- **Easy manual operation** — minimal training
- **Broad tube selection** — wide range of gases & ranges
- **Ideal for surveys, troubleshooting & confined-space spot checks**

Typical Applications

Confined Space Checks
Pre-entry and continuous spot checks.

Industrial Hygiene
Worker exposure assessment and process monitoring.

Leak Investigation
Detect and quantify leaks quickly on-site.

Fumigation / Cargo Inspection
Verify fumigant levels in cargo holds and stores.

Marine / Refinery Maintenance
Routine checks during maintenance and turnarounds.

Environmental Monitoring
Spot measurements for ambient air assessments.

What Al Ghwasa Can Supply

Detector Tubes
Extensive range for industrial, environmental, marine and specialty applications.

GV-100 / GV-100S Sampling Pump
Durable manual pump for accurate and consistent sampling.

Sampling Accessories & Spare Parts
Connectors, tips, filters, rubber parts and consumables.

Application Guidance
Selection support, method guidance and best-practice recommendations.

Quotation Support
Competitive pricing, quick quotations and prompt delivery support.