Static Control

900 & 200 Series
for industrial and cleanroom environments

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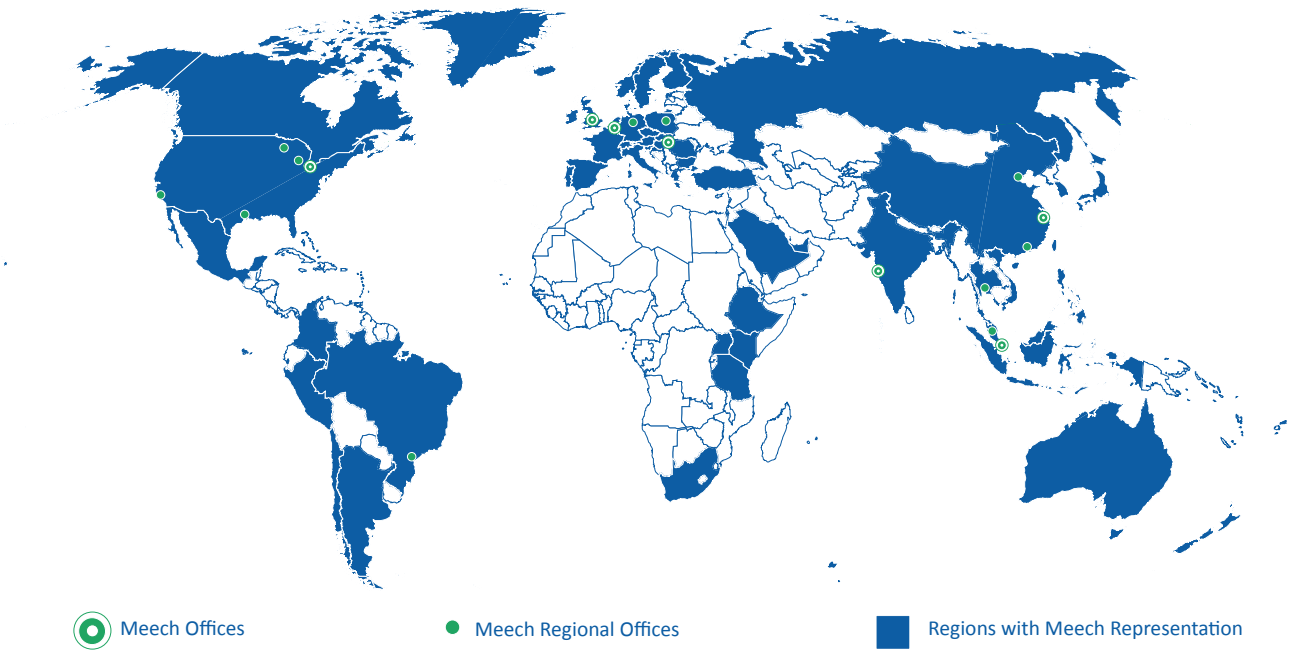
We've got the world covered

Wherever you are in the world, you'll find Meech hard at work, providing a wide range of businesses with technical expertise. From our headquarters and technical centre in the UK, our manufacturing subsidiary in the USA and sales offices in Belgium, Hungary, China, India and Singapore; we've got the world covered. In fact, our distribution network now covers over 50 countries, providing easy access to fully trained, carefully selected Meech distributors, who can provide in-depth support, wherever you are based.

Outstanding quality as standard

We always work to the highest possible quality standards in everything we do: manufacturing, customer support and technical expertise. send Products manufactured by Meech are appropriately certified to international standards. They carry markings including CE and UL/CSA (CUL), as well as ATEX and UL "EX" approvals. With so much to offer, it is no wonder our global user list has grown to in excess of 7,000 companies.



STATIC EXPLAINED

What is Static Electricity?

When a material or object holds a net electrical charge, either positive or negative, it is said to have a static charge. Charges will slowly decrease over a period of time. The length of time that this takes is dependent on the resistance of the material. For practical purposes the two extremes can be taken as plastics, which will hold a charge for a long period of time and metal, which will hold a charge for a relatively short period of time.

There are two main types of static electricity, volumetric and surface. Volumetric static charges are charge imbalances within the body of a material whereas surface static electricity is only present on the very outer surface of a material. In practice nearly all the static electricity problems found in industry relate to surface charges.

What Factors Affect Static?

There are many factors that affect static charge, these include:

- Humidity – Generally speaking, the dryer the environment, the higher the level of static charge and conversely, the higher the humidity, the lower the static charge.
- Type of Material – Some materials are more readily charged than others, for example, acetate will gain a charge very readily, whereas glass will gain a charge less readily. Also, the position on the material on the Triboelectric series, will determine whether a material charges positively or negatively dependent on the other material with which it has come into contact.
- Repetition – Repeated actions such as friction or separation will increase the level of charge found on a material.
- Change in Temperature – As a material cools down, it has a tendency to generate charge. If the material is a very good insulator the internal (volumetric) static charge can be maintained for extremely long periods of time. However over time this charge normally migrates to the surface at which point it becomes a surface static charge.

How is Static Created?

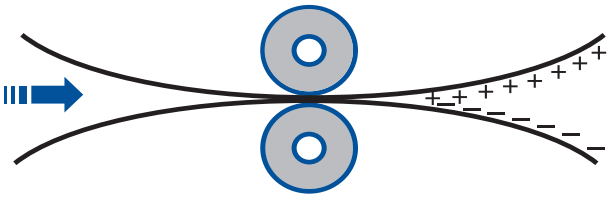
There are three main causes of static electricity; friction, separation and induction:

- Friction – Two materials are rubbed together.
- Separation – Two materials are pulled apart.
- Induction – when a material is in the presence of a strong electric field.

Charge by Friction

As two materials are rubbed together, the electrons associated with the surface atoms on each material come into very close proximity with each other. Depending on the materials, the surface electrons can be transferred from one surface to another. The transferral and resulting charges created are increased significantly with pressure: the harder the two materials are pressed together, the greater the charge.

Charge by Separation



Charging by separation also occurs when two materials' surface electrons are in close proximity. Upon separation of the materials, electrons have a tendency to adhere to one material or the other, dependant on the material composition. Similarly, the level of charge can be affected by the speed of separation: the faster the separation, the higher the charge and the slower the separation, the lower the charge.

Charge by Induction

Whilst of interest technically, induction does not play a significant role in our field. Static charges can be generated when materials are in the presence of a strong electric field. The surface of a material in close proximity to a high positive voltage will tend to become positively charged. The method of charging is caused by ionisation of the air between the surface of the material and the voltage source which carries surface electrons away from the material to the source.
An example of induction is operators working near charged materials. The operator will himself become charged and on touching an earthed object will discharge to it, giving the operator an electric shock- often mistaken for a shock from the mains supply.

OPTIMUM WORKING DISTANCES

All Meech products have an optimum working distance. These distances vary between our products and the applications they are used in.

We divide our ionising products into 4 categories; close-range, mid-range, long-range and compressed air driven. Typically close range ionisation relies on lower output voltage whereas longer range ionisation will require a higher voltage.

For applications that require additional range, compressed air boost can be added to certain bars in order to produce the desired results.

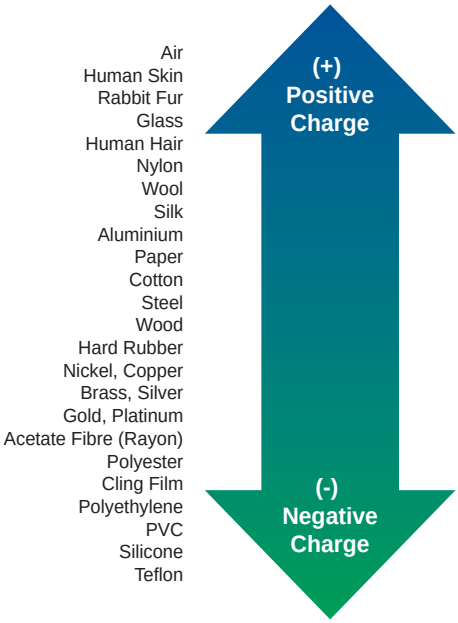
Our industry experts have the knowledge and expertise to advise you of the best product to suit your specific application in order to achieve the best ionisation.

MEASURING EQUIPMENT

How to Measure Static?

The range of Meech measuring equipment has been designed to provide accurate readings of electrical charges, the performance (both AC and DC) and the surface resistivity. These hand held devices are easy to use and vitally important to diagnosing static control issues.

The chart on the right shows the Triboelectric Series. This is a list of materials, showing which have a greater tendency to become positively charged (+) and which have greater tendency to become negatively charged (-). This is an extremely useful tool to determine which combinations of materials create the most static electricity.



983v2 Static Locator

The 983v2 Static Locator provides accurate measurement of electrostatic charges. Its design enables fast response, low drift and ease of operation. The 983v2 can operate in “Continuous” or “Peak Hold” mode to record changes in the level of charge or the highest charge detected respectively.

	Dimensions	Measurement Range	Accuracy	Battery Life
Details	143mm x 81mm x 25mm	-200kV to +200kV at a distance of 150mm	+/-5%	2 x AA Alkaline: Approx 10 hours of continuous use

984v2 Ion Sensor

The 984v2 Ion Sensor is a device used for checking the performance of both AC and DC powered static elimination bars. Indicator lights confirm the presence of ions, and in the case of a DC power source their polarity. Regular monitoring of installations with the 984v2 will indicate when bars require cleaning or other maintenance work.

	Dimensions	Weight	Battery	Measures in 'situ'
Details	142mm x 81mm x 25mm	168g (including battery)	2 x AA alkaline	Avoids need to remove bar for testing

990SRM Surface Resistance Meter

The 990SRM is a convenient, pocket-sized meter for measurement of surface resistivity and resistance to ground. It is a useful tool for testing materials for static charging applications and for diagnosing static electricity related problems.

	Dimensions	Weight	Accuracy	Display
Details	96mm x 61mm x 26mm	170g	± 10%	LED's - one per decade

Options for Measuring Equipment

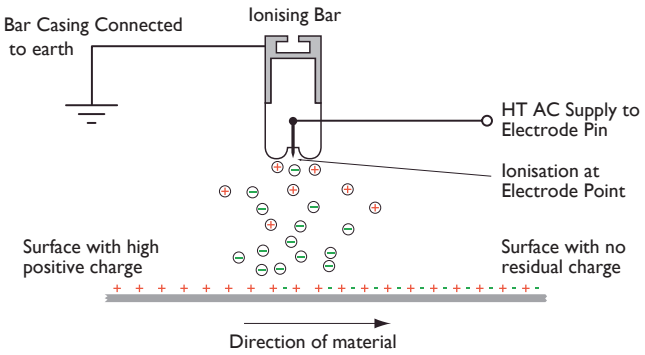
983v2 & 984v2 Test Kit

The 983v2 & 984v2 test kit gives operators & maintenance staff the ability to diagnose static related issues and monitor the performance of their ionising equipment. The test kit features both the 983V2 and 984V2 in an easy to carry, hard-wearing case.

AC IONISING EQUIPMENT

What is AC Static Elimination?

A normal mains 110/240V, 50/60Hz AC supply is increased by a special transformer to typically 7kV AC. This high voltage is carried by a shielded HV cable to the static eliminator, where it is connected to an array of emitter pins. This creates a high energy ion cloud, in which a very large number of positive and negative ions are generated. As the AC cycle changes, either positive or negative ions are produced in approximately equal quantities. A statically charged surface of either polarity passing close to this ion cloud will be quickly neutralised.



904 & 905 Power Supply

The 904 and 905 Power Supplies are constant voltage power supplies, designed to provide a 7kV (904) or 5kV (905) source for Meech AC ionising equipment. They are adjustable to operate at 100-120V or 200-240V input voltage and are available in either 50Hz or 60Hz versions to suit local conditions. They both incorporate a low voltage jack socket for connection of the 900vs2 High Voltage Sensor.

	Dimensions- Case Only	Output Frequency	Output Voltage	Input Voltage
Details	145mm x 130mm x 113mm	50/60Hz	904: 7kV 905: 5kV	110 / 240V AC

914 Ionising Bar

The 914 AC Ionising Bar has been designed to meet the most arduous of static elimination problems, including those encountered in high speed web applications. The powerful performance provides very fast decay times and effective ionisation up to distances of 100mm. The 914 Ionising Bar is powered by the 905 Power Supply.

	Dimensions	Optimum Working Distance	Weight	Emitters	Operating Voltage
Details	15mm x 18mm x Max length 4000mm	25mm - 100mm	Approximately 400g per 1000mm length	Titanium	5kV AC

915 Ionising Bar

The 915 AC Ionising Bar has been designed to meet the most arduous of static elimination problems, including those encountered in high speed web applications. The powerful performance provides very fast decay times and effective ionisation up to distances of 150mm. The 915 Ionising Bar is powered by the 904 Power Supply.

	Dimensions	Optimum Working Distance	Weight	Emitters	Operating Voltage
Details	18mm x 42mm x Max length 4000mm	30mm - 150mm	Approximately 1100g per 1000mm length	Titanium	4.5kV - 7kV AC

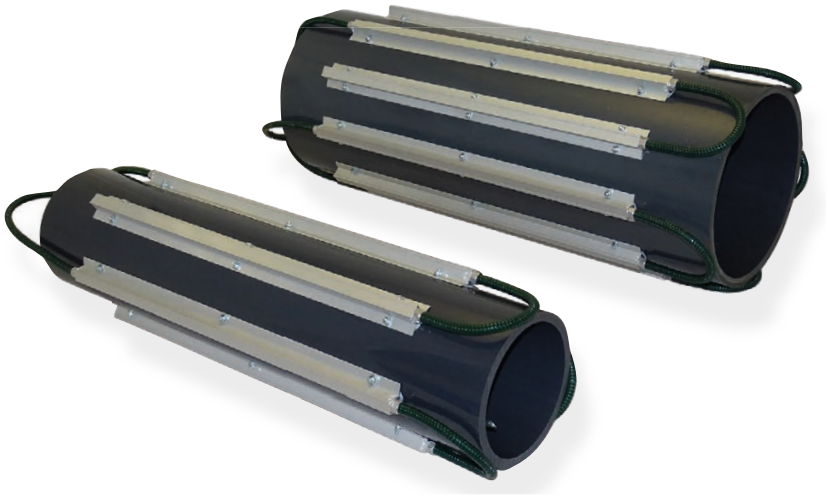
912 Ionising Bar

The 912 circular static eliminator is based on the popular 910 Ionising Bar.

The inductively coupled design provides powerful static neutralisation and completely shockproof operation. The 912 Ionising bar is powered by the 904 Power Supply and is suitable for applications where 360° neutralisation is required.

	Dimensions	Weight	Emitters	Pin energy
Details	21mm x 18mm, Ø: from 30mm to 254mm	350g for 30mm internal Ø	Stainless steel	Approx 0.15 millijoules

913 Flow Tube



The 913 Flow Tube neutralises static charges on materials in handling and conveying systems. It incorporates in-line ionisation, which eliminates material clinging and clogging in ducting systems due to static charges. The 913 Flow Tube is powered by 905 power supply and is provided in a range of diameters to fit most of the industrial standard installations.

	Diameter range	Total length	Tube construction	Maximum temperature
Details	Ø 50mm - 305mm	700mm	Stainless steel	60°C

925 High Temperature Bar

The Meech 925 is an AC Ionising bar, designed to eliminate static in high temperature applications. With a maximum operating temperature of 150°C, the 925 can be mounted in areas not suitable for standard AC ionising bars.

The powerful performance of this anti-static bar provides very effective neutralisation of static charges at distances up to 100mm.

The emitter pins of the 925 are directly coupled to the HT output of the 905 power supply. The 905 has a maximum output current of 5mA; an internationally recognised safe current.

	Dimensions	Optimum Working Distance	Operating Temperature
Details	Ø 28mm, Max length 2400mm	100mm	Max 150°C

957 Ionising Air Curtain

The 957 Ionising Air Curtain provides effective static neutralisation and dust removal in a wide range of industrial applications. The unit comprises a powerful Model 915 ionising bar mounted on to an Energy Saving Air Curtain. The 957 Ionising Air Curtain requires a compressed air supply and is powered by the 904 Power Supply.

	Dimensions	Optimum Working Distance	Output Voltage	Input Voltage	Air consumption
Details	28mm x 63mm, Max length 1800mm	50mm - 300mm	7kV	110/240V AC	122l/min at 5.4 bar (80psi) pressure per 25mm

954v2 Ionising Gun

The 954v2 Ionising Gun is the latest evolution of hand held air assisted ionising guns from Meech. Designed to neutralise static charges and remove dust contamination, the 954v2 has decay times 60% faster than the previous model.

	Dimensions	Optimum Working Distance	Weight	Max Pressure	Noise level (at 1000mm)	Output Voltage	Air Consumption
Details	193mm x 183mm x 28mm	Up to 500mm	Gun only 135g (490g with 3000mm of cable)	6.8 Bar /100 PSI (Rec. usage 3.4 Bar / 50 PSI)	<80 dB(A) at 50psi	7kV	15cfm (425l/min) at 80psi (5.4bar)

954v2 Shockless Ionising Nozzle

The 954v2 Nozzle is designed to neutralise static charges and remove dust contamination. It includes a 1/4" BSP threaded fitting for easy connection to any air supply.

	Dimensions	Optimum Working Distance	Output Voltage	Max Pressure	Noise level (at 1000mm)	Air Consumption
Details	71mm x 26mm x 28mm	Up to 500mm	7kV	6.8 Bar /100 PSI (Rec. usage 3.4 Bar / 50 PSI)	<80 dBA at 50psi	15cfm (435l/min) at 80psi (5.4 bar)

940 Ionising Nozzle

The 940 Ionising Nozzle is available as a single unit (Blank End) or with two or more units connected in series (Through Type). Powered by a 905 Power Supply the 940 Nozzle is suitable for applications requiring the removal of electrostatically attracted dust and for longer range static neutralisation.

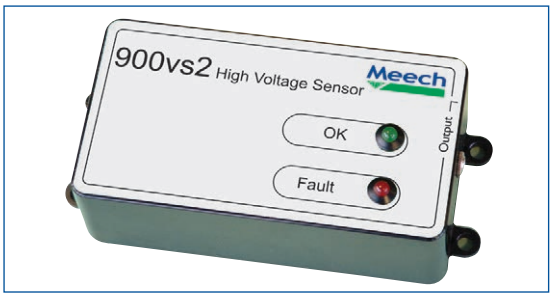
	Dimensions (nozzle)	Optimum Working Distance	Max Pressure	Construction	Weight
Details	56mm x 29mm x 25mm	Up to 500mm	100 psi	Black anodised aluminium with PTFE insert	200g

942 Ionising Nozzle & 942F Flexi Nozzle

The 942 is a small, lightweight in-line ionising air nozzle. It can be used either as a single unit (Blank End) or with two or more units connected in series (Through Type). The 942F includes a length of flexible knuckle trunking. They are particularly suited to applications on sheet feeder and delivery systems. The 942 and 942F are powered by the 905 Power Supply.

	Dimensions - body	Optimum Working Distance	Max Pressure	Construction	Air Consumption	Weight
Details	32mm x 32mm x 55mm	Up to 500mm	30 psi	Brass body with moulded plastic inserts	9cfm at 1 bar	240g

Options for AC Equipment

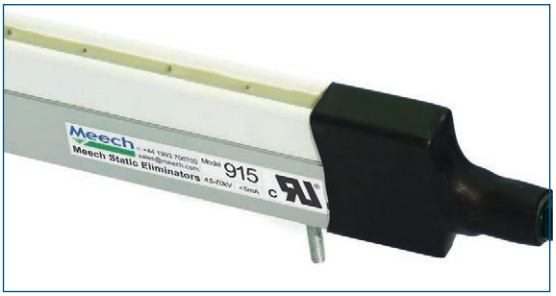


900vs2 High Voltage Sensor

The 900vs2 is a high voltage sensor designed to monitor the high voltage output of Meech AC power units. Operating status is displayed via LED's. Relay outputs allow connection to remote indicator lamps or alarms. The 900vs2 is powered directly from the 904 or 905 Power supply.

Dust Proof for 915 Bars

For installation in dirty or dusty environments the dust proof option improves resilience of the bar.



Water Resistant

A water resistant option allows the installation of bars where routine machine cleaning can cause them to be splashed.

Air Assist

The effective range of bars can be increased by the addition of an air-boost system. The air assist option is suitable for 914 or 915 ionising bars.

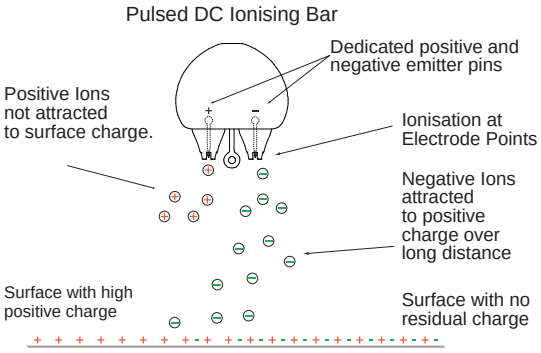
900-HTCON In-line Connector for AC Bars

On machinery where AC bars need to be disconnected periodically, the quick connect options provides a simple solution. The connector can be used to provide a quick disconnect system for ionising bars or can be used to overcome problematic bar installations where machine bulk heads make cable routing difficult.

DC IONISING EQUIPMENT

What is DC Static Elimination?

DC technology allows control of frequency and ion balance (the relative proportion of positive and negative ions). Mains voltage is transformed into high voltage that is split into positive and negative outputs and connected to dedicated emitters. Alternating clouds of positive and negative ions are produced in accordance with the chosen frequency setting (between 0.5 and 20Hz). The lower frequencies allow longer distance ionisation to be achieved in still air whilst the balance control allows the ion output to be adjusted to suit the charge polarity on the target.



233v4 Pulsed DC Controller

The Hyperion 233v4 Pulsed DC Controller is a small and powerful 15kV controller. The 233v4 is compact, ideal for mounting on the end of a robot arm and is designed with the ability to power two of the same Meech pulsed DC ionisers. If more ionisers are required for an application this can be done through the use of splitters.

The 233v4 is also available for use in hazardous environments. The 233v4HL includes the same features and benefits as the standard model. The HL version will be able to directly power two Meech DC EX bars.

	Dimensions	Input voltage	Input Current	Output voltage	Output balance
Details	46mm x 93mm x 129mm	24V DC	Max 5mA	Up to 15kV	20/80 to 80/20 Positive/Negative

977CM DC Controller

The 977CM (Current Monitoring) Pulsed DC Controller brings together powerful long-range ionisation; closed-loop feedback; self-monitoring and remote reporting. These features allow optimum control of static for much longer periods than previously possible.

	Dimensions	Input voltage	Input Current	Output voltage	Output balance
Details	190mm x 171mm x 45mm	100V-250V AC / 24V DC	Max 40mA	Up to 15kV	20/80 to 80/20 Positive/Negative

977HL DC Controller

The 977HL Pulsed DC controller is used with the Meech 976EX hazardous area ionising bars. In-built performance monitoring guarantees that the operator can keep the ionising system running effectively: ensuring correct static control in critical applications.

	Dimensions	Input Voltage	Input Current	Output Voltage	Output Balance
Details	190mm x 171mm x 45mm	100V - 250V AC	Max 40mA	Up to 9.6kV	20/80 to 80/20 Positive/Negative

233v3 DC Controller

The 233v3 Pulsed DC Controller works with the Meech Cleanroom 200 series of ionisers and is designed for ESD applications. The 233v3 is light, compact and features lockable plug and socket connectors for quick release. It also provides the option of Steady State DC (SSDC) output.

	Dimensions	Input Voltage	Input Current	Output Voltage	Output Balance
Details	95mm x 158mm x 37mm	24V DC	Max 200mA	4 kV- 8kV	20/80 to 80/20 Positive/Negative

Hyperion 936 Ionising Blower

The 936 Blower is comprised of an ionising head and an integrated fan system. A high volume flow of ionised air is generated by blowing air through the ionisation head at the mouth of the unit. Ionisation is provided by the 924IPS bar, generating an operating range of up to 1200mm.

	Dimensions	Input Voltage	Output Voltage	Operating Range
Details	184mm x 172mm x 300mm up to 1200mm	24V DC (21-27VDC)	Adjustable with BarMaster	200 - 1200mm

212v2 Benchtop Ioniser

The 212v2 Benchtop Ioniser is a compact unit that provides excellent work station coverage and a high level of ESD protection. Designed to prevent possible ESD damage in sensitive electronic applications. The 212v2 is part of the Meech Cleanroom 200 series.

	Dimensions	Input Voltage	Output Voltage	Decay Time
Details	160mm x 160mm x 85mm (w/o brackets)	24V DC	3kV - 7.5kV DC	< 4 seconds at 305mm (1000 to 100V) Max fan speed

971 Ionising Bar

The 971 Pulsed DC bar delivers powerful, long range ionisation to control static electricity on a wide range of printing, converting and process machinery. Its great long range ability makes it ideal for use on applications such as rewinds and collection bins. The design has been optimised to reduce the effects of contamination and to allow easy maintenance.

	Dimensions	Weight	Output Voltage	Output Frequency	Input Current	Input Voltage
Details	63mm x 69mm x Max length: 4000mm	1200g per 1000mm length	+/- 15kV DC	1Hz - 20Hz	Via 977CM	Max 15kV

251 Ionising Gun

The 251 Ionising Gun is a robust, lightweight gun handle used with the 233v3 Pulsed DC Controller. The 251 is part of the Meech Cleanroom 200 series.

	Dimensions	Input Voltage	Weight	Noise Level	Decay Time
Details	193mm x 119mm x 30mm	+/- 9kV DC	550g	68dB(A) at 20psi, 1.5bar, 1000mm	0.8 sec at 150mm at 30 Psi (2 bar)

261v2 Ion Nozzle

The 261v2 Ion Nozzle is a small, robust ioniser. Suitable for industrial and cleanroom environments, it provides fast static control and excellent dust removal. It meets OSHA dead-end pressure requirements and is powered by either a 233v3 or 977CM Pulsed DC Controller.

261v2-1/4 Ion Nozzle

The 261v2-1/4 Ion Nozzle includes ¼" BSP connections that allow integration into existing plastic pipe work. When used on automated cleaning machinery the 261v2-1/4 ionises the airflow used to clean and neutralise components. The 261v2 can be powered by either a 233v3 or 977CM Pulsed DC Controller.

	Dimensions	Optimum Working Distance	Input Voltage	Noise Level	Decay Time
Details	32mm x 32mm x 74mm	150mm	+/- 9kV DC	68 - 70 dB(A) at 20psi, 1.5bar, 1000mm	0.8 sec at 150mm at 30 Psi (2 bar)

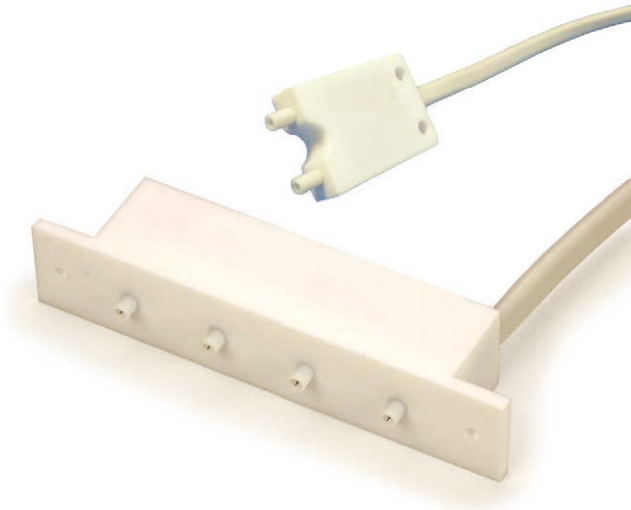
924S Ionising Bar

The 924S ionising bar is designed to provide highly effective short-range ionisation using Pulsed DC Technology. It is particularly suited for use on wide-format digital printers. At 32mm high by 22mm wide, it's compact and lightweight size provides easy installation on the print head, offering reliable static control between every print pass.

	Dimensions	Weight	Output Voltage	Output Frequency	Input Current	Input Voltage
Details	22mm x 32mm x Max Length 240mm	500g per metre	7.5kV DC	1Hz - 20Hz	Via 233v4	Variable via 233v4: 2 - 15kV

976 Pulsed DC Ionising Head & 976 Mini

The 976 Pulsed DC Ionising Head is a small and lightweight ioniser which is designed to be used with the 977 series of Pulsed DC Controllers. The 976 Mini is designed to be used primarily with digital printers. The small and compact size means that it can be easily mounted to the printer head.



	Dimensions	Construction	Input Voltage	Emitter Pins
Details	50mm x 35mm x 12mm/ 127mm x 34mm x 25mm	PTFE	+/- 15kV DC	Titanium

271, 272 & 273 Flexi Nozzle

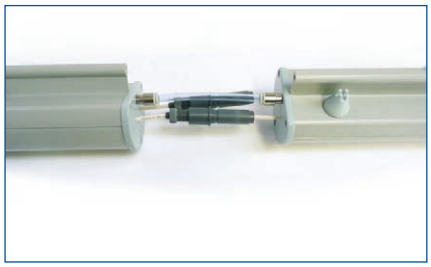
The 271 Flexi Ion Nozzle is a compact, "hands free" ioniser designed for repetitive cleaning tasks. The 272 Flexi Nozzle includes a pneumatic foot pedal which allows the operator to regulate the flow of air and activate the ionisation. The 273 includes a standard foot switch which allows the operator to regulate the air flow.

	Dimensions	Input Voltage	Noise Level	Decay time
Details	32mm x 32mm x 74mm, 300mm Flexible trunking and base	+/- 9kV DC	68 dB(A) at 20psi, 1.5bar, 1000mm	0.8 sec at 150mm at 30 Psi (2 bar)

Options for DC Equipment

988 Sensor Bar

The 988 Sensor Bar works in conjunction with the Meech 977CM Pulsed DC Controller; enabling the system to provide closed-loop static control. It senses the charge on the material and provides a control signal to the 977CM, allowing it to adjust its output to give optimum static control.



971 Interconnect

For use in situations where it would be preferable to connect two or more 971 bars without an expanse of cabling. This leads to a tidier and safer working environment when connecting bars within a close proximity.

971 Replacement Pin Set

Whilst our titanium emitter pins are extremely durable, it is sometimes necessary to replace them for optimised productivity after natural deterioration. The replacement pin set contains a quantity of 10 titanium emitter pins, which are easy to install in order to refresh bar efficiency.

200 Series Fixing Bracket

Used with the model 261 Ion Nozzle the universal mounting bracket not only simplifies installation but also allows accurate positioning and directional control for the air flow from the 261 Ion Nozzle.

Pneumatic footswitch

Used with the 273 Flexi Nozzle, the pneumatic footswitch allows the operator the ability to control the intensity of airflow. The footswitch also features a signal cable which, on the application of pressure, turns the 273 Flexi Nozzle on and off standby mode.

DC High Voltage Cable Splitters

DC High Voltage Cable Splitters have been developed to enable a number of ionising products to be powered from the Meech Pulsed DC Controllers. They are available as 2 way, 4 way or 8 way.

EX IONISING EQUIPMENT

Static Elimination in EX hazardous areas

Hazardous locations (sometimes abbreviated to HazLoc) are defined as places where fire or explosion hazards may exist due to flammable gases, flammable liquid–produced vapors, combustible liquid–produced vapors, combustible dusts, or ignitable fibers/filings present in the air in quantities sufficient to produce explosive or ignitable mixtures. Electrical equipment that must be installed in such classified locations should be specially designed and tested to ensure it does not initiate an explosion, due to arcing contacts or high surface temperature of equipment. The Meech EX range has all been tested to meet these specific requirements.

924EX Hazardous Area Ionising Bar

The 924EX is a compact, pulsed DC ionising bar for use on the most arduous static elimination problems. The 924EX has been designed to extend the exceptional performance and benefits associated with the 924IPS, to classified hazardous environments.

	Dimensions	Optimum Working Distance	Weight	Emitters	IP Rating	Construction
Details	22mm x 32mm 40mm increments between 300mm - 1400mm	20mm - 150mm	400g per 1000mm	Titanium	IP68	PC ABS

915EX Hazardous Area Ionising Bar

The 915Ex has been designed to extend the exceptional performance and other benefits of the 915 Ionising Bar for use in hazardous environments.

	Dimensions	Optimum Working Distance	Weight	Emitters	Operating Voltage	EX Zone Characteristics
Details	18mm x 42mm x Max length 4000mm	30mm - 150mm	1100g per 1000mm	Titanium	4.5kV - 7kV AC	II 2 GD EEx m 1180 Gas group IIA, temp Class T6 (T85°C)

976EX Hazardous Area Ionising Bar

The 976Ex is unique and has been designed to extend the exceptional performance and other benefits of the 976 Pulsed DC system to classified hazardous environments.

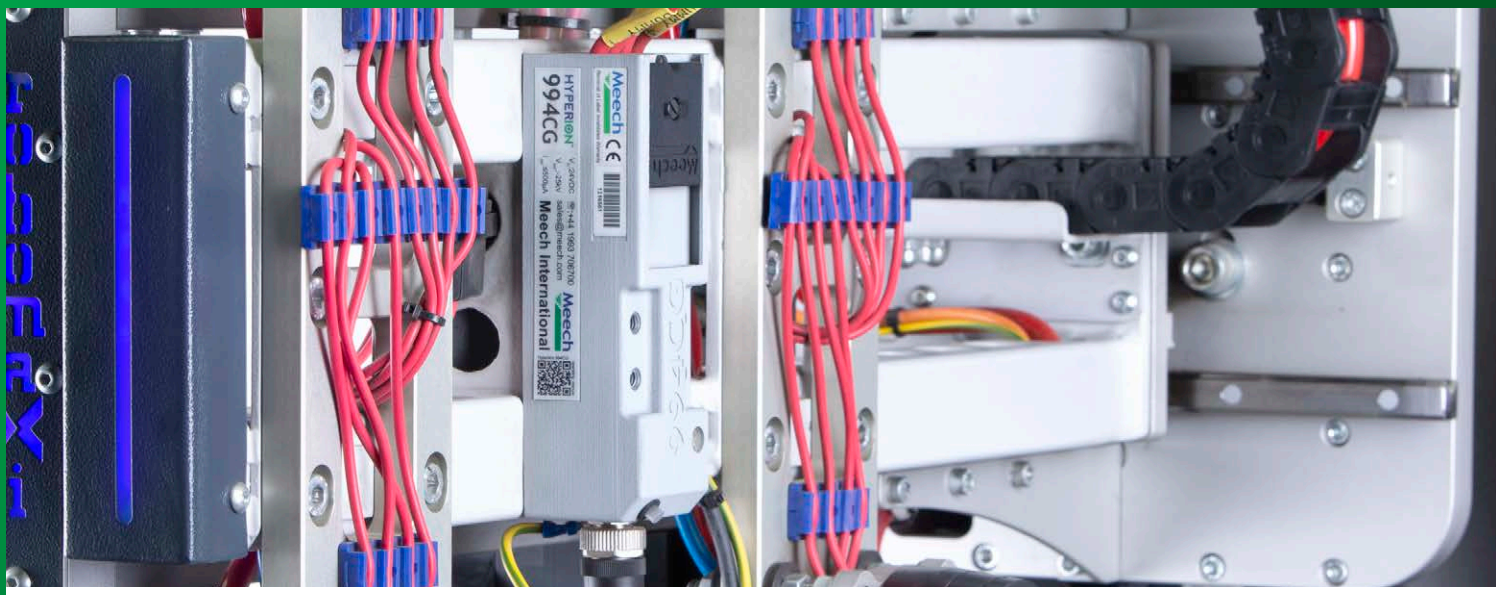
	Dimensions	Optimum Working Distance	Weight	Emitters	Operating Voltage	EX Zone Characteristics
Details	55mm x 50mm x Max length 4000mm	200mm - 600mm, 900mm with air boost	1300g per 1000mm	Titanium	Up to 10kV DC	II 2 GD EEx m 1180 Gas group IIB, temp Class T6 (T85°C)

957EX Hazardous Area Ionising Air Curtain

The unit comprises a powerful 915EX Ionising Bar mounted on to an Energy Saving Air Curtain. Together they produce a high speed, laminar sheet of ionised air. The 957EX Ionising Air Curtain requires a compressed air supply and is powered by the 904 Power Supply.

	Dimensions	Optimum Working Distance	Air Consumption	Weight	Emitters	Operating Voltage	EX Zone Characteristics
Details	28mm x 66mm x Max length 1800mm	50mm - 300mm	122l/min at 5.4 bar per 25mm of air curtain	2650g per 1000mm	Titanium	7kV AC	II 2 GD EEx m 1180 Gas group IIA, temp Class T6 (T85°C)

STATIC GENERATION EQUIPMENT



What is Static Generation?

Static Generation creates a controlled static charge on a non - conductive material that will allow a temporary, adhesion between surfaces with charges of opposite polarity. A high DC voltage (up to 50kV) is safely produced and is carried to a static generator bar, where it is connected to an array of suitably designed emitter pins to generate a “corona”. The DC voltage may be positive or negative. The emitter pins are positioned within close proximity of a grounded surface (fig.1) or, for greater effect, a generator bar with emitter pins of the opposite polarity (fig.2). The material(s) to be bonded are passed into the “corona”, resulting in bonding to the grounded surface or to the other material.

Figure 1

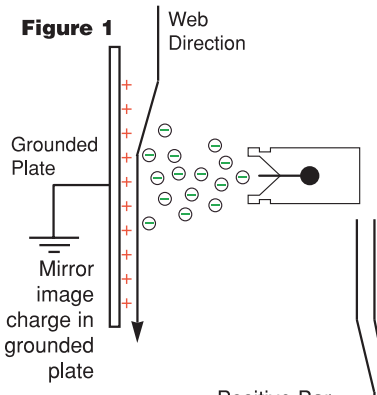
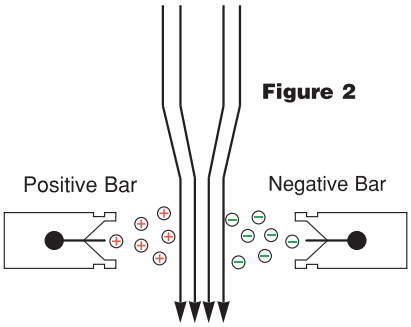


Figure 2



Hyperion IonCharge30 (15W) & Hyperion IonCharge50 (75W)

The IonCharge family of static generators from Meech includes the compact IonCharge30 and the larger, higher powered IonCharge50. IonCharge uses advanced high voltage technology and software for a controlled static charge via our range of static generator bars and pinning heads. IonCharge provides independently selectable voltage and current and the inclusion of a colour touchscreen interface provides simple adjustment and clear display of settings. IonCharge is extremely versatile and effective for a range of applications and materials.

	Dimensions (mm)	Maximum Output Power	Output voltage	Output Current
Details	IC30: 122.5 x 58 x 180 IC50: 231.4 x 126 x 268.5	IC30: 15W IC50: 75W	IC30: 0-30kV IC50: 0-50kV	IC30: 0 to 0.5mA IC50: 0 to 2.5mA

994 IML Static Generator

The 994-IML Static Generator is a compact and lightweight system, it provides 0-20kV, Negative polarity with connections to suit the Meech Hydra.

	Dimensions	Output Polarity	Output Voltage	Max Output Current
Details	190mm x 171mm x 45mm	Negative	0 - 20kV Negative	500µA

Hyperion 994CG Compact Generator

HYPERION™
A Meech Innovation

The 994CG is the most powerful and compact IML generator Meech have ever produced. Powered by 24V DC, it has outlet ports capable of connecting up to 4 x 994 Hydra IML Pinning Systems directly to the generator. The 994CG is available in two versions, a socket terminal utilises the Meech PVC plug and a terminal version that allows crimp connections.

	Dimensions	Output Polarity	Output Voltage	Max Output Current
Details	Socket: 150mm x 45mm x 40mm Terminal: 170mm x 45m x 40mm	Negative	4 - 25kV Negative	500µA

993R Spark Free Generator Bar

The 993R is a high performance generator bar used with the Meech range 992V3 30kV and 50kV Static Generator. Resistively coupled emitter pins deliver smooth, controlled pinning whilst spark free operation avoids tripping out on intermittent applications.

	Dimensions	Operating Voltage	Operating Current	Power Source
Details	52mm x 22mm x Max length 3000mm	Up to 50kV DC	500mA	IonCharge30 IonCharge50

995R & 995R IML Pinning Head

The 995 is designed to deliver exceptional pinning of multi-layer plastic. Uses include bag making and flow-wrapping machinery. The integral switch on the 995R IML allows the operator to switch the system on only when pinning is required, making it ideal for manual IML applications.

	Dimensions	Operating Voltage	Operating Current	Power Source
Details	995R: 208mm x 107mm x 50mm 995R IML: 155mm x 65mm x 30mm	Up to 50kV DC	500mA	992v3 Static Generator

995v3 Flexible Pinning Head

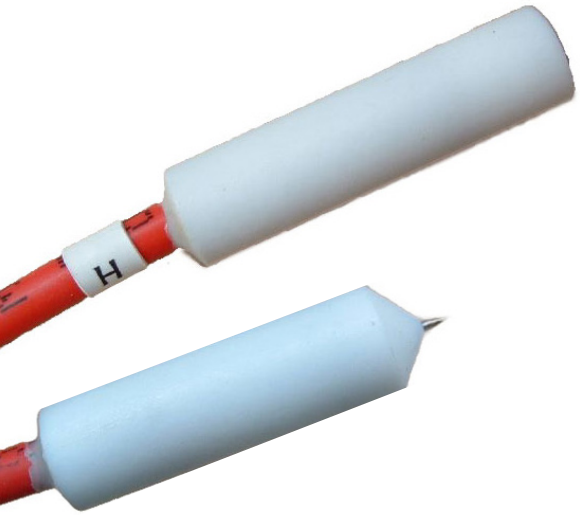
The 995v3 Flexible Pinning Head includes a length of flexible trunking that allows accurate pinning of non-conductive materials. Ideal for hard to reach applications.

	Dimensions	Operating Voltage	Operating Current	Power Source
Details	195mm x 96mm x 26mm including knuckle trunking	Up to 50kV DC	500mA	992v3 Static Generator

995 DE & 995 Claw Pinner

The 995 DE Dirty Environment Pinner provides electrostatic pinning in applications where the risk of contamination is high. The resistively-coupled titanium pins are shrouded to offer a physical protection. The 995 Edge Pinning Claw is a powerful pinning head intended for use on cast-film lines. Pinning the edges of the cast film to the chill roller prevents necking of the film.

	Dimensions	Operating Voltage	Operating Current	Power Source
Details	995 DE: 142mm x 56mm x 56mm 995 Claw Pinner: 154mm x 65mm x 30mm	Up to 50kV DC	500mA	992v3 Static Generator



994 SPP Heads

The 994 Single Point Pinning Heads are ideal for localised static pinning in applications such as in-mould labelling (IML).

The pinning heads are connected to a 992v3 high voltage supply via a resistive splitter box (4 way or 6 way). The individual resistive coupling ensures smooth spark-free pinning, with completely independent operation of each head.

	Dimensions	Cable Length	Resistively Coupled	Power Source
Details	40mm x Ø 10mm 23mm x Ø 10mm	1000mm	Allowing spark-free, independent operation	992v3 Static Generator

Options for Static Generation Equipment

994 4 or 6 Way Standard Resistive Splitter Box

The splitter box can be used to simultaneously run multiple 994 SPP Heads or 994 Hydras from a single power supply. This is a safe way to increase the amount of pinners from a single source. The splitter box is available with 4 or 6 splitting outlets. The splitter box has a resistance of 500MΩ.

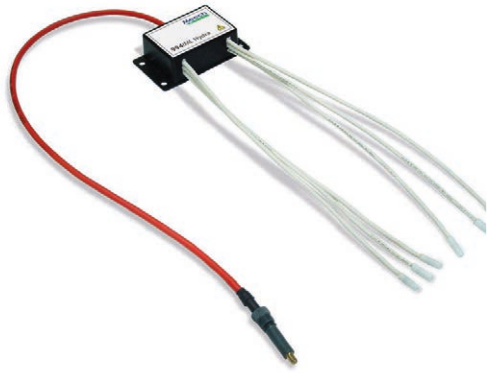
994 4 or 6 Way Heavy Duty Resistive Splitter Box

The heavy duty resistive splitter box has a resistance of 100MΩ, which offers a more powerful output. The heavy duty splitter box is available with 4 or 6 splitting outlets.

HT Cable with Conduit for 993R bars

As standard, the 993R bar is provided with 2m of HT Cable. On purchase of the bar, HT cable can be increased to lengths of up to 20m.

IML Hydra Pinning Systems



994 Hydra IML Pinning System

The 994 Hydra is a pinning system designed for applications where small items are being moulded i.e yoghurt pots or drinks containers. The standard system comprises a resistively coupled distributor with either four or six pinner cables.

	Dimensions	Weight	Power Source	Operating Voltage
Details	Distributor without flanges: 65mm x 45mm x 26mm	175g	994 IML Generator / 994CG	With 994 IML: Up to 20kV With 994CG: Up to 25kV

994 Hydra Miniature IML Pinning System

The 994 Hydra is a miniaturised in-mould pinning system designed for applications where size and weight are restricted, due to its compact and lightweight design. It is suitable for applications where small items are being moulded i.e yoghurt pots or drinks containers. The standard system comprises a resistively coupled distributor with either two, four or six pinner cables.

	Dimensions	Weight	Power source	Operating voltage
Details	Distributor without flanges: 40mm x 27mm x 15mm.	53g	994 IML Generator / 994CG	With 994 IML: Up to 20kV With 994CG: Up to 25kV

Options for IML Hydra Pinning Systems

994 Hydra IML Splitter

Available in 2, 4, 6 and 8 splitter configurations. Can be used to power additional 994 Hydras from a single source for IML applications.

Hydra HT Supply Cable 5000mm Male - Female

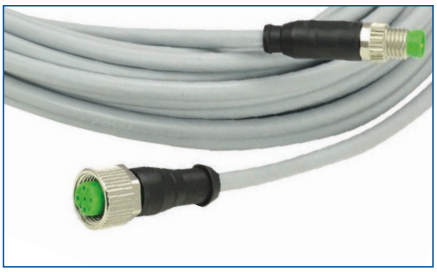
Additional extension cable to be used for direct plug-in from the Generator to the Hydra.

Hydra HT Supply Cable 5000mm Male - Male

Additional extension cable to be used for direct plug-in from the Generator to the Hydra Splitter.

994CG Remote Setpoint Controller

Generates an adjustable 4-20mA signal to control the output voltage of the 994CG Compact Generator. M8 input and M12 output connections.



M12-M8 Murr adaptor cable 1000mm for BarMaster to 994CG connection

Allows connection of BarMaster programmer to 994CG Compact Generator

Mini Din prewired cable 8 way

Compatible with the I/O ports on 977CM and 994IML. The pre-wired cable simplifies the connection to input and output signals.

All you need, from the best in the business

Meech is also a leading provider of:

- **Web Cleaning Systems** – Typically used within the printing and packaging industries to remove contamination, improve print quality and increase productivity.
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