

### Static bonding



### Static elimination



### Surface cleaning





#### **MISSION STATEMENT**







Simco-Ion® Netherlands manufactures and supplies complete solutions for static control, static charging and webcleaning applications in Europe, Africa and the Middle East. Our goal is to grow our business by being the highest value provider for our customers. We provide value through a combination of advanced technology, a full line of products, superior Customer Service, experienced application support and a competitive price/value ratio.

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## EXPLANATION OF SYMBOLS

-  Pulsed DC ionisation
-  AC ionisation
-  24V DC input voltage
-  4 year warranty
-  Approved for use in certain explosion-hazardous environments
-  Universal mounting
-  IQ version available



Although every attempt is made to ensure that the information contained in this catalogue is accurate and up-to-date, please check with your Simco-Ion® representative or Simco-Ion® Netherlands before specifying or purchasing this equipment to confirm availability, exact specifications and suitability for your applications. Specifications subject to change without notice.

# WORLDWIDE ORGANISATION

## SIMCO-ION NETHERLANDS

Simco-Ion, a member of the worldwide ITW group, has operated in Europe since 1946.

Our activities started with the introduction of plastics in the textile industry.

Today we offer a comprehensive range of products to control static electricity, for instance in the plastics, packaging, converting and printing industries.

Our products are sold through an extensive network of competent agents.

## ORGANISATION

Anyone operating in a large area should be able to respond rapidly. From receipt to despatch, we use modern systems for supervising and implementing all orders. Although highly automated, the production process is still flexible. Products are despatched by reliable international courier services. We are fully aware that any problems related to static electricity must not only be solved professionally, but usually also as quickly as possible.

## TECHNICAL SKILLS

To respond effectively to the market needs we are continuously developing new products and applications. In this effort, we are driven by our customers. Many of our products have been developed in close co-operation with our customers. Apart from know-how, we have resourceful people. Briefly put, Simco-Ion has an adequate solution to almost any problem with static electricity.

## QUALITY

You have a right to expect excellent quality from us. This is why our production processes are subjected to quality checks and a meticulous final inspection to ensure a high quality and reliable end-product. This continuous quality assurance effort is reflected in the ISO 9001 : 2008 certificate.



## SERVICE

Our service doesn't stop when the product has been delivered. We also devote a great deal of attention to after-sales service. Apart from the usual guarantee, you may always call on us for product repair and calibration.

## DOCUMENTATION

We give much thought to our documentation. In this effort, we always try to make explicit and straightforward documents. Our manuals meet the latest directives. Simco-Ion has an instructive Internet website: [www.simco-ion.co.uk](http://www.simco-ion.co.uk)



# UNDERSTANDING STATIC ELECTRICITY

FIGURE 1

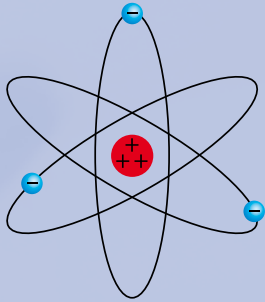


FIGURE 2

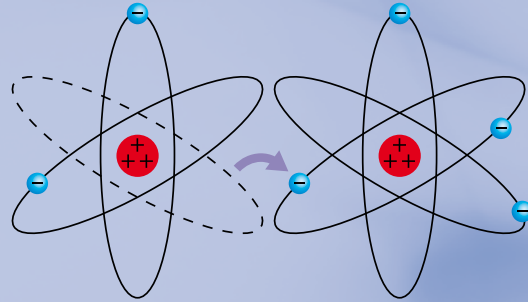
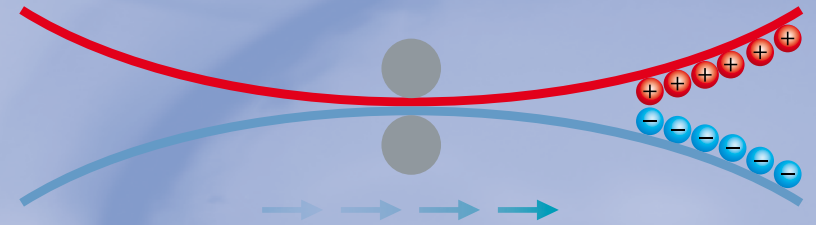


FIGURE 3



## WHAT IS STATIC ELECTRICITY

Static means not moving. Static electricity is an electrical charge that doesn't move. All materials are made up of atoms. An atom is the smallest particle of a material that still contains the properties of the material. Each atom consists of a positively charged nucleus around which one or more negative electrons move. In an idle state, the positive charge of the nucleus is equal to the sum of the negative charge of the electrons moving around the same nucleus. Therefore the charge is neutral (see figure 1). If the nucleus loses or gains electrons, an imbalance is caused. An atom that has lost one

or more electrons then has a positive charge, and an atom that has gained one or more electrons has a negative charge and is called an ion (see figure 2). There are only two types of charge: positive and negative. Atoms with the same type of charge repel one another, while those with the opposite type of charge attract one another.

## HOW IS STATIC ELECTRICITY GENERATED

Static electricity is a surface phenomenon and is generated when two or more surfaces come into contact with one another and are separated again. This causes a sort of splitting, or a transfer of negative electrons from one

atom to the other. The level of charge, (the field strength) is dependent on a number of factors: the material and its physical and electrical properties, temperature, humidity, pressure and speed of separation. The greater the pressure or the speed of separation, the greater the charge (see figure 3).

Static charge is greater during the winter months due to low humidity. When the relative humidity is high, some materials can absorb moisture, as a result of which the surface can become semiconductive. The static charge will then remain low or even disappear entirely as a result of the (semi)conductive surface.

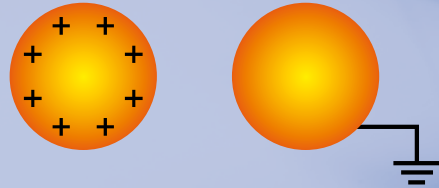
A number of materials are indicated in the tribo-electric series (see figure 4). As a result of friction, these materials will take on a positive or negative charge. The magnitude and polarity of the charge depend on the position in the series.

FIGURE 4: TRIBO-ELECTRIC SERIES



# UNDERSTANDING STATIC ELECTRICITY

FIGURE 5



## CONDUCTIVE AND NON-CONDUCTIVE MATERIALS (INSULATORS)

Materials can be divided into two basic groups: conductors and insulators. In a conductor, the electrons can move around freely. In principle, a conductor that is arranged in an insulated way can take on a static charge. This charge can easily be eliminated by connecting the conductor to earth (see figure 5).

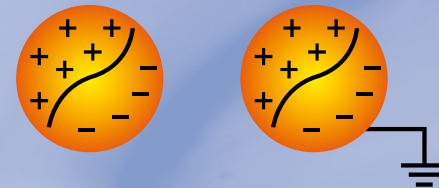
Non-conductive material can retain static charge for a long time, even having opposite polarities in different places. The electrons cannot move around freely. This explains why materials are attracted in some zones

and repelled in others. Connecting to earth does not work because the material has non-conductive properties (see figure 6). Only active ionisation offers a solution to this.

## WHAT IS THE EFFECT

In production processes, static charge can often be a severe disruption, as it means that materials get stuck to machine parts or to each other. Operators do not like getting electric shocks. The dust in the surrounding area is attracted by the electric charge. In explosion-hazardous zones, static charge can cause a spark, which in turn can cause a fire or even an explosion.

FIGURE 6



## HOW CAN STATIC ELECTRICITY BE CONTROLLED

Neutralising the static charge of non-conductors is carried out by means of active ionisation.

Simco-Ion is world-renowned as a producer of ionisation equipment. At the high-voltage points of this equipment, air molecules are split up into positive and negative ions. The static charge on the product attracts ions of the opposite polarity, thus neutralising the material.

Simco-Ion has a wide range of equipment to choose from depending on which type is the most suitable for

certain production processes or applications. However, static electricity can also be useful. Using high voltage, materials can be given a static charge so that they will stick to each other temporarily, thus simplifying production processes.

To put it simply, Simco-Ion makes equipment for measuring and controlling static electricity.

# MEASURING INSTRUMENTS



Product quality, output and yield of manufacturing processes can be improved considerably when problems related to static electricity are identified and dealt with effectively. Electrostatic fieldmeters are appropriate measuring tools to simply identify static electricity problems.



**Electrostatic fieldmeter  
FMX - 003**

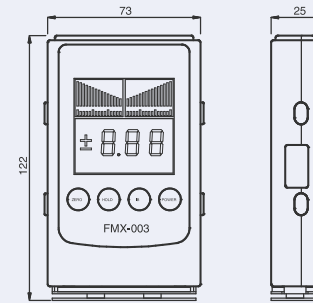
The FMX-003 is a convenient, compact and pocket-sized electrostatic fieldmeter. With this fieldmeter you can measure and store the field strength and polarity. It enables you to carry out measurements in awkward places. The correct measuring distance is displayed by two integrated LEDs. The electrically conductive plastic housing with an earth connection fitted at the side ensures accurate measurements. The unique bicolour display shows the measured value both numerical and graphically. The status of the battery is shown on the display.



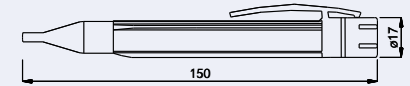
**Static system checker  
TensION**

The TensION static system checker enables you to check all kind of ionising and charging equipment. Without making contact with the actual equipment it gives you an easy and safe way to check if a high voltage is present. The tip of the TensION illuminates when a voltage is detected. When a high voltage is present the minimal requirement for operation of the equipment is provided.

**FMX - 003**



**TensION**



## TECHNICAL SPECIFICATIONS

	<b>FMX-003</b>	<b>TensION</b>
Range	0 - 40 kV pos./neg.	3 - 30 kV
Accuracy	± 10% 0-20 kV ± 20% 0-40 kV	
Measuring distance	25 mm (0 - 20 kV) 60 mm (0 - 40 kV)	3,3 kV-5mm, 4 kV-6mm, 5 kV-10mm, 7 kV-13mm, 10 kV-20mm, 30 kV-80mm
Zero adjustment	automatic	
Display	LCD display	LED indication
Memory	yes	no
Battery	9 V alkaline battery	2x AAA, 1,5 V
Case	conductive ABS	Radilon-S HS(a)
Weight	0,17 kg	0,04 kg
Ambient temperature	10 - 40°C	-10°C - +55°C
Packaging	soft carrying case, coil cord for grounding and adapter for ion balance measurements	



Introducing a new level of static control; the heart of the new IQ Easy platform is the Manager IQ Easy. It comprises of a Control unit with a 7" LCD touch screen, provides information from all the connected devices and makes it easy to change and monitor status and parameters. Up to 6 IQ devices can be directly connected to the Manager IQ Easy. The 24V DC power distribution is routed via the Manager, so no extra cables! This makes the connection of a device even easier than connection to a single desktop power supply.

#### Features:

- 7" full colour touch screen.
- Information is colour coded.
- Controls up to 30 devices.
- Connection up to 6 devices.
- Analogue & digital inputs and outputs.
- Serial fieldbus interfaces.
- Ethernet interface.
- USB interface.

Read the Product specification for more details on all features.

#### Manager IQ Easy

The Manager IQ is available in 2 versions:

- 1) Input voltage 100 – 240V /50-60 Hz

This unit converts the input voltage to 24V DC and provides power to all 6 connected devices.

- 2) Input voltage 24V DC

This model needs a 24V power input provided by the user.

Further extension of devices is possible using the Extension IQ Easy. This adds another 6 devices to the system with a maximum of 30.

2 ports on each Manager or Extension are available for the connection of previous (non IQ) Easy products e.g. Performax Easy.

#### Interfacing:

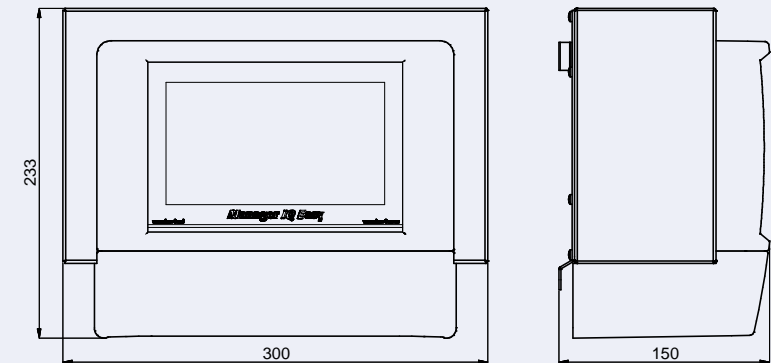
Communication to machine interfaces is provided. Analogue and digital inputs, outputs and several serial fieldbus protocols can be used. Also Ethernet and USB ports are available for many functions.

#### Pro-Active ionisation control:

Through Simco-Ion's patented technology of upstream charge evaluation, it is possible to fine tune neutralisation of static in combination with a Performax IQ Easy anti-static bar. Adding a Sensor IQ Easy to the system will allow the user to measure the downstream charge on the material. The system can also be perfected further to enhance efficiency and allow quality control. Closed loop measuring and adjustment of the static bar output will guarantee an extremely low level of residual charge.

#### Data logging:

All device and process parameters are logged in real time and can be made visible on the LCD screen or downloaded through the Ethernet interface.



The LCD display is beautifully styled and clearly organised giving the operator an immediate overview and status of the system. All information is colour coded and visible from a long distance.

**Blue:** The device is operational and running.

**Green:** The device is operational, but in standby mode.

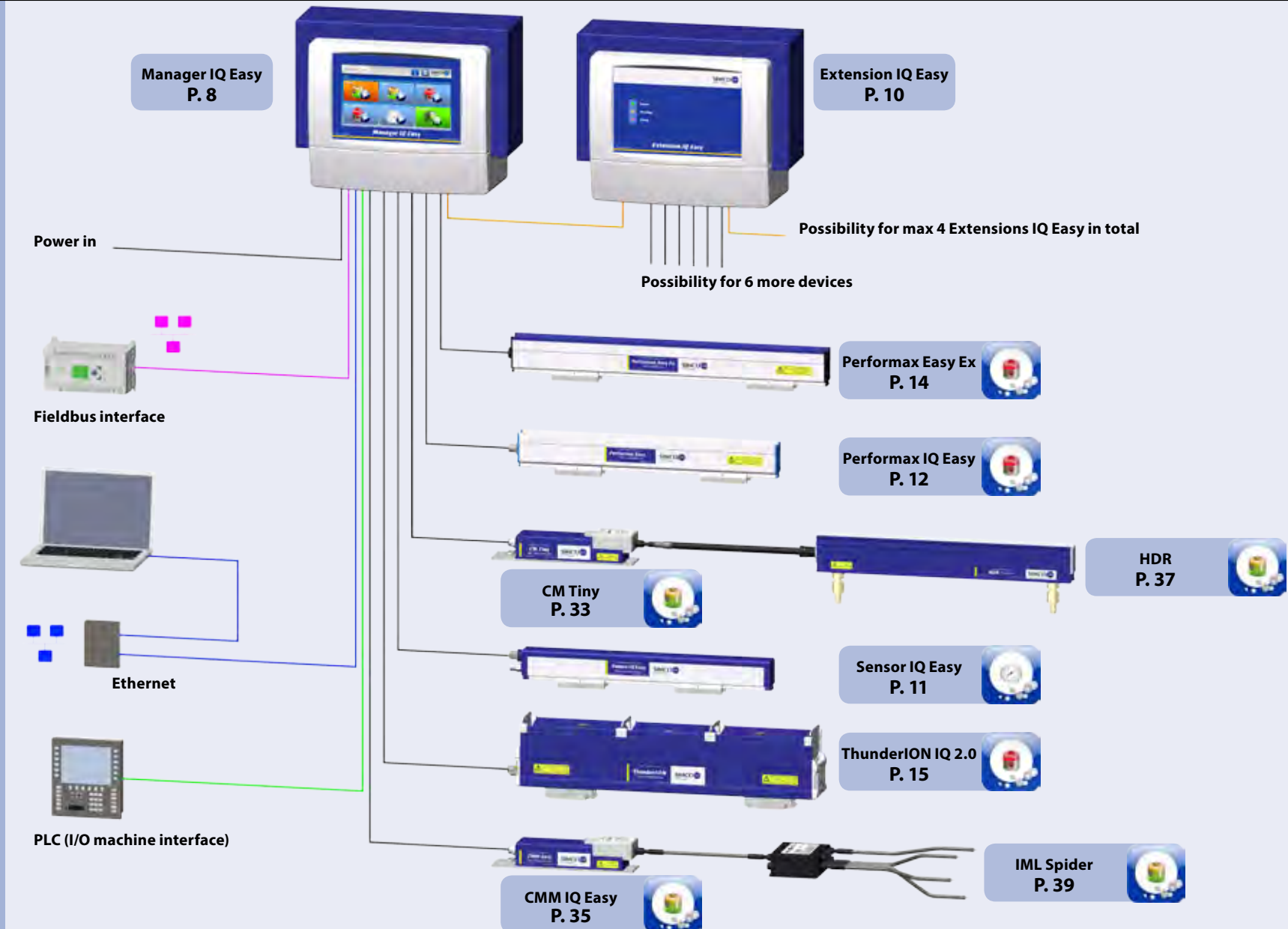
**Orange:** Notice, one or more devices need attention e.g. cleaning is required.

**Red:** Alarm, a device has a fault or parameter has exceeded the alarm level.

**Grey:** No device is connected.



# IQ PLATFORM COMPONENTS



### Features:

- Connection of up to 6 devices.
- LED indicators

Read the Product specification for more details on all features.



### Extension IQ Easy

The IQ Easy platform with at least one Manager IQ Easy can be extended with the Extension IQ Easy to control an additional 6 devices.

The Extension IQ Easy comprises of a Control unit without a display. Status LED's show the power on and overall warning or alarm status.

Up to 6 IQ devices can be connected to the Extension IQ Easy. The 24V DC power distribution is routed via the Extension. So no extra cables! This makes the connection of a device even easier than connection to a single desktop power supply.

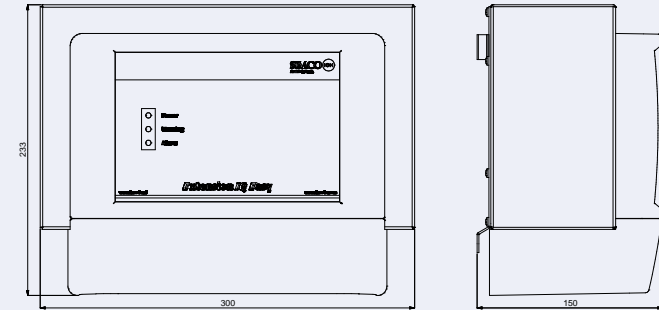
The Extension IQ Easy is available in 2 versions:

- 1) Input voltage 100 – 240V /50-60 Hz  
This unit converts the input voltage to 24V DC and provides power to all 6 devices connected.
- 2) Input voltage 24V DC  
This model needs a 24V power input provided by the user.

Further extension of devices is possible by using multiple Extension IQ Easy's. Each Extension adds another 6 devices to the system with a maximum of 30 devices in total.

2 input ports on each manager or extension are available for connection of previous Easy products eg. Performax Easy.

Extension IQ Easy



### Interfacing

Communication to machine interfaces is provided. Analogue and digital inputs, outputs as well as a serial protocol can be used. These interfaces are provided by the Manager IQ Easy.

### Pro-Active ionisation control

Through Simco-Ion's patented technology of upstream charge evaluation it is possible to fine tune neutralisation of static in combination with a Performax IQ Easy anti-static bar. Adding a Sensor IQ Easy to the system to measure the downstream charge the system can even be further perfected. The closed loop measuring and adjustment of the static bar performance will guarantee an extremely low level of residual charge.

Devices can be placed anywhere in the platform. A device connected to the Manager can communicate with a device connected to the Extension and vice versa.

### Data logging

All device and process parameters are logged in real time through the Manager.



### Features:

- Full web width charge monitoring
- Up to 16 sensors
- Air purge to keep sensors clean



### Sensor IQ Easy

A sensor that measures the electrostatic charge of a web can be added to the IQ Easy platform.

The Sensor IQ Easy is a bar type device that can hold up to 16 sensor heads. Each sensor head can be placed on a strategical position across the web to monitor the electrostatic charge.

All data of each sensor head is communicated to the Manager IQ Easy and stored for process monitoring.

For dirty environments or for precautionary protection of the sensor heads, the Sensor IQ Easy bar is equipped with a compressed air connection. Using only a very low pressure and air volume dirt entering the orifice of the sensors is prevented.

IQ anti-static bars or IQ charging generators in the system can act on data received from a sensor. This makes it possible to control the static charge level on the web in real time using a closed loop feed back and correction routine.

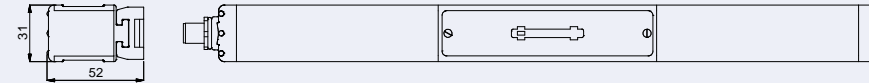
Data received from the Sensor heads can also be used for quality control and process monitoring.

It can be retrieved from the Manager IQ Easy through the standard Ethernet port.



Universal mounting brackets

### Sensor IQ Easy



### TECHNICAL SPECIFICATIONS

Sensor IQ Easy	
Working distance	25 - 60 mm
Housing material	(Reinforced) plastic
Cable	Low voltage
Connector	Standard M12.5 pins male
Weight	1,5 kg/m
Ambient temperature	0 - 55°C
Use circumstances	Industrial
Input power	24 V DC, <0,5A (8 sensors) 24 V DC, <1A (16 sensors)
Indication	3 LED's (Power, Warning, Alarm)
Measuring range	± 40kV
Options	Air purge to keep sensors clean 1-16 sensors
Max. pressure	1 bar

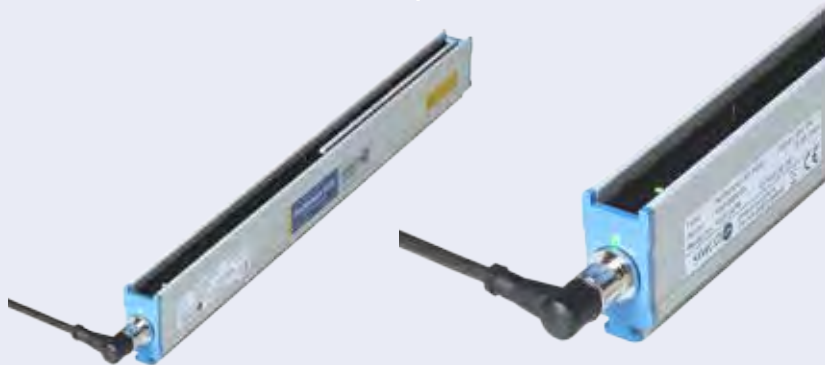
# ANTI-STATIC BARS

## ANTI-STATIC BAR



### Features:

- Incorporated high voltage power supply, input voltage 24V DC
- Efficiency indication
- Cleaning indication
- Pro-active neutralisation
- Standard M12 connector, straight or angled
- Rugged glassfiber reinforced plastic extrusion
- Designed for industrial use and easy cleaning; (protection classification IP66)
- Universal mounting brackets



### Performax IQ Easy

High performance combined with optimal control. This is the new standard for anti-static bars. In combination with the Manager IQ Easy the Performax IQ Easy anti-static bar will ensure a very high efficiency of static neutralisation.

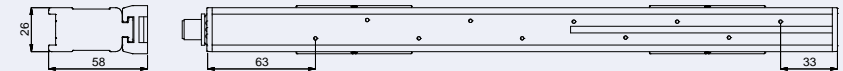
Through the Manager IQ Easy it can be set up as a pro-active static neutraliser using the patented Up-stream static charge evaluation technique. Adding a Sensor IQ Easy to the system enhances the efficiency by measuring the downstream residual static charge and regulating the ionisation efficiency in real time to ensure a very low residual static charge.

The glassfiber reinforced profile offers a very rugged structure even up to 5 metres in length. The Performax IQ Easy has an integrated high voltage power supply and requires only a low voltage input of 24V DC. It is equipped with a standard M12 connector for the 24V DC input. Two 3 colour high brightness LED visualises bar ON (green), WARNING (orange) or bar ALARM (red). The Performax IQ Easy bar has light slanted ends and protection classification IP66 which allows easy cleaning. Universal mounting brackets are supplied for various mounting options.

Performax IQ Easy anti-static bars are available in two variations:

- 1) Standard, for all applications with a working distance between 100 and 500 mm
- 2) Speed, for high speed applications. Working distance 50 to 500 mm

### Performax IQ Easy



### TECHNICAL SPECIFICATIONS

Performax IQ Easy													
Working distance	Performax IQ Easy: 100-500 mm Performax IQ Easy speed: 50 - 500 mm												
Housing material	Glassfiber reinforced plastic												
Emitter pins	Special alloy												
Cable	Low voltage cable												
Connector	Standard M12												
Weight	1,25 kg/m												
Ambient temperature	0 - 55 °C												
Use circumstances	Industrial												
U primary	24 V DC, <0,5 A												
Protection classification	IP66												
Suitable power unit	Integrated, 24V DC voltage input												
Indication	High bright LED green/orange/red												
Signalling:	<table border="0"> <tr> <td></td> <td>Continuous</td> <td>Flashing</td> </tr> <tr> <td>Green</td> <td>In operation</td> <td>Standby</td> </tr> <tr> <td>Orange</td> <td>Warning</td> <td></td> </tr> <tr> <td>Red</td> <td>Alarm</td> <td></td> </tr> </table>		Continuous	Flashing	Green	In operation	Standby	Orange	Warning		Red	Alarm	
	Continuous	Flashing											
Green	In operation	Standby											
Orange	Warning												
Red	Alarm												
IO signals	Serial communication with the Manager IQ Easy Power via Manager IQ Easy												
Options	Stand alone operation Desktop power supply (100-240 V / 24 V) Din rail power supply (100-240 V / 24 V)												



Universal mounting brackets

# ANTI-STATIC BARS

## MEDIUM RANGE, HIGH SPEED



Simco-Ion anti-static bars generate an electrical field through a high voltage on a row of ionising emitter points. This causes the air molecules in the vicinity of the bar to break down into positive and negative ions. Because opposite charges attract, any charged material passing near the bar will attract ions until the charge on the material is neutralised. The materials will no longer be attracted to each other or to the machine parts. Attraction of dust, explosion or fire hazards and electrical shocks to personnel caused by static discharge are avoided. Simco-Ion offers a very wide range of antistatic bars.



### Performax Easy and Performax Easy speed

The rugged *Performax Easy* static neutralizing system, with reinforced profile offers superior deflection performance that minimizes damage due to (accidental) bending. The *Performax Easy* has an integrated high voltage power supply and requires only a low voltage input of 24V DC. It is equipped with a standard M12 connector for the 24V DC input. The emitter points are shockless. A two colour high bright LED visualise bar ON (green) or bar FAULT (red). On the connector an additional remote on/off contact is available and a signal indicating high voltage O.K. The *Performax Easy* bar has light angled ends and protection classification IP66 which allows easy cleaning. Universal mounting brackets are supplied for various mounting options. The standard M12 cable connector has integrated LED's for quick status information of the *Performax Easy*: green LED (Power (24 V) is on), white LED (Remote on/off signal is on), orange LED (High voltage ok).

The *Performax Easy* performs at its optimum between a distance of 100 mm and 500 mm, at material speeds below 500 metres per minute and is available in effective lengths of 270 mm to 3690 mm, in increments of 180 mm.

For material speeds exceeding 500 m/minute and/or distances from 50 to 500 mm the *Performax Easy speed* is recommended, which is available in effective lengths of 90-3810 mm, in 60 mm increments.

### Performax Easy



### Performax Easy speed



## TECHNICAL SPECIFICATIONS

Performax Easy / speed			
Working distance	Performax Easy: 100 - 500 mm Performax Easy speed: 50 - 500 mm		
Housing material	Glassfiber reinforced plastic		
Emitter pins	Special alloy		
Cable	Low voltage cable		
Connector	Standard M12		
Weight	1,25 kg/m		
Ambient temperature	0 - 55°C		
Use circumstances	Industrial		
U primary	24 V DC, <0,5 A		
Protection classification	IP66		
Suitable power unit	Integrated, 24V DC voltage input		
Indication	High bright LED green/red		
Signalling	Green	Continuous In operation	Flashing Standby
	Red	Overload	Standby
	IO signals	Remote on/off; 10-30 V DC High Voltage OK; supply voltage - 1 V. Max. 50 mA	
Options	Desktop power supply (100-240 V / 24 V) Din rail power supply (100-240 V / 24 V)		



Universal mounting brackets

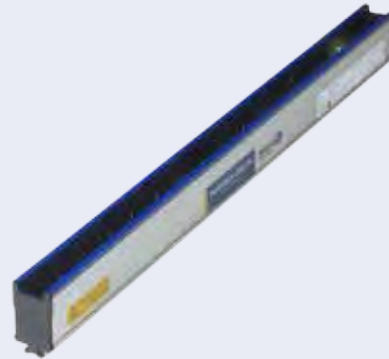
# ANTI-STATIC BARS

MEDIUM RANGE, HIGH SPEED



## Features:

- Incorporated high voltage power supply, input voltage 24V DC
- Standard 5, 10 or 20 m cable
- Rugged Aluminum profile
- Designed for industrial use and easy cleaning; (protection classification IP66)
- Universal mounting brackets
- No HV cable in Ex Area
- Complies to the latest standards
- IQ version available



## Performax Easy Ex

Compact high efficient static neutralising for explosion hazardous environments. The Performax Easy Ex has an integrated high voltage power supply and requires only a low voltage input of 24V DC. A two color high bright LED visualises bar ON (green) or bar ALARM (red). On the standard connection cable an additional wires for remote on/off contact is available and a signal indicating high voltage O.K. The Performax Easy Ex bar has light slanted ends and protection classification IP66 which allows easy cleaning. The aluminum profile offers a very rugged structure even up to 3 meters. Universal mounting brackets are supplied for various mounting options.

Performax Easy Ex anti-static bars are available in two variations:

- 1) Standard, for all applications with a working distance between 100 and 500 mm
- 2) Speed, for high speed applications.



Universal mounting brackets

## Performax Easy Ex



## TECHNICAL SPECIFICATIONS

Performax Easy Ex										
Working distance	Performax Easy Ex: 100-500 mm Performax Easy Ex speed: 50 - 500 mm									
Housing material	Aluminum and plastic									
Emitter pins	Special alloy									
Cable	Low voltage cable									
Weight	1,25 kg/m									
Ambient temperature	0 - 55 °C									
Use circumstances	Industrial									
U primary	24 V DC, <0,5 A									
Protection classification	IP66									
Suitable power unit	Integrated, 24V DC voltage input									
Indication	High bright LED green/red									
Signalling:	<table border="0"> <tr> <td></td> <td>Continuous</td> <td>Flashing</td> </tr> <tr> <td>Green</td> <td>In operation</td> <td>Standby</td> </tr> <tr> <td>Red</td> <td>Overload</td> <td>HV OK overload</td> </tr> </table>		Continuous	Flashing	Green	In operation	Standby	Red	Overload	HV OK overload
	Continuous	Flashing								
Green	In operation	Standby								
Red	Overload	HV OK overload								
IO signals	Remote on/off; 10-30 V DC High Voltage OK; Supply voltage - 1V. Max. 50 mA									
Options	Desktop power supply (100-240 V / 24 V) Din rail power supply (100-240 V / 24 V) IQ version									
Approval	* Atex pending II 2 GD EX mb s IIB T4 Gb EX mb s IIB Db T135 °C									

# ANTI-STATIC BARS

## LONG RANGE PULSED DC



### Features:

- 24V DC input voltage
- Long range neutralisation of static charges up to 1000 mm
- Shockless touchable emitters
- Flexible, replaceable emitter holders
- Removable support brackets
- Removable end brackets
- Removable side plates
- Visual indications with multicolour LED's on 4 sides
- Universal mounting brackets
- Patented technology
- IQ version available with f.e. clean bar indication



ThunderION 2.0

The ThunderION is a revolutionary development in both design and functionality. It offers long distance static elimination even up to one meter. The robust design of the reinforced extruded profile allows the use in industrial environment up to even 5 m length. The T-ridge on the backside of the ThunderION enables the user to position the Simco-Ion universal mounting brackets as desired, allowing optimal mounting flexibility.

The disc shaped emitters differ from the conventional emitters. They produce a high and balanced ion output. The emitters are shockless when accidentally touched. A flexible and replaceable structure prevents damage to the emitters when hit by foreign objects.

The ThunderION has an integrated high voltage power supply and requires only a low voltage input of 24V DC. The new concept for long range static neutralisation is achieved with a combination of pulsed DC and a low frequency. LED's on four sides visualise bar ON or bar ALARM.

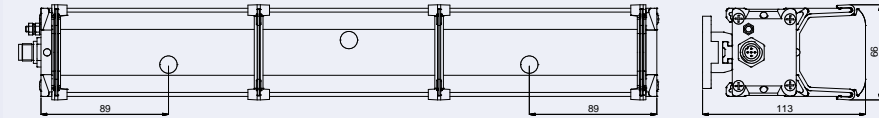
The totally new designed housing makes it very easy to clean the ThunderION. End brackets, middle support brackets, side plates and emitters can be easily removed to gain access to the whole surface for fast and accurate cleaning.

With certain production processes its necessary to neutralise static electricity at a very long distance, for example winding and rewinding of webs where the diameter of the



Universal mounting brackets

ThunderION 2.0



### TECHNICAL SPECIFICATIONS

ThunderION 2.0													
Working distance	300 - 1000 mm												
Housing material	Plastic												
Emitters	Special alloy												
Cable	Low voltage cable												
Weight	Base 0,8 kg + 2,4 kg/m												
Ambient temperature	0 - 55 °C												
Use circumstances	Industrial												
Input power	24 V DC, <2 A												
Protection classification	IP65												
Suitable power unit	Integrated, 24V DC voltage input												
Indication	High bright LED green/orange/red												
Signalling:	<table border="0"> <tr> <td>Green</td> <td>Continuous</td> <td>Flashing</td> </tr> <tr> <td>Orange</td> <td>In operation</td> <td>Standby</td> </tr> <tr> <td>Red</td> <td>Warning</td> <td></td> </tr> <tr> <td></td> <td>Alarm</td> <td></td> </tr> </table>	Green	Continuous	Flashing	Orange	In operation	Standby	Red	Warning			Alarm	
Green	Continuous	Flashing											
Orange	In operation	Standby											
Red	Warning												
	Alarm												
IO signals	Remote on/off; 10-30 V DC High Voltage OK; Supply voltage - 1V. Max. 50 mA												
Options	Desktop power supply (100-240 V / 24 V) Din rail power supply (100-240 V / 24 V) IQ version												

re-windingsection changes continuously. With the ThunderION a new technique is being used were long range neutralisation is possible without air support as transport medium for the ions.

# ANTI-STATIC SYSTEM

## LONG RANGE PULSED DC



With certain production processes its necessary to ionise at such a long distance where classical AC anti-static bars aren't sufficient enough, for example winding and rewinding of webs where the diameter of the re-winding section changes continuously. Also with bagmaking machines type Wicketer it's necessary to ionise from a long distance as moving machine parts hinder short range ionising. With the Thunder/ON a new technique is being used were long range ionisation is possible without air support, as transportmedium for the ions.



Thunder/ON

The Thunder/ON offers long distance static elimination even up to one meter. The robust design of the reinforced extruded profile allows the use in industrial environment up to even 3 m length. The disc shaped emitters produce a high and balanced ion output. When accidentally damaged they can easily be replaced.

The Thunder/ON has an integrated high voltage power supply and requires only a low voltage input of 24V DC. The new concept for long range ionisation is achieved with a combination of pulsed DC and a low frequency. Two LED's visualise bar ON or bar FAULT. An incorporated overload detection will temporarily switch off the high voltage in the event a short circuit may occur.



Control Module

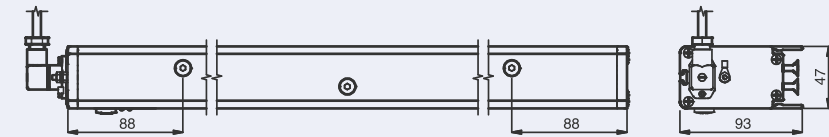
The Control Module provides power and control for up to 4 Thunder/ON anti-static bars. The Control Module operates on the mains voltage, which can be turned on and off with a switch. A cable with a pre-assembled connector at each end links the Thunder/ON bar with the Control Module. This offers quick and easy assembly.

All cables carry just 24 V.

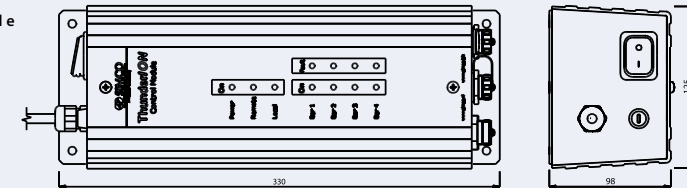
The Control Module enables you to check the functioning of each connected anti-static bar. A green LED indicates that the bar is switched on.

A red LED indicates that a fault has been detected. Via the I/O port, you also have the option of switching each bar on/off remotely and separately, as well as checking its correct functioning.

Thunder/ON



Control Module



### TECHNICAL SPECIFICATIONS

Thunder/ON	
Working distance	300 - 1000 mm
Housing material	reinforced plastic
Emitters	special alloy
Cable	low voltage cable
Weight	base 0,8 kg + 1,5 kg/m
Ambient temperature	0 - 55°C
Use circumstances	industrial
Input power	24 V DC, <0,7 A
Operating voltage	30 kV DC
Suitable power unit	integrated
Approval	UL

Control Module	
Housing material	Aluminium and steel, powdercoating
Weight	3,1 kg
Connections	4 connectors for Thunder/ON bar, 1 connector for remote I/O
Mains cable / Interconnection cables	1,8 m / 6 or 12 m length
Ambient temperature	0 - 55°C
Protection Classification	IP-54
Use circumstances	industrial
Power consumption	100 - 240 V AC
Frequency	50 - 60 Hz
Input power	100 Watt max.



# ANTI-STATIC BARS

## SHORT RANGE



Simco-Ion offers a very wide range of anti-static bars. They all have properties, often specifically designed for the application where they are being used.

MEB / MEJ anti-static bars are often used on production machines where short range ionisation is possible and where no moving machine parts are interfering the ionisation.



UL US  
E-173152

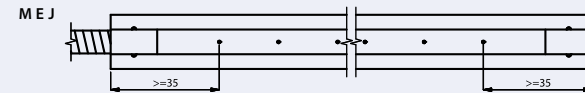
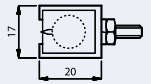
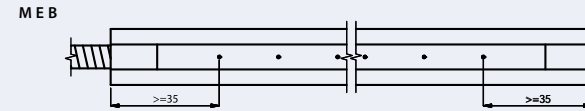
MEB

Each individual emitter point of this rectangular anti-static bar is coupled capacitively to the high voltage. You will therefore not get an electrical shock when the emitter pins are accidentally touched. Another advantage is that the bar continues to function properly when a number of emitter pins are short-circuited, for instance due to heavy fouling.



MEJ

The properties of this Simco-Ion anti-static bar are the same as those of type MEB, except that the MEJ type is round. Therefore mounting this anti-static bar via holes in the machine frame is possible.

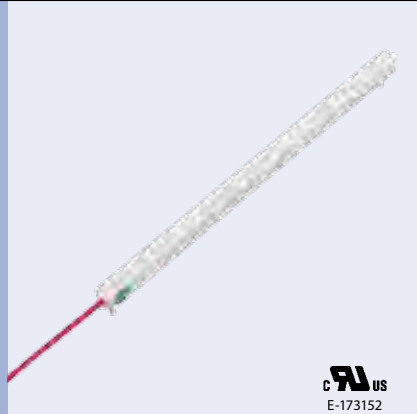


### TECHNICAL SPECIFICATIONS

	MEB	MEJ
Working distance	30 mm max.	30 mm max.
Housing material	anodised aluminum	anodised aluminum
Inner bar material	PVC	PVC
Emitter pins	special alloy	special alloy
Cable	metal shielded	metal shielded
Weight	0,56 kg/m	0,56 kg/m
Ambient temperature	0 - 55°C	0 - 55°C
Use circumstances	industrial	industrial
Operating voltage	7 kV AC	7 kV AC
Options	right angle cable exit airsupport	right angle cable exit
Suitable power unit	A2A75 / MPM	A2A75 / MPM
Approval	UL	

# ANTI-STATIC BARS

## SHORT / MEDIUM RANGE



UL  
E-173152

### SS 1/2"

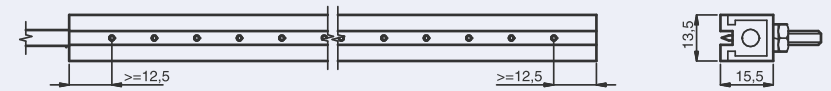
The emitter pins of the Super Service anti-static bars are directly coupled to the high voltage so that maximum ionising current is reached. These bars can be cleaned easily and therefore they are suited for being installed in places which may be subject to heavy fouling. Touching an emitter pin will cause an unpleasant electrical shock. These bars are usually installed in such a manner that the emitter pins cannot be touched by personnel.



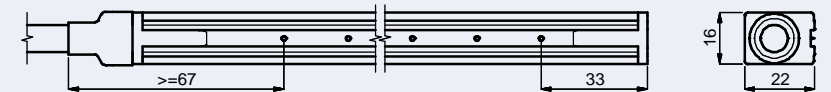
### MaxION

Each individual emitter pin of the MaxION anti-static bar is coupled capacitively to the high voltage. You will therefore not get an electrical shock when the emitter pin is accidentally touched. The rugged MaxION static neutralising bar has a reinforced profile that minimises damage due to accidental bending. The ground reference is embedded in the reinforced profile. The slide slot on the backside of the MaxION enables the user to position the mounting bolts as required, allowing greater mounting flexibility. After cleaning the precision emitter pins with a brush you can sweep the contaminants out of each light-angled end of the bar easily.

### SS 1/2"



### MaxION



## TECHNICAL SPECIFICATIONS

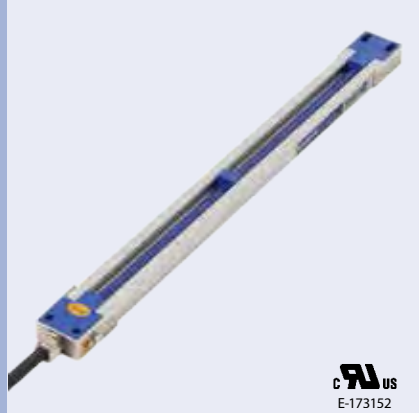
	SS 1/2"	MaxION
Working distance	30 mm max.	400 mm max.
Housing material	anodised aluminum	reinforced plastic
Inner bar material	PTFE	
Emitter pins	special alloy	special alloy
Cable	high voltage cable	high voltage cable
Weight	0,56 kg/m	0,6 kg/m
Ambient temperature	150°C with special cable	0 - 70°C
Use circumstances	industrial	industrial
Operating voltage	4 kV AC	5 kV AC
Options	right angle cable exit	
Suitable power unit	A2A4S / MPM	A2A5S / MPM
Approval	UL	

# ANTI-STATIC BARS

## MEDIUM / LONG RANGE



Simco-Ion anti-static bars are also available for applications requiring long range neutralisation. These anti-static bars are shockless; each emitter pin is coupled capacitively to the high voltage.

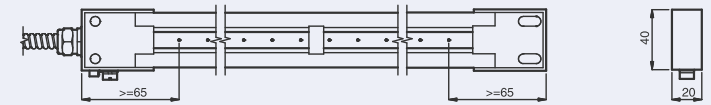


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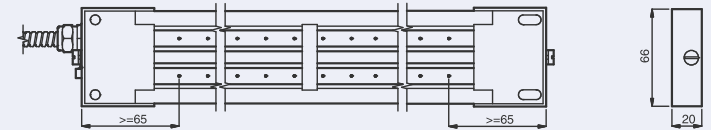


UL US  
E-173152

EP - Sh - N



P - Sh - N



EP - Sh - N

Each individual emitter pin of this anti-static bar is coupled capacitively to the high voltage. You will therefore not get an electrical shock when the emitter pin is accidentally touched. Another advantage is that the bar continues to function properly when a number of emitter pins are short-circuited, for instance due to heavy fouling. Under certain conditions the EP-Sh-N bar is capable of neutralizing the electrostatically charged material from a maximum distance of 150 mm.

P - Sh - N

This type of anti-static bar, a more powerful version of the EP-Sh-N is highly effective and, with its long range, ideal for neutralisation of static electricity on materials when the distance varies. Under certain conditions the maximum distance may even be as large as 600 mm.

### TECHNICAL SPECIFICATIONS

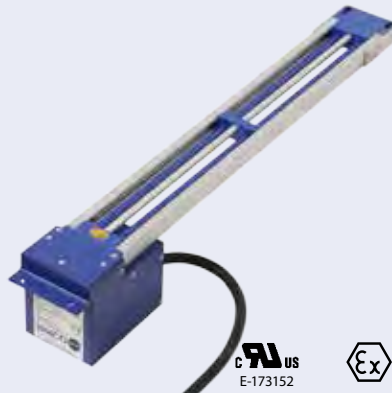
	EP-Sh-N	P-Sh-N
Working distance	150 mm max.	600 mm max.
Housing material	anodised aluminum	anodised aluminum
Inner bar material	PVC	PVC
Emitter pins	special alloy	special alloy
Cable	metal shielded	metal shielded
Weight	0,5 kg/m	1 kg/m
Ambient temperature	0 - 55°C	0 - 55°C
Use circumstances	industrial	industrial
Operating voltage	7 kV AC	7 kV AC
Options	right angle cable exit	right angle cable exit airsupport connection
Suitable power unit	A2A7S / MPM	A2A7S / MPM
Approval	UL	UL

# ANTI-STATIC BAR / BLOWER

FOR HAZARDOUS AREAS



Simco-Ion anti-static bars are also available for applications requiring long range neutralisation and for being used in certain hazardous zones. These anti-static bars are shock-proof; every emitter pin is coupled capacitively to the high voltage. The anti-static bar for hazardous areas is equipped with an integrated power unit, so the need for an external high-voltage cable is eliminated. For larger working distance or 3D objects an ioniser including blower is available.



P - S h - N - E x

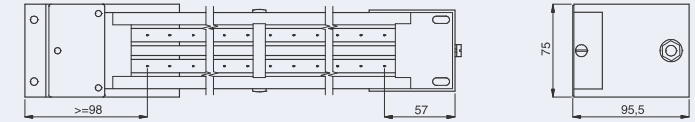
This anti-static bar has the same properties as the P-Sh-N but is equipped with an integrated power unit, you do not need a high-voltage cable. This anti-static bar has been approved for use in certain hazardous environments. The 5m long primary cable shall be connected to the mains voltage. A neon lamp can indicate that a high voltage is present. Under certain conditions the P-Sh-N-Ex bar is capable of neutralizing the materials from a maximum distance of 200 mm.



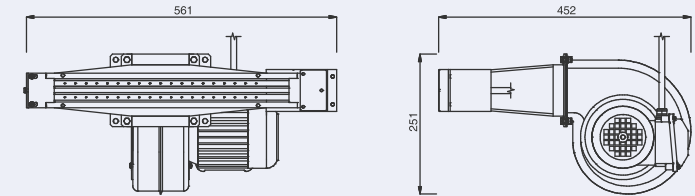
HP - N - E x

The HP-N-Ex ionising air blower consists of a motor and a fan. The ambient air is drawn on one side and blown off along an anti-static bar. The effective ionising width is 500 mm. This ionisation blower has been approved for use in certain explosion-hazardous environments. The power unit is integrated in the anti-static bar.

P - S h - N - E x



HP - N - E x



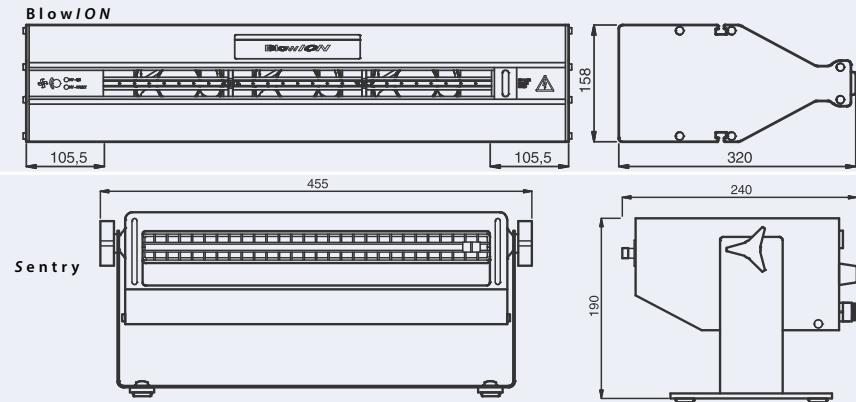
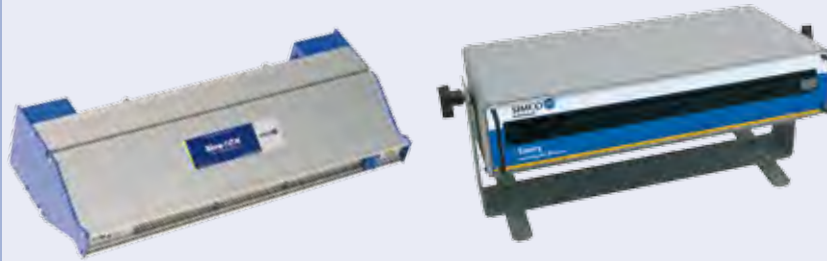
## TECHNICAL SPECIFICATIONS

	P-Sh-N-Ex	HP-N-Ex
Working distance	200 mm max.	1500 mm max.
Working width		500 mm
Housing material	aluminum / steel	aluminum / steel
Inner bar material	PVC	PVC
Emitter pins	special alloy	special alloy
Cable bar	5 m (Neoprene)	5 m (Neoprene)
Cable motor		5 m (Neoprene)
Weight	base 2 kg + 0,8 kg/m	13 kg
Ambient temperature	0 - 40°C	0 - 40°C
Use circumstances	industrial	industrial
Noise level		60 dB (A) (at 1 metre)
U primary	230 V, 50 Hz	230/400 V AC, 50 Hz, 3 phase
Power consumption	30 Watt	120 Watt
Option	neon lamp, external	neon lamp, external
Suitable power unit	integrated	integrated
Approval	UL, ATEX	ATEX
ATEX category	II 2 GD Ex smb IIB T4 Ex mD 21 T135C	II 2G Ex smb IIB T4 (bar) c T4 (blower) II 2G Ex e II T4 (motor)
ATEX certificate	BAS00ATEX2162X	BAS00ATEX2162X PTB02ATEX3114

# IONISING AIRBLOWERS



Plastics attract dust due to static electricity. The dust particles stick firmly to the surface, which creates quality issues. Due to their shape, many plastic products have to be neutralised from a distance. For this purpose, Simco-Ion has developed ionising air blowers. The emitter pins of the anti-static bar inside the blower ionise the air which is blown towards the electrostatically charged object. The part is then neutralised by the ionised flow.



## Blow/ION

The Blow/ION features an ergonomic, robust designed extruded anodized aluminum housing. The integrated fans and the intelligent positioning of an anti-static bar and a high effective neutralising technique to provide long range ionisation over a large area. The patented built-in cleaner brush maintains the ionisation production at optimum results by simply sliding from right to left. No external HV wiring is required as the power supply is integrated (Plug and Play). The Blow/ION is available in standard effective lengths from 520 mm up to 1960 mm, in increments of 160 mm which covers most un- and rewinding applications.

## Sentry

The Sentry is ideal for use in light industrial environments and it increases productivity. The Sentry is excellently suited to neutralise static charges on three-dimensional objects, for instance injection moulded products. This ionizing air blower stands out for its compact design. It has an integrated fan which draws in the ambient air and blows the air off along the anti-static bar. The air inlet may be fitted with a filter. The air volume can be adjusted electrically. The high-voltage power unit for the anti-static bars is also integrated. The anti-static bars are equipped with a (patented) cleaning system. The control knobs at the rear are easily reached and operated.

## TECHNICAL SPECIFICATIONS

	Blow/ION	Sentry
Working distance	1000 mm max.	1000 mm max.
Working width	520 - 1960 mm	500 mm
Housing material	anodized aluminum, coated steel	painting steel
Ionizing bar material	brass	brass
Emitter pins	special alloy	special alloy
Cable	2 m with IEC 320 connector	1,8 m with plug
Weight	11 - 25 kg	8 kg
Ambient temperature	0 - 50°C	0 - 50°C
Use circumstances	industrial	light industrial
Noise level	49 - 63 dB(A) (at 1 metre)	58 dB(A) (at 1 metre)
Airvolume	750 - 3000 m3/h	119 - 204 m3/h
U primary	100 - 240 V AC, 50/60 Hz	230 V AC, 50 Hz
Power consumption	230 Watt max.	115 Watt
Fan speed control	yes	yes
Options	filter	filter
Suitable power unit	integrated	integrated

Blow/ION LED  
function indicators

Blow/ION  
cleaning brush



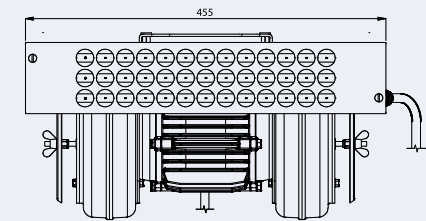
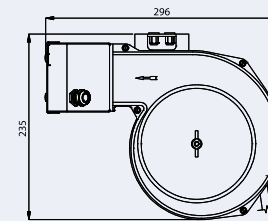
# IONISING AIRBLOWER



The Volum/ON blowers are robust and therefore suitable for industrial use. The distance from the blower to the product or material to be neutralised may be 1,5 metre at most. The built-in Simco-Ion shockless anti-static bars are energized by a Simco-Ion power unit which supplies the required voltage for ionisation.



Volum/ON



Volum/ON

Volum/ON with filter

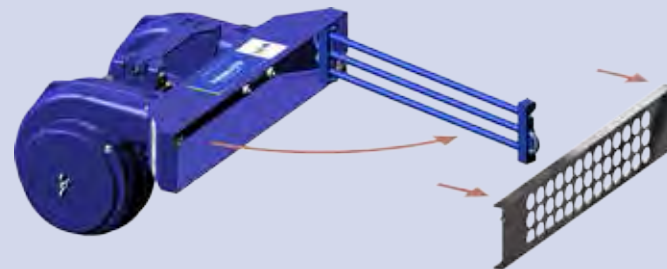
The Volum/ON is a very robust ionizing air blower with an effective ionising width of 500 mm.

The Volum/ON consists of a motor, two fans and an ionisation unit.

Ambient air is drawn on two sides and blown off along three anti-static bars.

The air flow that is drawn in is adjustable on both sides.

This ionising air blower is also ideal for long range neutralising when paper and film webs are being wound. The air inlets can be fitted with a special filter.



Smart construction for easy cleaning of the ionisation unit.

## TECHNICAL SPECIFICATIONS

Volum/ON	
Working distance	1500 mm max.
Working width	500 mm
Housing material	steel, powder coating
Ionizing bar material	PVC
Emitter pins	special alloy
Cable bar	3 m metal shielded
Cable motor	3 m (Neoprene)
Weight	11 kg
Ambient temperature	0 - 50°C
Use circumstances	industrial
Noise level	77 dB(A) (at 1 metre)
Airvolume	50 Hz: 600 m <sup>3</sup> /h 60 Hz: 660 m <sup>3</sup> /h
U primary	400 V AC, 50 Hz/60 Hz
Power consumption	140 Watt
Option	filter
Suitable power unit	A2A7S / MPM

# TYPHOON

## IONISING AIR KNIFE, BLOWER DRIVEN



Typhoon airknives eliminate static and removes particles from flat or contoured surfaces. Typhoon incorporates a blower with an airknife. This system provides a continuous stream of clean ionised air for removal of surface particles and contamination.

The Typhoon is adaptable to large halo systems used for auto and truck body cleaning prior to painting. It is also suitable for cleaning bumpers and other plastic parts. The bumpers or parts can be placed on a rack before going into the spray-painting cabin. By using blowers instead of compressed air, Typhoon can reduce operational costs by 30 to 70%.



Typhoon with EP-Sh-N or P-Sh-N-Ex anti static bar

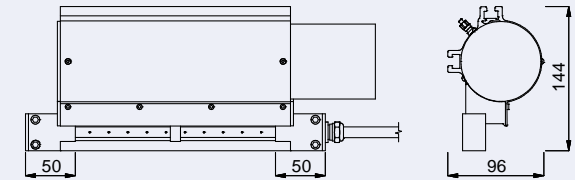
The airknife is constructed of extruded aluminium with incorporated mounting grooves. This design provides a precise air volume over the entire width of the airknife. In the airknife tube a high air pressure appears and is flowing out of the air knife narrow outflow opening. The anti-static bar produces positive and negative ions which are blown onto the surface by the air knife. The electrons will now be exchanged, which causes the surface to be neutralised and the impurities to be removed. For use in hazardous zones, the Typhoon with the P-Sh-N-Ex anti-static bar is approved.

### Power unit A2A7M

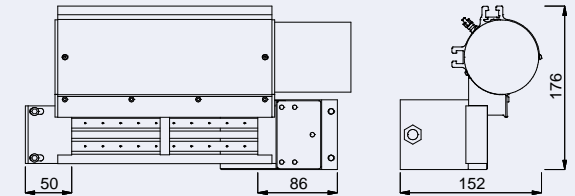
Typhoon systems with EP-Sh-N anti-static bars incorporate a power unit type A2A7M. This unit contains an additional 12V power source for connection of the airpressure sensor. For full specifications see standard power units on page 29.



EP-Sh-N



P-Sh-N-Ex



## TECHNICAL SPECIFICATIONS

	Typhoon	
	with E-P-Sh-N	with P-Sh-N-Ex
Working distance	2000 mm max.	2000 mm max.
Working width	on demand	on demand
Housing material	aluminum	aluminum / steel
Ionizing bar material	PVC	PVC
Emitter pin	special alloy	special alloy
Cable	metal shielded	Neoprene
Weight	4 kg/m	base 2 kg + 4,3 kg/m
Ambient temperature	0 - 55°C	0 - 40°C
Use circumstances	industrial	industrial
Operating voltage	7 kV AC	7 kV AC
Airconnection	75 mm Ø	75 mm Ø
U primary		230V 50Hz
Suitable power unit	A2A7S / MPM	integrated
Approval	UL	UL, ATEX
ATEX category		II 2 GD Ex smb IIB T4 Ex mD 21 T135C
ATEX certificate		BAS00ATEX2162X

# TYPHOON



## PROFITABILITY CALCULATION

We would be pleased to help you comparing our Typhoon system with compressed air systems. Using a spread-sheet, Simco-Ion will be able to calculate exactly the payback period of a planned investment in a Typhoon, when you provide the relevant variables.



*Typhoon Blower*

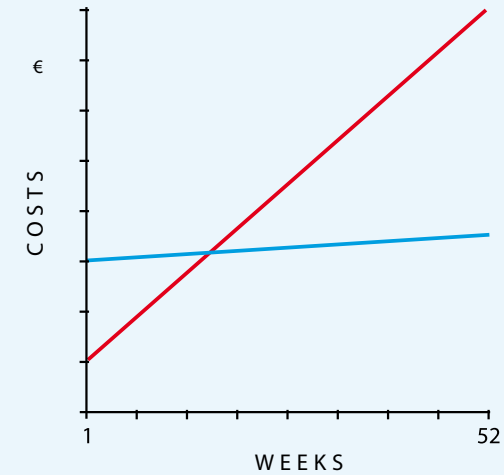
A Typhoon system consists of a blower with one or several Typhoon airknives and tubes. Each system will be tailored specifically for a customer's application. A checklist can be completed by the customer with all specific data. If needed, Simco-Ion can supply a trial system so the customer can determine the air pressure (blow off force) needed to eliminate static charges and/or removing impurities. Dependent from the required air pressure, the capacity of the blower can be determined, and Simco-Ion can offer the right blower.



*Airpressure sensor*

Each Typhoon system is supplied with an air pressure sensor which can measure the air pressure inside the airknife. If the pressure drops under the required level, the system does not work optimally. A system check is then necessary, often it appears that the air filter needs to be cleaned.

## PROFITABILITY CALCULATION



### REFERENCE

- Compressed air system
- Typhoon system

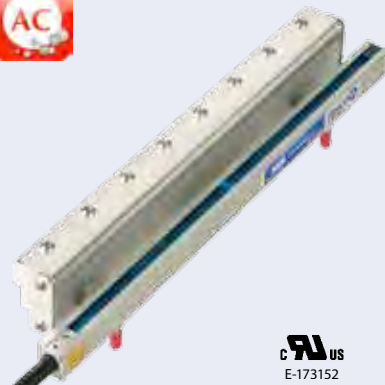


# ANTI-STATIC BAR WITH AIRKNIFE

## IONISING AIR KNIFE



A Simco-Ion anti-static bar with airknife combine the effects of air amplification and ionisation to produce a high-velocity “sheet” of ionised air (amplification ratio as high as 25:1). This combined effect can be used for static neutralising and dust removal in a single operation, for instance in the automotive finishing, printing, packaging, plastics and textile industries. The airknife is very compact and does not have any moving parts. Simco-Ion anti-static bars produce an electrical field which causes air molecules to break down into positive and negative ions. These ions are picked up by the high-velocity airflow produced by the airknife and propelled into the work area where they neutralise the charged surface or product.



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### MEB anti-static bar with airknife

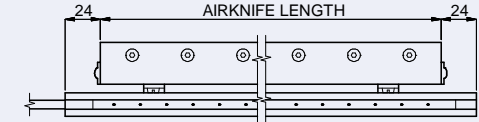
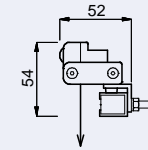
A type MEB shockless anti-static bar combined with an airknife come in standard lengths. The compressed air is blown across the high-voltage points over the entire width and amplified by the ambient air carried along. The air flow is saturated by the positive and negative ions produced by the anti-static bar. The air flow neutralises the static charge, enabling any contamination to be easily blown away.



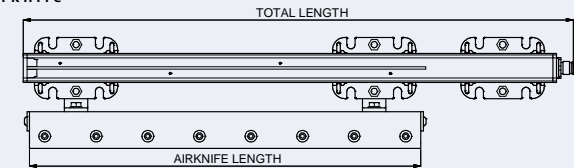
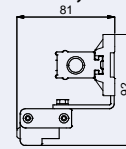
### Performax Easy anti-static bar with airknife

The Airknife with *Performax Easy* is especially useful for situations where the ionisation or cleaning needs to be mobile s.a. cleaning parts with a robot. With the 24V connection it is easy to install in such applications. The Airknife with *Performax Easy* is standard available in 5 lengths, 76, 150, 310, 460 and 610 mm. Longer combinations on request.

### MEB with airknife



### Performax Easy with airknife



## TECHNICAL SPECIFICATIONS

	MEB with airknife	Performax Easy with airknife
Working distance	1000 mm max.	3000 mm max.
Working width	standard: 76 150 310 460 610 mm, lengths upto 2000 mm on request	standard: 76 150 310 460 610 mm, lengths upto 2000 mm on request
Housing material	aluminum	Aluminium/reinforced plastic
Inner bar material	PVC	Potting
Emitter pins	special alloy	special alloy
Cable	metal shielded	Low voltage cable
Weight	3 kg/m	4 kg/m
Ambient temperature	0 - 55°C	0 - 55°C
Use circumstances	industrial	industrial
Operating voltage	7 kV AC	24 V DC
Air consumption	on request	on request
Pressure	max. 10 bar	max. 10 bar
Airconnection	1/4" BSP	1/4" BSP
Option	airfilter	airfilter
Suitable power unit	A2A7S / MPM	
Approval	UL	

# IONISING AIR GUNS



The ES-2J and Cobra ionising air guns have a rugged design and are therefore ideal for use in industrial applications. Ionising air guns neutralise static charges on several materials and clean the surface using ionised compressed air.



**ES - 2 J**

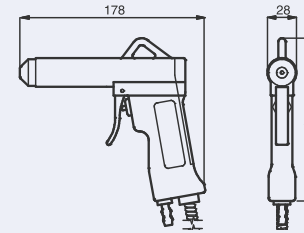
Thanks to its rugged design this gun is ideal for heavy-duty industrial applications. This gun is shockless, the emitter pin is coupled capacitively to the high voltage. The airflow is controlled by the trigger. It comes standard with 3 metres of metal-shielded cable.



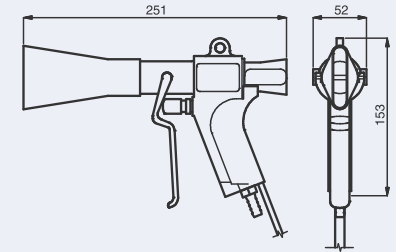
**Cobra**

The Cobra ionising air gun is excellently suited for heavy-duty industrial applications. It has a lightweight durable gun body made of high-impact resistant plastic. The airflow is controlled by the trigger. The air flow is amplified by a minimum factor of 6 : 1 by drawing in ambient air through the rear. The emitter pin integrated aerodynamically in the gun body is cleaned during use. The gun comes standard with 6 metres of cable. Two guns max. can be connected to a single power unit.

**ES - 2 J**



**Cobra**



## TECHNICAL SPECIFICATIONS

	ES-2J	Cobra
Working distance	300 mm max.	600 mm max.
Housing material	aluminium	impact resistant plastic
Emitter pin	special alloy	special alloy
Cable	metal shielded 3, 6 or 9 metres	PVC en PE, 6 or 12 metres
Weight	1 kg incl. 3 metres cable	0,6 kg incl. 6 metres cable
Ambient temperature	0 - 60°C	0 - 55°C
Use circumstances	industrial	industrial
Operating voltage	7 kV AC	5,1 kV AC
Noise level	78 dB using 2 bar at 0,6 m	95 dB using 2 bar at 0,6 m
Air consumption	275 l/min. using 2 bar	200 l/min. using 2 bar
Max. pressure	7 bar	7 bar
Airconnection	1/4" BSP with 8 mm hose connection	1/4" BSP, hose min. 9 mm inside diameter
Suitable power unit	A2A7S / MPM	A2A5G

# IONISING AIR GUN AND IONISING NOZZLE



Ionising air guns and nozzles neutralise static charges on several materials and clean the surface using ionised compressed air. Neutralising the static charges makes it easier to blow-clean the surface and prevents dust and dirt particles from being reattracted. The compressed air used for this purpose must be free from oil and water. The guns and nozzles are connected to a power unit which supplies the required high voltage.



**Top Gun III**

Simco-Ion's Top Gun III is developed for light industrial applications. A high ion production attend to an optimal neutralisation of static charges. High blow-off force and low air consumption provide high-efficiency cleaning. A filter at the exit of the gun ensures that the air is clean. The gun body is lightweight and durable. It features a light-touch trigger, making it comfortable even for extended use.

All functionality is built into the gun, including a flowcontrol valve, and a two-level LED which indicates if the gun is in "stand by" mode and if high voltage is currently active. Both the gun and cable are static dissipative.

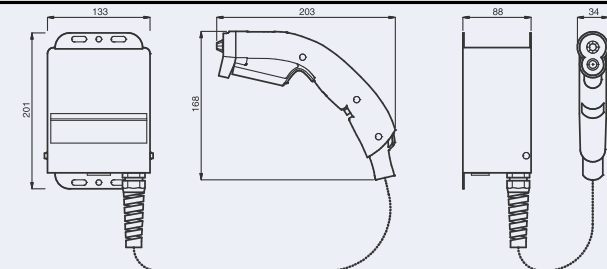
A hanger is provided for easy mounting. One gun can be connected to one power unit.



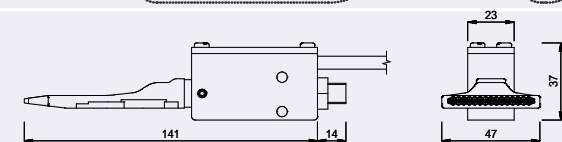
**Flat Nozzle**

The Flat ionising air nozzle is used to clean and neutralise electrostatically charged surfaces. The use of compressed air allows awkward places to be neutralised and cleaned as well. The Flat Nozzle is especially suitable for neutralising at the feeding and delivery sections of machines in the printing industry. The current of the Flat Nozzle is limited, so that an emitter pin is safe to touch.

**Top Gun III**



**Flat Nozzle**



## TECHNICAL SPECIFICATIONS

	Top Gun III	Flat Nozzle
Working distance	300 mm max.	50 - 300 mm
Housing material	impact resistant plastic	ABS and PVC
Emitter pin	special alloy	special alloy
Cable	static dissipative, 3 metre	PVC and PE, 3 metre
Weight	0,8 kg incl. 3 metres cable	0,23 kg incl. 3 m HV cable
Ambient temperature	0 - 40°C	0 - 55°C
Use circumstances	light industrial	industrial
Operating voltage	5 kV AC	7 kV AC
Noise level	76 dB using 2 bar at 0,6 m	60 dB using 1 bar at 1 m
Air consumption	68 l/min. using 2 bar	5 Nm <sup>3</sup> /h using 1 bar
Max. pressure	7 bar	6 bar
Airconnection	1/8" NPT female	1/8" BSP
Airfilter	0,01 micron	no
Suitable power unit	Top Gun III power unit	A2A7S / MPM

*Specifications Top Gun Sidekick on request.*



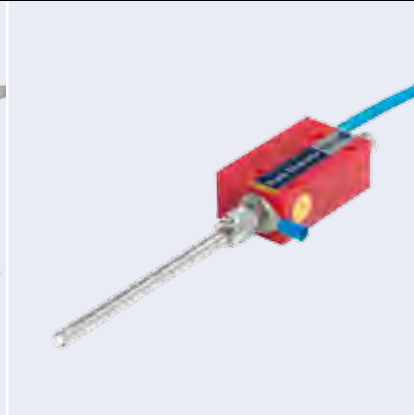
### Top Gun Sidekick

The Top Gun Sidekick offers hands-free operation. A foot pedal controls both ionisation and airflow. The Top Gun Sidekick includes a flexible mount feature with a bracket for flexible positioning.

# IONISING AIR NOZZLES



Ionising air nozzles produce a high-velocity ionised air flow which simultaneously cleans and neutralises static charges on parts and materials. The nozzles operate on compressed air and provides an ionised air source for being used in critical cleaning and/or static neutralising. Nozzles can be fitted and installed in many configurations to meet specific requirements. Simco-Ion power units supply the high voltage necessary for operation. If required, all nozzles can be fitted with a stop valve. Type HE can be fitted on a standard air header.



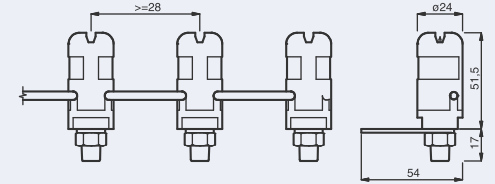
## HE

The high voltage at both emitter pins are current limited. Being installed outside the air flow, the emitter pins are hardly subject to fouling, if at all. The nozzle blow-off force is high at a relatively low air consumption.

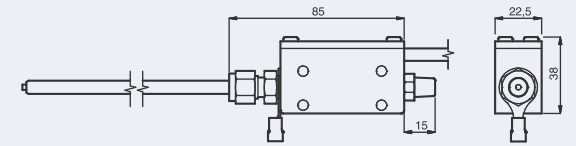
## BW

This nozzle has been designed especially for neutralising and cleaning (small) bottles on the inside, etc. Ionisation takes place at the end of the tube from which the air is blown. The emitter pin is non-shockless. The tubes are available in two diameters and in a required length.

HE



BW



## TECHNICAL SPECIFICATIONS

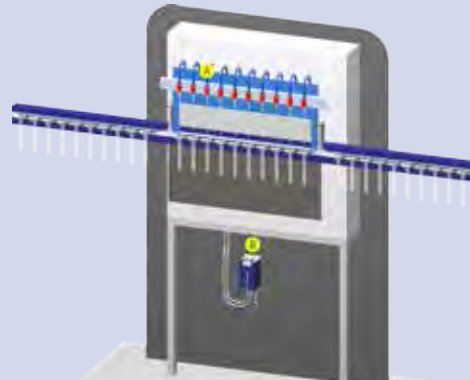
	HE	BW
Working distance	250 mm max.	150 mm max.
Housing material	plastic	plastic, stainless steel
Emitter pins	special alloy	special alloy
Cable	PVC and PE	PVC and PE
Weight	0,04 kg	0,06 kg
Ambient temperature	0 - 55°C	0 - 55°C
Use circumstances	industrial	industrial
Operating voltage	7 kV AC	3,3 kV AC
Noise level	66 dB using 1 bar (at 1 metre)	58 dB using 1 bar (at 1 metre)
Air consumption	3,5 Nm <sup>3</sup> /h using 1 bar	with 1/4" tube 4 Nm <sup>3</sup> /h using 1 bar with 3/8" tube 8,5 Nm <sup>3</sup> /h using 1 bar
Max. pressure	7 bar	6 bar
Airconnection	1/8" BSPT on nozzle (male) 3/8" BSP on header (female)	1/8" BSPT
Option	multiple nozzles on header	
Suitable power unit	A2A75 / MPM	A2A35 / MPM



Click system for easy assembly.

A Ionising air nozzles

B Power unit



# POWER UNITS

AC



Active ionisation equipment operates on high voltage. The power units transform the mains voltage to the high voltage required by the ioniser. There are different types of power units available. Power units are easily connected and operated and don't need any maintenance.

## Options

**B: Ion Balance control**

**H: High-voltage control**

Apart from the high-voltage indicator a switch contact is available on the I/O connector.

**M: Master Slave**

Two MPM units can be interconnected to produce bi-phase ionisation for high speed applications s.a. Conveyostat®.

**O: Overload detection**

A switch contact is available on the I/O connector.

**P: 24 V DC power output on I/O connector**

**R: Remote control**

The power unit can be remotely switched on or off by a remote contact.

**D: This power unit can be switched off at a preset drop in high-voltage output**



UL US  
E-173152



UL US  
E-173152

## Power Unit A2A7S

The standard model has a modern styling featuring easy-access control and connections. It is equipped with an on/off switch with an indicator lamp as well as a high-voltage indicator lamp. This lamp will extinguish if the system is malfunctioning. 4 ionisers can be connected as a maximum.

Variations of the Power Unit:

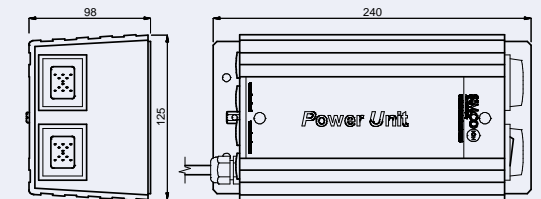
- **A 2 A 3 S** ; For ionising air nozzle type BW and BFW.
- **A 2 A 4 S** ; For anti-static bars operating on 4 kV.
- **A 2 A 5 G** ; For ionising air gun type Cobra.
- **A 2 A 5 S** ; For anti-static bar type MaxION.
- **A 2 A 7 S** ; For anti-static bars operating on 7 kV.

## MPM

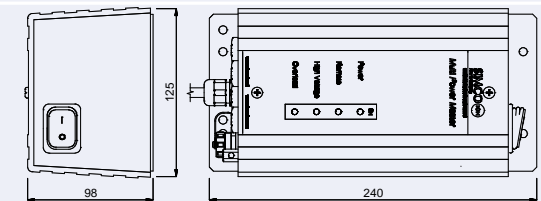
The MultiPowerMaster (MPM) is an addition to the range of high voltage powers units. It features electronically stabilised output voltage and a wide range of input voltages. Input voltages range from 100–240 V AC, 50–60 Hz. Output voltage is preset at the factory to 3.3 , 4.0 , 5.0, or 7 kV.

Green and red LED's are incorporated in the top face of the MPM. Optionally the MPM can be fitted with a I/O connector for interfacing with f.e. a PLC. Optional I/O signals are available for remote on/off, high voltage present and overload. The I/O connector also contains a 24 V power source for use with the Typhoon airpressure sensor.

A Unit



MPM



## TECHNICAL SPECIFICATIONS

	A Unit	MPM
Housing material	aluminum and steel, powdercoating	aluminum and steel, powdercoating
Weight	2,8 kg	3 kg
Connections	4	4
On/off switch	yes with light	yes without light
High voltage indication	neon lamp	LED
Cable	1,8 m	1,8 m
Ambient temperature	0 - 50°C	0 - 50°C
Use circumstances	industrial	industrial
Protection classification	IP-54	IP-54
U primary	115 V or 230 V *	100 V - 240 V
Frequency	50 or 60 Hz*	50 - 60 Hz
Power consumption	50 Watt	36 Watt
U secondary	3,3 - 7 kV AC *	3,3 - 7 kV AC *
I secondary	2,5 mA max.	3 mA max.
Options	HR, D	B,H,M,O,P and R
Approval	UL*	UL

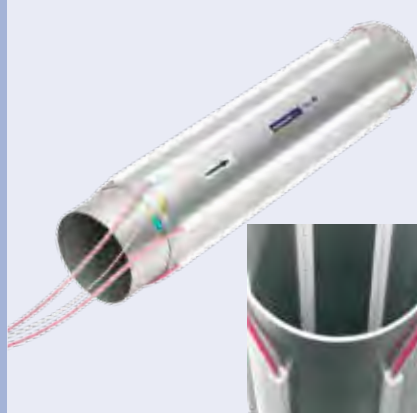
\*Contact Simco-Ion for other voltages, frequencies and approvals.

# INLINE IONISER

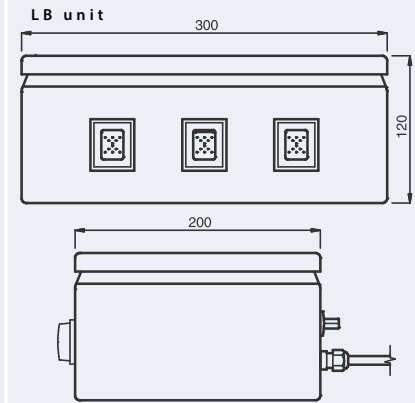
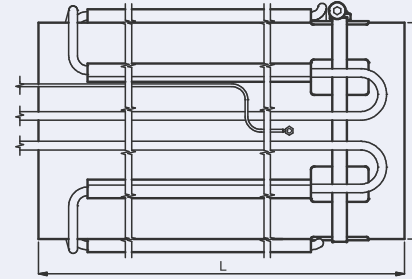
## CONVEYOSTAT®



The Conveyostat® has been designed to neutralise static charges on materials in pneumatic conveying systems. Inline ionisation eliminates clinging and clogging in tube systems due to static electricity. Production need no longer be interrupted to declog the system, which will save precious time. The location of the Conveyostat® is established in conjunction with the Simco-Ion consultant, based on the client's problems.



Conveyostat®



### Conveyostat®

The tube diameter is adjusted to the existing tube system. And so is the number of integrated anti-static bars, based on the diameter. Simco-Ion anti-static bars can also be integrated in a tube provided by the client. The anti-static bars are arranged in two series. They are connected to a two-phase power unit to ensure optimal ionisation at high velocities.

On request:

- Conveyostat® for outdoor applications
- Conveyostat® with flange connections
- Conveyostat® for use in hazardous areas
- Custom size pipe

### Power Unit LB2A4S

This power unit is equipped with two high-voltage transformers with 180° phase-shifted output voltages. As a result, the anti-static bars connected to the power unit produce positive and negative ions simultaneously. This ensures optimal neutralization of static charges even at very high velocities.

This power unit is fitted with two high-voltage indicators and an on/off switch with an indicator lamp.

### LB2A4D

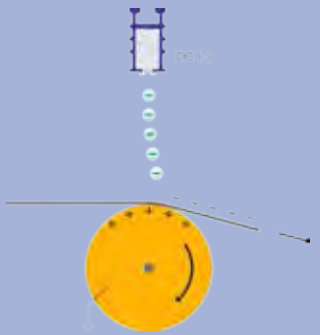
This power unit switches off at a preset drop in high-voltage output, for instance due to short-circuiting.

This unit is recommended to be used with outdoor Conveyostats.

### TECHNICAL SPECIFICATIONS

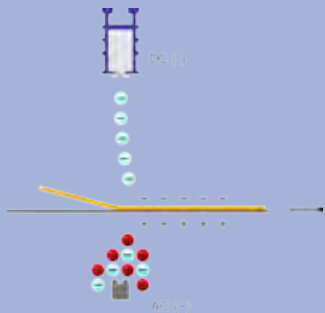
Conveyostat®	
Tubediameter	50 - 300 mm (D)*
Tube length	700 mm (L)*
Housing material	stainless steel
Cable	high voltage cable 2 x 3 m
Ambient temperature	0 - 50°C
Operating voltage	4 kV AC
Suitable power unit	LB2A4S
*Contact Simco-Ion for different sizes.	
LB	
Housing material	steel, powdercoating
Weight	6 kg
Connections	2 x 4
On/off switch with lamp	yes
High voltage indication	neon lamp
Cable	1,8 m
Ambient temperature	0 - 50°C
Use circumstances	industrial
U primary	115 V or 230 V *
Frequency	50 or 60 Hz*
Power consumption	100 Watt
U secondary	4 kV AC *
I secondary	2,5 mA max.
*Contact Simco-Ion for other voltages and frequencies.	





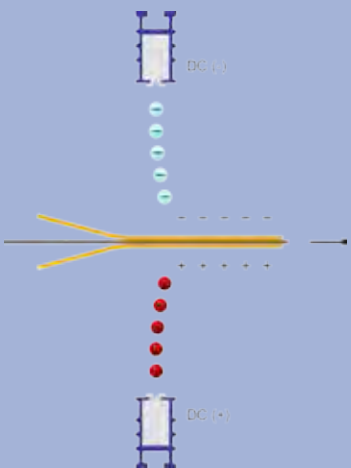
**Direct voltage opposite earth**

The charging electrode is located opposite an earthed plate or roller. Because of the electrostatic field the material web will temporarily adhere to the reference earth.



**Direct voltage opposite an anti-static bar ("virtual" earth)**

There are also conditions without reference earth. Ions of different polarity attract each other, this causes an isolator (e.g. film) to adhere temporarily to a material with a different polarity, in this case an isolator as well.



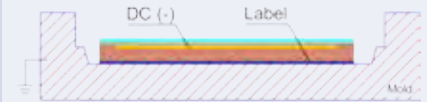
**Bipolar direct voltage**

This is the most effective method. The negative ions of the upper electrode attract the positive ions of the lower electrode, thus creating maximum adhesion between the top/bottom layer and the intermediate carrier.

**IML charging (patented)**

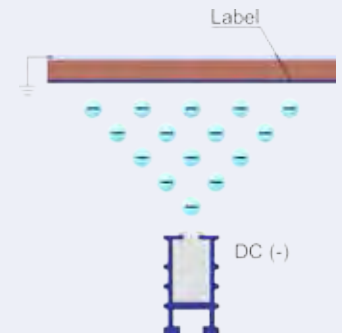
Static charges can be used to pin labels tight against the inner mould surface during injection moulding. Finished product quality is greatly improved by this method. The label will not slip or change position in the mould. Simcolon's patented IML charging method provides an easy way of constructing a charging electrode.

It uses an anti-static foam material that provides a full contact with the label and even distribution of the electrostatic charge.



**Simplified IML charging**

This simplified method of IML charging uses the anti-static foam material as a basis. Instead of applying the voltage directly to the foam electrode the label will be electrostatically charged against the foam electrode. In the next step the label can be transferred into the mould.



# HIGH VOLTAGE GENERATOR

DC



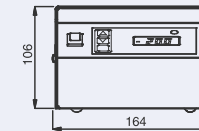
Simco-Ion Chargemaster systems are excellently suited for temporarily bonding materials; adhesion between the material surfaces is brought about by generating an electrostatic charge. As a result, production processes can often be simplified and accelerated. A system consists of a DC high-voltage generator and one or several charging electrodes. The generator generates the high voltage for the high voltage points in the electrodes. The high voltage points produce ions to charge the materials, which then adhere to each other or to other surfaces electrostatically. High-frequency switching technology is used in the generators. This technology ensures a consistent output at a preset value, until overloading. The generators are electronically current limited and protected from spark-over. Features of the modern design include the control panel, which has membrane switches can be rotated 180°.



## CM lite

A compact high voltage supply with an adjustable output voltage of 0 – 20 kV (with a maximum current of 0,7 mA) clearly shown on the digital display. State-of-the art electronics are employed with a remote control option. The power supply is available with a positive or negative output voltage. A warning lamp lights up if the system is overloaded or in the event of spark-over. An overload signal is available through a 25p Sub-D connector.

## CM lite



## TECHNICAL SPECIFICATIONS\*

CM lite	
Housing material	steel, powdercoating
Weight	5,2 kg
Connections	4
I/O	Sub-D 25 p
High voltage reading	LCD display
Cable	2,5 m with plug and Euro Connector IEC-320
Ambient temperature	0 - 40°C
Use circumstances	industrial
U primary	120 V or 230 V AC
Frequency	50 - 60 Hz
Power consumption	48 Watt
U secondary	0 - 20 kV DC
I secondary	0 - 0,7 mA
Polarity	pos. or neg.
Overload indication	yes
Standard	remote control*

\*Contact Simco-Ion for detailed specifications.





# HIGH VOLTAGE GENERATOR

DC

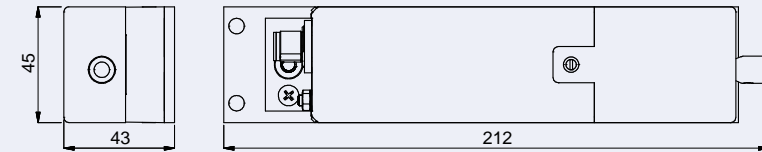


## Features:

- Supply voltage 24V DC
- Miniaturised Design
- Compact and robust, capable of withstanding G-forces
- No high voltage cable running through the cable channel
- HV OK signal
- Detachable high voltage distribution block
- LED's on both sides
- Microprocessor controlled.
- External Setpoint control
- Remote on/off signal
- IQ version available



CM Tiny



## ChargeMaster Tiny (CM Tiny)

The CM Tiny is the smallest industrial charging generator for static bonding applications. The unit has fully integrated high voltage parts and only needs a 24V DC supply. The housing is compact, robust and only weighs 500 grams which makes it perfect for small machines and applications with moving parts s.a. pick and place handling systems. It can easily withstand the high G-forces occurring during the process. Two LED's on the side give clear indications of the status of the charging generator;

- Green: Power is on
- Green flashing: Powers is on and HV output is inactive
- Red: Alarm, HV overload or HV Ok signal short circuit

The CM Tiny can be used directly from a machine interface capable of supplying a 4-20 mA signal for the setpoint and a 24V DC signal for remote on/off.

Manual operation can be implemented by an additional control circuit. The control circuit enables you to mount a potentiometer and LED by simply providing 2 holes in the front panel of your machine interface.

Connection blocks with one or four outputs are available.

For the use of the quick connect ports the charging electrode has to be equipped with a special connector.



## TECHNICAL SPECIFICATIONS\*

CM Tiny	
Supply voltage	21-27 V DC
Electricity consumption	Max. 0.7 A
Setpoint	4 - 20 mA, 220 Ω internal resistance
Connection	M12 connector, 5-pin
Output voltage	0 - 18 kV negative
Output current	Max. 0.4 mA
Operating environment	Industrial, internal use
Ambient temperature	0-55°C
Protection class	IP54
HV OK	Supply voltage -1 V (max. 50 mA)
Remote on/off	10 - 30 V
Dimensions (lxwxh)	200 x 45 x 36 mm
Weight	500 g (excluding high-voltage cables)
Housing material	ABS/aluminium/PVC
Vibration resistance	≤ 6 G, ≤ 7 m/s
Output connection	1 or 4 quick connect ports (Ø 6 mm)
Options	IQ version

# HIGH VOLTAGE GENERATOR

DC



The CM5 is a high voltage generator which incorporates all functions and features of previous version and more. A new patented feature "Advanced Current Control" is optionally available. Adjustable Output voltages of 0-30 or 0-60kV either positive or negative are capable of generating strong static charges, even at high velocities. CM5 high voltage generators are equipped with the following standard functionality:

- Voltage Control and Current Control
- Password protected menu, lockable keyboard
- 4 line LCD display with dual instructions (text + symbols)
- Analogue remote control functions and signals
- Quick set-up
- Advanced Current Control (patented)
- Advanced Output Control

**Optional functionality:**

- Serial bus interface (Profibus or CANopen)

**Optional protocols can be installed at the time of order or can be retrofitted.**



**ChargeMaster CM5**

CM5 is fully backwards compatible with ECM30/60 and ECM DI30/60. The unit is fully electronically controlled via a menu. The menu language is selectable to English, German, French and Italian.

For basic users a quick set-up menu is provided to set-up the generator to function as an ECM30/60.

The new standard function Current Control will enable you to set a constant current vs a constant voltage. This will provide a much more stable charging and will compensate contamination and emitter pin wear automatically.

Advanced Current Control is a revolutionary new feature. The generator keeps track of the supplied current to the electrode. It senses when there is no material to be charged and switches the current to a safe low level. This prevents spark-over and emitter pin wear. When material is reinserted the current will switch back to the high level current.

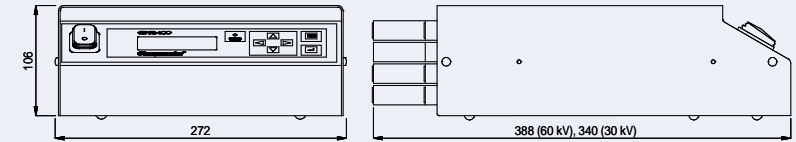
A serial bus interface can be fitted additionally to enable the generator to communicate through serial fieldbus interfaces s.a. Profibus or CANopen (Other serial protocol available on request).

Advanced Output Control is optionally available for specific applications.

This function provides output control that is proportional to an input signal.

F.e. the level of charging can be proportional to the speed of the machine.

CM5-30 / CM5-60



**TECHNICAL SPECIFICATIONS**

	CM5-30	CM5-60
Housing material	steel, powdercoating	steel, powdercoating
Weight	8,2 kg	8,2 kg
Connections	4	4
I/O	Sub-D 25 p	Sub-D 25 p
High voltage reading	LCD display	LCD display
Cable	2,5 m with plug and Euro Connector IEC-320	2,5 m with plug and Euro Connector IEC-320
Ambient temperature	0 - 55°C	0 - 55°C
Use circumstances	industrial	industrial
U primary	100 - 240 V AC	100 - 240 V AC
Frequency	50 - 60 Hz	50 - 60 Hz
Power consumption	240 Watt max.	240 Watt max.
U secondary	0 - 30 kV DC	0 - 60 kV DC
I secondary	0 - 5 mA	0 - 2,5 mA
Polarity	pos. or neg.	pos. or neg.
Limit indication	yes	yes
Standard	Voltage and Current Control Analogue remote control fuctions Lockable keyboard Advanced Current control Advanced Output control	Voltage and Current Control Analogue remote control fuctions Lockable keyboard Advanced Current Control Advanced Output Control
Options	Serial bus interface	Serial bus interface

# HIGH VOLTAGE GENERATOR



DC

## Features

- Supply voltage 24V DC
- Cycle OK signal (patented)
- Compact and robust, capable of withstanding G-forces
- No high voltage cable running through the cable channel
- Miniaturised Design
- Detachable high voltage distribution block
- LED's on both sides
- Microprocessor controlled
- External Setpoint control
- Remote on/off signal
- IQ version available

## The best part is; It will save you money!

Using the parameters generated by the CMME you can drastically reduce the charging time and thus the total cycle time of the injection moulding process.

- Speed up initial set up
- Speed up changeover
- Speed up cycle time
- Increase reliability

For more details read the product specification.



## ChargeMaster Micro Easy (CMME)

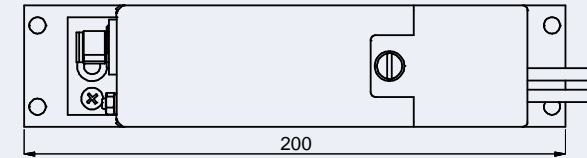
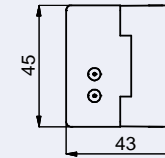
The CMME is a small profile footprint charging generator specially designed for IML applications. The unit has fully integrated high voltage parts and only needs a 24V DC supply. The housing is compact, robust and only weighs 340 grams which makes it perfect for end of arm mounting in IML pick and placehandling systems. It can easily withstand the high G-forces occurring during the IML process.

### The CMME has a unique (patented) cycle OK feature.

A signal will become active when the label(s) have accumulated enough electrostatic charge indicating that the charging is finished. This signal can be used by the machine interface to decide to stop charging. A second stage in the cycle OK signal will indicate that the charge on the mandrell has dropped below a safe level to start moving the mandrell out of the mould. This innovative feature completely eliminates the guess work and experimental setup for each individual IML application, and when changing product or label.

The CMME is equipped with an easily detachable high voltage distribution block. The high voltage distribution block is available with 1-8 connection cables.

CMME



## TECHNICAL SPECIFICATIONS

CMME	
Supply voltage	21-27 V DC
Electricity consumption	Max. 0.7 A
Setpoint	4 - 20 mA, 220 Ω internal resistance
Connection	M12 connector, 5-pin
Output voltage	0 - 18 kV negative
Output current	Max. 0.4 mA @ 50% duty cycle
Operating environment	Industrial, internal use
Ambient temperature	0-55°C
Protection class	IP54
Cycle ok	Supply voltage -1 V (max. 50 mA)
Remote on/off	10 - 30 V
Dimensions (lxwxh)	200 x 45 x 36 mm
Weight	340 g (excluding high-voltage cables)
Housing material	ABS
Vibration resistance	≤ 6 G, ≤ 7 m/s
Options	IQ version

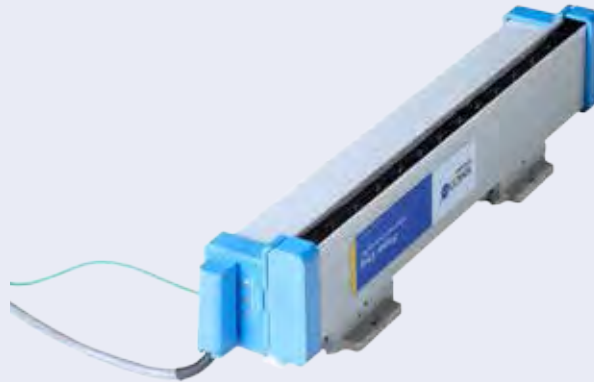
# CHARGING BARS

DC



## Features:

- Input voltage 24V DC
- Incorporated bar and HV power supply
- Long-life emitters
- Voltage or Current control operation
- Analogue interface
- Fully serviceable



## Pinner Easy

The innovative Pinner Easy integrated charging bar incorporates both a static charging bar and charging generator into one. This design eliminates the need for high voltage wiring and makes the bar perfect for applications such as catalog stacking, card insertion, roll-to-roll transfer, and bag making. Both the charging generator and bar assembly are fully serviceable and replaceable, while the pins ensure longevity and reduce maintenance.

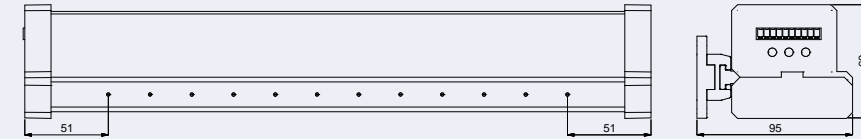
The Pinner Easy's emitters are current limited for increased safety while the high stability resistors provide excellent performance for a variety of applications. For installations where a PLC or machine control system is in place, the Pinner Easy is designed with a simplified connection for full integration into the existing system.

Available in lengths from 380 - 1525 mm. The negative polarity Pinner Easy ensures customized and powerful pinning performance.

## Universal mounting brackets



## Pinner Easy



## TECHNICAL SPECIFICATIONS

Pinner Easy	
Input Power	24 VDC, 2.5A max, supplied from the Control Module via 10-conductor cable
Working distance	25-100 mm typical
Effective Length	330 mm to 1475 mm
Overall Length	381 mm to 1525 mm
Output Voltage	0-30 kVDC
LED Indicators	POWER (green), lit HV on/blinking HV disabled; WARNING (yellow); FAULT (red)
Housing material	Glass filled polyester
Emitters	Tungsten, resistor coupled
Weight	5,4 kg/m of overall length
Ambient temperature	0-50°C
Mounting	Universal brackets

# CHARGING BARS/CHARGING ELECTRODES

DC



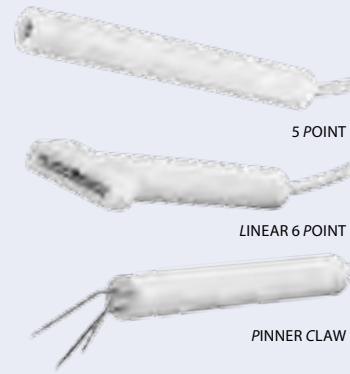
Simco-Ion offers a variety of charging bars and electrodes, depending on the specific applications and conditions. These bars are connected to a DC high-voltage generator. A strong, ion-saturated electrical field around the single polarity high voltage points forces the material to a reference earth. The material is charged by the ions. Being attracted by different polarities, the surfaces temporarily cling together. There are various methods of temporarily charging materials electrostatically, using a Simco-Ion Chargemaster system.



HDC and HDR

These rugged charging bars are used in a variety of industrial applications. The slot at the rear of the charging bar permits easy mounting. HDC charging bars are provided with a resistor to avoid failures in the machine control system in the event of accidental spark-over. The cable output may be straight or right-angled (90°).

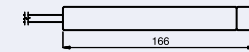
The HDR charging bar suits high-velocity applications. Each individual point being fitted with a resistor, so the chance of spark-over is strongly reduced.



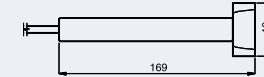
Pinner series

Simco-Ion offers various electrodes, including the 5 Point, Linear 6 Point and the Pinner Claw, specifically for spotcharging small surfaces. These electrodes are also ideal for edge charging in cast-film extrusion processes. The material applied permits high temperature use. The electrodes are resistor-protected to avoid spark-over. The points are replaceable.

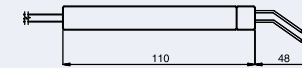
5 Point



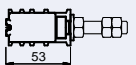
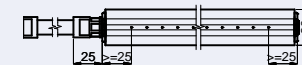
Linear 6 Point



Pinner Claw



HDC and HDR



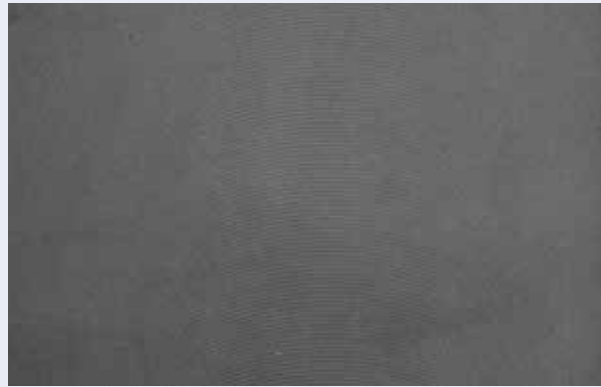
## TECHNICAL SPECIFICATIONS \*

	HDC	HDR	5 Point	Linear 6 Point	Pinner Claw
Working distance	20 mm using <30 kV 75 mm using 30-60 kV	20 mm using <30 kV 75 mm using 30-60 kV	min. 12,5 mm	min. 12,5 mm	min. 12,5 mm
Housing material	PVC	PVC	PTFE	PTFE	PTFE
Ionisation points	special alloy	special alloy	special alloy	special alloy	special alloy
Cable	high voltage cable with PA protective sleeve	high voltage cable with PA protective sleeve	high voltage cable	high voltage cable	high voltage cable
Weight	1 kg/m	1,6 kg/m	0,3 kg	0,3 kg	0,3 kg
Ambient temperature	0 - 55°C	0 - 55°C	150°C	150°C	150°C
Use circumstances	industrial	industrial	industrial	industrial	industrial
Operating voltage	0 - 60 kV DC	0 - 60 kV DC	0 - 30 kV DC	0 - 30 kV DC	0 - 30 kV DC
Option	right angle cable exit	right angle cable exit			
Suitable high voltage generator	CM5-30/60	CM5-30/60	CM lite, CM5-30	CM lite, CM5-30	CM lite, CM5-30

\*Verify with Simco-Ion the correct product choice suitable for your application.



Example core made with Easycore



## IML Easycore

Simco-Ion's patented IML charging technique is even more versatile with the IML Easycore 2 component resin for construction of IML cores.

Even very complex and small cores can be constructed with the 2 component resin.

The resin is specially developed by Simco-Ion to have the perfect electrical and mechanical properties for use as an IML core.

All mechanical operations s.a. drilling, grinding, milling etc are possible to make the core to the perfect shape and size.

The IML Easycore comes in duo-packs consisting of the resin and the correct amount of hardener. Package sizes of 250 and 500 g are available.

## TECHNICAL SPECIFICATIONS

IML Easycore		
Pot life 150g	20 - 40 minutes	
Gel time 150g mass @ 25°C	40 - 80 minutes	
	Minimum cure	Full cure
Cure schedule	24 hours @ 20°C	1 week @ 20°C
Cure schedule	2 hours @ 60°C	4 hours @ 60°C
Cure schedule	1 hour @ 80°C	2 hours @ 80°C
Flame retardant	Yes	
Shore A hardness	78	
Electric strength	16 kV/mm	

# CHARGING ELECTRODES



## DC

### Features:

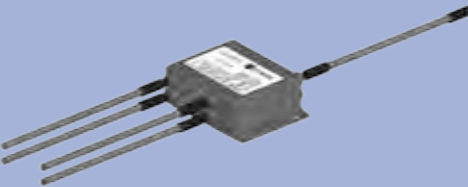
- IML Spider block with 8 positions
- Each output limited with a resistor
- Quick connect cables and electrodes
- Daisy chain possible
- Electrodes custom sizes
- Unlimited combinations with all IML generators

Also available as Junction Block without resistors.

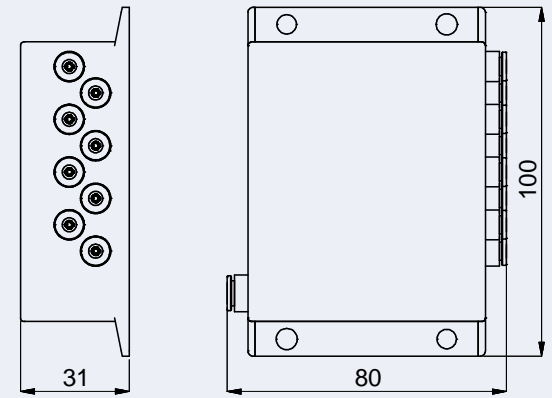
### IML Spider



### Junction Block



IML Spider



### IML Spider

The IML Spider is a versatile electrode for direct charging for IML applications. It consists of an IML Spider block with built-in resistors to prevent accidental sparking. The IML Spider Block has 8 output ports, with resistors per port, for connection of up to 8 flexible charging electrodes. An additional output port is provided for daisy chaining complementary IML Spider Blocks. All connection ports are equipped with quick connect plugs.

Electrodes are available in lengths of 300 and 500 mm and a special 500 mm long one that can be tailored during installation by use of a special tool.

Interconnection cables are available in lengths of 0,5 , 1 , 2 and 3 metres.

Connection cable for use with the CM lite type generator are standard 2 , 5 and 10 metres long.

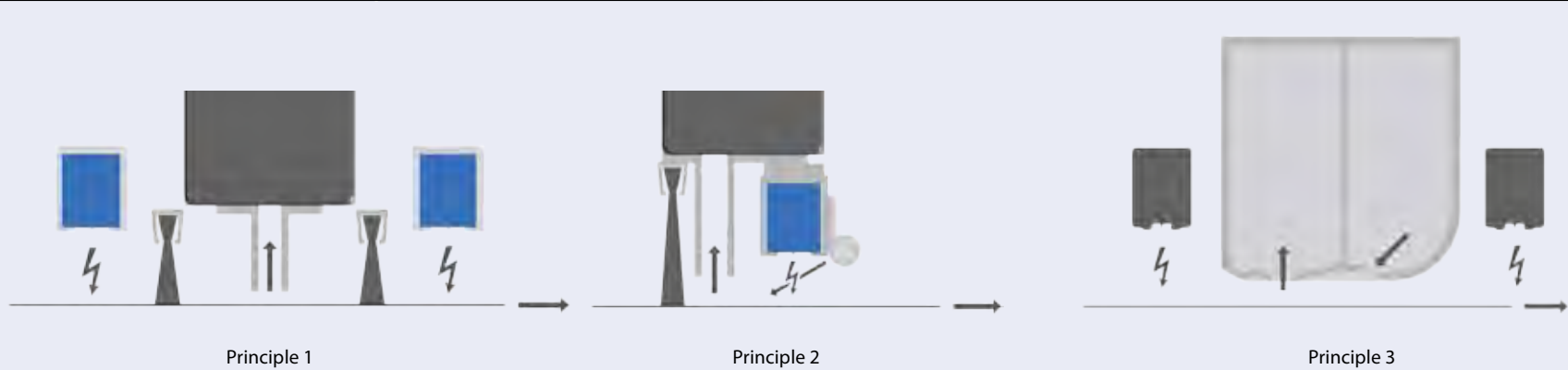
The IML Spider can be used for IML applications in conjunction with IML generators with a maximum output of 18 kV.

Special connection heads for the CM Micro Easy make it possible to use the IML Spider with the CM Micro Easy or use the CM Micro Easy directly as an IML Spider with maximum 4 Spider Electrodes.

### TECHNICAL SPECIFICATIONS

IML Spider	
Operating Voltage	Max. 18 kV DC
Current Output	IML Spider (Head) max. 0,7 mA (@duty cycle 20%, cycle 5 s)
Operating environment	Industrial, internal use
Temperature	0-55°C
Relative humidity	Max. 90% non-condensing
Sealing	IP-54
Resistor per output	Yes
Dimensions (lxwxh)	99,3 x 67,5 x 31 mm
Vibration resistance	≤ 6 G, ≤ 7 m/s
Input/daisy chain connectors	2 x Ø 6 mm
Output connectors	8 x Ø 4 mm

Static electricity is generated when paper and plastic webs, or sheets, are being processed. Dust particles adhere electrostatically to the surface. Quality deteriorates due to this type of contamination, particularly when the products have to be printed. Clean/ON web cleaning systems have been designed to neutralise static charges and, at the same time, to remove particles, even at higher velocities! Each Clean/ON system is designed to meet specific production requirements. A variety of vacuum hood configurations and dustcollectors are available to ensure maximum cleaning and static neutralisation for each application. For all web widths there are vacuum hoods for non-contact cleaning or contact (brush) cleaning.



Vacuum hood configurations are adapted to their individual need.

Three basis principles are used:

- 1) High vacuum /low volume full contact cleaning
- 2) Medium vacuum/medium volume contact cleaning with air assist
- 3) High vacuum/high volume non contact cleaning with balanced air assist

A vacuum hood is constructed with a special shaped suction slot. Prior to the suction slot the substrate will be neutralised by an anti-static bar. This removes the adhesion force caused by the static electricity and creates an ideal basis for the cleaning. Contact systems use a soft brush to loosen particles from the substrate prior to cleaning. Contact cleaning with air assist and non contact cleaning systems use an air nozzle to blow against the movement of the substrate to force particles into the suction slot. Non contact cleaners use a closed-loop blower system for the vacuum and blowing air. The web is guided through the double sided cleaning heads that provide excellent web guidance.

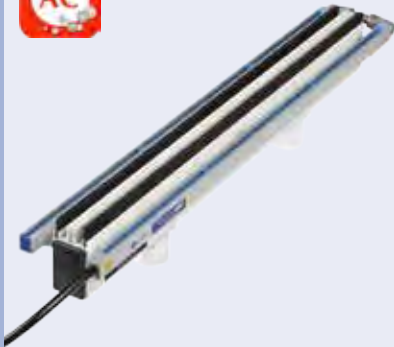
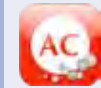
Dustcollectors are available for each specific system ensuring maximum cleaning efficiency. All dustcollectors are equipped with durable three phase 400V motors. Please contact Simco-Ion or a Simco-Ion representative for a detailed advice tailored to your specific situation.

Clean/ON cleaning systems are very versatile and can be used for many applications and processes:

Application	Process
Paper web	Screenprinting
Plastic web	Flexoprinting
CD / DVD	Painting
Tubes	Laminating
Plastic sheets	Coating
Glass	Slitting
Textile	Packaging
Wood	Vacuum forming



The DD Clean/ON has been designed to neutralise and clean paper or film webs before printing. This system prevents the accumulation of paper dust on the printing plate and deterioration of the print quality. Contamination being considerably reduced, the effective life of the printing plate will be much higher, resulting in higher productivity and improved print quality.



Clean/ON DD

The Clean/ON DD is fitted with two MEB anti-static bars to neutralise static electricity before and after cleaning. Two brushes are fitted between the bars to brush the dust particles from the surface to be cleaned. The loose dust particles can then easily be evacuated by the suction slot fitted between the two brushes (principle 1). The Clean/ON DD is available in lengths from 60 to 1800 mm. A power unit integrated in the dustcollector supplies the required high voltage.



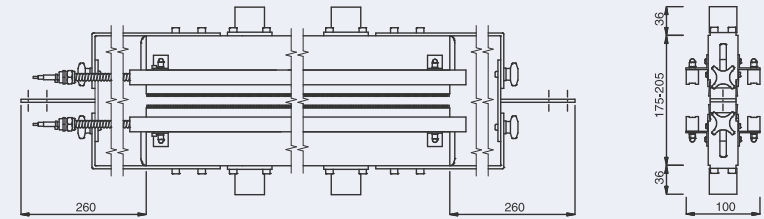
Clean/ON VAC

An industrial dustcollector equipped with a 3-phasemotor for dust evacuation. A hose for the web cleaning system is optional. The dustcollector has a large dust container to minimize emptying. The wheeled dustcollector can easily be moved.



\* CleanION VAC 13, RVS stainless steel

DD



### TECHNICAL SPECIFICATIONS

	Clean/ON DD	Clean/ON VAC 11/13*
Working distance	contact	
Working width	60 - 1800 mm	
Housing material	aluminum, painted	steel, powdercoating
Anti-static bar	MEB	
Cable	metal shielded	neoprene
Weight	depending on size	49 kg
Ambient temperature	0 - 55°C	0 - 55°C
Use circumstances	industrial	industrial
Noise level		70 dB(A) (at 1 metre)
Air capacity		140 m <sup>3</sup> /h (50 Hz) 170 m <sup>3</sup> /h (60 Hz)
U primary		400 V 50 Hz, 3 phase 400 V 60 Hz, 3 phase
Power consumption		1,3 kWatt (50 Hz) 1,5 kWatt (60 Hz)
Operating voltage	7 kV AC	
Brush	soft, non scratching animal hair	
Connection suctionhose	40 mm Ø	50 mm Ø
Capacity dustcontainer		37 liter
Option		disposable bag
Suitable power unit	integrated in the dustcollector	integrated

# WEBCLEANING

## CLEAN/ON SE



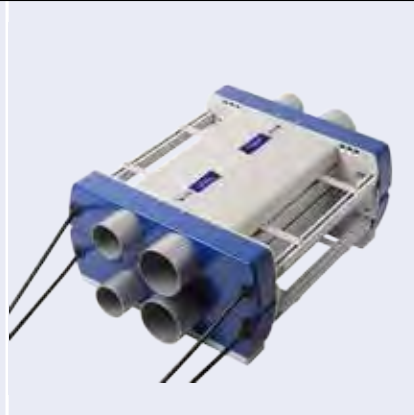
Clean/ON SE web cleaners are specifically designed for cleaning various web materials. The Clean/ON cleaning heads are available in two models. Clean/ON SE60 is compact and specially designed for web widths up to 1500 mm. Clean/ON SE80 is larger and constructed to span web widths up to 2500 mm.

### Features:

- Non contact cleaning
- Double sided cleaning
- Optimal cleaning efficiency due to simultaneous removal of static charges
- High efficient pre and after cleaning static neutralisation
- Easy installation
- Easy web threading
- Filter efficiency control indicator



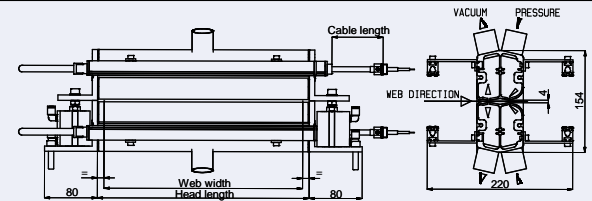
Clean/ON SE 60



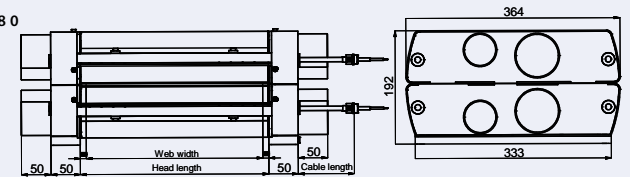
Clean/ON SE 80

The Clean/ON High vacuum/high volume non contact cleaning with balanced air assist assure efficient cleaning without contacting the web. A balanced air flow generated by blowing air in an angle against the web movement and a vacuum flow guide the web through the cleaning section without the risk of touching the web. Prior to the suction slot the substrate will be neutralised by an anti-static bar. This removes the adhesion force caused by the static electricity and creates an ideal basis for the cleaning. Clean/ON SE cleaning systems use an air nozzle to blow against the movement of the substrate to force particles into the suction slot. Clean/ON SE cleaners use a closed-loop blower system for the vacuum and blowing air. After the cleaning section, anti-static bars neutralise the web to prevent attraction of particles from the surrounding area. Cleaning is always double sided to guaranty an optimal result and preventing contaminants to travel from one side to the other side of the web. The Clean/ON SE vacuumhoods are constructed of heavy duty aluminium profiles that make the structure rigid and capable of covering widths of 2500 mm without additional support. The vacuum heads are automatically positioned to the exact distance to the web. For maintenance and web threading the top head can be lifted with a pneumatic cylinder.

Clean/ON SE 60



Clean/ON SE 80

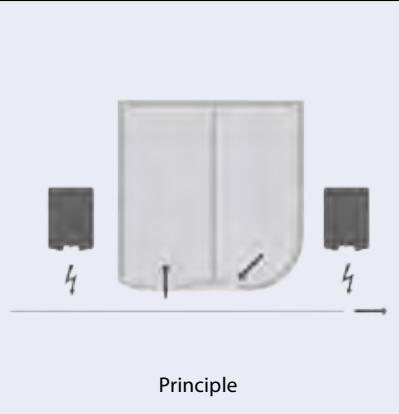


### TECHNICAL SPECIFICATIONS

	SE 60	SE 80
Working distance	2-4 mm	2-4 mm
Working width	200-1500 mm	1600-2500 mm
Housing material	Aluminium	Aluminium, painted steel
Weight	1 kg + 10 kg/m	10 kg + 16 kg/m
Anti-static bar	Max/ON	Max/ON
Cable	2 x 3 m shielded	4 x 3 m shielded
Ambient temperature	0 - 70 °C	0 - 70 °C
Use circumstances	industrial	industrial
Noise level	< 85 dB(A)	< 85 dB(A)
Power Unit	A2A55	2 x A2A55
Connection suction hose	32 and 40 mm	80 mm
Connection blowing hose	32 and 40 mm	60 mm
Pneumatic lift	30 mm	40 mm



Each Clean/ON webcleaning system is supplied with all components to enable a comfortable installation. The System consists of 2 Webcleaning heads that come as one unit with a dustcollector. Each unit has standard pneumatic lifting cylinders. A manual pneumatic switch is included. The web cleaner heads are equipped with four Max/ON anti-static bars with three meter shielded high voltage cable. Depending on the length of the vacuum head one or two High voltage power units type A2A55 are supplied. Upto 3 metres hose and connection pieces provide connection between the Cleaning heads and the dustcollector.



Principle



Dustcollector DC

System configuration

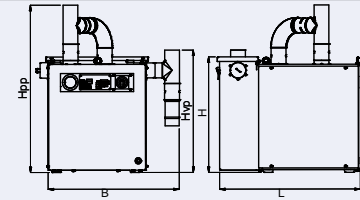
The Dustcollector is equipped with a 3 phase motor suitable for continuous use in an industrial environment. Dustcollectors vary in size depending on the web width. The air passes a fine filter before reaching the fan. The fan blows the air back to the web cleaner head. As an option, a micro filter can be installed between the fine filter and the fan to ensure that no particles larger than 0.3 µm are carried back to the web. The fine filter has textile filter bags inside a supporting cloth bag and filters the air down to 3 micron. An additional 0,3 micron disposable filter section is available as an option. The system has valves on the pressure and vacuum sides of the fan in order to allow adjustment of the ratio between the pressure air and the vacuum air for the best cleaning of all materials.

### System configuration

Cleaning Head	Size	Dustcollector	Hose				Starter	A2A55
			32 mm	40 mm	60 mm	80 mm		
SE60	200-300 mm	DC15	6 m				Direct	1
SE60	400-800 mm	DC22		12 m			Direct	1
SE60	900-1500 mm	DC30		24 m			Direct	1
SE80	1600-1900 mm	DC55			12 m	12 m	Star/Delta	2
SE80	2000-2500 mm	DC75			12 m	12 m	Star/Delta	2

### Dustcollector DC

	DC15	DC22	DC30	DC55	DC75
Hpp	906	922	1194	1312	1312
Hvp	663	922	961	1009	1009
H	626	884	961	957	957
B	530	530	730	730	730
L	762	832	1085	1085	1085



### TECHNICAL SPECIFICATIONS

Dustcollector DC	
Housing material	Painted steel
Weight	DC15 = 150 kg DC22 = 180 kg DC30 = 245 kg DC55 = 270 kg DC75 = 270 kg
Connections	2
On/off switch	Yes
Ambient temperature	0 - 40 °C
Use circumstances	Industrial
U primary	400 V
Frequency	50 Hz
Power consumption	DC 15 = 1,5 kW DC 22 = 2,2 kW DC 30 = 3,0 kW DC 55 = 5,5 kW DC 75 = 7,5 kW
Noise level	< 75 dB(A)
Filter	3 micron
Option filter	0,3 micron
Including	An associated power supply

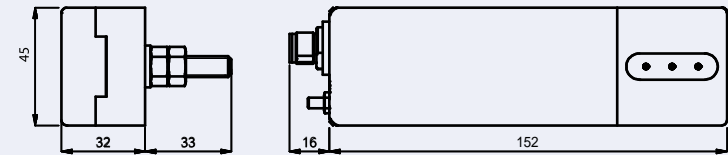


High voltage spark over can be used in a controlled way. A spark over from a special electrode to a ground reference can be detected and evaluated.

Perforations in plastic webs can be detected and counted.



Perfomaster



## Perfomaster

The Perfomaster provides the hardware and software to generate a controlled spark over, detect this and evaluate the spark over to produce a pulse signal. The pulse signal is available on the output connector and can be used for counting the detected spark-overs and thus perforations.

The miniaturised design of the Perfomaster contains the electrode as well as the high voltage source. It is powered by 24 V DC, so no high voltage cable is required. Electrodes are standard fitted with three special alloy emitter pins and are detachable for replacement or remote placement.

A status signal LED provides direct system information on the Perfomaster. A green LED signals operation OK. An intermittent red LED signals a perforation detected.

Supply voltage and output voltage setting to the Perfomaster can be provided in two ways:

- 1) directly from the machine f.e. PLC
- 2) with additional external control kit



## TECHNICAL SPECIFICATIONS

Perfomaster	
Housing material	ABS / PTFE
Cable	low voltage cable, standard M12 connector
Input power	24 V DC, <0,5 A
Emitter pins	special alloy
Max detection frequency	25 Hz
Signal	Multicolour LED: - Green, signal "operation OK" - Red, signal perforation detected
Signal output	Optocoupler
Control voltage	0-10 V DC or 0-24 V DC
Ambient temperature	0 - 55°C
Use circumstances	industrial
Protection classification	IP 54



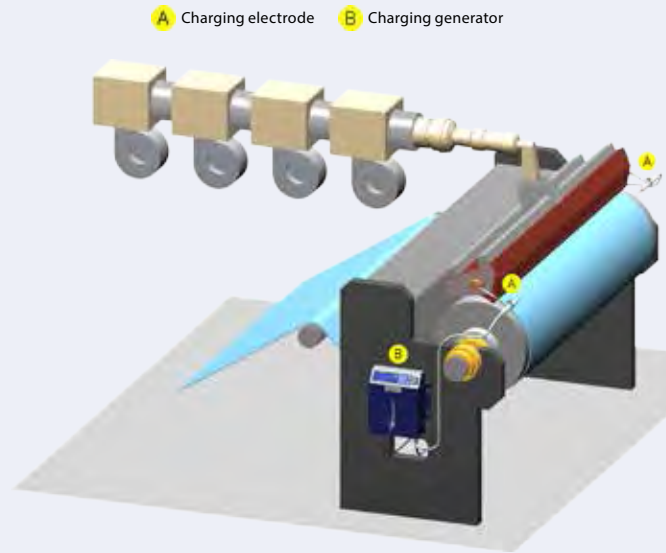
**A** Perfomaster; perforation detection and counting on a bagmaking machine

# APPLICATIONS

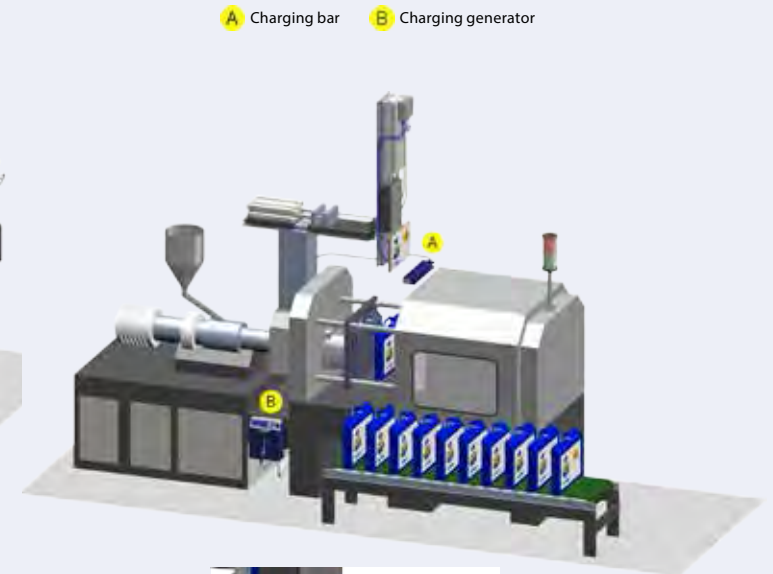
## PLASTIC INDUSTRY



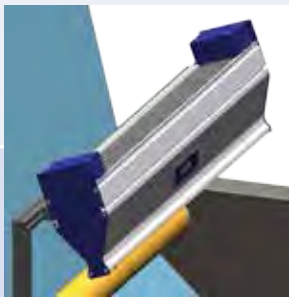
**A** Ionising air blower



**A** Charging electrode **B** Charging generator



**A** Charging bar **B** Charging generator



### STATIC ELIMINATION ON EXTRUSION LINES

An ionising blower installed above the film directs the ionisation at the film.

Static charges are eliminated during the rewinding process, preventing ambient contaminants from being reattracted to the film.

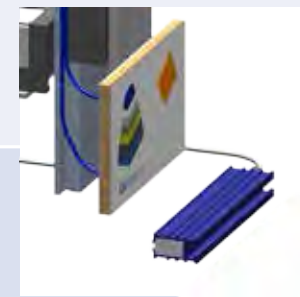
As a result, neutralised materials stay clean and dust free, dramatically reducing slowdowns and rejected rolls, and improving overall product quality. The elimination of the static charge also eliminates "operator shock" to your employees.



### ELECTROSTATIC EDGE PINNING ON CAST FILM LINE

A charging applicator at each edge of the film on the chill roll applies a static charge to the extruded film as it contacts the chill roll.

The static charge effectively prevents 'neck-in' of the film.



### IN MOLD LABELING (IML) ELECTROSTATIC

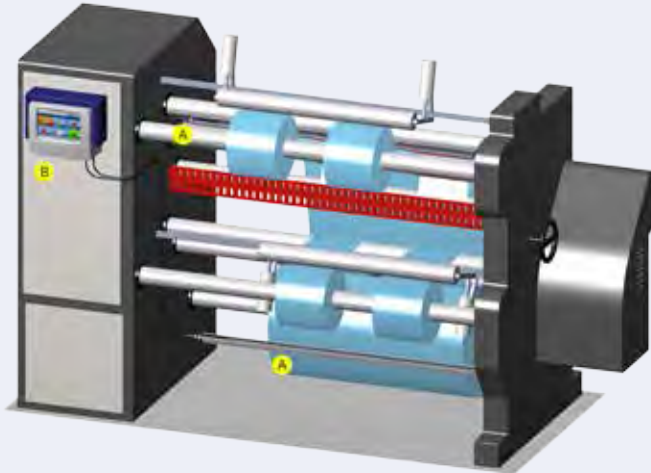
Static charges can be used to pin a decorative label tight against the inner mould surface during injection moulding without the use of vacuum. This procedure greatly improves finished product quality. Outside the mould a robot presents the label to a charging bar which applies an electrostatic charge to the label. The label is then placed into the mould cavity, where it sticks due to the electrostatic bond between the label and the metal mould wall. The label will not slip or change position in the mould.

# APPLICATIONS

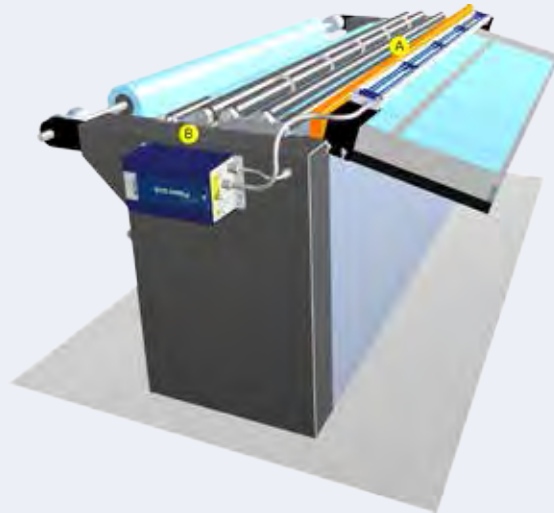


## PLASTIC INDUSTRY

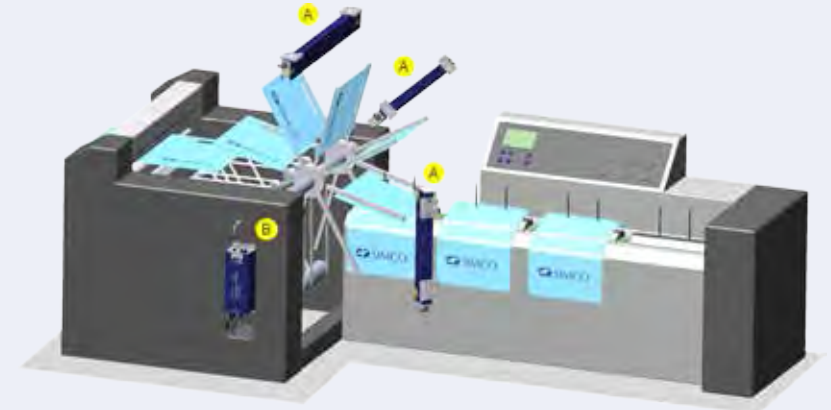
A Anti-static bars B Manager IQ Easy



A Anti-static bar B Power unit

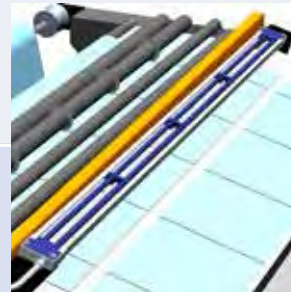


A Anti-static bars B Control module



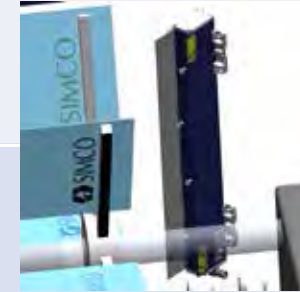
### SLITTING STATIC FREE

Anti static bars installed above and just after the slitting operation directs the ionisation at the film. Static charges are eliminated during the slitting process, preventing fragments from being reattracted to the film. As a result, neutralised materials stay clean and dust free, dramatically reducing slowdowns and rejected rolls, and improving overall product quality. Controlling the static charge will also eliminate "operator shocks" to your employees.



### STATIC FREE SHEETING

An anti static bar installed above and right after the sheeting operation directs the ionisation at the sheets. Static charges are eliminated during the sheeting process. As a result, neutralised sheets can be stacked correctly without jams.



### STATIC CONTROL ON A WICKETER

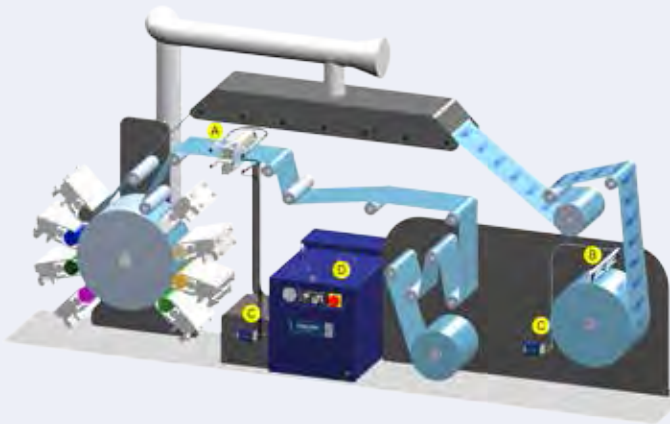
Static charges can make bags stack poorly, decreasing production yields and increasing rejects. Because of its extended range and high ionisation output, the anti-static bars can neutralise static from a long range, eliminating the static charges responsible for stacking problems on the wicketer.

# APPLICATIONS

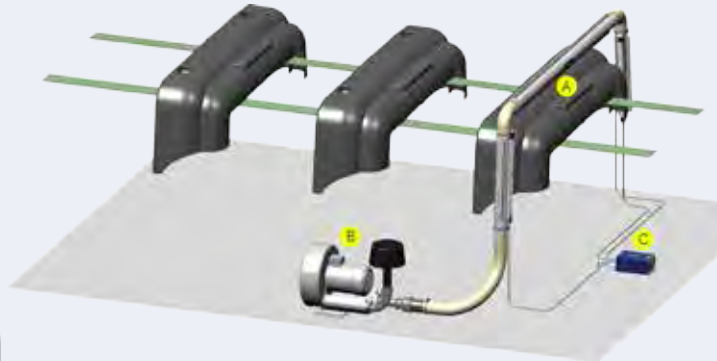
## PLASTIC INDUSTRY



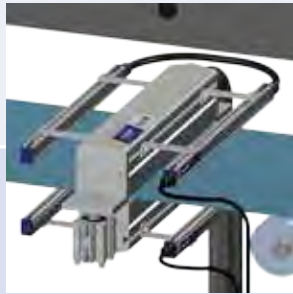
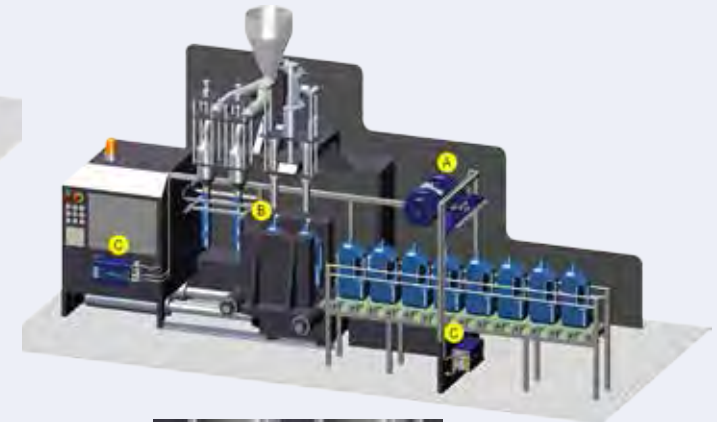
A Webcleaner B Anti-static bar C Power unit D Dustcollector



A Ionising airknife B Blower C Power unit



A Ionising air blower B Anti-static bar C Power unit



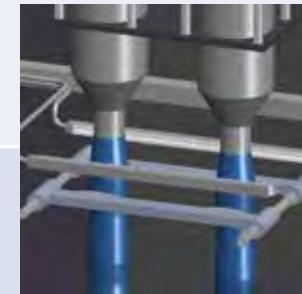
### CLEAN WEB SURFACES ON FLEXOPRINT MACHINES

Slitter dust and other environmental contaminants on the surface of the film material make it impossible to achieve production goals and difficult to maintain quality print standards. Webcleaning systems effectively remove slitter dust and other contaminants from the surface of films prior to printing.



### TYPHOON BLOWER DRIVEN AIRKNIFE

Static control airknife systems are custom designed to provide superior heavy-duty surface cleaning. They perform like compressed air knives, but use a blower instead of compressed air, reducing operating costs by 30% to 70%. Combined with anti static bars, blower driven airknives becomes a powerful tool for removing dust and dirt from flat or contoured surfaces like car bodies and bumpers prior to painting.



### BLOW MOLDING MACHINE

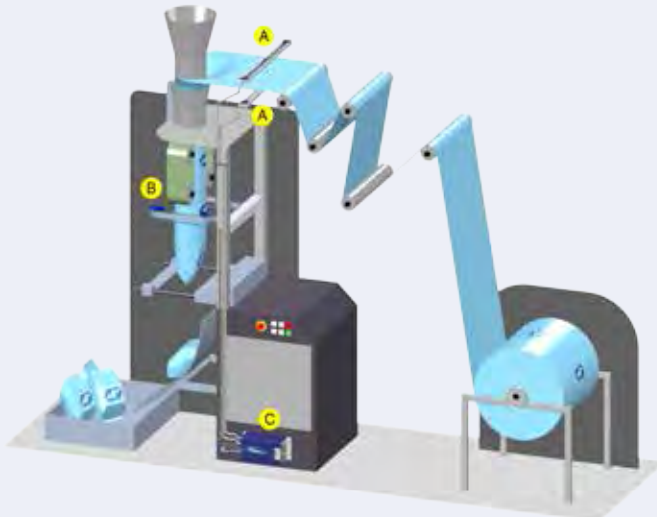
A thin gauge of molten plastic, called a parison, exits the die head of the extruder and drops vertically between the sides of the open mold. The parison has a high static charge and tends to bow and attract towards the grounded metal mold. This results in quality failures in the blown bottles. When using multiple die heads the parisons carry a static charge of the same polarity causing them to repel each other, which often results in rejected parts. Heat resistant anti static bars assure elimination of static charges and no production failures and machine stops caused by the negative effects of static electricity.

# APPLICATIONS

## PACKAGING INDUSTRY



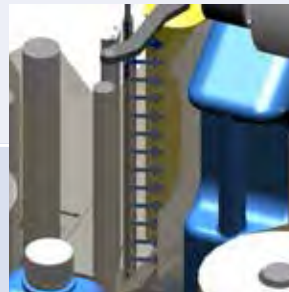
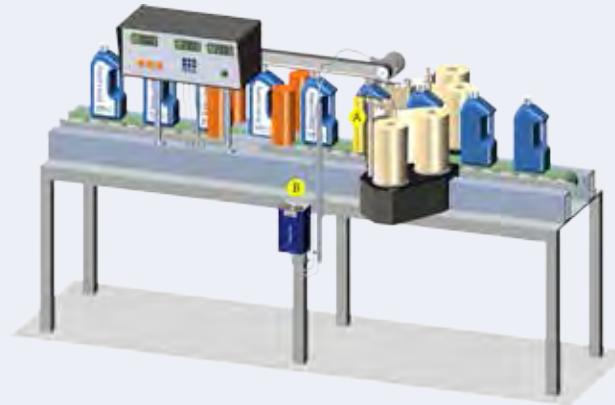
A Anti-static bars B Anti-static nozzles C Power unit



### VERTICAL FORM, FILL AND SEAL MACHINE

Vertical form, fill and seal operations often result in rejects of the finished package due to product fines attracting to the film in the seal area. Positioning an ionising air nozzle just below the fill tube will neutralise the static charges, resulting in a clean seal. To prevent the film from sticking to the shoulder/former, place an anti static bar over the flat film just prior to the forming operation to neutralise the static charge.

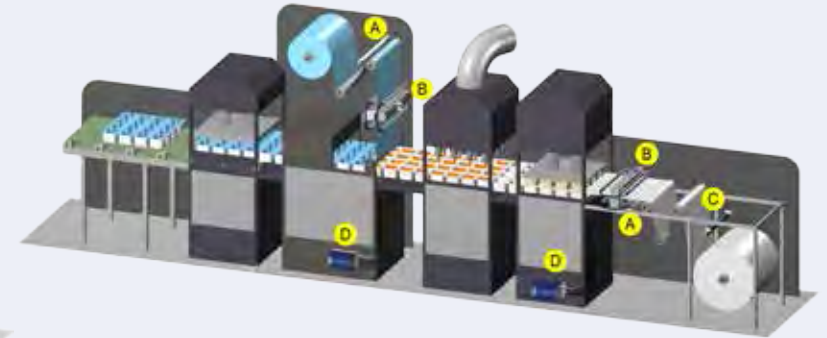
A Anti-static bar with airknife B Power supply



### LABELING MACHINE

Static electricity on labels may cause poor label feeding on high speed labeling machines. Static electricity on plastic bottles to be labeled will result in poor label placement and bad positioning. These problems will cause slower production speeds and higher rejection rates. Anti static bars positioned as shown above will eliminate the static charges and allow optimum process productivity.

A Anti-static bar B Webcleaner C Anti-static bar D Power unit



### THERMO- / VACUUM- FORM MACHINE

Unwinding a plastic web generates static electricity and gives electrical discharge shocks to operators. Static electricity will also attract ambient dust. The thermoform process also creates static and will cause further dust attraction and stacking problems. In line systems in particular suffer from the contamination on the film, particularly when the "cups" immediately after being vacuum formed are filled with a product; i.e. yogurt. To remove the contamination on the web just before vacuum forming, Simco-Ion recommends a webcleaner.



# APPLICATIONS

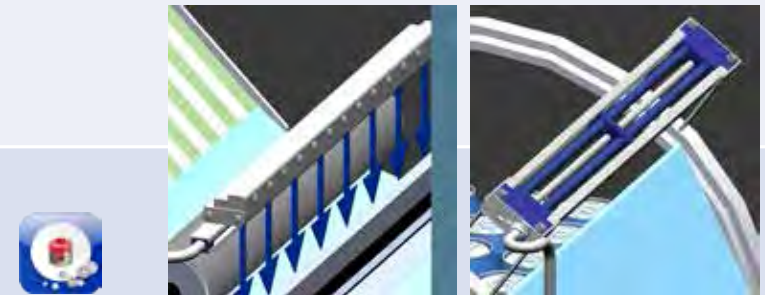
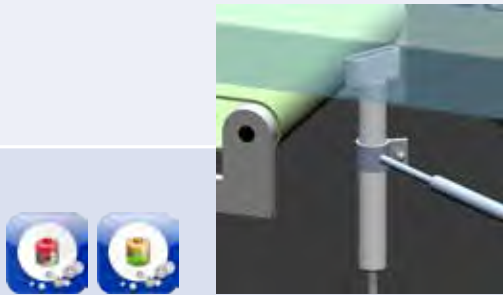
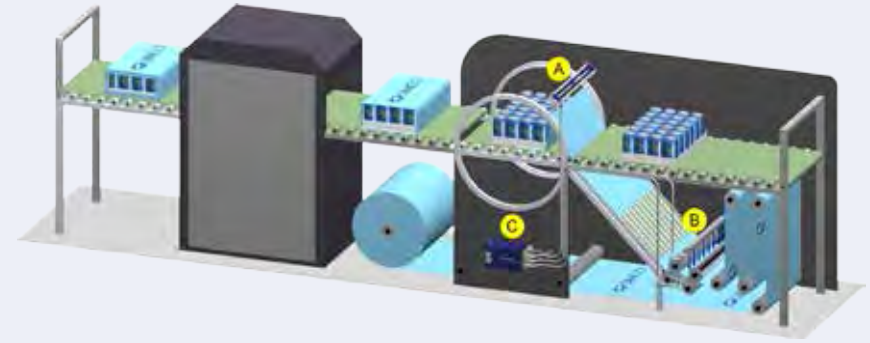
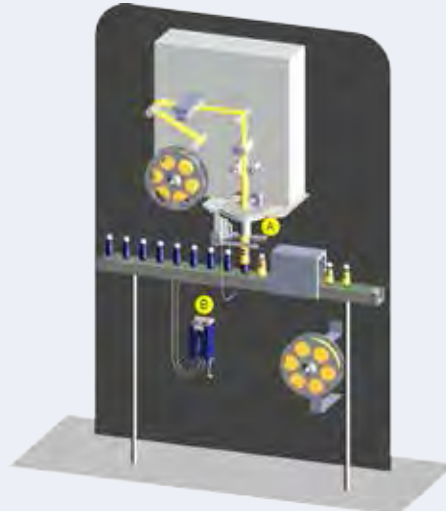
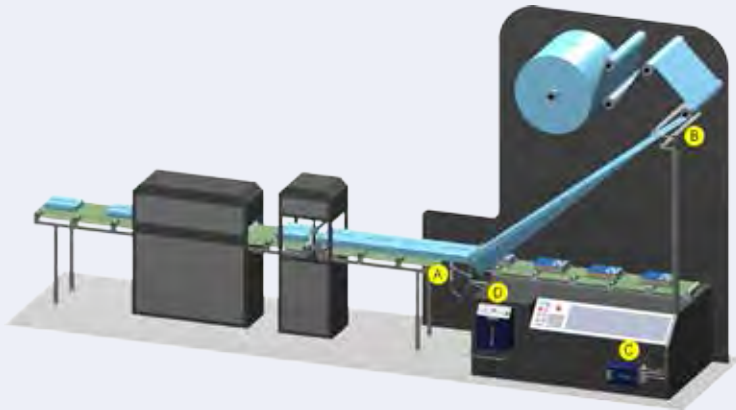
## PACKAGING INDUSTRY



A Charging electrode B Anti-static bars C Power unit D Charging generator

A Anti-static bar with airsupport B Power supply

A Anti-static bar B Anti-static bar with airknife C Power unit



### FLOW WRAP MACHINE

Packaging film is unwound and formed into a tubular configuration, as the product flows on a belt into the tube of film. The film is overlapped either on top or bottom side. The so-called overlap is required to fix the two ends of the film tight together. Heat welding or electrostatic charge is applied, to prevent the film from tearing in the shrink tunnel.

The electrostatic electrode uses less energy than the heat welding system. It also requires no maintenance and the final product is easier for the end-user to unwrap.

### SLEEVE MACHINE

Printed shrink sleeves for decorating plastic or glass bottles, offer an effective medium for advertising purposes and additional protection.

The flat film is unwound and runs through a bufferstack and is then pulled over a mandrel to form a tube. The sleeve is cut to size by knives in the cutting unit. The sleeve is then pushed down over the container and shrunk to fit the container contour in a heat tunnel. Static electricity may cause the film to stick to the mandrel or, once cut, the sleeve is not properly positioned on the container. Anti static bars placed at the indicated position assure a correct functioning of the machine.

### WRAP AROUND HEAT SHRINKING

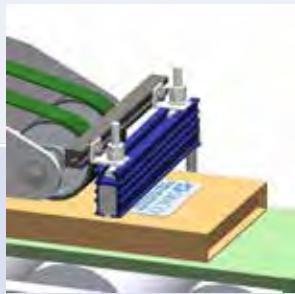
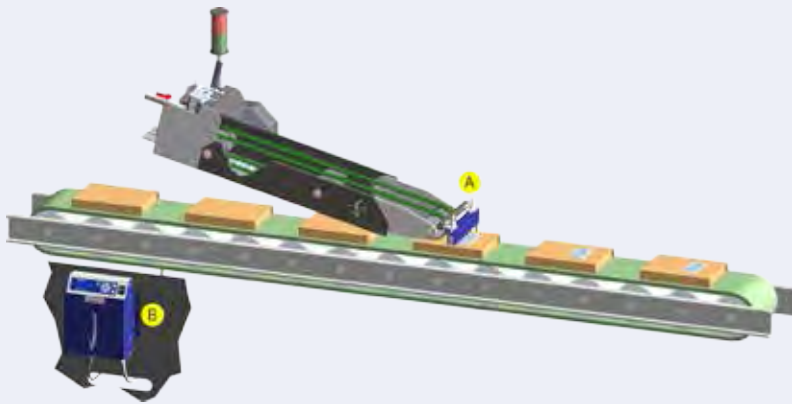
As packaging film is unwound, an electrostatic charge is generated on the surface of the film which causes the film to stick and wrap around rollers. An anti-static bar will neutralise the surface charge. Rubber draw-rollers create friction thus static causing the film to cling to the vacuum belt. A gentle stream of ionised air in the cutting section will neutralise static and prevent the film to stick. The wrapping bars follow over the product, towing the tail end of the film under the line and completely wrapping the product. The tail end clings to the film sheet and the product cannot be packed properly, causing costly machine stops. A long range anti-static bar placed over the wrapping bars will keep the tail end from sticking against the film.

# APPLICATIONS

## PRINTING INDUSTRY



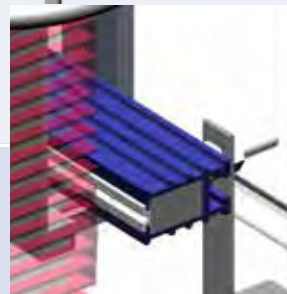
A Charging bar B Charging generator



### CARD INSERTION

On perfect bound lines, card inserts often overshoot the target area because of the line speed. Also, it may not exactly match the line speed hence the card may slide backwards which results in bad positioning on the package. Apply a static charge with the charging bar to the card as it hits the package to effectively hold the card in place.

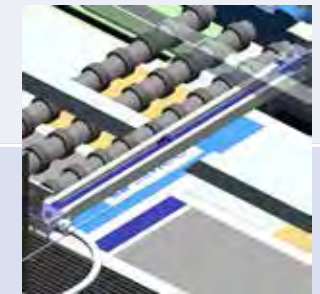
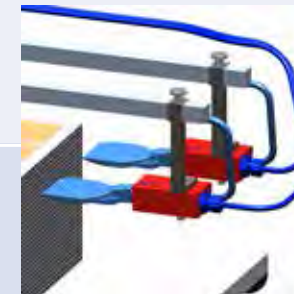
A Charging bars B Charging generator



### ELECTROSTATIC BLOCKING

Magazines, pamphlets or books, coming from upstream machinery are conveyed on an automatic line to the wrapping or palletizing machine. Before arriving there, they are fed into a book collation machine to be stacked. Once, the bundle leaves the turntable of the stacker the sudden speed of movement of the machine may cause the unstable packs to shift or fall over. Compensating stackers are equipped with electrostatic charging bars at the top and from both sides, using different opposite polarities, stabilising the bundle of magazine into "brick-like" stacks to secure further transport.

A Anti-static bars B Anti-static bar C Ionising nozzles D Power unit



### FOLDING MACHINE

At the in-feed an electrostatic charge is created that will cause the top sheets to stick together. This usually results in a paper jam and consequently a machine stop. Blowing with ionising air nozzles will flutter the top sheets separating them and neutralising the static charge so that they can be removed from the stack individually. Including a static neutralising bar, mounted just ahead of the paper stack, insures that the individual sheets move.

Friction generated by the folding operation creates an electrostatic charge again, which will cause registration problems at the folding-pocket resulting in incorrect folds.

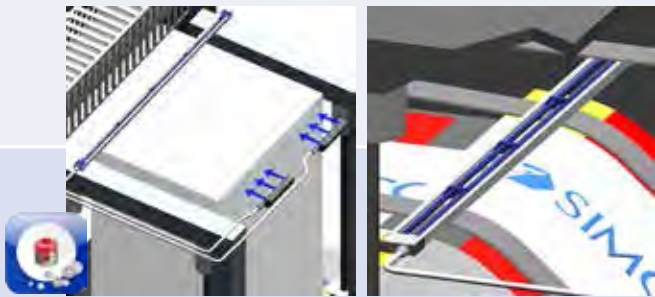
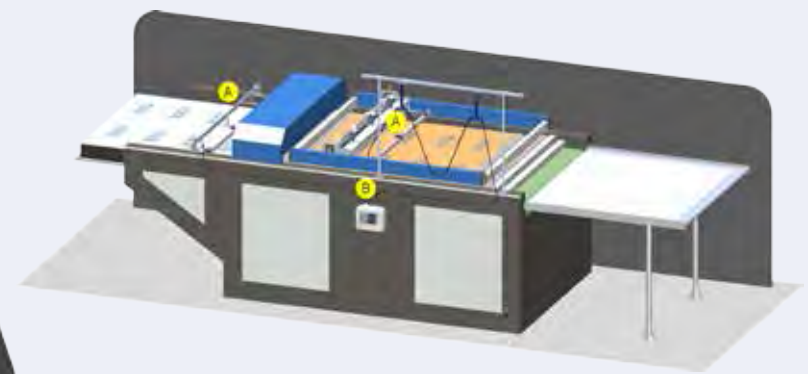
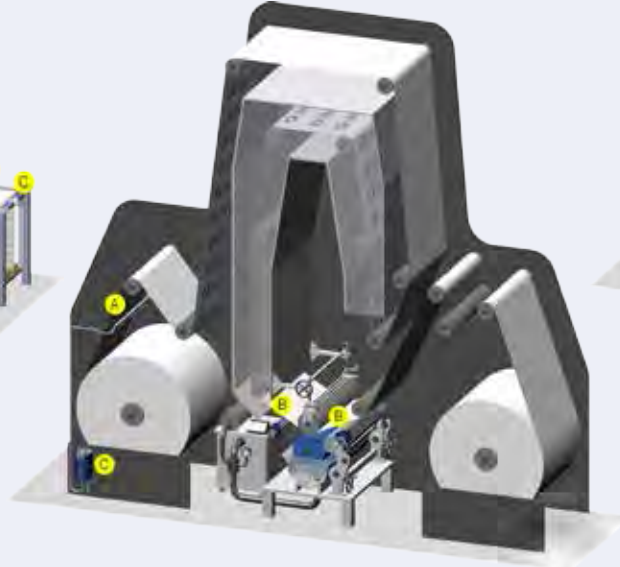
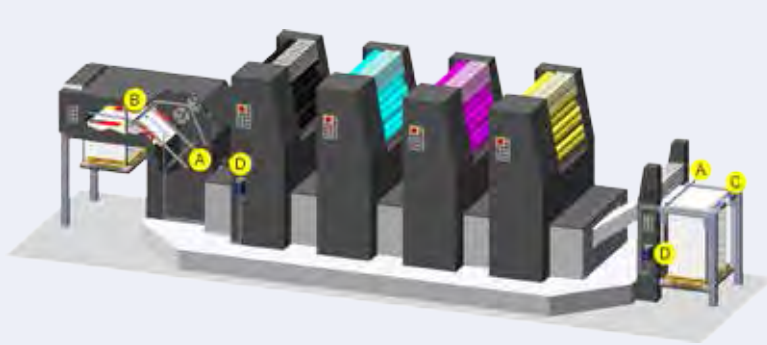
An anti-static bar will eliminate the static charge, and eliminate folding problems. At the delivery end an anti-static bar will ensure a neat stack.

# APPLICATIONS



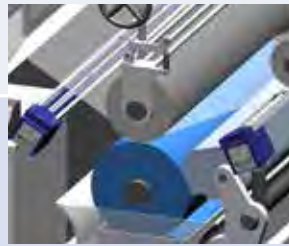
## PRINTING INDUSTRY

- A Anti-static bar
- B Anti-static bar
- C Anti-static bars with airknife
- D Power unit
- A Anti-static bar
- B ATEX approved anti-static bars
- C Power unit
- A Anti-static bars
- B 24 V Power supply



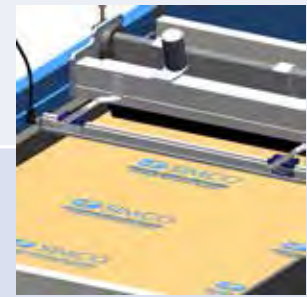
### OFFSET PRINTING

Static electricity may be the cause of malfunctioning of high speed printing presses. At the feeder sheets may stick together with mis-registration and machine stop as a result. Ionising air knives blowing in paper direction to separate the top sheet from the stack with ionised air. The top sheet is now fed into the machine and can be neutralised in open air when passing underneath the bar, mounted on top of the stack. Single or double side neutralisation at the delivery section will ensure a neat stack.



### ROTO GRAVURE

An electrostatic charge is created on the surface of the material as it travels through the machine with continued contact and separation events, complicated by the speed of the process. The surface charge can build to potentially hazardous levels at the print station where the use of solvent based inks creates a dangerous situation. A spark from an electrostatic discharge can ignite the solvent/oxygen mixture, causing a fire. The ATEX approved Anti-static bars neutralises these static charges before and after the print station allowing for static free, safe, printing. Simco-Ion also recommends static control equipment at the rewind station, to avoid electrical shocks to operators.



### SILKSCREEN PRINTING MACHINE

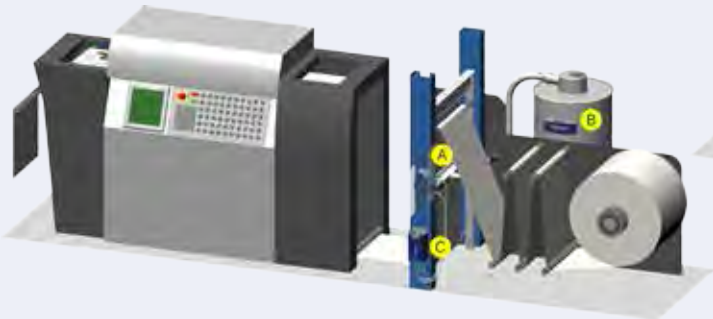
The sheet pile at the feeder section of the printing machine may have a static charge which causes the sheet (substrate) to stick to the pile and misfed into the machine. Once the squeegee has realized its printing stroke and the screen is lifted, the substrate may stick to the screen, causing smearing. The substrate may also stick electrostatically to the screen bed and cause misalignment. Misbehavior on its path through the dryer, and incorrect piling at the delivery, attraction of airborne contaminants are all problems which Simco-Ion products can resolve, preventing irritation and machine stops.

# APPLICATIONS



## PRINTING INDUSTRY

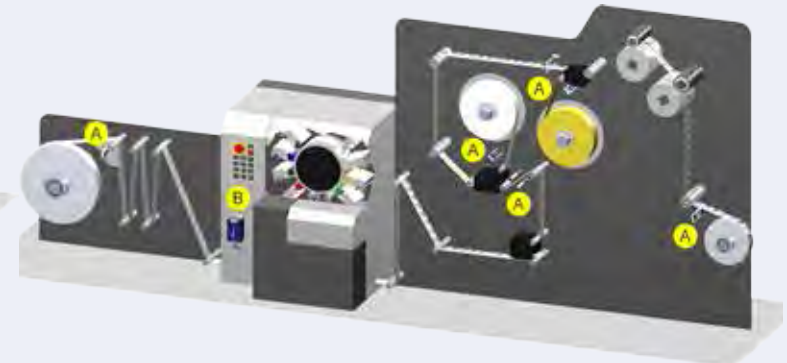
A Webcleaner B Dustcollector C Power unit



A Anti-static bar with airknife B Anti-static bar C Power unit

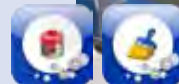


A Anti-static bars B Power unit



### DIGITAL PRINTERS

Digital Printing technology has progressed, Printing On Demand (POD) has become widely recognized and applied. Digital technology offers high flexibility to printers for personalised, security and financial documents. This requires substrates with a high degree of cleanliness. Simco-Ion designed a complete Plug and Run system for narrow web cleaning to be installed on the substrate web prior to entering the printing unit. Contamination is removed, print quality is improved whilst misprints are prevented. Service intervals are reduced due to the collection of paper dust.



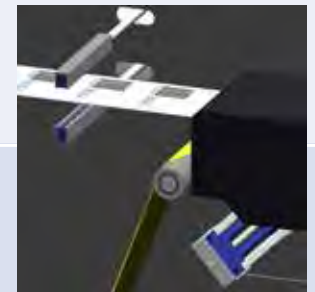
### TAMPON PRINTING MACHINE

There are two principal problems caused by electrostatic charges. The tampon, a silicon based product, touches the product to be printed. Due to the deformation of the tampon, a static charges is created and fine paint splashes may be found on the product or on the tampon. An anti-static bar neutralises the tampon on its way to and from the printing block and will resolve this problem. Contamination on the surface of the product, attracted by static, may be picked up by the tampon and remain stuck, resulting in misprints for all following products. An air supported anti-static bar cleans the product prior to printing, this will provide in better printing and less rejects.



### RFID TAGS

RFID tags contain an antennae to enable them to receive and respond to radio-frequency queries from an RFID transceiver. The microchip contained in an RFID tag can be damaged by static electricity. Static charges are commonly found in tag and label printing/production operations anywhere along the path from the feed-roll to the rewind. The charges are generated by the contact and separations of the web material from the unwind roll, and as the material travels over the various rollers and process stations as it runs through the press or converting equipment. Unfortunately the tiny circuits of the RFID tags may not be robust enough to withstand exposure to static charges.

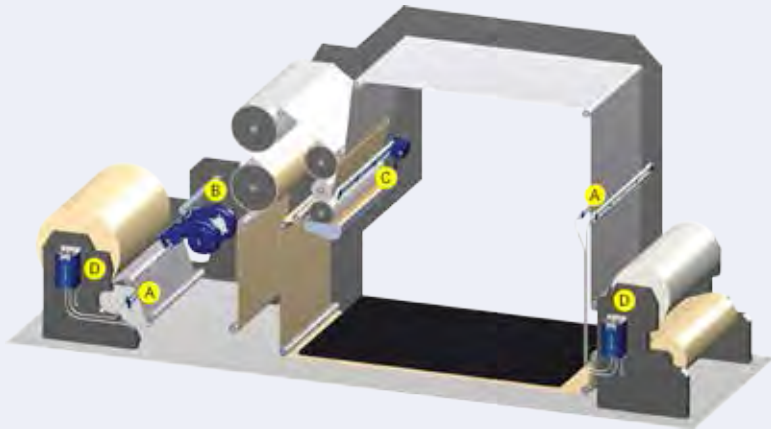


# APPLICATIONS

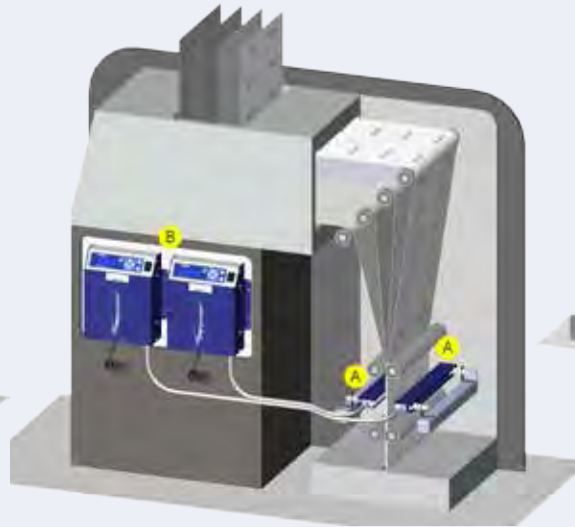


## PRINTING INDUSTRY

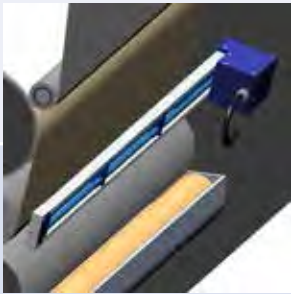
A Anti-static bars B Ionising air blower C ATEX approved anti-static bar D Power unit



A Charging bars B Charging generator

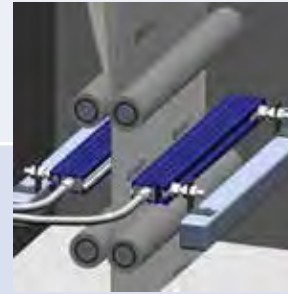


A Charging bars B Charging generator



### COATING / LAMINATING

Electrostatic surface charges are common in most coating and laminating operations where insulating (non-conductive) materials are processed at very high web speeds. The static charges cause a myriad of production problems ranging from: electrical shocks to operators, to the attraction of airborne contaminants on the surface of the material, to hazardous environments due to the presence of volatile solvents. The most dangerous situation arises when a spark from a static discharge occurs in the coating/laminating area, that is saturated with volatile vapors, and ignites a fire. ATEX approved static elimination equipment is required in these environments to neutralise static charges and thus prevent fires. Outside the hazardous area ionising bars and blowers can be used for unwind and rewind stations.



### RIBBON TACKING

Rotary printing machines running at high speed require high precision in registration, folding and cross cutting sections of the machine. Electrostatic charging bars with opposite polarity, placed on either side of the paper web, will prevent air from being trapped in the ribbon, thus improving the sheet registration. This registration control during cutting and folding will reduce dog-ears and ribbon weave for trouble free converting.



### CHILL TACK SYSTEM

The Chill Tack system is designed for Web Offset printing presses. A static charge produced by charging bars is applied to the web at the first point of contact to the chill roll. Electrostatic pinning results in more effective web cooling. It also reduces the air gap between web and chill roll, prevents slippage and eliminates condensation streaking. Preventing slippage also reduces tension upsets and improves registration throughout the press.

# APPLICATIONS

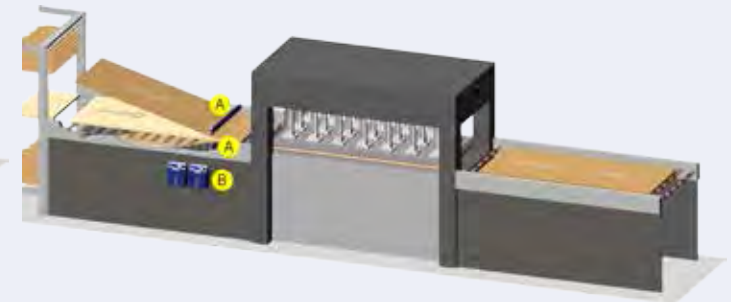
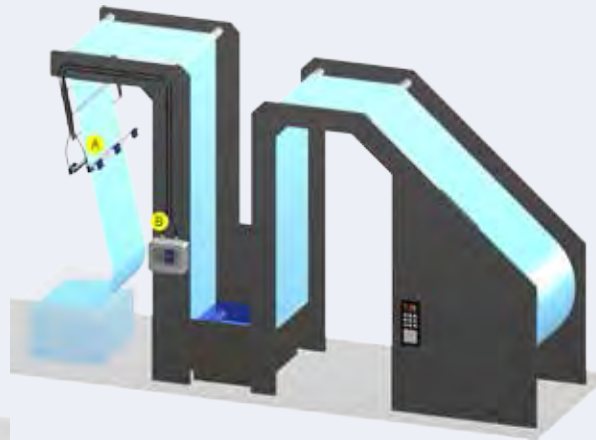
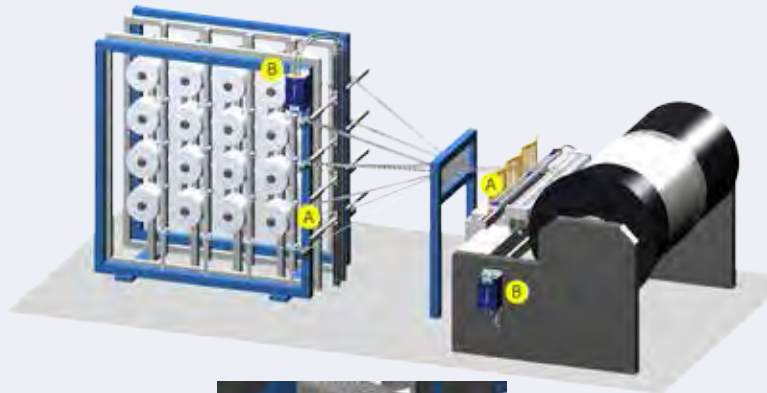
## TEXTILE AND WOOD INDUSTRY



A Anti-static bars B Power unit

A Anti-static bars B 24 V Power supply

A Charging bars B Charging generator



### CREELS

The single yarns of synthetic material unwound from the bobbins on the creel are heavily electrostatic charged due to friction in the ceramic eyelets. This will cause balloon formation (repel of yarns) between the creel and the warper. Simco-Ion advises to install anti-static bars underneath the yarns leaving the creel. Static electricity is recreated in the downline process caused by friction of the yarns in the combs causing fibre breaks and uneven (twisted) yarns on the warper. For obtaining a static free rewind, an antistatic bar is installed just before the warping.



### STENTERS

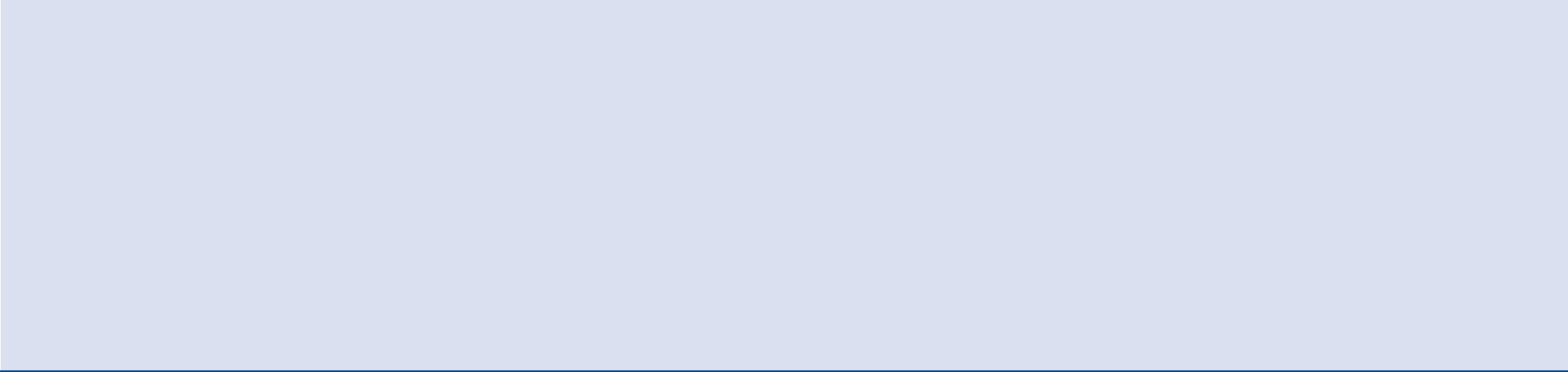
During the production, compacting and preparation of textile webs electrostatic charges are created. Static electricity causes the fabric to cling to machine frames causing machine slowdown. Shocks to operators may cause unpleasant reactions. On the finishing machine the swing arm is unable to properly position the fabric into final position due to attraction or repel between the textile surfaces. Anti-static bars prevent all static related problems and assures smooth running machines.



### CHIPWOOD PRESSES

In the chipwood industry decorated paper, impregnated with synthetic resin and hardener, is usually put on both sides of the chipwood panel. The sandwich is then transported into the press. During this process the problem occurs that the decoration paper slides due to the sudden movement, so that only a part of the chipwood remains covered. The panel becomes waste. Simco-Ion advises to use charging bars, to be installed above and below the chipboard just before the sandwich is moved into the press. Applying opposite polarity electrostatic charge to both sides of the panel will prevent the paper to move.





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#### WORLDWIDE SUPPORT

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