



Operating Manual

Model 935

Ionising Air Blower

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Introduction



The Model 935 Ionising Blower provides effective long range ionisation over a large area. Its versatility makes it suitable for a wide range of industrial applications.

The Model 935 comprises an ionisation head and an integrated fan system. A high volume flow of ionised air is generated by blowing air through the ionisation head at the mouth of the unit. Ionisation is provided by powerful 915 bars, generating an ionised field to a depth of up to 2000mm. The 935 unit is powered by the Model 904 and is available in both 110V and 240V versions.

There are many benefits to the Model 935, such as shockless operation due to a resistively coupled ionisation head. As the ionisation is provided by the 915 bars it allows for powerful ionisation and very fast decay times. As it has a high volume air flow it provides highly effective long range ionisation.

The 935 is flexible in a number of industries and also allows for simple installation and mounting to suit any application. As it is made to suit any application, the model has a variable fan speed and the air flow can be adjusted.

Due to the removable grill, it allows for easy access for maintenance of the ionisation head.

Meech blowers are powerful static eliminators which give many years of excellent service, provided that the following instructions are observed closely.

Unpacking and Inspection

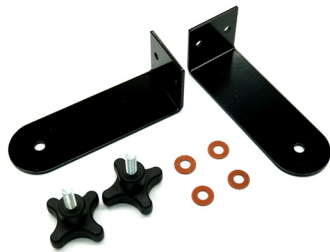
The Model 935 Blower was carefully packed at the factory. Nevertheless, we recommend careful examination of the carton and contents for any damage. If damage is evident, keep the packing material and immediately notify the carrier of a possible damage claim. Shipping claims must be made by the consignee to the delivering carrier.

Contents:

Standard



935 Blower



Mounting Kit



IEC cable

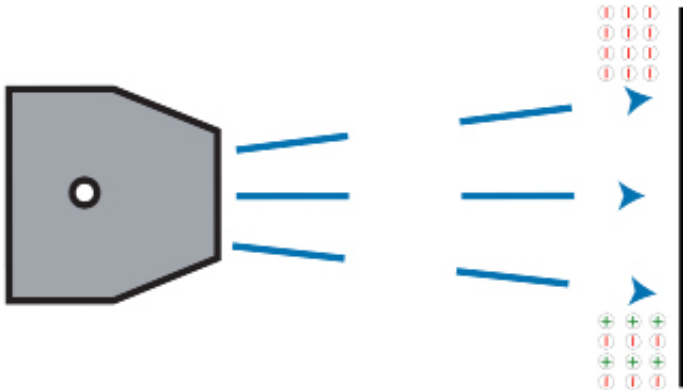
Operation

The typical Meech Blower installation consists of one or more blowers connected to a Meech Power Unit.

THIS APPLIANCE MUST BE GROUNDED/EARTHED THROUGH THE MAINS ELECTRICAL SUPPLY.

The Power Unit converts the primary electricity supply into a high voltage, low amperage output. This energy is transferred to the Meech Bars in the mouth of the blower by the HT cable.

The titanium pins of the bars emit the energy to form an ionised air corona. The fans inside the blower provide an air flow to transport the corona to the object to be neutralised. When a statically charged object passes through this corona, the free moving ions are attracted to the opposite charge on the object. In this way the static electricity is neutralised. Unused ions in the corona recombine or are discharged to earth.



Installation

The correct positioning of the blower is vital to the efficient operation. Please observe the following instructions.

Distance From Object

Although the blower has excellent long range neutralisation capabilities, the general rule is that it should be as close to the object as possible.

Good results can be achieved at distances up to 1500mm but as the distance from the object increases, the speed of the neutralisation will decrease.

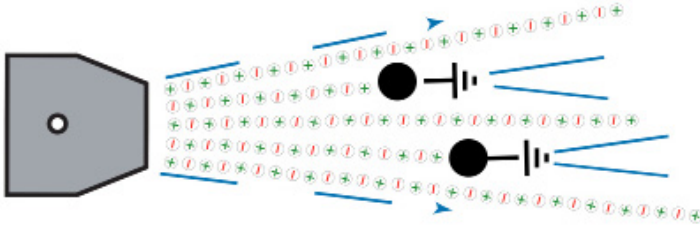
Decay Times

The table below shows the decay times of the charge between 5000V and 500V in relation to the distance from the 935.

Distance	Time
300mm	0.4s
900mm	3.8s
1500mm	8.0s

Intervening Objects

If the ionised air is blown through earthed objects (eg a machine frame or cross-rods), these will absorb some of the ionisation and so reduce the neutralisation power. Avoid this whenever possible.



CAUTION: It is recommended that the following procedure be observed for safe operation of the Model 935 Blower:

The supply voltage of the power supply must be interlocked with the ON/OFF control of the machine to which the equipment is fitted.

This will ensure that whilst the machine is switched off and thus operatives may gain access to the machine and our equipment, there will be no danger to operatives working in close proximity to our product.

It is assumed that normal safety barriers are in place on the machine to ensure that operatives are unable to access the machine and hence our equipment whilst the machine is switched ON.

Technical and Construction

Dimensions	184 x 172 mm
Maximum length	200-2400mm in 200mm steps
Operating range	200mm – 1500mm
Weight	5.4kg approx for 400mm blower with 3m cable (Standard)
Construction	Extruded anodised aluminium body with steel plate ends
Mounting	Steel fixing brackets supplied with each unit
Input Voltage	110V or 240V
Output Voltage	7kV
Electrical Connection	Bars - 900 connection (m4 heatshrink eyelet), Fans - IEC mains connector
Max ambient temperature	60°C
Pin energy	0.15 Millijoules
Cable	3 meters of HT cable as standard. Longer lengths available when ordering
Switch	On/off switch on backplate for fans
Emitters	Sharp titanium pins

Maintenance

The Static Eliminator bars in the mouth of the blower should be cleaned regularly to keep the emitter pins free from dust and other contaminants. A toothbrush is ideal for this.

Cleaning of the emitter pins of the ionisation bars

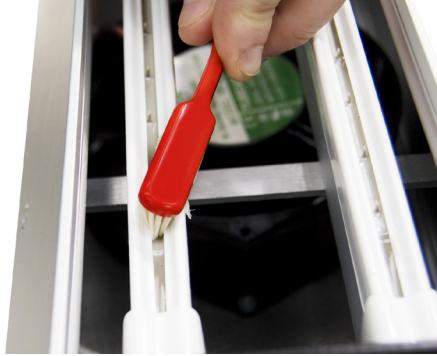
Ensure the blower is switched off and isolated from the mains electrical supply.



Remove the front black plastic grill by bending gently and pulling out.



Using a tooth brush (or a similar brush with non conductive bristles), brush the pins and upper surface of the two white ionising bars.



With a cloth clean the exterior and interior surfaces of the blower.



Replace the black plastic grill by the reverse procedure.



Fault Finding

Tests must be completed by a qualified electrical engineer.

If in doubt contact Meech head office or your local distributor.

CAUTION: Whilst no danger to personnel exists, it is essential than any high voltage ionising equipment, make no contact with water or water based fluids.

Should such an event occur, disconnect immediately and return equipment to the manufacturer for water damage assessment. High voltage electrical equipment should not make contact with water.

The Model 935 blower forms part of a system, comprising itself and a Model 903 or 904 power supply.

To verify where a fault may have occurred it is important to test each item of the system individually. Should more than one ionising appliance be connected to one power supply, these must be tested individually.

To check the Model 935 blower follow the procedure detailed below.

Switch off the electrical supply to the system.

Disconnect all ionising appliances from the power supply.



Follow the test procedure for the Model 903 / 904 power supply. This can be found in the relevant instruction manual.

12 Having checked the power supply reconnect the 935 blower.

Using a high voltage probe (RS 610 281) and meter (RS 610 590) measure the voltage on the pins of the ionising bars. The voltage should be approximately ~ 6.5 kV.

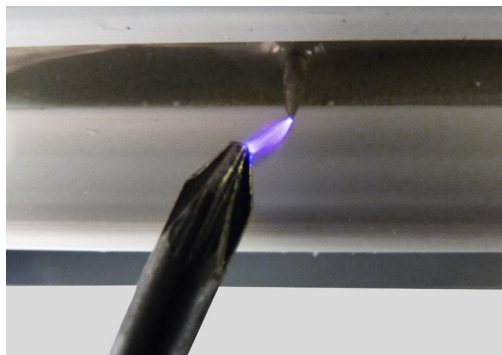


If the voltage is below 4.5 kV, then the item should be returned to Meech for service and / or repair.

If no meter and probe is available, then a fast and simple test is to simply short a pin of one of the ionising bars to earth using a length of insulated electrical cable bared back 3 mm at either end.

Connect one end of the cable to the earth post of the blower.

Approach the pin of the bar with the other end of the cable. As the conductors of the cable approaches the pins of the bar a small faint spark should jump from the pin to the cable conductors. If the bar is under direct sunlight or bright lights it may be difficult to see this spark.



As the spark is drawn a slight buzzing sound will also be heard. This would indicate the bar is functioning correctly.

If there is more than one appliance to test, disconnect the first item and repeat the above steps.

Repairs And Warranty

The 935 blower is warranted by Meech Static Eliminators Ltd to the original purchaser against defects in material and workmanship for one year after purchase. Should any malfunction occur, please return the bar directly to Meech Static Eliminators or your local agent. All products returned to the factory MUST be accompanied by a return authorisation number and must be shipped prepaid. For prompt service, ship the unit to the factory with the return authorisation number shown clearly on the label. Be sure it is well packed in a sturdy carton with shock absorbing material.

Include a note stating the nature of the problem as specifically as possible, and also include instructions for returning the bar to you. We will pay one-way return surface shipping costs on any repairs covered under the warranty.

Field repairs should not be undertaken during the warranty period. Repair attempts by unqualified personnel will invalidate the warranty.

CE Approval

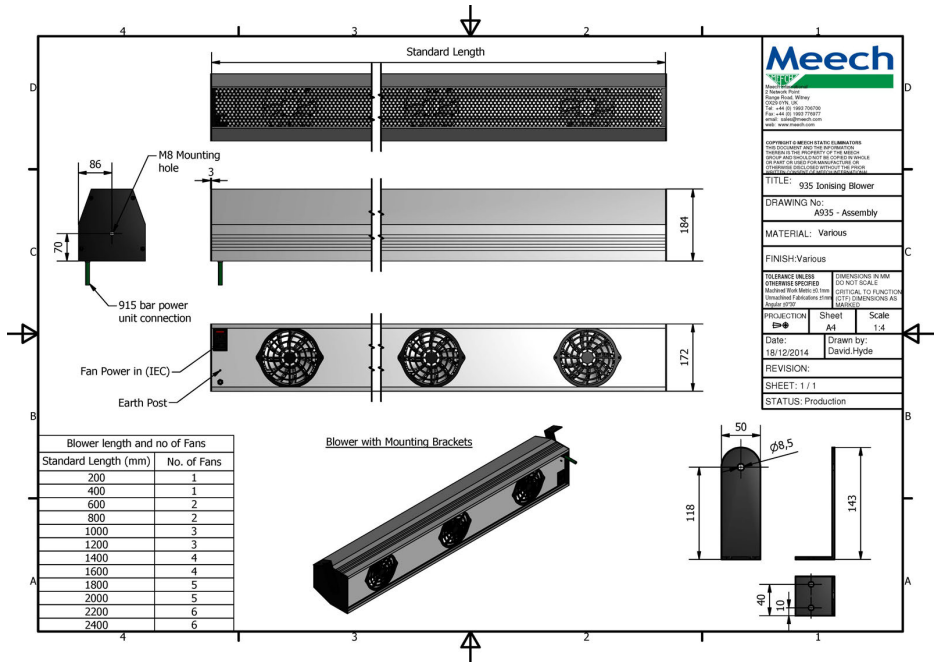
An EC Declaration of Conformity for this product exists in respect of the Low Voltage Directive: 72/23/EEC ("LVD") & Electromagnetic Compatibility Directive: 89/336/EEC ("EMCD")



Health and Safety

Emission of Ozone: Considerably below international standard of 0.01 ppm.

Technical Drawing





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