



6000
IONTUBE



Fraser static control equipment has been designed to give you many years of productive service. However, the science of static control has unique rules which must be followed to allow the equipment to give a good return on your investment.



Please read the following operating and maintenance instructions carefully.

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1. Introduction

This manual applies to the 6000 Iontube.

It is essential that you read and understand the complete manual before installing and using this equipment. See also separate instructions for connecting the Fraser Power Unit. This is important for safety and for warranty cover.

1.1 Explanation of Symbols

Warning!

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in serious personal injuries.



Caution!

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in damage to property.



2. Safety

Warnings:

- The Iontube is only designed for neutralising surfaces with an electrostatic charge.
- Electrical installation must only be carried out by a qualified electrical engineer.
- Adequate installation earth / ground is required to ensure safe and proper operation.
- Disconnect the power supply before cleaning or handling the Bars.
- The emitters are sharp and can cause physical injury.
- There are no user serviceable parts inside the Bars.
- The ozone generated by this product is within internationally accepted limits.
- Ensure the Bars and connecting cable are free from damage prior to installation and check periodically once in use.
- Iontubes fitted with a connection box must only be installed inside a factory. They are not for external use.

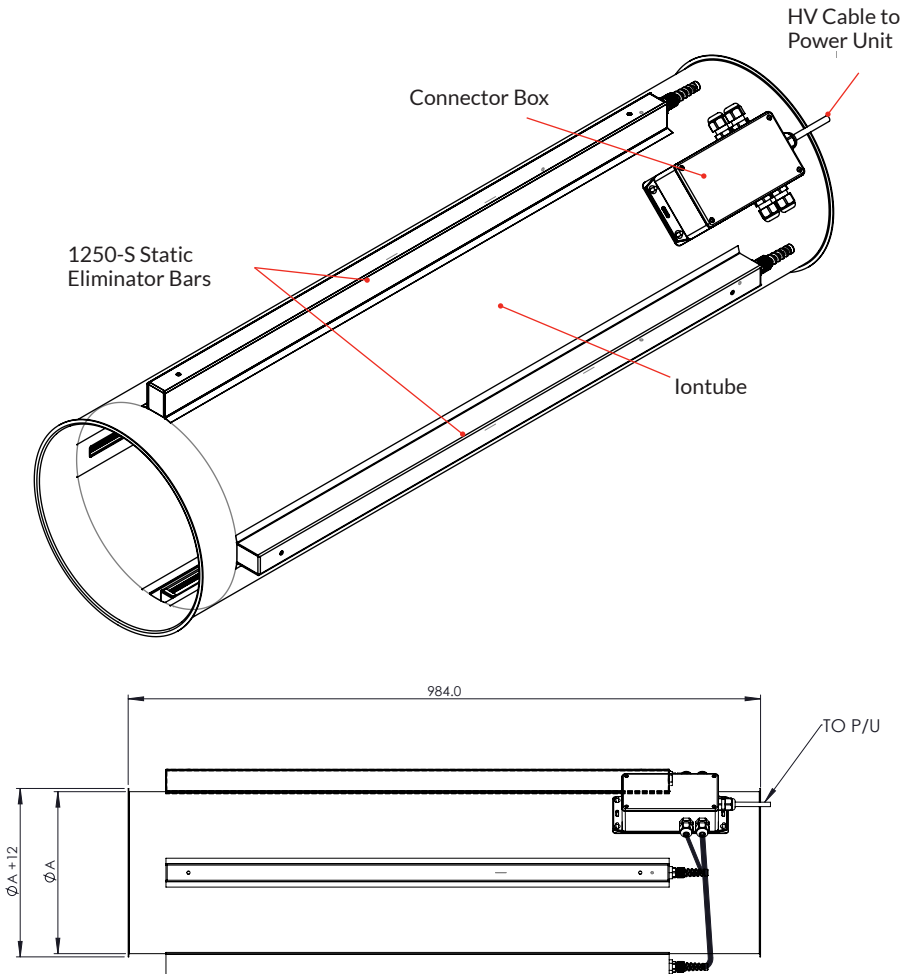


Any changes to the equipment without written consent of the manufacturer will nullify the warranty and CE approval.

3. Use

The static elimination system consists of two or more 1250-S static eliminator Bars mounted into a stainless steel tube and a power unit. The power unit converts the primary voltage to approx. 5.5 kV. It is current limited with a maximum current output of 5 mA for safety. The emitter pins in the static eliminator Bar are resistively connected to the high voltage, so are shockless in operation.

The 1250-S Bars ionise the air passing through the tube, which eliminates the static electricity in the product being transported.



4. Checking on Delivered Equipment

The equipment leaves our factory in suitable protective packaging. Please check that it is undamaged when it arrives. If there is visible damage contact the Factory or one of our Distributors immediately, before carrying out any installation.

Check that the parts that have been delivered are the same as you have ordered.

5. Electrical Connections

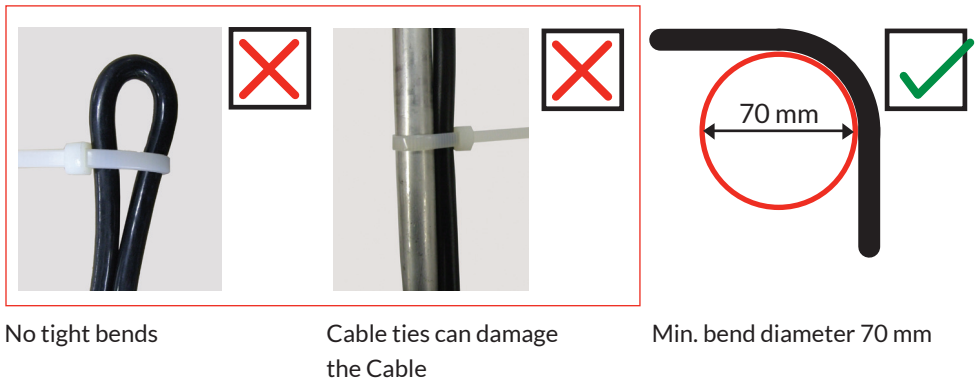
The Power Unit is connected to the mains single phase supply - check label for voltage. The mains supply must provide an earth. The Power Unit is rated at 20 VA at 230 V. See Power Unit instructions.

6. Positioning

The best location is immediately before the cyclone, or other static critical area. It must be remembered that the static will be regenerated by subsequent passage through pipe work - even 1 m of pipe work after the Ionisation Tube can regenerate substantial static charge.

HV Cable to Power Unit

Hi-flex cable is made to a high specification, but all HV cables must be treated carefully. Sharp bends will damage the insulation and lead to breakdown. It is very important that cable ties are not used to fix the cable (for example to an airpipe) and that the cable is not bent more than 70 mm diameter. See sketches below:



7. Checking the System

There are three ways of checking that the Static Eliminator Bars in the Ion tube are operating:

1. Use a Fraser Static Bar Checker Model 720, or an alternative static electrical charge measuring device.
2. Use an insulated earth wire with bared conductors at each end. With one end touching earth e.g. outside of the tube - the other end should raise a small spark from the emitter pins, about 2 - 3 mm long. This should be carried out by an electrician or other experienced person.
3. Measure the voltage on the emitter pins with a high voltage probe and meter. The voltage should be about 4.5 to 5 kV.

No Power:

Check the mains supply and the fuse on the power unit. Replace fuse if necessary.

The power unit has a current limitation of 5 mA, which ensures the safety of the system. If there is a short on one of the bars it will try to draw more current than 5 mA. When this happens the power unit will shut down. Disconnect one bar at a time to discover which bar is causing the problem. Please see page 12.

8. Maintenance

Switch off the Power Unit before starting maintenance.



Cleaning

Usually the 1250-S Bars are self-cleaning due to the speed of the air inside the lontube, but they may become dirty - depending on the type of product being transported. This will vary according to application. The Bars should be cleaned as often as required.

Dirt will reduce efficiency and result in unsatisfactory performance.

A soft toothbrush or fingernail brush are ideal for cleaning Bars.

The 1250-S Bar can be washed with soapy water or isopropyl alcohol, but it must be dry on the inside of the bar around the emitters before turning the power on.

9. Replacing a Static Eliminator Bar

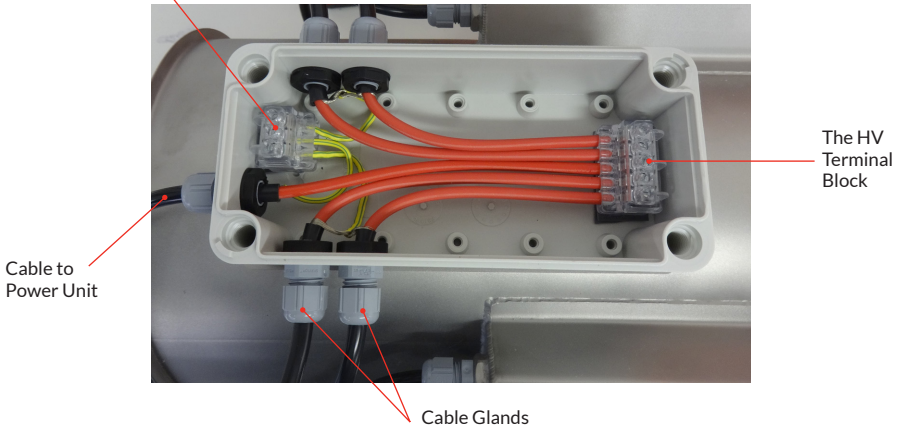
Switch off power before starting this work.



The Earth Terminal Block

All earth/conductor wires should be connected to this terminal block.

Connector Box



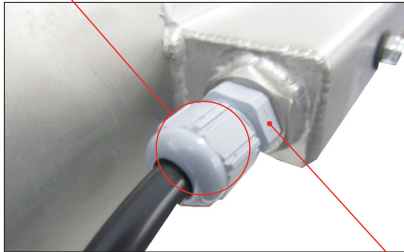
Disconnect one cable at a time on the HV Terminal Block and see if the other Bars start operating. Continue to do this until the defective Bar is discovered.

Warning: this work should be carried out by a competent electrical engineer. There could be live high voltage present.



9. Replacing a Static Eliminator Bar

1. Disconnect the correct HV and Earth wires from the defective Bar into the Connector Box.
2. Loosen the external nut on the cable gland to release the cable.
3. Pull the cable through the cable gland in the side of the Connector Box.



DO NOT loosen this nut as you may damage the cable.



4. Undo the metal nuts that hold the Static Eliminator Bar in the enclosure.
5. Loosen the external nut on the cable gland in the Iontube to release the cable.
6. Allow the Static Eliminator Bar to drop out of the enclosure into the Iontube (take care as the emitter pins are sharp). Gently pull the HV Cable through the cable gland.
7. Reverse the procedure to fit a new Bar.
8. Take care when re-wiring the high voltage and earth connections in the Connector Box.

10. Power Unit

Please see separate Operating Instructions.

11. Health and Safety

The ozone generated by this product is less than 0.1ppm and within internationally accepted limits.

Please note, when handling and cleaning, that the emitter pins within the static eliminator Bars are sharp and care is needed.



The emitter pins are shockless - there is a large resistor below each emitter reducing the current to a shockless level.

12. Certification and CE Declaration of Conformity

Our model 6000 Iontubes are entitled to display the CE Mark.

For further instructions and information, please contact the manufacturer.

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For more information about static and to view the full range
of our products, please visit www.fraser-antistatic.com



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