FRASER
Anti-Static Techniques

OPERATING INSTRUCTIONS

MODELS 1260 & 1265

CE

LLOYD'S REGISTER QUALITY ASSURANCE ISO9001

UKAS QUALITY MANAGEMENT 001

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.

Contents **Page**

1. The Equipment

Models 1260 and 1265 are high performance static eliminator Bars. They are used in thousands of applications by many of the leading industrial companies worldwide.

Models 1260 & 1265

The 1260/1265 are part of a system consisting of one or more 1260/1265 Bars and a Power Unit.

The Power Unit converts the primary voltage to 5.5kV which is transmitted to the Bar by the HV cable. The emitter pins in the Bar use the high voltage to produce a cloud of ionised air. Ionised air supplies ions of the opposite polarity to neutralise the static charge.

2. Checking the Equipment Delivered

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 which have been delivered are the same as you ordered.

3. Safety

1. Proper Use

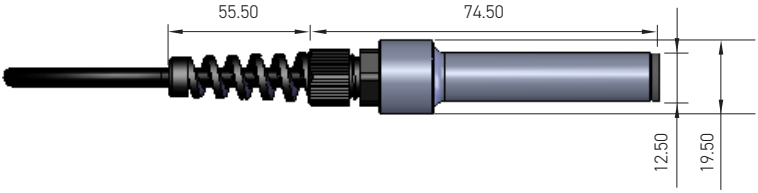
- The 1260/1265 Bar is static control equipment for use in internal factory applications.
- It should be used only with a suitable Fraser Power Unit.
- It is not certified for use in hazardous areas. For these areas see Fraser EX certified Bars.

2. Identification of Hazards

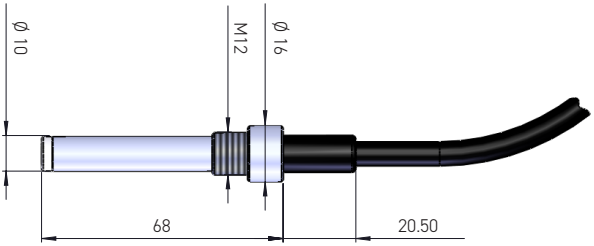
Fraser designs and manufactures this equipment using the latest technology and safety information. However, all high voltage equipment should be treated with care and only installed and maintained by qualified engineers who have read and understood these instructions.

Please pay particular attention to parts of this manual marked with this symbol which indicate potential safety hazards.

1260



1265



4. Technical Specification

Power Unit	Use with Fraser 5.5kV or 6kV Power Units.
Body of Bar	Stainless steel body with PTFE insulation and nylon cable gland.
Cable	Special screened HT Cable with PVC outer sheath. Nominal diameter 6mm. Bend radius 70mm. 2m of cable supplied unless otherwise specified on order.
Resistors	100 Mohm resistance in series with HV for shockless operation.
Ambient Conditions	Maximum temperature 60°C.
Maximum Load	The maximum Bar and Cable length depends on the Power Unit: HP50 and 9055-2 Power Units: Max load is 12m of Bar and Cable. HP50-F Power Unit: Max load is 25m of Bar and Cable.

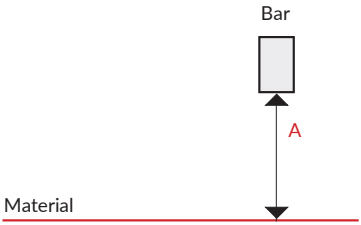
5. Assembly and Installation

Positioning the Bar

i. The best location is usually at, or immediately before, the area where static is causing the problem - remember that static can be regenerated if the material passes over rollers or through a process after neutralising. A static meter is useful to determine the best position.

ii. Important. The material to be neutralised generally should be in free air, not touching another surface as it passes the Bar. It is not possible to neutralise static electricity where the material is touching another surface or roller. Position the bar 50mm from rollers or the machine frame.

iii. The bars must be dry and oil-free.

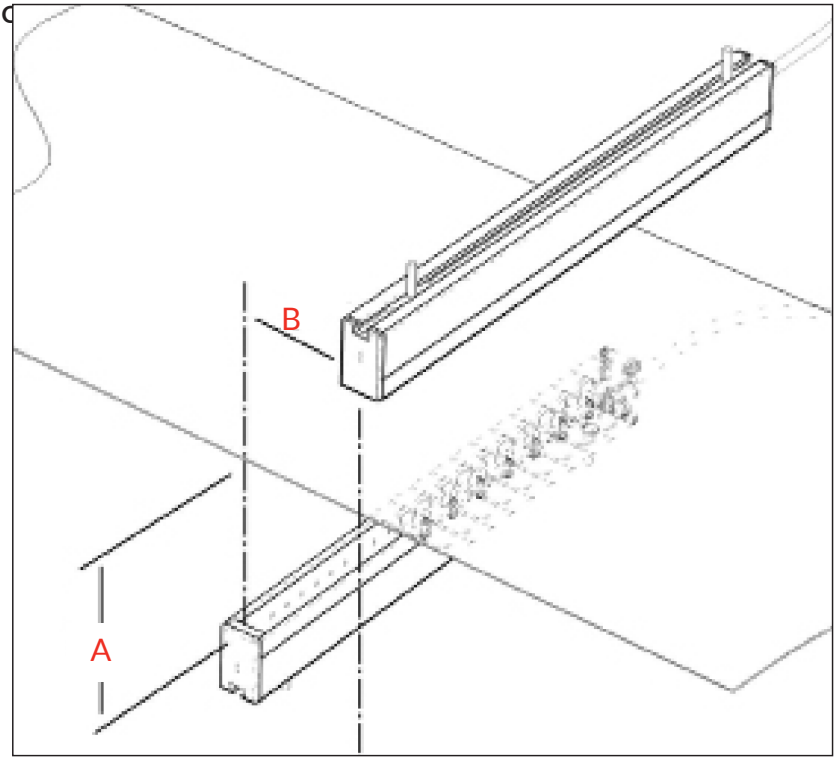


Distance A	% of Performance
20mm	100%
50mm	45%
100mm	10%
150mm	<5%

iv. It is important that the emitter pins are not touching, or within 10mm of other metal objects, to avoid spark erosion that will damage both the Bar and the metal object.

v. If more than one Bar is used, they should not be positioned directly opposite each other, but should be offset by at least 50mm.

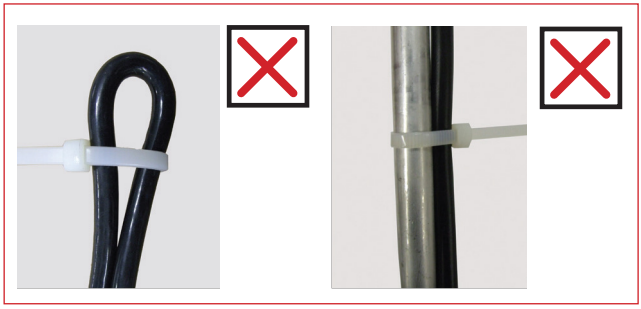
C



Dimension (A) should be 20mm for best performance but can be up to 150mm - see chart on page 9.

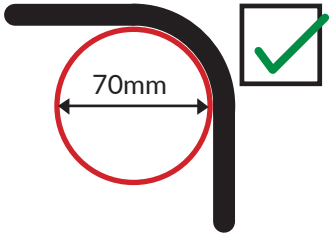
If two Bars are used they should not be directly opposite each other. Dimension (B) should be >50mm.

Cable Hi-flex cable is made to a high specification, but all HT 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 70mm diameter. See sketches below:



No tight bends

Cable ties can damage the Cable



Min. bend diameter 70mm

5. Assembly and Installation

Positioning Summary:

- Emitters facing material.
- Bar >50mm from rollers or machine parts.
- Material should be in free air.
- Distance ‘A’: 20mm to 150mm. Closer is better.
- Distance ‘B’ : if there are two bars, offset them >50mm.
- Cable not bent more than 70mm diameter.
- Dry and Oil-free.

Connecting to Power Unit

Turn Power Unit off before any installation or maintenance work.

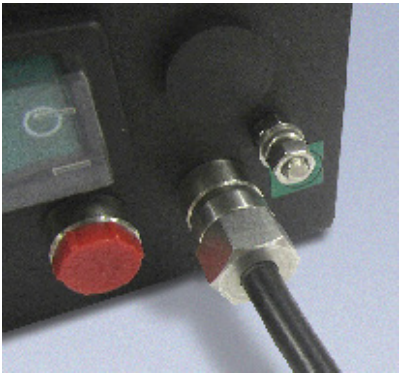
Do not touch the white insulators - high voltage will track through any contamination on this insulator and could cause a breakdown.

HP50 Power Units:

HP Connector - IMPORTANT

Keep white insulator clean.

Dirt or finger grease on the white insulator can cause tracking of the high voltage and failure of the Power unit.



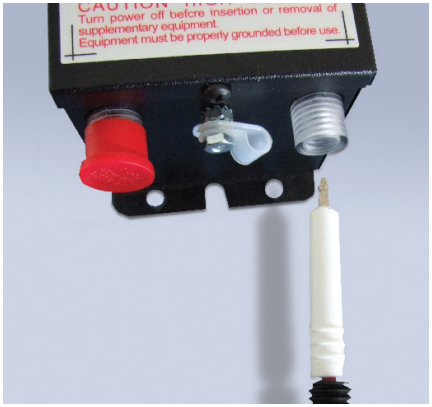
Completely screw into one of ports.

- Turn the hexagon head finger tight.
- The spring contacts the internal HV source.
- The threaded stainless steel body connects to the earth through the port.
- Connect the earth terminal to an independent earth for additional protection.

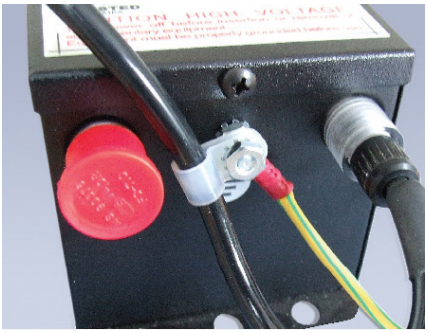
5. Assembly and Installation

9055-2, 9050-2 Power Units:

9055-2 Connector.
IMPORTANT Keep white insulator clean!



Push connector into one port.
Screw finger tight.



Connect the earth wire securely to earth stud on case. Use the 'P' clip as a strain relief for cable if there is a risk of the cable being pulled.

When the installation has been made as the instructions in this booklet, the system is ready to turn on.

The ionised air corona produced by the emission of high voltage from the emitter pins will neutralise static charge that passes through it. This is a powerful and safe process. The emission produces a soft buzzing sound which is not usually audible in a factory.

Ozone

The emission also produces a small amount of ozone which may be detectable by a sensitive nose. This ozone level is considerably below the international safety limit of 0.1 ppm. If the smell is undesirable then increase the level of ventilation.

Dust and Contamination

The electric field produced by the emission may attract dust from the atmosphere. It can also cause a blackening of the plastic extrusion due to carbonisation. Both the dust attraction and carbonisation are normal - see Maintenance for cleaning of Bar.

Interlock With Process

Although the equipment is designed for continuous operation, we recommend that its operation is linked with the running of the machine or process, so that the system is not running when it is not needed. This will reduce dust attraction and so reduce maintenance.

Shockless

The emitter pins are resistively coupled to the high voltage. The resistance is 100M Ohm which results in a pin energy level of about 50µA which is shockless. Please note that if more than one emitter is touched at the same time then the resistors may be connected in parallel and so less shockless.

Sharp Emitters

Please note that the emitter pins are designed to be sharp! They could cut fingers if handled without care.

Cleaning

Important: Turn off power before cleaning.

Accumulation of dust and other contaminants is normal, but this will reduce the performance of the Bar. It is important to clean the Bar to keep it working efficiently.

Light dust can be removed with a nylon brush - such as a toothbrush or nailbrush.

Engrained dirt and carbonisation can be removed with IPA (isopropanol alcohol) or a similar solvent which is compatible with ABS, epoxy resin and aluminium. Soapy water can also be used.

Important: Do not turn on power until the Bar is dry.

Take care - the emitter pins are sharp!

8. Trouble Shooting

Poor Static Elimination	Check positioning of the Bar. It will not work well unless there is 'free' air on the opposite side of material.
	Clean the Bar. Dirt around the emitters could severely affect performance.
Is the Bar Working?	Check with an electrician`s 'volt stick' (it will illuminate from 200mm), or a 720 Static Bar Checker.

Try to draw a small spark to earth from the emitters, using an insulated cable with bared conductors, or similar.

If it is a multi-bar system disconnect one Bar at a time from Power Unit and see if the system re-starts. The reason for this is that there could be a short in one of the Bars which pulls down the Power Unit by drawing more than 5mA of current. If this load is removed the rest of the system will restart.

If the Bar is not working it should be returned to the factory for further inspection or replacement if under warranty. There are no user-repairable parts in the Bar or cable.

9. Warranty

The warranty is for a period of 12 months from date of delivery note.
It covers defective workmanship and parts provided:

- The equipment has been used within the operating conditions specified in this document.
- There has been no physical damage to the product.
- The product has not been altered or tampered with.
- It is sent back to the factory by the customer. The customer is responsible for these carriage costs, Fraser is responsible for returning the product repaired or replaced under warranty.

HP connector set

For assembly by the customer. Part 90100

9055-2 Connector Set

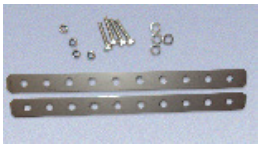
Part 90101

HP-ILC cable Extension with 2m cable For HP connectors (not 9055-2).

Part HVC-2

Power Units

Please see range of Power Units on our website.



Mounting Bracket Kit

Consisting of two fixing strips, nuts and bolts. Part 12508

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

FRASER
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