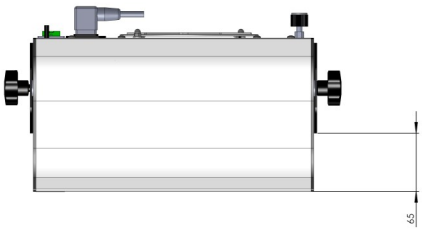
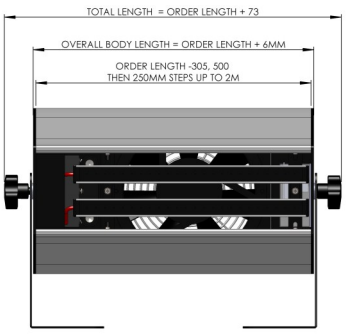
2010 Ionised Air Blowers

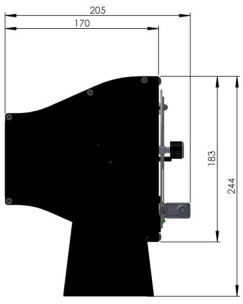
Model 2010 is a high performance Static Eliminator designed for long range and wide area static neutralisation.

It consists of two 1250-S Bars mounted in the mouth with an axial fan system behind. The fans inside the Blower transport the ionised air produced by the 1250-S Bars to the object to be neutralised.

The 2000 Blower is available in a range of sizes from 305mm, 500mm then to 2m in 250mm steps.







Notes

Construction

Manufactured in an anodised aluminium with robust powder coated steel end plates and backplate.

Length:

305mm, 500mm then in 250mm steps up to 2m.

Weight:

Fixings:

Swivel “L” brackets allow the Blower to be screwed or bolted to vertical or horizontal surfaces. Hand knobs tighten the Blower to face the correct direction.

Ionisation:

Provided by 2 x 1250-S Bars in the mouth of the Blower
All sizes have an internal Power Unit.

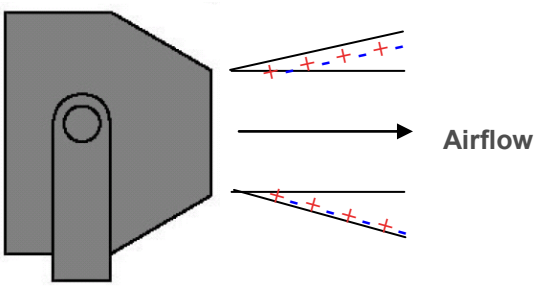
Cable:

A 2m mains cable with IEC cable is supplied unless otherwise specified.

Performance

The 2010 Ionised Air Blower is a very powerful static eliminator. It is considerably more powerful than competitive equipment which we have tested. Please see table on next page.

The airflow from the 2000 Blower leaves the mouth of the blower and expands at approximately 15° in both axes



Notes

Reliability

Operating at 5.5kV means a more reliable and safer product than systems working on 7kV or 8kV, such as the Simco or Meech competition.

The axial fans are rated at 50,000 hours - this equals 6000 x 8 hour shifts or 2083 x 24 hour shifts.

Performance

The 2010 Blower can be used at distances up to 2m. The best operating distances are shown in the performance figures below :

250mm	:	0.5 secs
500mm	:	2.1secs
750mm	:	3.6 secs
1000mm	:	5.4 secs

These are the average times to discharge a charge plate monitor from 5000V to 500V.

They clearly show that the closer the Blower is to the object, the better. At 1m the performance is under 10% of the performance at 250mm.

Operating Conditions

All static eliminators work best in clean and dry conditions. Damp conditions deposit a microscopic layer of water onto the static eliminator bars which allows much of the pin energy to go to earth.

Maintenance

The 1250-S Bars should be cleaned regularly to remove dust and contaminants which can reduce their performance. A nylon fingernail brush is ideal for this. Over time black carbonisation forms on the edge of the aluminium extrusion of the 1250-S Bars - this is not harmful and can be removed with a cloth.

Notes

Options to be specified at time of ordering

Filters

Non-woven filters can be supplied for each fan. These reduce the airflow by about 40%. They are inexpensive and simple to retrofit, if required. Generally customers think that filters are a good idea. In practice they do not clean the filters when they collect dust, resulting in low airflow and strain on the fans.

Most customers eventually remove the filters because they require extra work.

LT Cable

The IEC connector/ cord on all sizes has 2m of cable unless otherwise specified on order.

Custom Brackets

Custom brackets can be made as required. Please send drawing for quotation.

Controls on 2010 Blower

The back panel has an earthing point, an on-off switch and rotary speed controller.

Notes

Applications and target markets for 2010 Blowers

The 2010 Blower can be used throughout industry. It is built to a higher specification and is more economical than most competitive products. This allows it to be used in a variety of long range and wide area applications.

Most 2000/2010 Blowers are used for long range static neutralisation to prevent product misbehaviour. In the moulding industry they are widely used to prevent dust attraction. 2010 Blowers cannot remove dust - their airspeed is too slow, but they can prevent dust contamination by reducing the charge below the dust attraction level.

Usually the customer has to chose between 3024L, Ionstorm or Jupiter Long Range Static Eliminators and Blowers.

Long Range Static Eliminators are usually the preferred choice - they are lighter, cheaper and easier to install. The only occasions when Blowers are recommended are:

1) Where ionised air has to travel past metal machine parts. The ions from long range bars will be attracted to the metal parts, while the blower will have the airspeed to blow the ions past them. A blower has more penetration.
2) If there is moving air in the application a blower may be more effective for the same reasons as above.
3) Some customers like the reassurance of the traditional blower.

Plastic Film and Sheet

including: Slitters & Winders Unwinders Various Converting Applications

The main problems here are shocks to operators, film misbehaviour, problems at customer and dust attraction.

Plastic Mouldings

including: Large and Small Injection Mouldings Rotational Mouldings.

Widely used in the moulding of automobile parts and similar high quality mouldings where they are to be spray painted. If the product is neutralised soon after moulding there will be much less dust contamination.

Packaging, Food etc

Including:	Stretch wrapping	Plastic Bottles
	Wrappers	Unscramblers

Paper and Printing

Including:	Winders and Slitters	General Converting

Textile

Including:	Stenters	Winders
	Inspection machines	

Notes

Competition

One of the main competitors for the 2010 Blowers is Meech. The following table gives a comparison between the Meech 930 and the Fraser 2010 Blowers

	Fraser 2010	Meech 930
Construction	Manufactured in an anodised aluminium with robust powder coated steel end plates and backplate. Rugged design provides long life.	Extruded aluminium secured by 4 self tapping screws to steel end plates. Backplate loose in aluminium groove.
Size	In steps of 25cm up to 3m	In steps of 20cm up to 3m
Fans	One 150mm fan per 25cm.	One 150mm fan every 40 cm, apart from 20cm unit. As a result units above 20cm are seriously underpowered.
Airflow	Both use similar fans with rating of 200 - 220cfm. Even airflow across full length and no "dead" spots. Smooth inside of body gives optimal air efficiency.	"Dead" spots every 40cm and in the centre of each fan. Internal ridges and grooves in extrusion reduce airflow and create turbulence.
Range	All Blowers have same range.	Only 20cm unit has same range as Fraser. The other Meech models generally have a smaller range because they have fewer fans.
Ionisation	Two high performance resistively coupled shockless 1250 Bars provide the ionisation. Each 1250 Bar has three times the ionisation performance of the Meech equivalent.	Three weak capacitively coupled 910 Bars provide the ionisation. Total ionisation power is about 50% less than Fraser. This shows in the performance figures below.
Neutralisation Power (to standard EOS/ESD3 i.e. time to reduce 5kV to 500V - on 150mm x 150mm plate. Tested on positive polarity)	at 500mm: 2.1 seconds at 1m: 5.4 seconds	at 500mm: 2.7 seconds at 1m: 7.3 seconds
Electrical	Built to IEC international standards with over specification in critical areas e.g. the internal HT cable is rated at 40kV although only 5.5kV is used.	Lower standards generally. The internal cable for example is rated below the 7kV which is used.

Notes