5000 / 5100 IONISED AIR KNIVES

Ionised Air Knives produce fast-moving ionised air which can neutralise static electricity and remove contaminants.

The 5000 and 5100 Ionised Air Knives are part of Fraser's comprehensive range of cleaning and static neutralising products.

PERFORMANCE

- Ionisation power up to 6 kV provided by 1250-S Static Eliminator Bar and Fraser HP Power Unit.
- Powerful ionisation kills the static charge, allowing the fast beam of laminar air to remove it.

ESSENTIAL QUALITIES

- Non-turbulent laminar airflow increases cleaning and static neutralisation performance.
- Air knives amplify compressed air by a factor of up to 20:1 for economy.
- Available in a wide range of standard lengths in two body sizes - the compact 5000 and the efficient 5100. The 5100 is also available in custom lengths.

APPLICATIONS

- Fraser 5000/5100 Ionised Air Knives are used for hundreds of different cleaning applications from automobile and automotive mouldings to medical parts and packaging.
- Also used for sheet separation.

OPTIONS

- ATEX certified static elimination for hazardous areas.
- 24 V DC static eliminator options.



SPECIFICATION

Construction:
Air Knife: aluminium. 1250-S Static Eliminator Bar (see separate Datasheet).

Cable:
Hi-Flex 30 kV screened cable with 70 mm bend diameter. Standard length is 2 m - longer lengths can be specified at time of order (subject to maximum load on power unit).

Safety:
Meets OSHA and international standards. 5 mA maximum current from Power Unit. High voltage resistance inside bars further limits current below 50 µA.

Power Unit:
Use with Fraser 5.5 kV and 6 kV Power Units. See Datasheets.

Air Supply:
The air should be clean and dry. Air connection(s): 1/4" BSP female thread with push-fit connector for 8 mm OD tubing.

Environmental:
60 °C maximum temperature. 70 % rH non-condensing max.
Noise from Air Knife at 1 m is 65 dB(A).

Certification:
CE.

Options:
ATEX EX version - see EX-1250 EX Static Eliminator.
24 V DC Static Eliminator options.

FRASER Anti-Static Techniques

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HOW IT WORKS

Air is forced out of the slot at very high speed.

It sacrifices some of this speed to entrain ambient air to produce a large volume of fast-moving air.

The air is ionised as it passes over the static eliminator bar and so capable of neutralising static electricity.

The airspeed can be varied by adjusting the air pressure from 1 Bar up to 7 Bar. The best cleaning distance is between 100 mm and 150 mm.

AIR CONSUMPTION

The pipe work and air supply must be capable of supplying this volume of air.

Maximum pressure 7 Bar. Typical working pressure 5 Bar.

We recommend that a sensor is used to minimise air consumption - blowing only when the product is present.

Pressure in bar:	2	3	4	5	6	7
5000 Air Consumption Lit/min per cm of Air Knife:	19	22	27	33	39	45
5100 Air Consumption Lit/min per cm of Air Knife:			17.3			

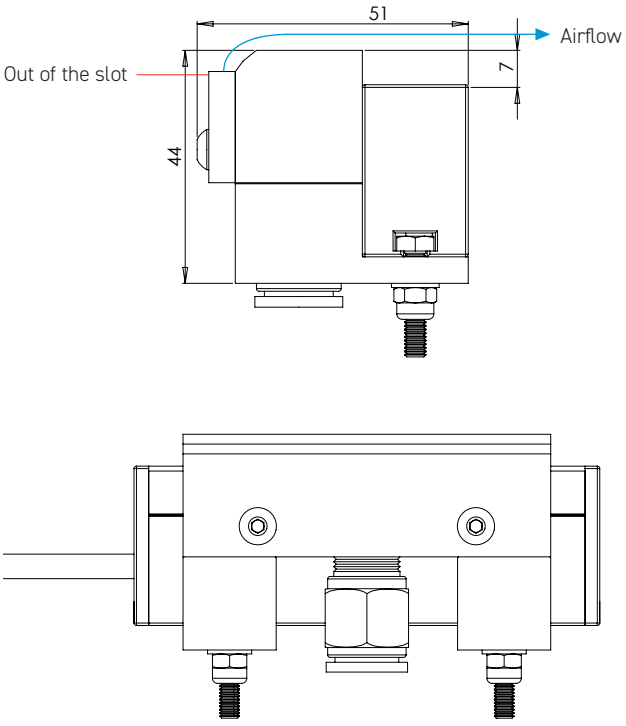
DIMENSIONS AND CONSTRUCTION

Static eliminator bar available in standard lengths of:

5000: 150, 300, 450, 600, 750 and 900 mm.

5100: 80, 100, 150, 200, 250, 300, 400, 450, 500, 600, 750, 800, 900, 1000, 1200 and 1300 mm. Non-standard at 100 mm steps up to 2500 mm.

5000 Ionised Air Knife



5100 Ionised Air Knife

