# 5500 IONISED AIR KNIFE SYSTEM

The 5500 is a high performance fan-driven Ionised Air Knife System for static neutralisation and cleaning of mouldings, glass, automobiles and other large objects.

The blower produces a high volume of air which exits from the airknife in a fast laminar flow.

## PERFORMANCE

- Ionisation options include AC and 24 V DC technology.
- Powerful ionisation kills the static charge holding the dust, allowing the fast beam of laminar air to remove it.

## ESSENTIAL QUALITIES

- Fraser designs 5500 Air Knife Systems to meet the most demanding applications, achieving powerful cleaning and neutralisation with economic running costs – typically 70 % less than compressed air alternatives.
- Cleaning with more depth/range than compressed air systems.
- Fraser 5500 Systems: better blowers, better ionisation and better performance per kilowatt of power.

## APPLICATIONS

- Wide range of applications from automobile and automotive mouldings to cleaning sheets of glass and other large objects.

## 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:**
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:**
Various kW blowers to suit length of air knife/knives.
Air speed 110 m/sec at slot in air knife.

**Environmental:**
1250-S Static Eliminator Bar: 60 °C maximum temperature.
70 % rH non-condensing max. IP66. Fully sealed.

**Certification:**
CE.

**Options:**
ATEX EX version - see EX-1250 EX Static Eliminator.
UL (US and C) Listing is a free of charge option for the 1250-S and EX-1250 Static Eliminator Bars (see Datasheets).
24 V DC Static Eliminator options.

FRASER Anti-Static Techniques

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## FAN-DRIVEN IONISED AIR KNIVES: A TYPICAL PAYBACK CALCULATION

**Purchase Cost: € 4,700.00**
2 x 500 mm 5500 Ionised Air Knives, a 3 kW blower and 5 m pipework.

**Running Cost € 3.84 per 8 hour day**
3 kW at € 0.16/kW/hr.

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**Purchase Cost: € 1,617.00**
A compressed air knife system consisting of 2 x 500 mm Ionised Air Knives.

**Running Cost € 33.28 per 8 hour day**
At 7 Bar pressure a typical compressor generates 150 litres per kW and a typical 500 mm compressed air knife uses over 2000 lit/min. For 2 x 500 mm air knives this is the equivalent of a 26 kW compressor running continuously. 26 kW @ € 0.16/kW/hr.

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PAYBACK IN 6 MONTHS
**On this basis the extra purchase cost of € 3083.00 is paid back in 105 days.**

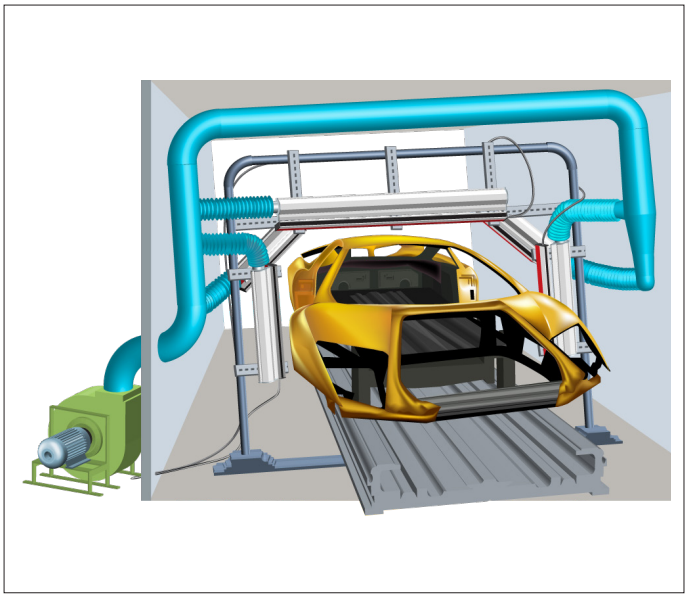
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## 5500 SYSTEM ELIMINATES DUST CONTAMINATION

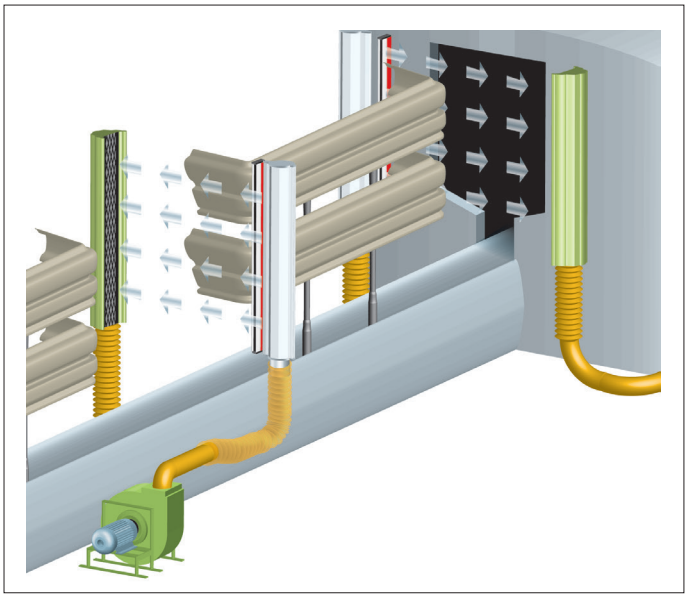
Dust contamination is a huge problem in many areas of industry - especially where the product has to be painted, decorated or laminated. Rectifying dust problems can have a very high cost:

- a large car manufacturer calculated the cost of repainting a car at over € 3000.
- a dust contaminated bumper costs over € 150 to repaint.
- a customer who makes aircraft cockpits believes the cost of dust included in lamination could be as high as € 50,000.

Automotive Industries



5500 System cleaning a car body. They are also suitable for trucks and coaches.

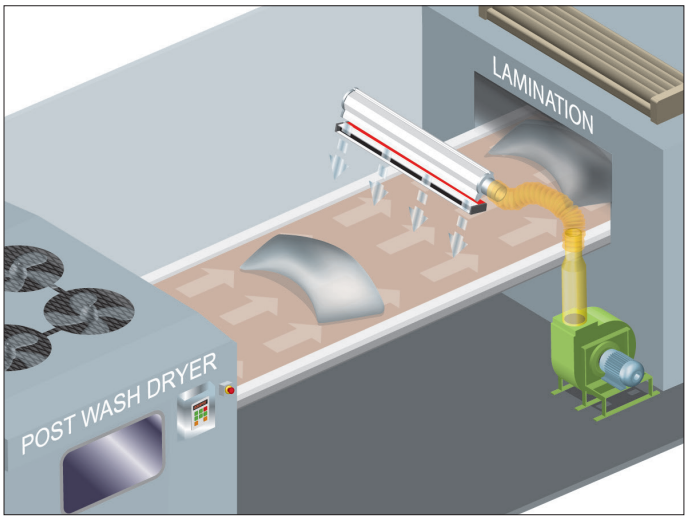


5500 System cleaning car bumpers immediately before they enter the spraybooth. They can be used with or without dust collection. Other automobile parts cleaned by 5500 Systems include fascias, lamp assemblies, body panels, caravan ends, truck cabs and many others.

## 5500 SYSTEM ELIMINATES DUST CONTAMINATION

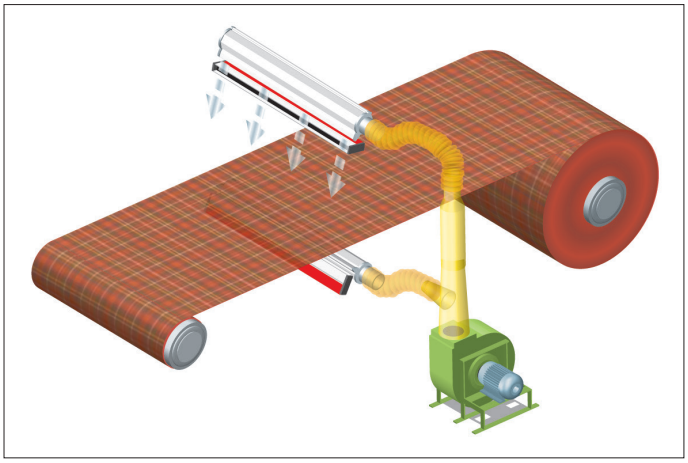
### Fraser 5500 Ionised Air Knives on Glass

From laminated automobile glass to the cockpits of jet aircraft - Fraser 5500 Air Knife Systems remove contaminants and prevent the re-attraction of dust.




### Eliminating Dust and Static on Sheets and Webs

5500 Ionised Air Knife Systems are used for removing dust and static from plastic sheets, textile webs, extrusions, floor coverings, and many other large products.



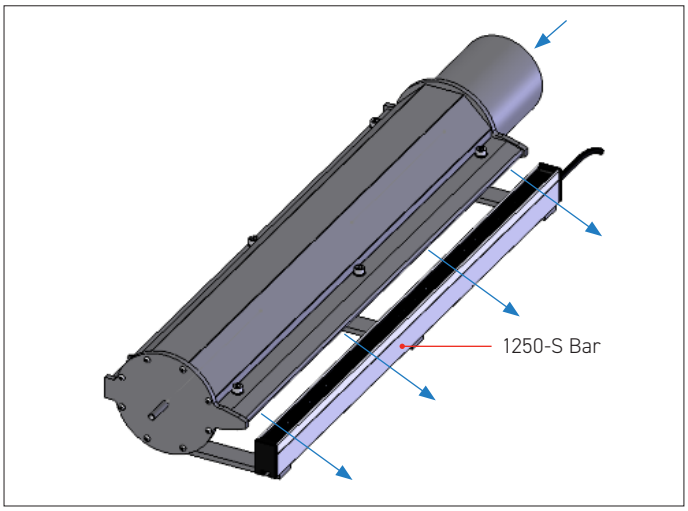
## THE NEXT STEP

- Send an outline of your requirement direct to Fraser, or to one of Fraser's worldwide distributors.
- If we require any further information we will contact you before submitting a costed proposal.

## HOW IT WORKS

1. A system is engineered using the best blowers, pipework and ionised air knives to meet the customer's requirements.
2. Air from the blower enters the air knife at the correct pressure and volume for maximum performance.
3. The air exits from the 5500 in a fast-moving linear beam. With an airspeed of over 110 m/sec it removes the most stubborn statically attracted dust.
4. The 1250-S Static Eliminator Bar ionises the air as it passes over, giving it the power to neutralise static charge. The 1250-S Bar (see separate Datasheet) is the most powerful static eliminator bar fitted to air knives, giving it unequalled performance.
5. There is a wide choice of air entry and mounting possibilities for the best engineered installations.

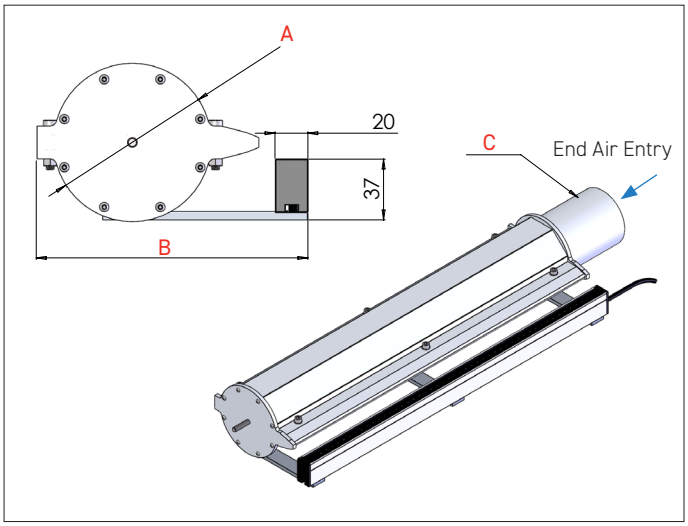
A complete range of accessories is available, including filters, pipework, flow valves, silencers, acoustic enclosures and remote monitoring.



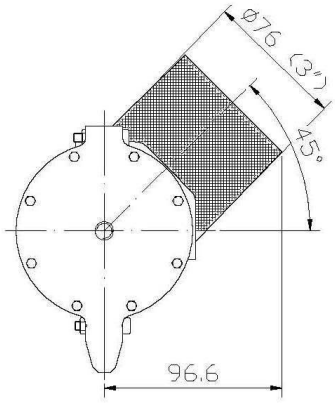

## DIMENSIONS AND CONSTRUCTION

**Standard 5500:** A = 96 mm ø B = 165 mm C = 76 mm

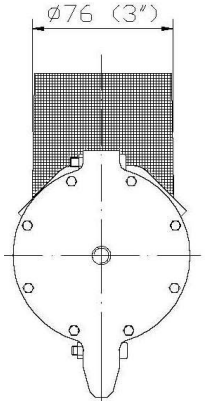
**Compact 5500:** A = 68 mm ø B = 127 mm C = 50 mm




Air Entry Options




45° Air Entry




180° Air Entry

The air entries can be positioned in the body of the air knife, or at either end. For 5500 Air Knife Systems over 1 m in length, 2 air entries are required.