

4200 IONISED AIR NOZZLE SYSTEM

The 4200 is part of Fraser's comprehensive range of cleaning products for removing dust and static electricity from mouldings, assemblies, PCBs, automobiles, graphics, optics and medical parts.

The 4200 Ionised Air Nozzle System is used to clean and neutralise mouldings, plastic sheets, conveyors and a wide range of three-dimensional products.

PERFORMANCE

- Up to 6 kV of ionising power provided by 1250-S Static Eliminator bar and Fraser HP Power Unit.
- Thoroughly neutralises the static charge, allowing the dust to be removed without the risk of re-attraction.
- Airflow amplifier nozzles can be used at up to 7 Bar for powerful thrust and blow-off.

ESSENTIAL QUALITIES

- Simple design not only optimises ionisation and blow-off power, but can be arranged into shapes and sizes to match the needs of the product to be cleaned.
- Nozzles amplify compressed air by up to 20:1 for economical operation.
- Quiet performance.
- All critical parts are encapsulated for a long life. All parts are replaceable if damaged.
- Completely shockproof in operation.
- Versatile and easy to install. One air connection for whole assembly.

APPLICATIONS

- Most applications are for removing dust and neutralising the static charge that attracted it – ranging from medical and automotive mouldings to television assemblies and jet fighter cockpits.



SPECIFICATION

Construction:

Aluminium bracket (63.5 mm x 63.5 mm x 4 mm) with anodised aluminium air nozzle. 1250-S Static Eliminator bar (see 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:

The system is shockless and meets OSHA and other safety standards as the nozzle cannot be dead-ended.

Power Unit:

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

Air Supply:

Regulate down to required pressure. From 1 Bar to 7 Bar. Air must be clean and dry.

Environmental:

60 °C maximum temperature. 70 % rH non-condensing max. IP64.

Certification:

CE.

Options:

24 V DC Static Eliminator options.
ATEX certified Static Eliminator for use in hazardous areas - see EX-1250 Datasheet.

HOW IT WORKS

Ionised air produced by the 1250-S Static Eliminator bar is transported to the object by the airflow from the nozzles.

At a gentle airflow, for example 1-2 Bar, the ionised air will neutralise static charge at distances up to 600 mm. If the air pressure is increased to 3-4 Bar the neutralising distance is extended to approximately 1000 m. For purely static neutralisation long-range applications, please consider our comprehensive range of 24 V DC powered Static Eliminators, or 2010 and 2050 Series Ionised Air Blowers, all of which have lower running costs.

The 4200 Ionised Air Nozzle System is mostly used for cleaning as well as static neutralisation. The airflow speed is increased by raising the air pressure to 4-7 Bar, depending on the distance between the product and the nozzles. The typical operating distance for cleaning applications is 100 to 200 mm.

AIR CONSUMPTION (PER NOZZLE)

Pressure	Compressed Air Consumption	Thrust
3 Bar	168 lit/min	1.2 N
4 Bar	196 lit/min	1.6 N
5 Bar	224 lit/min	1.9 N
6 Bar	248 lit/min	2.3 N
7 Bar	270 lit/min	2.7 N

Typical operating distance is 100 mm with a pressure of 5 Bar. At 100 mm the air covers 100 mm width.

DIMENSIONS

Available in any length from 100 mm to 4000 mm.

Overall length of the 4200 body and 1250-S bar = 100 mm longer than the nozzle array.

