

Model 5000 and 5100 Ionised Air Knives

The 5000 and 5100 Ionised Air Knives are used to blow dust off mouldings and similar objects. They consist of a linear airflow amplifier and a 1250-S Bar.



How it Works

The air knife is a quiet and efficient airflow amplifier. It uses coanda and air entrainment to multiply the compressed air by a factor of about 20 to produce a compact, quiet, high speed curtain of air.

The 1250-S Bar ionises the airflow so that the air not only removes the dust but also ionises the air.

The airflow is a non-turbulent, laminar flow - this means that it does not recombine quickly and has a long life.

We use two different commercially available air knives. The 5000 uses compact black, machined aluminium air knives made by Brauer. The 5100 uses larger extruded aluminium air knives made by Secomak.

For further information on the operation of these airflow amplifiers please see the manufacturer's websites:

www.Brauer.co.uk and www.beck-air.com

Which Air Knife to use?

The 5100 is our standard recommendation.

The only reason to use the 5000 is because it is more compact and so suitable for sheet separation and similar applications.

The reasons to use the 5100 are:

- better airflow
- lower noise (72dBA, compared to 80dBA at 5.5Bar)
- more standard sizes available, special manufacture up to 2m
- lower cost

Notes

Technical Specification 5000 & 5100

Notes

Construction:	Aluminium airknife. 1250-S Static Eliminator Bar Weight: 5000: 3.8kg per 1m 5100: 4.0kg per 1m
Length:	Available in standard sizes of : <u>Model 5000:</u> 150, 300, 450, 600, 750 and 900mm. <u>Model 5100:</u> 80, 100, 150, 200, 250, 300, 400, 450, 500, 600, 750, 800, 900, 1000, 1200 and 1300mm.
Cable:	2m HT cable is standard. Max cable length 10m.
Max. Temperature:	60°C.
Safety:	Meets OSHA and international standards. 5mA maximum current from Power Unit. High voltage resistance inside bars further limits current below 50µA.
Air:	The air should be clean and dry. Air connection (s): 1/4" BSP. Air Knives over 750mm have air connections at both ends.
Power Unit:	Use with Fraser 5.5kV 50/60Hz Power Unit.

Air Consumption

Allow for the following air consumption:

Pressure in Bar:	2	3	4	5	6	7
Air consumption Liters per min <u>per cm</u> of Airknife	19	22	27	33	39	45

This air consumption is per cm, so a long Air Knife will use a lot of compressed air if used continuously.

To reduce the air consumption it is normal to regulate the air knife to blow only when the product is presented to it. Factory engineers can organise a solenoid or similar system to achieve this. The air knife can also be operated by a foot switch etc.

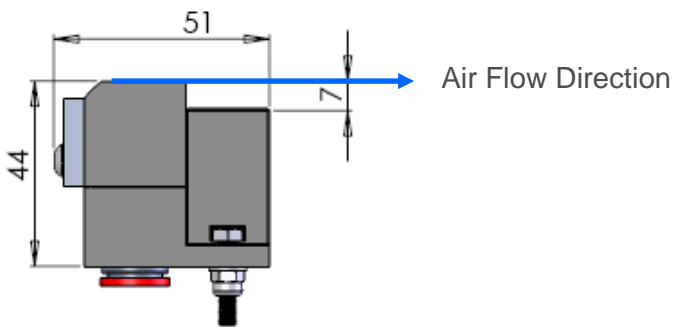
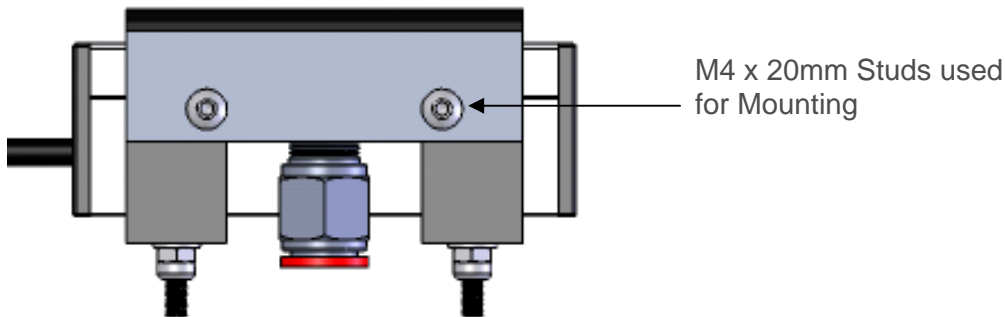
The air pressure should also be reduced to the minimum pressure required to do the job effectively.

Compressed air pipe sizes:

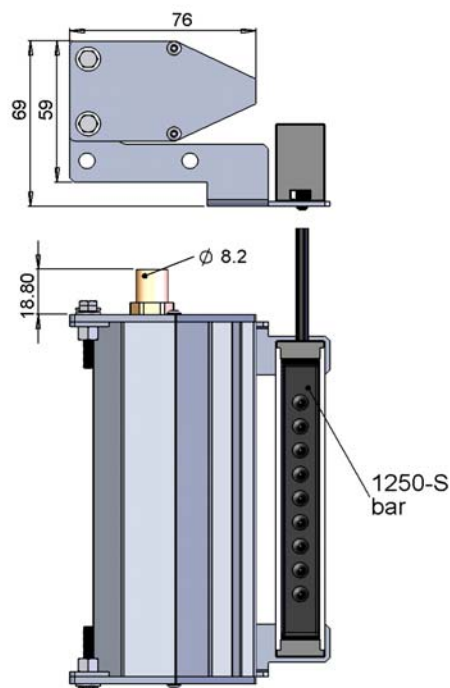
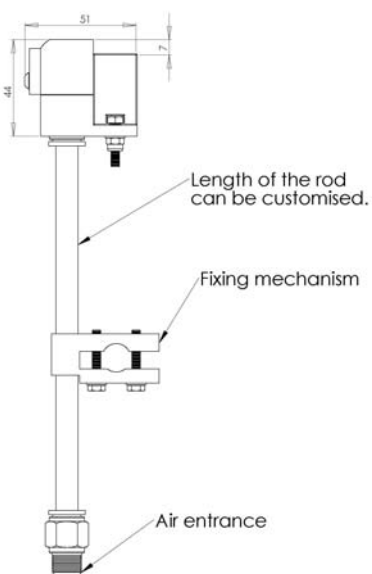
It is very important that the correct air pipe sizes are used in the compressed air lines to avoid air starvation and unsatisfactory operation. The pipe work and air supply must be capable of supplying the volume of air shown in the table above.

The most common customer complaint for air knives is due to the air supply pipes being too small. It is always wise to over specify of the size of the feed air pipes.

5000 Compact Ionised Air Knife



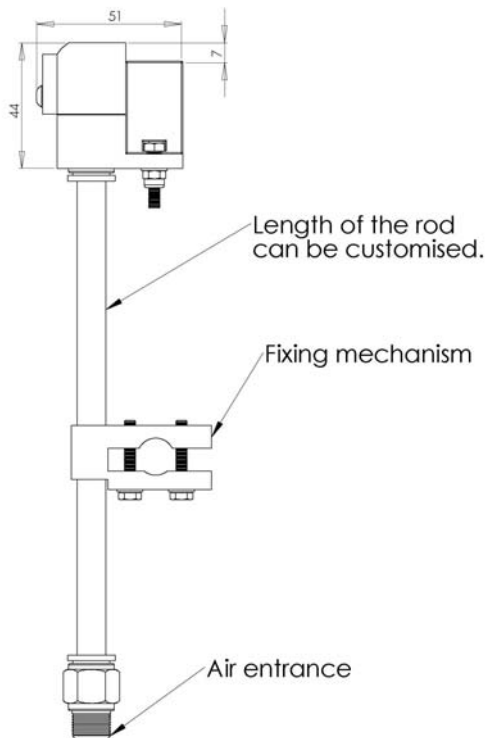
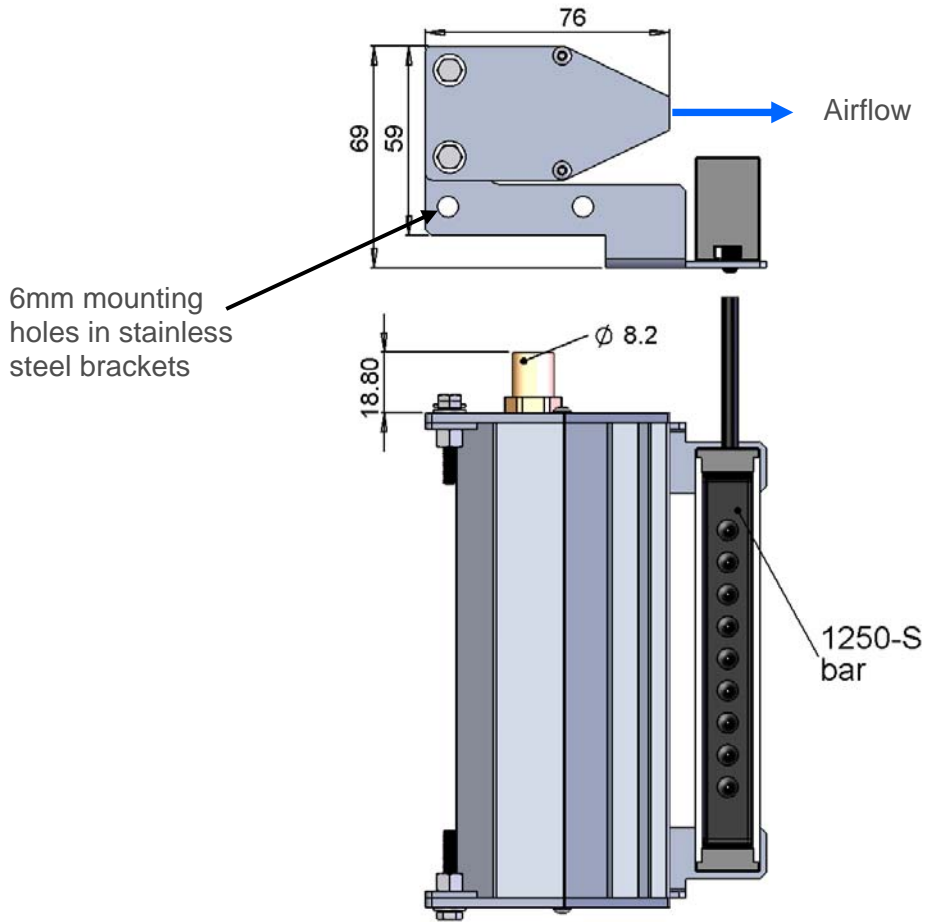
5100 Ionised Air Knife



Special attachments for sheet feeding system

Notes

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