
Ionizing Air Nozzles

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1 Ionizing Air Nozzles

Ionizing Air Nozzles

1.1 Overview

Ionizing air nozzles produce a high-velocity ionized air flow which simultaneously cleans and neutralizes static charges.



1.2 Benefits

- The nozzles operate on compressed air and provide a pinpoint ionized air source for being used in critical cleaning and/or static neutralising.

1.3 Applications

Ionizing air nozzles produce a high-velocity ionized air flow which simultaneously cleans and neutralises static charges on parts and materials. Nozzles can be fitted and installed in many configurations to meet specific requirements. power units supply the high voltage necessary for operation. If required, all nozzles can be fitted with a stop valve. Type HE can be fitted on a standard air header.

2 Models

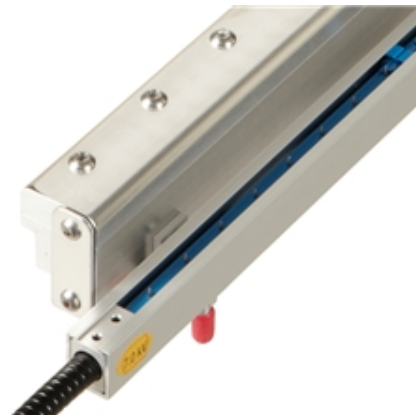
2.1 Airknife with Anti-static Bar

Air knives with a anti-static bar combine the effects of air amplification and ionization to produce a high-velocity "sheet" of ionized air (amplification ratio as high as 25:1). This combined effect can be used for static neutralizing and dust removal in a single operation, for instance in the automotive finishing, printing, packaging, plastics and textile industries. The air knife is very compact and does not have any moving parts. anti-static bars produce an electrical field which causes air molecules to break down into positive and negative ions. These ions are picked up by the high-velocity air flow produced by the air knife and propelled into the work area where they neutralize the charged surface or product.

MEB: Air knife with anti-static bar

A type MEB shock-proof anti-static bar combined with an airknife come in standard lengths. The compressed air is blown across the high-voltage points over the entire width and amplified by the ambient air carried along. The air flow is saturated by the positive and negative ions produced by the anti-static bar. The air flow neutralises the static charge, enabling any contamination to be easily blown away.

| | |
|---------------------------|-----------------------|
| Model | MEB |
| Working distance | 3000 mm |
| Working width | 76 150 310 460 610 mm |
| Housing material | aluminum |
| Inner bar material | PVC |
| Ionisation point | special alloy |
| Cable | metal shielded |
| Weight | 2,6 kg/m |
| Ambient temperature | 0 - 55° |
| Use circumstances | industrial |
| Protection classification | - |
| Operating voltage | 7 kV AC |
| Air consumption | on request |
| Pressure | Max. 10 bar |
| Airconnection | 1/4" BSP |
| Options | airfilter |
| Suitable power unit | A2A7S |
| Input voltage | - |
| Approval | UL |



Performax Easy: Air knife with anti-static bar

The Airknife with Performax Easy is especially useful for situations where the ionisation or cleaning needs to be mobile s.a. cleaning parts with a robot. With the 24V connection it is easy to install in such applications. The Airknife with Performax Easy is standard available in 3 lengths, 12, 18 and 24 inch. Longer combinations on request.

| | |
|---------------------------|--------------------|
| Model | Performax Easy |
| Working distance | 3000 mm |
| Working width | 310 460 610 mm |
| Housing material | aluminum/steel |
| Inner bar material | reinforced plastic |
| Ionisation point | special alloy |
| Cable | low voltage |
| Weight | 4 kg/m |
| Ambient temperature | 0 - 55° |
| Use circumstances | industrial |
| Protection classification | IP66 |
| Operating voltage | 9 kV AC |
| Air consumption | on request |
| Pressure | Max. 10 bar |
| Airconnection | 1/4" BSP |
| Options | airfilter |
| Suitable power unit | integrated |
| Input voltage | 24 V DC < 0,5 A |
| Approval | - |



2.2 Ionizing Air Nozzles

Ionizing air nozzles produce a high-velocity ionized air flow which simultaneously cleans and neutralizes static charges on parts and materials. The nozzles operate on compressed air and provide a pin-point ionized air source for being used in critical cleaning and/or static neutralizing. Nozzles can be fitted and installed in many configurations to meet specific requirements. power units supply the high voltage necessary for operation. If required, all nozzles can be fitted with a stop valve. The HE and H types can be fitted on a standard air header.

HE: Ionizing nozzle

The high voltage at both emitter points is current limited. Being installed outside the air flow, the high-voltage points are hardly subject to fouling, if at all. The nozzle blowoff force is high at a relatively low air consumption.

| | |
|---------------------|------------------------------------|
| Model | HE |
| Working distance | 250 mm |
| Housing material | plastic |
| Ionisation point | special alloy |
| Cable | PVC and PE |
| Weight | 0,04 kg |
| Ambient temperature | 0 - 55° |
| Use circumstances | industrial |
| Operating voltage | 7 kV AC |
| Noise level | 66 dB using 1 bar (at 1 metre) |
| Air consumption | 3,5 Nm ³ /h using 1 bar |
| Max. pressure | 7 bar |
| Airconnection | 1/8" BSPT on nozzle |
| Option | multiple nozzles on header |
| Suitable power unit | A2A7S |



Flat: Ionizing nozzle

The Flat ionizing air nozzle is used to clean and neutralize electrostatically charged surfaces. The use of compressed air allows awkward places to be neutralized and cleaned as well.

Connected to a SIMCO power unit, the ionizing air nozzles produce an air flow which is rich in positive and negative ions. When this air flow is pointed to an electrostatically charged area, electrons are exchanged until the area is neutralized. This makes that the material is neutralized during the blow-off process and prevents the blown-off particles from being re-attracted. The current of the Flat Nozzle is limited, so that the emitter point is safe to touch.

The Flat Nozzle is especially suitable for neutralising at the feeding and delivery sections of machines in the printing industry.

| | |
|---------------------|----------------------------|
| Model | Flat |
| Working distance | 50 - 300 mm |
| Housing material | ABS and PVC |
| Ionisation point | special alloy |
| Cable | PVC en PE |
| Weight | 0,23 kg incl. 3 m HV cable |
| Ambient temperature | 0 - 55° |
| Use circumstances | industrial |
| Operating voltage | 7 kV AC |
| Noise level | - |
| Air consumption | - |
| Max. pressure | 6 bar |
| Airconnection | 1/8" BSP |
| Option | - |
| Suitable power unit | A2A7S |



BW: Ionizing nozzle

This nozzle has been designed especially for neutralising and cleaning (small) bottles on the inside, etc. Ionisation takes place at the end of the tube from which the air is blown. The high-voltage point is not shockless. The tubes are available in two diameters and in a required length. A flexible version of the tube is also possible (type BFW)

| | |
|---------------------|------------------------------------|
| Model | BW |
| Working distance | 150 mm |
| Housing material | plastic, stainless steel |
| Ionisation point | special alloy |
| Cable | PVC en PE |
| Weight | 0,06 kg |
| Ambient temperature | 0 - 55° |
| Use circumstances | industrial |
| Operating voltage | 3,3 kV AC |
| Noise level | 58 dB using 1 bar (at 1 metre) |
| Air consumption | with 1/4" tube 4 Nm3/h using 1 bar |
| Max. pressure | 6 bar |
| Airconnection | 1/8" BSPT |
| Option | flexible tube |
| Suitable power unit | A2A3S |



3 Technical data

Airknife with Anti-static Bar

| Model | Working distance | Working width | Housing material |
|----------------|------------------|-----------------------|------------------|
| MEB | 3000 mm | 76 150 310 460 610 mm | aluminum |
| Performax Easy | 3000 mm | 310 460 610 mm | aluminum/steel |

| Model | Inner bar material | Ionisation point | Cable | Weight |
|----------------|--------------------|------------------|----------------|----------|
| MEB | PVC | special alloy | metal shielded | 2,6 kg/m |
| Performax Easy | reinforced plastic | special alloy | low voltage | 4 kg/m |

| Model | Ambient temperature | Use circumstances | Protection classification | Operating voltage | Air consumption |
|----------------|---------------------|-------------------|---------------------------|-------------------|-----------------|
| MEB | 0 - 55° | industrial | - | 7 kV AC | on request |
| Performax Easy | 0 - 55° | industrial | IP66 | 9 kV AC | on request |

| Model | Pressure | Airconnection | Options | Suitable power unit | Input voltage | Approval |
|----------------|-------------|---------------|-----------|---------------------|-----------------|----------|
| MEB | Max. 10 bar | 1/4" BSP | airfilter | A2A7S | - | UL |
| Performax Easy | Max. 10 bar | 1/4" BSP | airfilter | integrated | 24 V DC < 0,5 A | - |

Ionizing Air Nozzles

| Model | Working distance | Housing material | Ionisation point | Cable | Weight |
|-------|------------------|--------------------------|------------------|------------|----------------------------|
| HE | 250 mm | plastic | special alloy | PVC and PE | 0,04 kg |
| Flat | 50 - 300 mm | ABS and PVC | special alloy | PVC en PE | 0,23 kg incl. 3 m HV cable |
| BW | 150 mm | plastic, stainless steel | special alloy | PVC en PE | 0,06 kg |

| Model | Ambient temperature | Use circumstances | Operating voltage | Noise level | Air consumption |
|-------|---------------------|-------------------|-------------------|--------------------------------|---|
| HE | 0 - 55° | industrial | 7 kV AC | 66 dB using 1 bar (at 1 metre) | 3,5 Nm ³ /h using 1 bar |
| Flat | 0 - 55° | industrial | 7 kV AC | - | - |
| BW | 0 - 55° | industrial | 3,3 kV AC | 58 dB using 1 bar (at 1 metre) | with 1/4" tube 4 Nm ³ /h using 1 bar |

| Model | Max. pressure | Airconnection | Option | Suitable power unit |
|-------|---------------|---------------------|----------------------------|---------------------|
| HE | 7 bar | 1/8" BSPT on nozzle | multiple nozzles on header | A2A7S |
| Flat | 6 bar | 1/8" BSP | - | A2A7S |
| BW | 6 bar | 1/8" BSPT | flexible tube | A2A3S |