

ANTISTAT AMW

Effective counter to static charges



Generator

STATIC ELECTRICITY IS A NUISANCE, AND A HAZARD, AND ATTRACTS DIRT

Static electricity can seriously disrupt a wide variety of manufacturing processes, and is a constant source of annoyance. The charges' changing polarity, and resultant forces of attraction and repulsion give rise to tangled warp threads, cause sheets of paper to stick together, or quilt feathers and fibres to bunch, and attract dirt and dust to surfaces which are supposed to be smooth and clean. If personnel happen to come into contact with highly charged batches, rolls, beams, carts or bales, the results can be highly unpleasant, and could even trigger an accident.

Elimination of such static charges, no matter what the process, is therefore an absolute must.

The AMW Antistat ionizer for static-free industrial processing

It is no secret that static electricity is caused by the friction generated by two materials coming together, and separating, but only if the positive and negative carriers (ions and electrons) cannot escape from the material because of its poor conductivity.

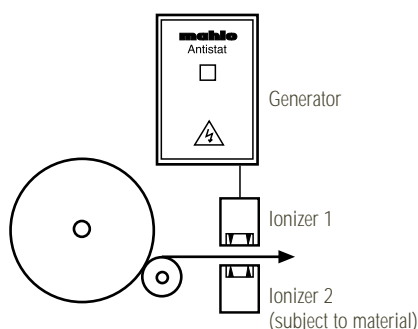
Static can be effectively discharged

by bridging the gap between the insulated carrier and earth, or mains supply, with an electrical conductor. This can take the form of earthed, metallic fingers or spikes, placed in the immediate vicinity of the charged commodity. A far better way, however, is to make the air space around the material conductive, by the simple process of ionizing it.

Type AMW Antistat ionizers induce this conductive state. A high-tension AC voltage applied via high-ohmage resistors to the spikes of the ionizer bar creates an exceedingly strong electrical field around the tips, rather like the pale blue discharge which can be observed at sharp corners or edges during a thunderstorm. In the air under the bar, the molecules are split, or ionized, thus making the air conductive around the spikes, and providing an escape route for the static electricity in the commodity.

Three vital aspects

- The ionizer bars should be fixed so that they almost touch the surface of the material (no farther away than 20 mm).
- Heavyweight material may have to be discharged at both sides (see diagram below).
- Static can be generated again wherever there is friction or separation. It should be discharged, therefore, at that point where it is proving troublesome.



Measurement

Control

Automation

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Ionizer bar

ANTISTAT AMW Technical features

Voltage Generator

Construction	High-tension transformer, totally enclosed in a block of hardened resin, and doubly protected by series-connected resistors. Impervious to heat
Outputs	Two 2 x 5 kV secondary outputs to feed up to a maximum of two 10 kV ionizer bars
Dimensions; weight	210 mm x 150 mm x 130 mm; 5.1 kg
Supply voltage	125V/60 Hz, 230V/50-60 Hz; 10VA

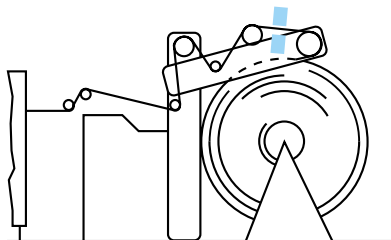
Ionizer bars

Construction	A series of synthetic blocks joined together on a supporting rail; two 3 m long high-tension cables, permanently connected to the blocks
Dimensions	Length: working width + 100 mm, Cross-section: 22 mm x 40 mm
Weight	0.7 kg/m

ANTISTAT AMW Typical applications

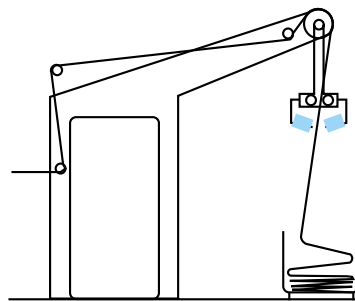
Batching (stenter etc.)

Ionizer bars on both sides for heavyweight fabric.



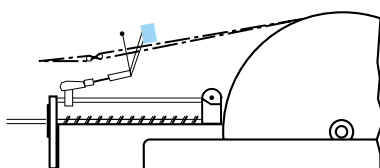
Plaiter

2 ionizers at the plaiter's extremities.



Warping machine

Discharge of static behind the reed.



Sizing machine

Discharge of static immediately ahead of the beam.

