Controlling Static on a Moving Web

In moving web applications, static charges are frequently generated from the continuous contact-and-separation action of the material in process as it passes over the rollers. Slowing your process speed may reduce the level of the static charge, but it will also reduce your overall productivity and cost-efficiency. In addition, if a high static charge is created on the take-up, you're more likely to encounter static problems in subsequent operations. Static charges can be more than a production nuisance, however; they can be dangerous. Static can create sparks, attract dust, and ignite flammable vapors, while discharges to personnel from large static build-ups cause injuries. Installing NRD ionizers in your moving web applications can control problems created by static and help you run at optimum process speeds.

Here's what to do:
1. Determining the proper linear ionizer for your application depends on certain variables- e.g., the web speed, the type of material in process, the maximum static voltage involved, etc. Contact NRD or your local representative for help with selection.

2. Select an installation position for the linear ionizer based on the following considerations:

- The installation location should be just before the point where the problem occurs, and just after the last web contact with rollers, guides, or any surface that might generate a static charge. (See Figure 1)
- The ionizer won't be damaged by moving machinery.
- The web has air behind it.
- The ionizer is over the web, not under it (preferable, but not essential).

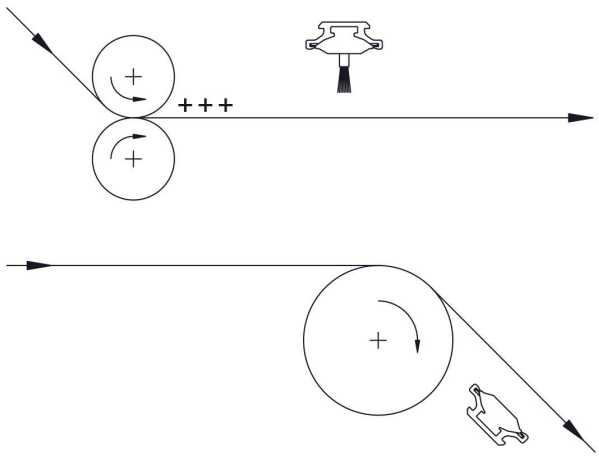

Figure 1

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ADVANCED STATIC CONTROL

What Do I Have To Do To Get This To Work?

3. When trying to achieve the lowest possible level of static charge at a particular position on the web – for example, point A in Figure 2 – then the distance between the ionizer and the roller should be slightly greater than three times the radius of the roller.

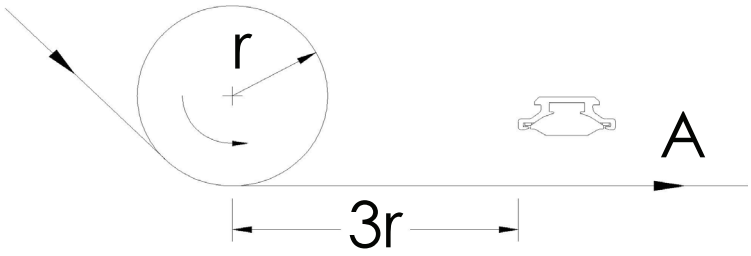

Figure 2

If the material in process is over 10 mil, you need to install two ionizers, one on either side of the web. (See Figure 3)

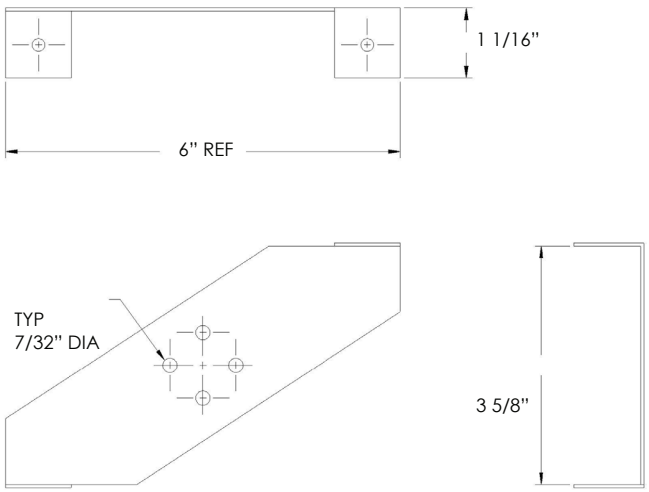

Figure 3