

# In Use – 10

## Nuclestat™ Ionizing Bars Help Improve Yields and Solve Static Problems in Electronic Handlers

The Data Mark Tester is one of the handlers or environmental testers commonly used by electronics manufacturers. These testers operate from 0° to 100°C. As temperatures rise, the hot dry convection air causes static to occur. While not easy to detect with a static field meter<sup>1</sup> (it's difficult to take measurements because the machine is grounded) it is clear that change takes place as the temperature increases. It's also clear that ionization is essential; without it, the components fail.

Fortunately, it is relatively simple to install an effective ionizing unit in this situation. It's also pretty easy to determine if it's effective, by doing a trial run. Start by installing a Nuclestat P-2001<sup>2</sup> ionizing bar on one machine, then compare the yields with other testers that don't have ionization. Chances are you'll see significant decrease in failure, and an impressive increase in yield with the ionization.

Gaining access for ionization requires removing the back of the machine to expose the contact heads that sense the devices for testing criteria. While the space inside the handler is quite restricted, there is a small ledge on the back of the machine in the path of the air manifolds. The circulated air passes

over the ledge and is blown onto the contact or tester heads. A Nuclestat P-2001 Bar (14" overall, with 12" effective length) can be installed on this ledge. Then, as air comes out of the manifold, it passes over the ionizer and is converted to ionized air.

There are a number of reasons alpha energy ionizers are more effective than electrical ones. Nuclestat P-2001 bars:

- Are easy to mount in tight spaces
- Require no high voltage power supply to potentially damage process controllers
- Have no RF emissions from cables
- Withstand high temperatures
- Need no calibration

### Quick Cross - Reference

1. **See In Theory – 7**  
How a Fieldmeter Works
2. **See Tech Tips – 1**  
Installing Nuclestat™ Linear Ionizers



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### Installing Nuclestat Ionizers with Data Mark Testers

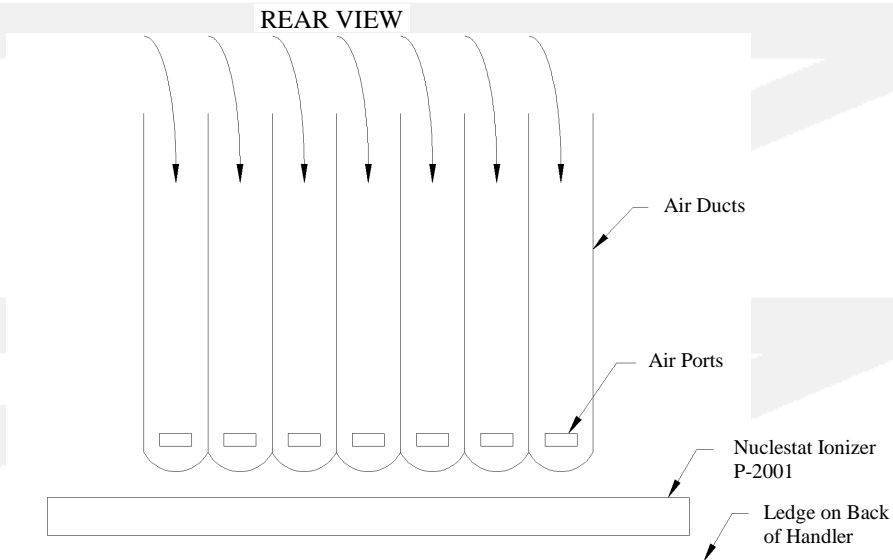


Figure 1

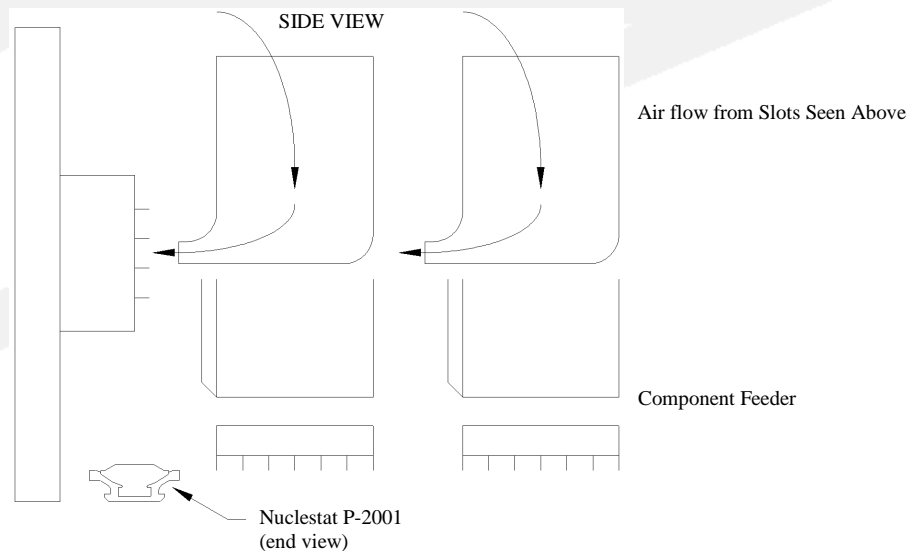


Figure 2



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