Installation / Operation / Maintenance

Staticmaster®

Model 6100EC and 6100ER Static Bar

General Guidelines

- Keep water, oil, grease, and other contamination away from static bars and power supplies at all times.
- Clean the ionizing points routinely as needed for optimum performance.
  CAUTION: Turn power off before performing any maintenance, removal, or repositioning of any static neutralizing equipment or power supplies.
- Mount the remote Power Supply as close as possible to the static bar.
- Dress and secure the high voltage cable neatly along the machine frame avoiding sharp corners and pointed edges.
- Make sure the static bar metal (aluminum) casing and the power supply are well "grounded".

Initial Set-up and Positioning

Proper location and positioning of the static bar(s) and power supply is essential to satisfactory performance and life of the equipment. Because each application is unique, careful thought is required to establish the best location and installation. The following guidelines will help to determine that.

Typically, the best place to install a static bar is immediately ahead of the problem. For example, if an operator is getting "shocked" from a rewind roll, then the static bar should be located so that it would be the last thing the material passes before it winds onto the roll. Another example is stacking paper at the end of a sheeter. Allowing the sheet to pass by the static bar last would assure a static "neutral" sheet enabling it to slide properly into place.

1. Metal parts in proximity to static bars tend to reduce their effectiveness. Whenever possible, allow two inches of free space all around the static bar and behind the material to be neutralized.
2. Unless the static bar is air assisted, the most effective distance between the static bar and the material to be neutralized is 1/2 to 1-1/2 inches. Do not place the static bar so that its ionizing points are facing the material when the material is against a background surface. (see figure on next page)
3. Static bars will operate efficiently above, below, or on either side of the material. Keeping the ionizing points facing downward tends to minimize contamination from falling on them.
4. Universal hardware is provided with the static bars. Use them or other metal clamping (if preferred) to secure the static bars to the machine frame or other suitable stationary angle or rod.
5. To prevent electrical shock and to assure proper operation and performance of the equipment, the static bars and power supply must be grounded. Metal clamps or mounting bolts tightened securely against the static bar's metal housing and attached to a "grounded" metal machine frame will provide an adequate "ground". If the static bar or power supply must be mounted to any non-metal surface, you must attach an external ground wire from the equipment to a suitable electrical ground.

Remember:

- The metal case of the static bars and the power supply must be electrically grounded!
- Do not attach ground wire to hot water, steam, or gas pipes.
- Do not remove ground stud from power supply or ground post from power supply line cord.
- Always plug the line cord into a properly grounded receptacle, or if wiring direct without the plug, be certain to properly and securely connect the ground wire.

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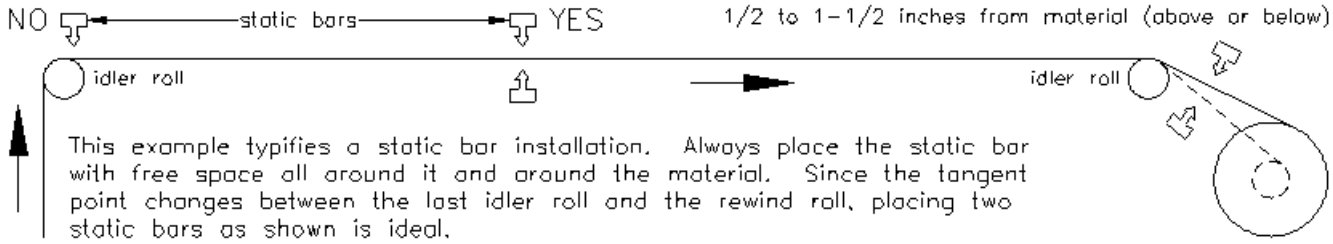
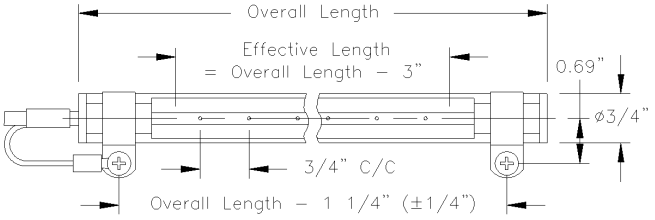


Mounting the Static Bar

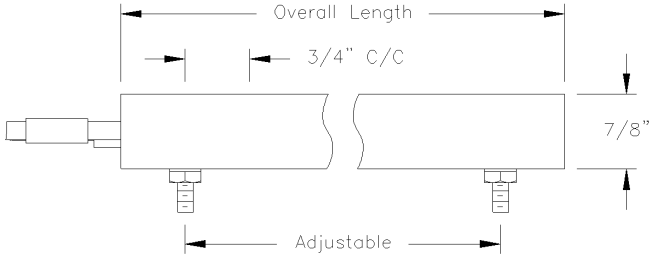
6100EC:

Uses loop clamps for mounting. Attach the loop clamps, with the supplied #10 mounting bolts, to a pre-selected and prepared angle iron, rod or brace.



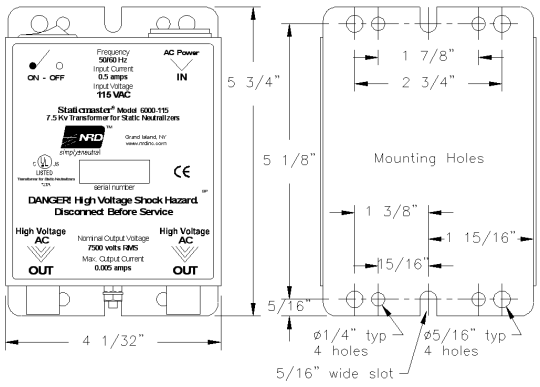
6100ER:

Is conveniently slotted on the back to house #8 weld bolts for mounting. Slide the weld bolts into and along the slot to the desired position and lock into place. Use universal extension brackets to bridge to the machine's side frame or attach the mounting bolts to a pre-selected and prepared angle iron, rod or brace.



Locating the Power Supply

Locate the Power Supply as close as possible to the static bar using its mounting plate to securely fasten the unit in place. Choose a location free of oil, water and gross contamination. Avoid areas where ambient temperature is continuously in excess of 120°F. Mount the Power Supply so that the High Voltage Output Ports are facing down or to either side to prevent entry of foreign material. Unless specified differently on the order, each static bar is equipped with a standard 72 inch length of high voltage cable inside a metal braid shield. This length of cable allows the installation of two static bars approximately 10 feet apart connected to one, centrally located power supply. If the high voltage cable is too long, you may coil it and secure it neatly out of harm's way. Because the cable is shielded, there will be no adverse effects such as excessive flux fields or noise that can result from unshielded cable.



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Operation

After the static bars (6100EC or 6100ER) have been installed, they need little attention during operation. Because the ionizing points are capacitively coupled to the high voltage cable, these static bars are categorized as "shockless". This means there is so little energy at the points an operator would scarcely feel a tingle if he or she accidentally touched them when powered. However, use caution whenever handling static bars since the ionizing points are sharp and can cause pinpricks or scratches if mishandled.

Routine Service

The 6100EC and 6100ER static bars and the 6000 power supply are designed to be durable, dependable, and trouble free. They require a minimal amount of maintenance. Each application and each environment, in which static control equipment is installed, is different making it difficult to state accurately how often cleaning is required.

After a period of use, a small sphere of dust will accumulate on the ionizer points. Do not allow this accumulation to continue indefinitely. Although they may continue to perform satisfactorily when they are dirty, gross contamination will degrade their efficiency.

Clean the ionizer points periodically with a stiff bristle brush (such as a toothbrush). A few quick swipes across the points along the length of the bar are usually sufficient.

Note: Do not use a brush with metal bristles since they may damage the points; scratch the plastic holding the points, and / or shed bristles, which may ultimately lead to a short circuit condition.

You may also use a compressed air blow off gun or nozzle to blow out loose dirt from the static bars. Use caution and proper eye protection when doing so.

CAUTION: Be sure power to the static control equipment is off before cleaning any part of it.

Trouble Shooting

The static control system is designed to neutralize static electricity on non-conductive materials by creating a field of positive and negative ions. When the electrostatically charged material passes through the ionized field it will attract ions of the polarity required to become "neutralized". If static electricity is the cause of a process problem, most of the time, the problem can be controlled, if not alleviated, with the proper application and use of this type of equipment. If you find that the system you have chosen does not significantly reduce or eliminate the problem after it has been properly installed, proceed with the following checklist.

- With power off, check to see that the high voltage cable connector is properly assembled and connected.
- Does the power supplied match that specified on the nameplate?
- Are the static bars and power supply adequately grounded?
- Are the static bars too close or far from the material to be neutralized?
- Are the static bars surrounded by metal or "shorting out"?
- Is there "free air" surrounding the static bars and below the material as indicated in the illustration above?

Has the high voltage cable been cut or otherwise damaged?

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Specifications:

6100EC:

Rectangular: 3/4 inch wide x 7/8 inch high

Overall Length: 2 to 144 inches

Effective Length: 1 to 143 inches

Ionizing Point Spacing: 3/4 inch on center

High Voltage Cable: 30KVDC, 80C, UL VW-1. Standard length 72 inches inside braided shield, terminated in a factory installed spring-loaded connector to mate with 6000 or comparable Power Supply.

Optimum Range: 3/4 to 1 1/2 inches

Mounting: Adjustable studs; #8-32 x 1/2 inch

Certifications:

c US CE

6100ER:

Round: 3/4 inch diameter

Overall Length: 4 1/2 to 144 inches

Effective Length: 1 to 141 inches

Ionizing Point Spacing: 3/4 inch on center

High Voltage Cable: 30KVDC, 80C, UL VW-1. Standard length 72 inches inside braided shield, terminated in a factory installed spring-loaded connector to mate with 6000 or comparable Power Supply.

Optimum Range: 3/4 to 1 1/2 inches

Mounting: Loop Clamps

Certifications:

c US CE

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