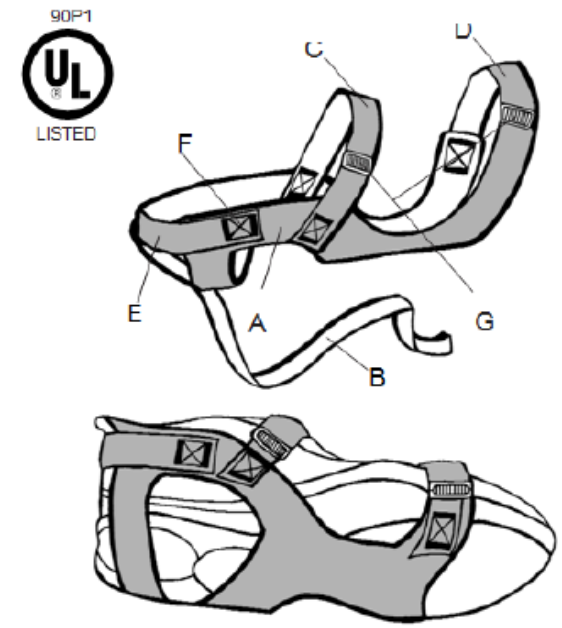


# Personal Earthing



90P1  
UL LISTED

For standing operations, personnel shall be grounded via a wrist strap system or by a flooring/footwear system. When a flooring/footwear system is used, one of the two following conditions shall be met:

A. When the total resistance of the system (from the person, through the footwear and flooring to the grounding / equipotential bonding system) is less than  $3.5 \times 10E7$  ohms, Method 1 shall be followed (see Table 2).

B. When the total resistance of the system (from the person, through the footwear and flooring to the grounding / equipotential bonding system) is greater than  $3.5 \times 10E7$  ohms and less than  $1 \times 10E9$  ohms, Method 2 shall be followed (see Table 2).<sup>\*</sup> (ANSI/ESD S20.20 section 8.2)

<sup>\*</sup>If the contact area between the bottom of the foot and the floor is not continuous, charge generation may occur especially when a person is walking. Heel straps must be worn on both feet to minimize the amount of time that the body of the person is isolated from ground while walking. (Handbook ESD TR 20.20 paragraph 5.2.3)

<sup>\*</sup>Compliance verification should be performed prior to each use (daily, shift change, etc.). The accumulation of insulative materials may increase the foot grounder system resistance. If foot grounders are worn outside the ESD protected area testing for functionality before re-entry to the ESD protected area should be considered. (ESD TR 20.20)

APPENDIX B - Foot Grounder Usage Guidance

Desco recommends the use of foot ground tester item No. 19252 or 19253.

For additional information on the use and maintenance of foot grounders, see Technical Bulletins TB-2020 and TB-2040.

**Description:**

Premium Full Coverage Foot Grounders provide a more complete path-to-ground than regular heel or toe grounders due to a wider and more consistent contact area. Many users are improving ESD control in response to handling increasingly sensitive ESD devices such as Human Body Model class 0 devices. These foot grounders are designed to provide maximum ESD protection and fit most standard footwear. The new embedded 2 Megohm resistor provides added operator safety, ensuring a minimum of 1 Megohm ground resistance. The new 3 point hook and loop fastening system promotes greater durability, comfort, and ease of installation. The Premium Full Coverage Foot Grounder's improved design allows for maximum contact area, providing superior grounding effectiveness. The rubber sole pattern is made from a black conductive outer layer and a non-marring colored lining that prevents carbon marks on shoes. These units include a blue tab with carbon suffused fibers and a stretch loop snaploc fastening system. It is suitable for ESD footwear component in Flooring - Footwear System as primary grounding method < $3.5 \times 10E7$ ohms per ESD STM 97.1 Floor Materials and Footwear-Resistance in Combination with a Person, and ANSI/ESD S20.20 Table 2 Method 1.

**Components:**

- A. 0.060" nominal thickness, 3" wide, tear resistant, dual layer rubber with black conductive exterior with a non-marring interior.
- B. 3/8" wide, 18" long blue polyester ribbon contains 8 electrically conductive carbon suffused fibers.
- C. 3/4" wide blue non-elastic hook material.
- D. 3/4" wide black non-elastic loop material, for quick and easy attachment to foot.
- E. 3/4" wide black elastic material stretches for comfort.
- F. A 1/4 watt, carbon film, 2 megohm internal resistor.
- G. 2 D-Rings allow for an adjustable and snug fit.



Date and lot coded to ensure quality control.

(UL) listed for safety and date coded.

**Tab to cup resistance:**  
10E6 - 10E7 Ohms @ 100 volts

ITEM #	DESCRIPTION	SHOE SIZE
17290	Small, 2 Megohm Resistor, RTG: < $10E7$ Ohms @ 100 volts, (UL)	Women's 4-8
17291	Medium, 2 Megohm Resistor, RTG: < $10E7$ Ohms @ 100 volts, (UL)	Women's 6 - Men's 11
17292	Large, 2 Megohm Resistor, RTG: < $10E7$ Ohms @ 100 volts, (UL)	Men's 10-14

Our UL listed foot grounders are rated at 250 VAC. It is not recommended to use them where exposure to line voltages above 250 VAC is possible. **Caution:** The foot grounder is for ESD control. It will not reduce or increase your risk of receiving electric shock when using or working on electrical equipment.

**PREMIUM FULL COVERAGE FOOT GROUNDER, 2 MEG**

DESCO WEST: 3051 WALNUT AVE., CHINO, CA 91710 WEB SITE: Desco.com PHONE (909) 627-8178 FAX (909) 627-7449 DESCO EAST: 30 HUDSON RD, CANTON, MA 02021-1407 PHONE (781) 821-8170 FAX (781) 876-0172	<b>DRAWING NUMBER</b> 17290	<b>DATE:</b> August 2007
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