



DESCO TECHNICAL BULLETIN TB-2020

Foot Grounders - Grounding, Testing, and Maintenance

90P1



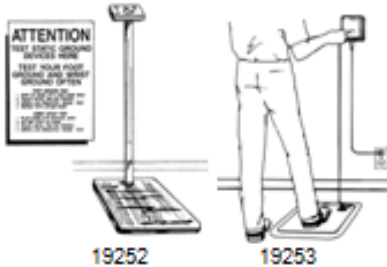
Made in the United States of America

Description

Desco's complete line of foot grounders has been created to provide a continuous ground path between the operator and a properly grounded ESD protected flooring. Foot grounders are designed for use in applications where user mobility is required, such as wave solder, kitting, and quality control. Per ANSI/ESD S20.20 Paragraph 6.2.2.2, "ESD protective flooring used with approved footwear, may be used as an alternative to the wrist strap system for standing operations." Foot grounders quickly and effectively drain the static charges which collect on personnel during normal everyday activities.

General Guidelines

1. It is recommended that foot grounders be worn on both feet, in order to assure that a continuous path to ground is maintained.
2. Grounding tabs should be tucked inside the shoe with as much contact area as possible to the bottom of the stockinged foot. Foot grounders rely upon the perspiration in the shoe to sustain electrical contact between the conductive grounding tab and the body.
3. Foot grounders should be used in conjunction with floor surfaces which have a surface resistance of less than 1×10^9 ohms.
4. A current limiting one or two megohm resistor in series with the grounding tab is recommended.



Testing Your Foot Grounders

The best test of your foot grommet is one that includes all three components: the individual foot grommet, the grounding tab and the interface between the grounding tab and the wearer's sweatlayer.

Desco has testers designed to properly test foot grounders. For more detailed information on these testers, ask for technical bulletins TB-2040 (19252, 19253).

If you obtain a fail reading from the tester you should stop working and clean the foot grommet and grounding tab. Retest after cleaning. If the unit still fails, replace the foot grommet. Retest the system before beginning work.

Cleaning

Foot grounders are to ground static charges, while dirt generally provides an insulative layer adversely affecting reliability. For proper operation, the Foot Grommet and its conductive strip must be kept clean.

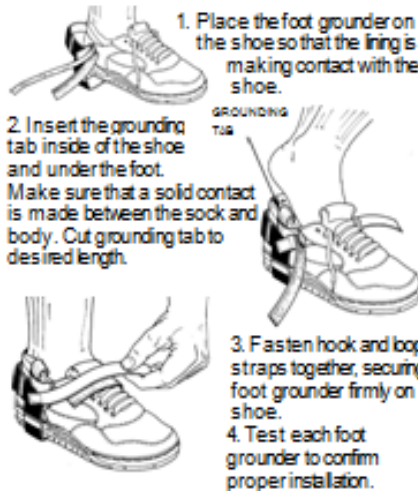
The rubber portion of the Foot Grommet should be cleaned using Desco's Restore™ Antistatic Surface & Mat Cleaner or "Static-Wipes" wipers. An alternative would be to clean using isopropyl alcohol. The Desco cleaning products are specially formulated for cleaning ESD control components and are silicone free. This is critical as silicone is an insulator. Desco ESD cleaners should not be used to clean the nylon polyester grounding tab.

Foot Grounders can be safely hand or machine washed on gentle cycle. Mild detergents, such as Woolite® or a liquid dish washing product and warm water are recommended. However, care must be taken to ensure that these detergents are silicone free.

Installation

HOOK & LOOP AND MARR RESISTANT HEEL GROMMETS

Desco model 07560, 17200, 17202, 17250, 17252, and 17260 heel grommets are designed for use on standard shoes. All Desco foot grounders can be easily adjusted to fit the individual wearer. Desco heel grommets have a dissipative lining that will not mar white or light colored shoes. Models 07560, 17200, 17202, and 17252 have a current limiting one or two megohm resistor in series with the grounding tab. Models 17250 and 17252 have no resistor.



D-RING HEEL GROMMET

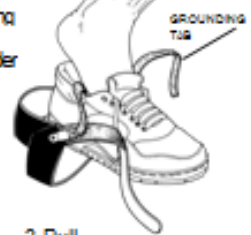
Desco model 07590 heel grommets are equipped with an elastic D-ring fastening system which provides snug cinching of the ankle strap and allows "flex" during walking. They are designed for use on most types of shoes and boots. The light blue lining prevents marring on white or light colored shoes.



These foot grounders include a molded external resistor and a permanently attached grounding tab.

1. Place foot grommet on the shoe so that the blue lining is making contact with the shoe.

2. Insert the grounding tab inside of the shoe and under the foot. Make sure that a solid contact is made between the sock and body. Cut grounding tab to desired length.

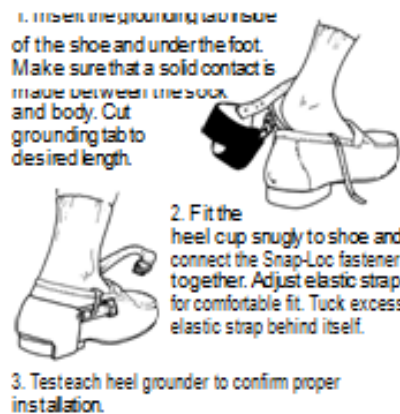


3. Pull the strap through the D-ring and clinch down for a snug, comfortable fit.

4. Test each foot grommet to confirm proper installation.

HEEL GROMMET WITH SNAP-LOC FASTENING SYSTEM

The Desco model 07515 heel grommets are equipped with a Snap-Loc quick release fastening system. The model 07515 has a cup and lining that will not mar shoes or floors. The 07515 has a molded exterior 2 megohm resistor.

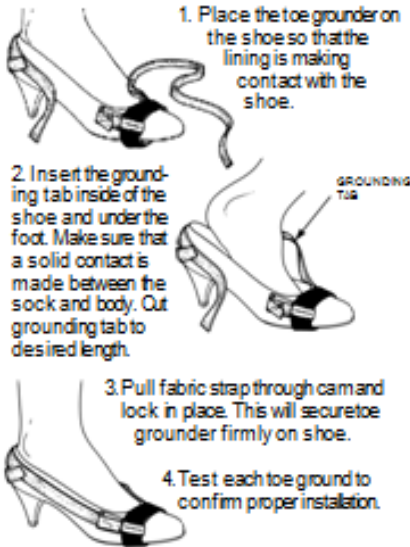


HOOK & LOOP TOE GROMMETS

Desco model 17222 toe grommets are designed for use on heeled shoes. Desco toe grommets have a lining that prevents marring on white or light colored shoes. Model 17222 has a current limiting one megohm resistor in series with the grounding tab.

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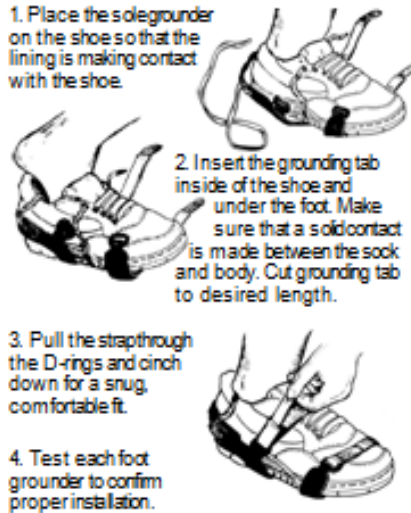


1. Place the toe grounder on the shoe so that the lining is making contact with the shoe.

2. Insert the grounding tab inside of the shoe and under the foot. Make sure that a solid contact is made between the sock and body. Cut grounding tab to desired length.

3. Pull fabric strap through cam and lock in place. This will secure toe grounder firmly on shoe.

4. Test each toe ground to confirm proper installation.

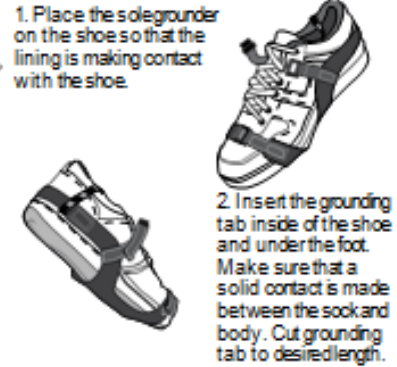


1. Place the sole grounder on the shoe so that the lining is making contact with the shoe.

2. Insert the grounding tab inside of the shoe and under the foot. Make sure that a solid contact is made between the sock and body. Cut grounding tab to desired length.

3. Pull the strap through the D-rings and cinch down for a snug, comfortable fit.

4. Test each foot grounder to confirm proper installation.



1. Place the sole grounder on the shoe so that the lining is making contact with the shoe.

2. Insert the grounding tab inside of the shoe and under the foot. Make sure that a solid contact is made between the sock and body. Cut grounding tab to desired length.



Snap-Loc Fastening System

3. Connect the Snap-Loc fastener together. Adjust elastic strap for comfortable fit. Tuck excess elastic strap behind itself.

4. Test each heel grounder to confirm proper installation.

D-RING TOE GROUNTERS

Desco model 07595 toe grounders with the elastic D-ring fastening system are designed for use on heeled shoes. Desco toe grounders have a blue lining that will prevent marring on white or light colored shoes. These toe grounders include a molded external 2 megohm resistor and a permanently attached grounding tab.

1. Insert the grounding tab inside of the shoe and under the foot. Make sure that a solid contact is made between the sock and body. Cut grounding tab to desired length.



2. Place rubber toe material under toe area of shoe sole. Pull velcro strap over top of shoe and cinch down until snug. Install so that the lined surface is making contact with the shoe.

3. Pull elastic strap around the back of the heel. Adjust D-ring plastic loop for a comfortable fit.

4. Test each toe grounder to confirm proper installation.

SOLE GROUNTERS

Desco model 07501, 07502, and 07503 sole grounders are designed for use on standard shoes. Desco sole grounders are available in three sizes and can be easily adjusted to fit the individual wearer. Sole grounders have a lining that prevents marring on white or light colored shoes. Models 07507, 07508, and 07509 also have a non-marring exterior to prevent marks on floors. Sole grounders have a molded exterior 2 megohm resistor.

FULL COVERAGE GROUNTERS

Desco model 17290, 17291, and 17292 full coverage grounders are designed for use on standard shoes. They can be easily adjusted to fit the individual wearer. They have a lining that will not mar most footwear. These foot grounders have a discrete one megohm resistor built into the grounding tab.



2. Insert the grounding tab inside of the shoe and under the foot. Make sure that solid contact is made between the stocking foot and grounding tab. Cut grounding tab to desired length.



4. Test each full coverage grounder to confirm proper installation.

1. Place the full coverage grounder on the shoe so that the lining is making contact with the shoe.



3. Connect the snap-loc fastener together. Adjust elastic strap for comfortable fit. Tuck excess elastic strap behind itself.

DISPOSABLE FOOT GROUNTERS

1. Insert the conductive grounding tab inside the shoe and under the foot.

2. Pull front and side extension tabs securing Full Coverage Foot Grounder

3. Then, tuck excess conductive grounding tab into the shoe.

4. Test each foot grounder on an ESD footwear tester to confirm proper installation.

ATTENTION: This product is not recommended for use on equipment with operating voltage exceeding 250 VAC.

CAUTION: The ESD Series is for electrostatic control. It will not reduce or increase your risk of receiving electric shock when using or working on electrical equipment. Follow the same precautions you would use without wrist straps, including:

- Make certain that equipment having a grounding type plug is properly grounded.
- Make certain that you are not in contact with grounded objects other than through the ESD Series.

Limited Warranty, Warranty Exclusions, Limit of Liability and RMA Request Instructions

See Desco's Terms and Conditions - <http://descoindustries.com/Terms-And-Conditions.aspx>