TERRA UNIVERSAL.COM
Critical Environment Solutions

Quick-Start Operating Guide *Document No. 1800-49*

Sole Cleaner

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Installation and Operating Guide

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Proprietary Notice

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Safety Notice

A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death.

The following symbols are intended to call your attention to two levels of hazard involved in operation:

The information presented here is subject to change without notice.

CAUTION

Cautions are used when failure to observe instructions could result in significant damage to equipment.

WARNING

Warnings are used when failure to observe instructions or precautions could result in injury or death.

1.0 Introduction

This manual provides information on operating and maintaining your Terra Sole Cleaner. By studying it carefully, you can be assured of a long, efficient service life from the unit.

2.0 Description

Terra Universal's Sole Cleaner features an adhesive surface that seizes particles from the bottoms of shoes and carts as they pass into a changing room or cleanroom.

It incorporates a microprocessor-controlled transport mechanism that automatically replaces the sticky film surface as it becomes soiled. Instead of individual mats, which must be cleaned or peeled off, the Sole Cleaner uses a continuous sheet of adhesive mat material mounted on a cartridge roll. An infrared beam monitors passing feet, and a counter displays total passes. When the total count exceeds the threshold you select, the transport system automatically unrolls a new sheet of sticky surface and resets the counter.

Made of stainless steel, the Sole Cleaner features a low, sloped profile that won't pose a tripping hazard. Its wide passage-way allows 36" of side-to-side clearance. The sticky film rests on a semi-flexible support pad that protects against rips, eliminates slippage, and enhances particle pick-up.

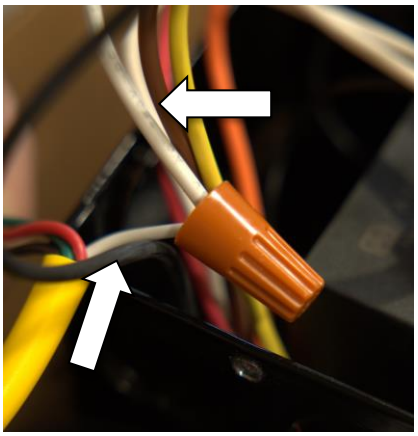
The side housings swing up to permit access to the mat cartridges and the transport mechanism, which uses a minimal number of moving parts to enhance system reliability. The programmable logic controller (PC) includes a readout of the number of passes. Multiple preset limits can be stored to allow simple system updating if the Sole Cleaner is moved from one location to another. The UL-listed take-up motor includes a safety overload shut-off that halts mat motion if an object (or person) is on the Sole Cleaner.

The Sole Cleaner requires no special installation—simply place it directly on the floor, plug it in, enter the desired number of passes, and it's ready for operation. It can be moved from one location to another, and requires no maintenance other than occasional cartridge replacement.

Each 180-foot roll typically yields about 50 surface changes.

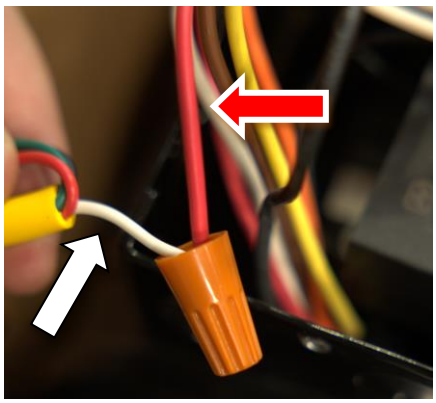
Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction. All metal components must be properly grounded.

All Sole Cleaners are pre-configured for 120V. It can be easily reconfigured to 240V.



120V Configuration

- Two **White** wires are connected to the same terminal.



220V Configuration

- **White** and **Red** wires connect to the upper terminal as shown.

Below is the placement for the wires for configuration.

1-Black
2-White
3-Red
4-Grn/Yel

1 – Black: Line 1 (L1)

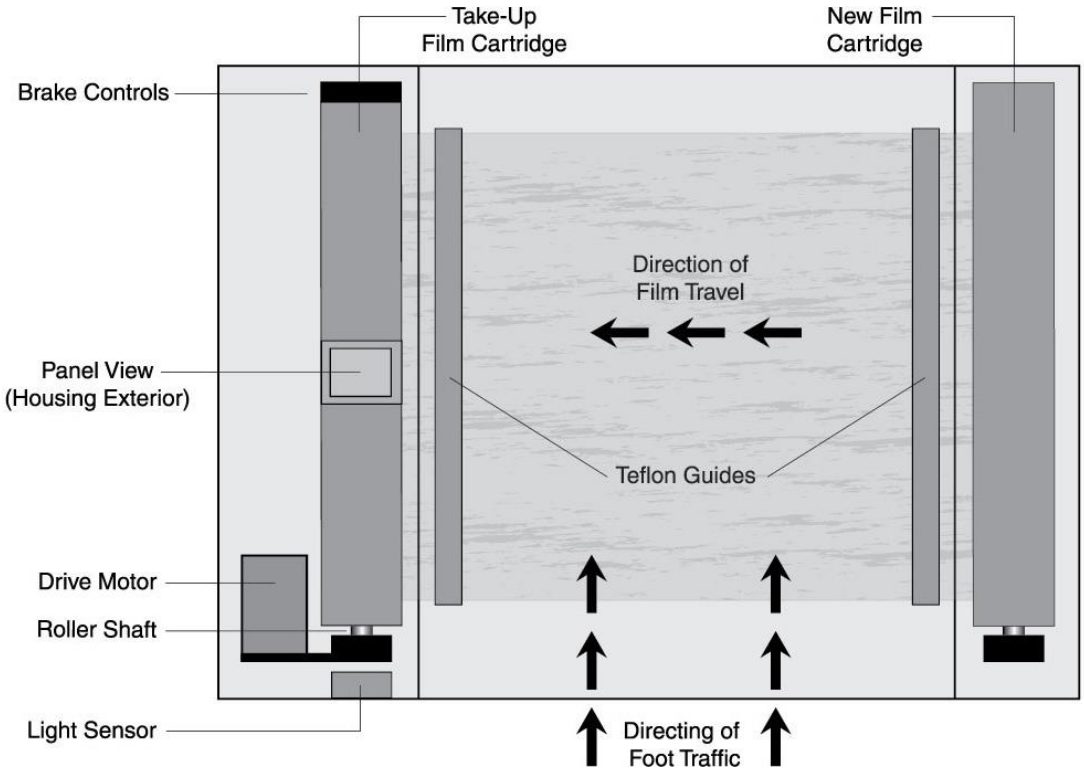
2 – White: Neutral (N 120VAC) or Line 2 (L2 240VAC)

3 – Red: Not Used

4 – Grn/Yel: Ground

CAUTION!
NOT FOR INTERRUPTING CURRENT

3.0 Operation

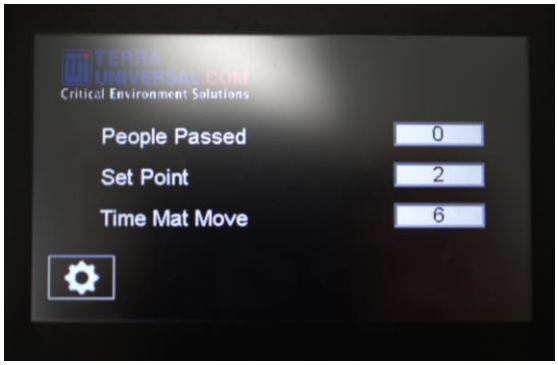


This automated adhesive mat changer will replace old used film with new material after a preset number of foot passes.

Under the cover of the right side there is the roll of new (feed) film. This film passes through the walking path on a plastic surface and is guided by two steel bars with a Teflon cover underneath for easy sliding of the film.

Under the cover of the left side (the larger housing) there is the motorized roll of used film.

The sole cleaner uses a programmable logic controller (PLC) touchscreen adjusting settings. The home page will show the People Passed, Set Point, and Time Mat Move. This can be accessed through using the PIN key 2-3-4-5.



To open the Settings menu, press the cog icon. The following menu should show up. To go back to the home page, press the house icon.

Summary of Keyboard Key Functions

Set Point: Displays the count value of mats that move

Set Time Mat Move: Reset /Preset the seconds of when the mat will move

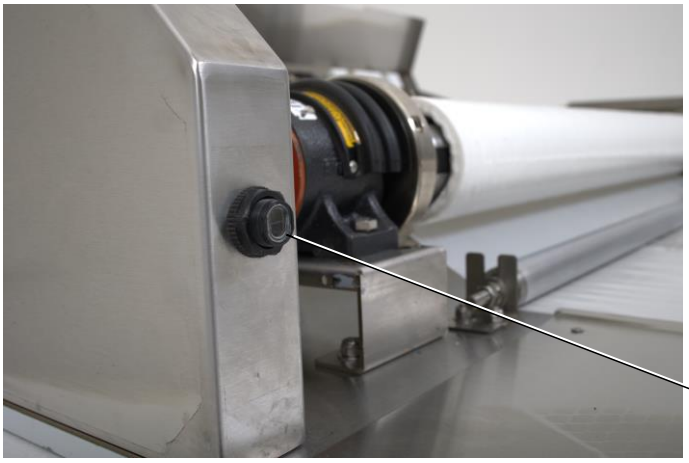
Delay Time Before Mat Move: The seconds before the mat refreshes a new one

People Passed: Counts the amount of people that have passed

Move Mat Manually: When held down, this moves the mat manually

3.1 Electric Controls Operation

An infrared light sensor detects the number of people passing through the unit. See photo.



When the counter reaches a preset count, the motor will advance the film to create a clean mat surface. Depending on the conditions of your facilities, you may find it necessary to change this factory setting (refer to counter adjustment information below).

When the counter reaches the preset number, before energizing the motor, current passes through 2 devices.

3.2 Delay Time Before Mat Move

Once the counter reaches the preset count (trigger count), motor activation will be delayed by this timer to allow any person on the walking pad to exit the sole cleaner safely. The Terra Universal logo light flashes for indicator and a red or green light bar.

Set Time Mat Move

Displays the time the motor will be winding the film (replacing old film with new).

3.3 Changing the People Passed Default:

You can change the counter set-point from the factory setting to suit your cleanliness requirements. Lower values may be necessary if shoe soles are particularly dirty. The counter automatically resets when this value is reached and the surface is regenerated.

To adjust the People Passed setting,

1. After opening the Settings menu, the PLC display should indicate the number of foot passes since the last reset (i.e., since the last time the Sole Cleaner replaced the film surface) under .

2. Press Manual Reset Counting, then press Set Point function key.

3. Set the number desired.

4. The set number is immediately saved. When complete, press the settings key.

3.4 Changing the Motor Time (Set Time Mat Move) Default:

This value is the time that the motor advances the film each time the Sole Cleaner regenerates the surface. The default value of 8 seconds is typically adequate to draw the soiled film completely inside the take-up housing and replace the entire footpath with new film. A shorter motor time will reduce the amount of film that is replaced; a longer motor time increases it.

To adjust the Motor Time setting,

1. Press Set Time Mat Move.

2. The PLC display should indicate the current motor time.

3. Set the desired motor time.

4. When you have established the desired time, press the Return key.

3.5 Roll Replacement:

When the clean film cartridge (located inside the right-side cartridge) is empty,

1. Lift the covers on both film cartridges.

2. Before removing the take-up roller with the soiled film, you must de-activate the motor. Trigger the red emergency stop button to ensure there is no movement or operation within the Sole Cleaner.

Figure A:
Engage the emergency stop button.

3. Beginning with one end of the take-up film cartridge, rotate the drive shaft until the Allen screw on the chuck faces up (see Figure B).

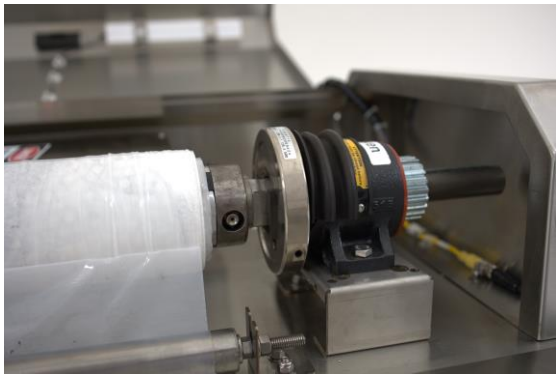


Figure B: Positioning the Quick-Release Chuck for Roll Removal.

4. Depress the nipple on the shaft to release air pressure, which holds the shaft against the inside of the cardboard cartridge. (See Figure C).

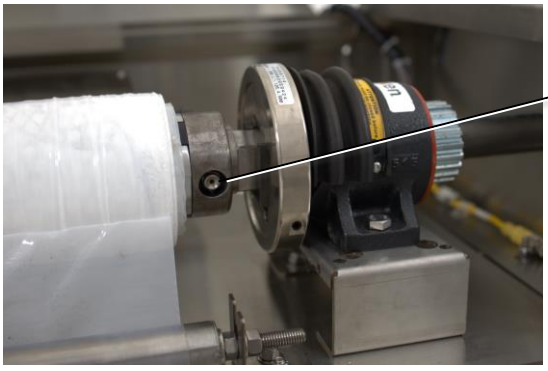


Figure C: Bleeding the Shaft Air.

5. Push back on the face of the quick-release chuck to disengage the chuck from the roller cartridge. (See Figures D and E).

Figure D: Removing the Quick-Release Chuck.

Cartridge Holder (Remove before Disposal of Dirty-Film Cartridge)

Figure E: Removing Film Cartridge.

6. Repeat steps # 3 – 5 for the other end of the take-up roller and both ends of the new film cartridge. Be sure to remove the cartridge holders from the dirty film cartridge before disposal.

7. Place the empty roll (from the clean film side) on the drive (take-up film) side, and place the new film roll on the clean film side. You will need to insert the cartridge holders into the clean film cartridge.

8. Depress the quick-release chuck on each end to fit the holder into the chuck. You may need to adjust the holder position inside the cardboard tube to ensure a snug fit.

9. Repeat this procedure for both ends of the take-up roller.

10. Insert a standard compressed air jet to lock the cartridge holder against the cardboard cartridge by injecting air into the nipple located on the holder shaft (See Figure F).

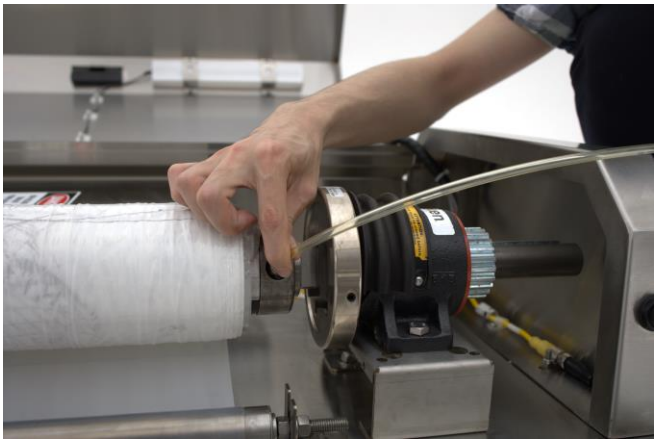


Figure F: Inflating the Cartridge Holders.

11. Thread the leading edge of the clear film across the mat support, below the Teflon guides, and onto the take-up roller (see Figure G). Use masking tape to hold the leading edge of the film along the length of the cardboard roller.

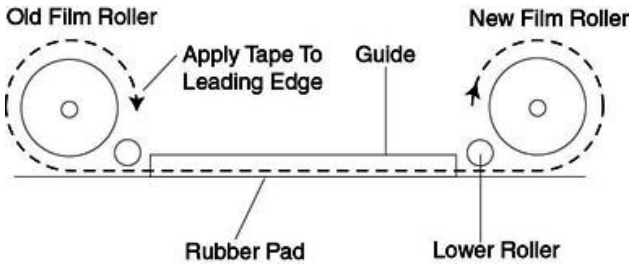


Figure G: Positioning the New Film.

12. Hold the *Move Mat Manually* key in the Settings menu momentarily to advance the film about a foot.

13. Close both covers. The quick-connect chucks will close automatically.

Replacement Roll **Cat. # 2010-52**

Each features 180 feet of 36"-wide 8 mil polyethylene film, yielding about 50 changes. Film is not damaged by shoes or casters and does not slip on Sole Cleaner support pad. Quantity discounts available. Weight: 39 lbs

4.0 Specifications

Electrical
- 115 VAC 60HZ 1 Phase
- Full - Load Current - 7.2 Amps

Sticky Film (typical values):
- Backing: Low-density polyethylene
- Adhesive: Water-based acrylic
- Thickness: 8 mil

Tensile Strength (psi)		Test Method
MD	3300	ASTM D 882
TD	2700	ASTM D 882
Elongation (%)		
MD	360	ASTM D 882
TD	540	ASTM D 882
Adhesion (oz/in)		
to stainless steel	8.0 – 12.0	PSTC-1

5.0 Warranty

Thank you for ordering from Terra Universal!