



Quick-Start Operating Guide

Document No. 1800-59

MicroVac™ Portable Cleanroom Vacuum Cleaner

© Copyright 2010 Terra Universal Inc. All rights reserved. • Revised October 2010

Your Comprehensive
 Equipment Source





Proprietary Notice

This manual pertains to proprietary devices manufactured by Terra Universal, Inc. Neither this document nor any portion of it may be reproduced in any way without prior written permission from Terra Universal.

Terra Universal makes no warranties applying to information contained in this manual or its suitability for any implied or inferred purpose. Terra Universal shall not be held liable for any errors this manual contains or for any damages that result from its use.

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:



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.

The information presented here is subject to change without notice.

1.0 Introduction

This manual provides information on installing and operating your Terra Universal MicroVac™ Portable Cleanroom Vacuum Cleaner.

By studying this document carefully, you can be assured of a long, efficient service life from the unit.

2.0 Description

The MicroVac™ Cleanroom Vacuum Cleaner/Blower performs two important cleanroom functions: it provides powerful suction to act as a cleanroom vacuum cleaner; and its ULPA-filtered exhaust provides a portable, localized source of clean air for blowing away particles, drying small parts, and other operations.

The MicroVac™ incorporates a four-stage filtering systems to remove particles and dust from the air stream (see the illustration below). During the first and second filtering stages, large particles are trapped in a disposable paper bag and inside a permanent cloth bag. In stage three, air passes through a permanent fine-mesh stainless steel screen. In stage four, pre-filtered air is drawn through an ULPA Exhaust Filter rated 99.999% efficient with particles 0.12 microns in diameter.

The MicroVac™ comes complete with a vacuum hose, a set of vacuum hose attachments, and a set of vacuum mini-tools and a mini-tool adapter (see listing below).

3.0 Installation

Before operation, carefully unpack the MicroVac™ and verify that all system components have been included: MicroVac™ System Components:

- MicroVac™ Stainless Steel Housing, including blower and filters (unclip the intake side of the MicroVac™ for access to the three pre-filters; for access to the ULPA final filter, remove the two screws from the exhaust end of the MicroVac™)
- 3-foot flexible vacuum hose



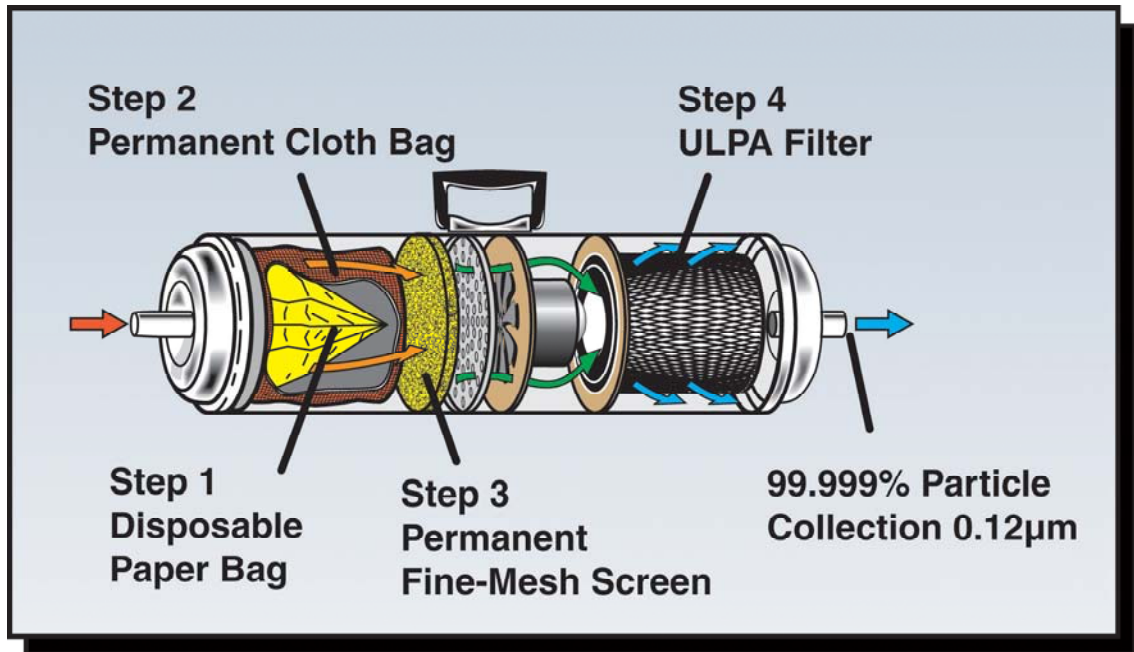
- Two 20-inch extension wands
- "Pick-all" nozzle
- Air maximizer nozzle
- Crevice tool
- Soft bristle dusting brush
- Air pin-pointer
- Mini-vacuum attachment kit, including adapter, straight and curved extensions, oval and round brushes, and a crevice tool
- Five disposable paper bag filters (Cat. No. 5100-01)
- One ULPA Exhaust Filter (Cat. No. 5100-04)

Make sure that the filters are properly installed, as indicated in the illustration. The disposable bag filter fits inside the larger cloth bag filter directly inside the intake side of the MicroVac™, and the fine-mesh screen should lie flush against the fixed stainless steel diffuser panel. The wide hole of the ULPA filter slides over the blower assembly on the exhaust side of the MicroVac™.



MicroVac™ Portable Cleanroom Vacuum Cleaner

To operate, first position the vacuum hose and any desired attachment (or the mini-vacuum adapter, if you are using one of the mini-tools) on the intake side of the MicroVac™ (the side that features the two clips). Plug the MicroVac™ into a grounded outlet and turn the power switch on.



Note: The vacuum attachments and mini-tools can also be connected to the outlet side of the MicroVac™ to direct and focus the stream of ULPA-filtered air.

To ensure a long service life, avoid extended use in hot or very dusty environments, and periodically inspect and replace the filters, as needed. The permanent cloth filter bag should be periodically shaken clean of all accumulated dust.

4.0 Specifications

Dimensions: 23"L (with nozzles) x 6.75" diameter

Construction: Stainless steel

Motor: 1.17 H.P.

Final Filter: Ultra-Low Penetration Air (ULPA) filter, rated 99.999% efficient with particles $\geq 0.12 \mu\text{m}$ in diameter

Weight: 7 lbs.



5.0 Warranty

Products Manufactured by Terra: Terra Universal, Inc., warrants products that it manufactures to be free from defects for a period of 12 months for parts and 90 days for labor, commencing from the date of shipment. Terra's sole responsibility is to repair or replace, at its option, any part of the product that proves defective or malfunctioning during this time limit. In some cases, components incorporated in Terra Universal products are covered by additional warranties from component manufacturers; obtain specific information from Terra sales representatives. This warranty is void if the equipment is abused or modified by the customer, is operated outside Terra's operating instructions or specifications, or is used in any application other than that for which it is specified. This warranty does not include routine maintenance or service procedures, breakage of quartz baths after 60 days, shipping damage, nor damage from misuse, intentional or unintentional abuse, neglect, natural disasters, or acts of God.

Products Manufactured by Others: Terra Universal, Inc., warrants that, to the best of its ability, Terra's representations of products that are manufactured by others reflect the manufacturer's representations, subject to change without notice. Sole warranty for these products is the original manufacturer's warranty that is passed forward to the purchaser and constitutes the customer's sole remedy for these products. Detailed warranties for distributed products are available through Terra sales representatives.

Freight Shortage or Damage: Upon receipt of any equipment from Terra Universal, Inc., customer shall immediately unpack and inspect for damage or shortage. The customer shall not accept a damaged package or a short shipment until the carrier makes a "damage or shortage" notation on both the carrier's and customer's copy of the freight bill or delivery receipt. Service title passes when the shipment is loaded, so customer is responsible for filing and collecting a freight claim. Any replacement products must be ordered and paid for separately. For Terra's "Policy and Procedures for Returning Goods," see Terra's Internet site: www.TerraUniversal.com.

Generally, customers can improve the chance of collecting on a freight claim by following these procedures: 1) formally requesting that the carrier inspect the shipment immediately upon suspecting damage or shortage to verify condition; 2) notifying the carrier upon discovery of concealed damage and requesting an inspection within 15 days of receipt, both in person or phone and following up via mail; 3) keeping the shipment as intact as possible, including retaining original packaging materials and keeping the product as close to the original receiving location as possible; 4) holding salvage for disposition by the carrier.

All Claims: Terra Universal expressly disclaims all other warranties, expressed or implied or implied by statute, including the warranties of merchantability or fitness for intended use. Terra Universal is not responsible for consequential or incidental damages arising out of the purchase or use of the products supplied by Terra Universal. Terra Universal is not liable for damage to facilities, other equipment, products, property or personnel of others, or of their agents, suppliers, or affiliated parties, which is caused or alleged to have been caused by products supplied by Terra Universal. In any event or series of events, Terra Universal's total liability for any and all damages whatsoever is limited to the lesser of the actual damages or the original invoice cost of the items alleged to have caused the damage. The customer's sole and exclusive remedy for any cause of action whatsoever is repair or replacement of the non-conforming products or refund of the actual purchase price, at the sole option of Terra Universal. All claims must be made in writing within 90 days of the date the product was shipped. Any claims not made within this time limit shall be deemed waived by the customer. Terra Universal is not responsible for any additional costs of repair caused by poor packaging or in-shipment damage during return.

Warranty Returns: All warranty returns must be authorized in advance by Terra Universal and approved under an RMA. Unless approved in advance for good reason, all returns must be in original condition, including all manuals, and must be packaged in original packaging materials. All returned goods are to be shipped to Terra Universal, freight prepaid at customer's expense. See Terra's "Policy and Procedure for Returned Goods."

**Thank you for ordering from
Terra Universal!**