





IMPORTANT SAFETY INSTRUCTIONS READ AND SAVE THESE INSTRUCTIONS

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| |  WARNING | <p>Warnings are used when failure to observe instructions or precautions could result in injury or death.</p> |
| <p>The information presented here is subject to change without notice.</p> | | |

1.0 Introduction

This manual provides information on installing and operating Terra Universal's Filter/Fan Unit. By studying this document carefully, you can be assured of a long, efficient service life from the unit.

The Fan/Filter unit provides a steady laminar flow stream of HEPA filtered air to the area below the mounted unit.

2.0 Operation

The unit consists of a 1/4 HP, thermally protected, three speed capacitor-run motor driving a forward-curved centrifugal blower. Air is drawn into the unit through a pleated pre-filter and in turn to an insulated chamber where it is then directed to an exit HEPA filter with a built-in diffuser. The motor is controlled by a built-in three-position electrical switch. This switch can be set for high, medium and low flow rates.

3.0 Installation

The Fan/Filter unit is designed to fit on top of a Terra Laminar Flow Hood or standard clean room ceiling grid. It includes a threaded fixture at each corner to accommodate four eye-bolts (not provided) that can be used to assist in positioning the unit.



WARNING:
To reduce the risk of fire, electric shock, or injury to persons, do not use this fan with any solid-state speed control device, and observe the following:

- Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switch on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.
- When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.

4.0 Start up



WARNING:
Keep unit disconnected from power supply during inspection

Prior to providing power to the unit, check that no damage has occurred during shipping. This can be accomplished via a visual check to make sure there are no visible dents or penetrations. If the unit is intact, remove the pre-filter and manually rotate the fan wheel to

make sure it is not in contact with any stationary parts and that there are no visible loose screws or bolts obstructing the wheel's rotation. Once visual inspection is completed, reinstall the fan guard screen and replace the prefilter. Then connect the 4-pin power plug to the unit, set the speed switch to the desired position (units are shipped from the factory with the speed switch set to medium), and turn on the external power switch. With power applied, the fan will rotate, and filtered air will exit the HEPA filter.

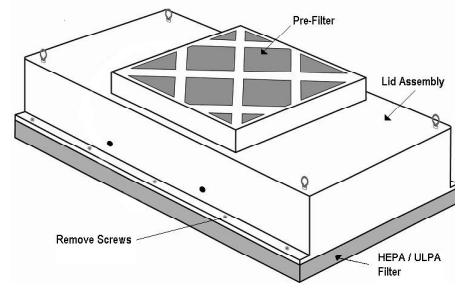
5.0 Cleaning and Maintenance



WARNING:
Disconnect from power supply before servicing unit. When servicing or replacing either filter, the new filter is to be installed in the same manner as the filter it replaces.

The scheduled maintenance of the unit depends on the installed location and consists of changing the pre-filter and the HEPA filter. It is recommended that the pre-filter be inspected and cleaned every three months or sooner depending on the cleanliness of the external environment. Replace the HEPA filter if any of the following apply: your maintenance program calls for it, filter integrity is compromised, face velocity falls below acceptable levels, pressure drop across the filter has doubled since install, or the filter has reached 5 years of use or 10 years of age.

Changing the HEPA filter requires removal of the unit to be removed from the ceiling grid. Place the unit on a flat work surface and remove the 10 sheet metal screws that hold the HEPA filter to the case. Replace the filter with a new one and secure it to the case with the same screws before placing it back onto the ceiling grid.



6.0 Specifications

| | | | |
|----------------|--|--|--|
| Dimensions: | 23.625" x 47.625" x 12.5"H | | |
| Housing: | White powder-coated cold-rolled steel or 304 stainless steel | | |
| HEPA Filter: | 99.97% efficient on removal of particles 0.3 microns and larger. | | |
| Pre-Filter: | 20" x 20" x 1" - 30% efficient ASHRAE rated | | |
| Blower: | Forward-curved centrifugal type factory balanced. Entire motor/blower assembly is removable from top of housing for service. | | |
| Motor: | 1/4 HP Direct drive, energy efficient. Permanent split capacitor type. Thermally protected with automatic overload reset. | | |
| Electrical: | Motor wiring will be run to a 3-speed motor switch (low-medium-high) and separate on/off switch. Motor nameplate FLA is 1.7. | | |
| Power Cord: | None supplied | | |
| Face Grille: | Perforated anodized aluminum or 304 stainless steel | | |
| Noise Level: | 49 dBA (measured at 30" from filter face) | | |
| Weight: | 71 lbs. shipping weight | | |
| Support: | Threaded screw receptacles provided for insertion of optional eyebolts | | |
| Power Options: | 1/4 HP motor with voltage of 120V/60Hz, 220V/60Hz or 240V/50Hz | | |

Power: for 2 ft. x 4 ft. HEPA, 120VAC, (Model No. 6601-24H-220-CE)

| | High Speed | Medium Speed | Low Speed |
|------------|------------|--------------|-----------|
| Run Amps | 4.3 | 3.5 | 3.3 |
| Watts | 512 | 416 | 393 |
| Start Amps | 9.1 | 6.3 | 4.9 |

Air Speed (6" below filter face)

| | 808 | 717 | 654 |
|----------------|-----|-----|-----|
| Flow (CFM) | | | |
| Velocity (fpm) | 115 | 102 | 93 |

Specification Notes:

- All FFU data is based on a standalone unit using 1" prefilter and clean filters.
- Data will vary depending on filter media and configurations with other products/systems, such as ductwork or hoods.



Quick-Start Operating Guide

Filter/Fan Unit

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7.0 Warranty

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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.

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