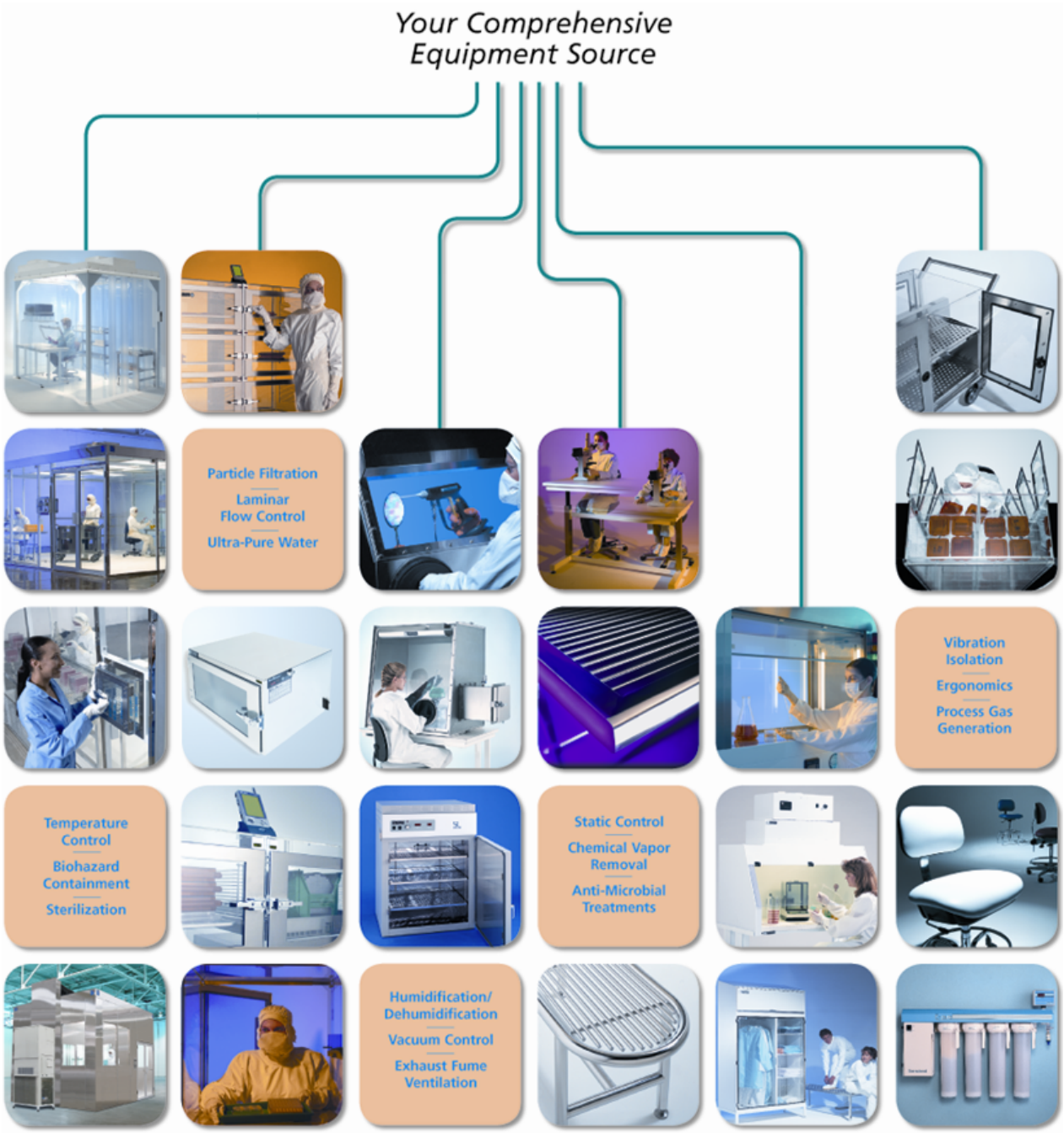
TERRA UNIVERSAL.COM
Critical Environment Solutions



Quick-Start Operating Guide *Document No. 1800-77*

Curing/Drying Cabinet Storage System

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Quick-Start Operating Guide

Curing/Drying Cabinet Storage System

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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:

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 Curing/Drying Cabinet.

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

2.0 Description

Terra Universal's Curing/Drying Cabinet provides a continuous wash of filtered air (HEPA or ULPA) for clean, controlled adhesive curing, PC board drying and parts storage. The 304 stainless steel shelves can be adjusted on racks to accommodate various part sizes. An optional exhaust purification system removes odors and chemical vapors from the air stream for safe indoor release. If the static-dissipative PVC option is selected, the Curing/Drying Cabinet will provide maximum particle and static control.



The cabinet is ideal for drying PC boards after epoxy coating or solvent cleaning, as well as in other applications requiring a high-volume wash of particle-free air to dry and clean sensitive materials.

These cabinets can be equipped to provide dual filtration. A powerful 940 CFM blower with adjustable speed controls forces incoming air through a HEPA particles filter, rated at 99.99% efficient with particles 0.3 µm in diameter, and then horizontally through the storage area (99.999% ULPA filters are also available).

The filtered air exits the cabinet through perforations on the opposing wall of the cabinet. Systems are also available with a filter housing on the exhaust side to facilitate final filtration (either HEPA or ULPA).

A second filter/blower system can be added in place of these exhaust openings to allow duct-free exhaust purification and release. These modules draw exhaust fumes through an activated carbon filter and an optional final particle filter to allow safe indoor venting. Equipped with dual opposing filter/blower modules, this drying cabinet maintains optimal

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air flow speeds and control over particles and chemical fumes to ensure both safe, effective parts drying and also full compliance with environmental safety regulations.

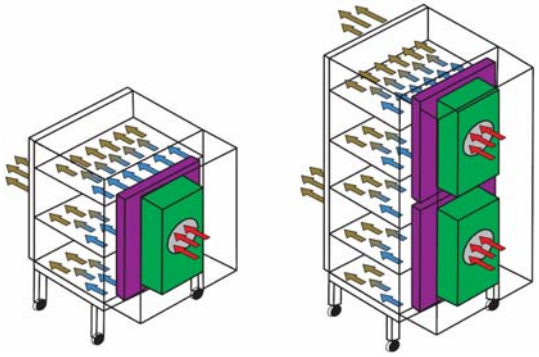
The storage cabinet is available in several sizes and configurations to meet individual requirements. Each chamber includes dual electropolished 304 stainless steel racks that allow height adjustment of 304 stainless steel shelves in 0.5 inch increments to meet varying clearance requirements (shelves are ordered separately at the time of purchase).

Cabinets come in either acrylic or transparent static-dissipative PVC, a durable material that eliminates build up of surface charges (which are commonly generated by standard plastics). Static-dissipative PVC, which features a surface resistivity of 10^7 ohms/square, also helps ensure cleanliness by eliminating particle attractions created by charged surfaces. All cabinets made of static-dissipative PVC feature grounded racks and ground terminals to allow easy connection to your in-house ground.

The three configurations available are explained in the following illustrations and accompanying text.

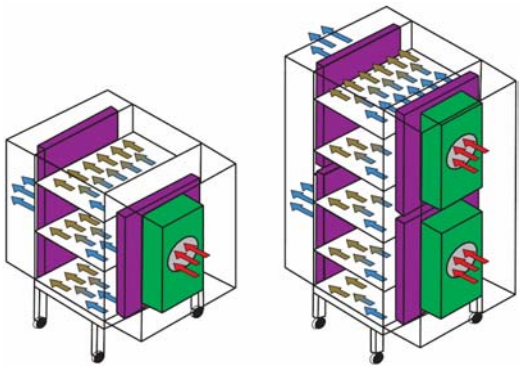
Inlet Filtration for Particle Protection

On this model, incoming air is drawn through the cabinet by an impeller and filtered for particles on the inlet side with HEPA or ULPA filters. Thus only one side of the Curing/Drying Cabinet utilizes filters.



Inlet and Outlet Filtration for Particle Protection

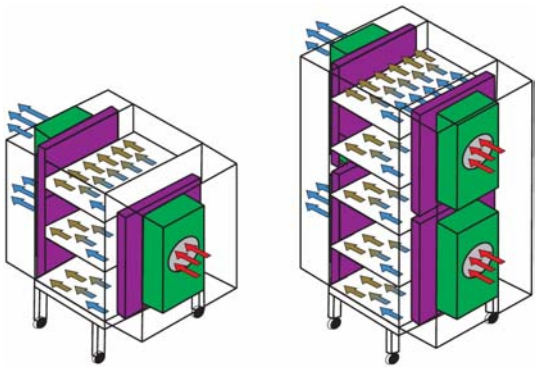
On this model, further particle filtration is achieved on the exhaust side through another impeller-and-filter configuration utilizing HEPA or ULPA filters.



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Inlet and Outlet Configuration for Particle and Chemical Vapor Protection

The configuration of this model is similar to the double-filtered model above but adds a charcoal filter to provide chemical vapor protection. Due to the layering of the filters and subsequent load constraint, a more powerful impeller unit is often installed.



3.0 Installation and Operation

To operate the system:

1. Plug the power cords from the impellers (one per impeller installed) into an appropriate grounded receptacle (115VAC/60Hz or 230VAC/50Hz).
2. A single of-off switch for each impeller unit is located on each blower/filter housing, so for an inlet filtration model, one switch will be found. On the inlet and outlet models, two switches will be found, one on each housing.
3. Turn on all switches to operate the Curing/Drying Cabinet.

4.0 Maintenance

These units should be cleaned periodically with warm water and a mild detergent. Frequent cleaning is especially important if the interior is often exposed to chemicals that could drip onto the inner surface of the cabinet.

CAUTION: Do not use alcohol or other cleaning agents on acrylic.

Air velocity should be monitored to ensure effective filtration using an appropriate air-speed monitor. Under typical conditions (8 hours of operation per day), filters should be replaced every year. As a HEPA filter clogs, you will notice increased blower noise and vibration, along with decreased air speed.

To replace the filters(s), first remove the Blower/Filter Housing.

1. Remove the screws around the perimeter of the housing.
2. Carefully remove the housing, including the impeller blower, to expose the filter(s).
3. Remove the filters and replace them with new ones (see chart below).
4. Carefully reposition the housing, including the blower, and replace the screws for a solid seal.

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Replacement Filters

	Cat#
HEPA Filter (99.99% efficient @ 0.3µm particles)	**1681-02**
ULPA Filter (99.99% efficient @ 0.12µm particles)	**1681-10**
Purification Filter (Activated charcoal)	**1716-00A**
Purification Pre/Post Filter	**1681-04A**

5.0 Specifications

Chamber:

Inside Dimensions:	25.625"@ x 24"D x 12"H (minus 1.062" on each side for electropolished 304 stainless steel racks)
Construction:	Solvent-welded acrylic or static-dissipative PVC with electropolished hinges and chrome-plated latches. One-piece closed-cell extruded gaskets maintain air-tight seals. Filter/blower housings are black acrylic (static-dissipative PVC available on a custom basis).
Blower:	At 0" static pressure (no filter load) 940 CFM, 1650 RPM impeller-type for HEPA filter applications; 1200 CFM, 1675 RPM impeller blower for charcoal-filtered applications.
Flow with Filter Load:	(Per Blower): 800 CFM for HEPA filter applications; 200 CFM for charcoal filter applications.

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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.

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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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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
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