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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:

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

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



This manual provides information on installing and operating your Terra Universal PureDry™ Hand/Glove Dryer.

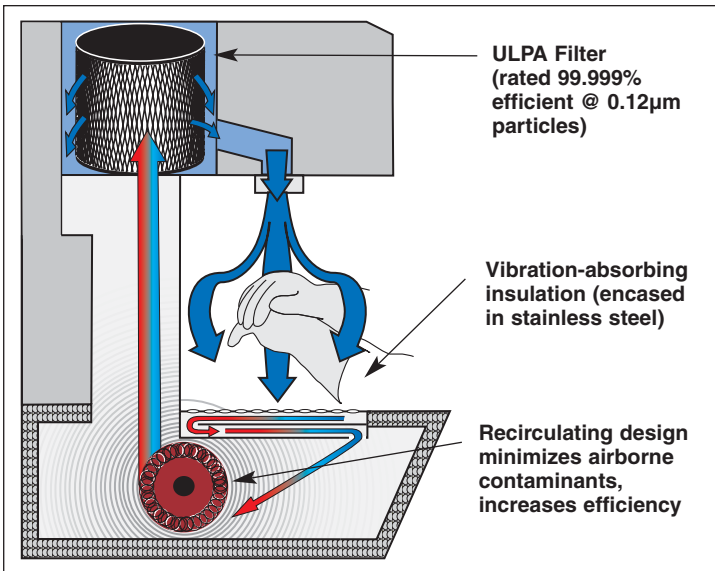
1.0 Equipment Description

The PureDry™ Cleanroom Hand/Glove Dryer provides warm contamination-free air for drying hands and gloves in cleanrooms and bio-cleanrooms. In a particle-sensitive environment, PureDry helps to eliminate contamination problems by reducing the number of air-borne particles and germs that can settle on PC boards, chemical solutions, biological cultures, and other sensitive materials.

Unlike conventional drying towels, it ensures fast, thorough drying without contact with foreign media that can shed particles and harbor germs. Its upstream heater warms the air stream before it passes through an ULPA filter (rated 99.999% effective at 0.12 micron particles) and on to the drying area. This noncontaminating operation is especially crucial in cleanrooms and bio-cleanrooms that call for strict environmental controls. The PureDry also eliminates waste disposal and/or laundering costs associated with towel drying.

And unlike other electric hand dryers, this unit employs a recirculating air design, thereby minimizing turbulence that can adversely affect cleanroom air circulation and containing particles that may fall from hands and gloves. As the heated, filtered air stream passes downward, it is captured in a collection area (along with moisture and contaminants) and routed back through the heater/filter/blower module (see Figure 1). The PureDry thus has almost no impact on the cleanliness, moisture level, or air flow of the surrounding area. And outside air—a potential source of contaminants—is not drawn into the PureDry's filtered airstream.

A photo cell allows hands-free operation, and the extended exposure area of the PureDry provides ample space to dry elbow-length gloves. The all-stainless steel housing of the PureDry is compatible with cleanroom requirements. It is ideal for many applications, from pharmaceutical laboratories to microelectronics manufacturing plants to hospitals.



Operation of PureDry™ Cleanroom Hand/Glove Dryer



2.0 Operation

The PureDry™ Cleanroom Hand/Glove Dryer employs a photo-electric cell installed at one end of the unit which, upon sensing an object within the drying compartment, activates the 60 CFM 115VAC/60Hz (optionally 220VAC/50Hz) brushless blower thereby providing an even stream of air through the specially engineered housing. This air-stream passes over a 700 watt glow-coil heater element in order to provide an even, non-chafing warmth for greater efficiency in the drying process.

After passing over the operator's hands, the airstream is drawn back into the unit housing through the air-entry duct and back through the ULPA filter before again being blown out onto the operator's hands, continuing until the operator removes his hands from the unit.

The 60 CFM brushless blower unit provides an even air-stream while remaining extremely quiet throughout operation so as not to disturb other cleanroom operations while still providing optimal performance.

Slotted screw holes on the rear of the unit allow easy wall mounting. Simply fasten screws of the appropriate thickness to your cleanroom wall and slide the PureDry into position. Gasketing can be applied to the rear edges of the PureDry to form a seal along the cleanroom wall that minimizes that possibility of particle accumulation; contact Terra Universal for ordering information.

3.0 Trouble-Shooting

The PureDry™ Cleanroom Hand/Glove Dryer is designed to provide years of reliable efficient operation. If you should experience any problems with your system, refer to the appropriate troubleshooting procedure below. If the problem persists, call Terra Universal for assistance.

Problem: Blower won't run.

Possible Cause:

1. Unit's power supply has been interrupted. Check to be sure unit is properly connected to power source.
2. Blower unit's internal power supply has become damaged or broken. Contact Terra for instructions.
3. Unit's photo cell has malfunctioned due to damage or miscalibration. Contact Terra for instructions.

Problem: Blower runs continuously.

Possible Cause:

Unit's photo cell has malfunctioned due to damage or miscalibration. Contact Terra for instructions.

Problem: Air supply is insufficient.

Possible Cause:

1. Unit's filter has become full, thus blocking air and causing backpressure.
2. Blower unit has malfunctioned. Contact Terra for instructions.

Problem: Air supply contains high particle counts.

Possible Cause:

Unit's filter has become full or damaged. Contact Terra for instructions.

Problem: Air is not properly heated.

Possible Cause:

Heater element has malfunctioned due to being damaged or disconnected. Contact Terra for instructions.

4.0 Maintenance

The PureDry™ Cleanroom Hand/Glove Dryer requires minimal maintenance as long as normal operating instructions are followed.

The ULPA (ultra-low penetration air) filter provides many years of reliable service; typically, its filtration efficiency increases as it captures more and more particles. The filter does not require replacement until the backpressure it generates increases to the point that the system can no longer provide an adequate air flow velocity to maintain required particle counts. Under normal use, this condition will take several years to develop. To monitor this condition, periodic testing with a particle counter is recommended.

WARNING!!!: Never attempt to service or replace the blower unit of the PureDry without first ensuring that the unit has been disconnected from the power source.



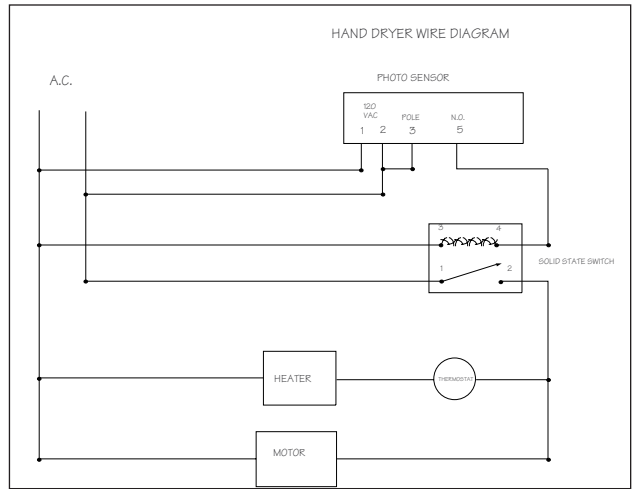
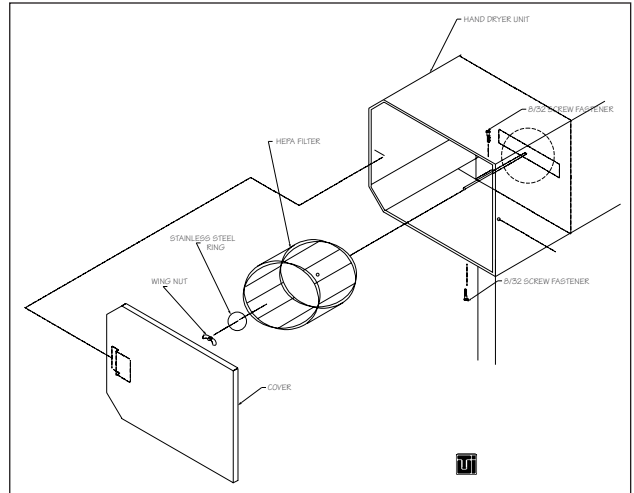
To replace the filter, follow the procedure below and refer to the diagram above.

1. Remove 8/32 screw fastener and remove the cover.
2. Remove the wing nut.
3. Remove old filter.
4. Install new filter.
5. Replace the wing nut.
6. Replace the cover and replace the 8/32 screw fastener.

Replacement ULPA Filter (Cat. No. 3333-35)

5.0 Specifications

- Construction: 304 stainless steel (electropolishing available)
- Dimensions: 15"W x 15.5"H x 9.5"D
- Shipping Weight: 32 lbs
- Filter: ULPA filter rated 99.999% effective @ 0.12µm particles
- Heater: 700W
- Power: 115VAC/60Hz or 220VAC/50Hz



6.0 Warranty

Products Manufactured by Terra: Terra Universal, Inc., warrants products which it manufactures to be free from defects for a period of 90 days for parts and labor. Terra's sole responsibility is to repair or replace, at its option, any part of the product which 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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Quick-Start Operating Guide

PureDry™ Hand/Glove Dryer

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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 30 days of receipt of the product or at the time the customer became aware or should have become aware of the failure. 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!*