

Quest PowerHEPA 500

Installation, Operation and Maintenance Instructions

– *Read and Save These Instructions* –

This manual is provided to acquaint you with the air scrubber so that installation, operation and maintenance can proceed successfully. Ultimate satisfaction depends on the quality of installation and a thorough understanding of this equipment. The air scrubber is built around tested engineering principles and has passed a thorough inspection for quality of workmanship and function.



Quest PowerHEPA 500:

- Less than 2 amps
- Compact design
- Variable speed flow
- Multiple ducting options
- Tough, plastic cabinet
- Optional carbon filter

The HEPA filtration system removes virtually all removable airborne particles.



Therma-Stor[®] LLC

Driven by performance. Powered by design.™

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Safety Precautions

Read the installation, operation and maintenance instructions carefully before installing and operating this device. Proper adherence to these instructions is essential to obtain maximum benefit from your Quest PowerHEPA 500.

READ AND SAVE THESE INSTRUCTIONS

- The device is designed to be installed INDOORS IN A SPACE THAT IS PROTECTED FROM RAIN AND FLOODING.
- Install the unit with space to access the back or side panels for maintenance and service. **DO NOT INSTALL UNIT WITH THE SERVICE PANELS INACCESSIBLE.**
- Avoid directing the discharge air at people, or over the water in pool areas.
- If used near a pool or spa; be certain there is NO chance the unit could fall into the water, be splashed and that it is plugged into a GFI GROUND FAULT INTERRUPT OUTLET.
- **DO NOT use the device as a bench or table.**
- **DO NOT** place the device directly on structural members. Provide vibration isolation in order to minimize operational vibration and/or noise.



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1. Specifications

Part No.	4031360
Power	110-120 Vac, 1.9 amps
Blower	500 CFM
Filters:	1st stage 1" Pleated Media, 18" x 18" (optional) 1" Carbon and Potassium Permanganate
	2nd stage 2.5" Pleated HEPA 18" x 18"
Warranty	One Year, 100% Parts and Labor
Dimensions	Width 22" Height 14" Depth 24" Weight 33 lbs.

2. Operation

2.1 Transporting

The Quest PowerHEPA 500 should be positioned upright on either set of feet when transported.

2.2 Location

Note the following precautions when locating the Quest PowerHEPA 500:

- It is designed to be used **INDOORS ONLY**.
- If used in a damp area, plug it into a **GROUND FAULT INTERRUPTER**.
- **DO NOT** use the Quest PowerHEPA 500 HEPA System as a bench or table.
- It must always be used in the upright position.
- The air inlet on top & the front outlet should be at least 1 foot from walls and other obstructions to airflow.

2.3 Electrical Requirements

The Quest PowerHEPA 500 System can be plugged into a grounded 15 Amp circuit. It draws about 2 Amps with clean filters and no ducting. The amp draw will decrease slightly with added ducting and as the filters load with particulate.



Quest PowerHEPA 500Plus**Installation, Operation and Maintenance Instructions****2.4 Air Ducting****2.4A Inlet Ducting**

Occasionally the area to be filtered is difficult to access and/or the unit cannot be located in the area. In such cases, the air can be ducted to the unit's inlet.

A round 16" diameter flexible duct can be attached to the unit inlet on top. It connects by placing the wire in the duct over the duct collar lip at one location and working over it over the lip gradually. It may be removed after use for easier transport and storage. Flexible 16" duct is available from Therma-Stor LLC. (4028357)

**2.4B Outlet Ducting**

A detachable trapezoid shaped exhaust ring is supplied that will allow 10" round lay-flat plastic duct to be attached to the Quest PowerHEPA 500 System outlet. Lay-flat plastic ducting is available from Therma-Stor LLC. (4024935)

To attach ducting to the collar, remove the ring from the unit by pressing release tab at the top of the grill. Put the plastic duct end through the ring center. Roll the duct end outward so that it over-laps the outside of the ring. Clip the ring back onto the exhaust grill.

2.4B (Continued) Outlet Ducting

The Quest PowerHEPA 500 System can be used to filter and exhaust air from a space. By exhausting to outside the space, the space will be under negative pressure. This will help prevent airborne particles from leaving the space, since the negative pressure will draw air in through openings in the space's exterior



CAUTION: Exhausting too much air from a space with open combustion devices (e.g. furnace, fireplace or water heater) can cause those devices to backdraft. This can contaminate the space with potentially fatal gases.

CAUTION

If open combustion device is present, the Quest PowerHEPA 500 must be used in one of the following three ways:

- A. As a filtering unit only. Exhausting no air from the space and thus causing no negative pressure or backdrafting.
- B. Exhausting a very limited amount of air which does not cause backdrafting. In case B, the open combustion devices must be thoroughly checked to guarantee that they do not backdraft while the Quest PowerHEPA 500 System is running.
- C. Direct the outlet duct from the Quest PowerHEPA 500 System to the room with the open combustion device(s). This will positively pressurize the room, thus preventing backdrafting. As in case B, those combustion devices must be checked after the Quest PowerHEPA 500 is running to guarantee that they are not backdrafting.

2.5 Power/Speed Control

The power/speed switch is located on the control panel to the left of the handle. When turned on to any speed, it powers the impeller fan.

Occasionally the impeller fan may not start on low speed. If this occurs, rotate the speed control to high speed until the impeller fan starts, then adjust it to a lower speed.

CAUTION: Do not remove HEPA filter with the unit on. Removing the top and filters while running will expose the dangerous rotating impeller fan. Disconnect the appliance before changing filters.

CAUTION

2.6 Servicing

Before each use inspect for damage, blocked inlet or outlet.

When the Quest PowerHEPA 500 is first turned on, check for excessive vibration. If the unit vibrates excessively or if impeller rubs on housing, turn off the unit. Have a service technician inspect the unit to locate the problem.

3. Maintenance

WARNING

Use extreme caution when changing the HEPA filter as hazardous material could be trapped in the media. Always make sure to dispose of filters in the appropriate way. If you are unsure of how to safely dispose of any filter-consult an industrial hygienist to ensure that all hazardous materials are contained and disposed of properly.

3.1 Air Filters

The Quest PowerHEPA 500 System is equipped with two filters that progressively filter out smaller particles. An optional activated carbon/potassium permanganate filter can be used in place of the standard pre-filter to



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remove odors (see section 4.2B). These filters must be checked regularly. Operating the unit with dirty filters will reduce the airflow, but will do no harm to the unit. The unit can be run indefinitely with dirty filters.

The two standard filters used are listed below (as installed in the unit from top to bottom):

- A. 25 to 30% efficient (per ASHRAE 52.1-1992), MERV-7, pleated fabric filter. This filter should be changed when airflow is reduced or it is contaminated by a previous job. (replacement PN: 4031877)
- B. 99.97% DOP efficient HEPA filter. This filter should be changed when airflow is reduced or it is contaminated by a previous job. (replacement PN: 4031864)

3.2 Filter replacement

3.2A Standard Filters

When the amber "filter change light" illuminates. It may be time to replace one or both filters.

To check airflow:

- Remove any inlet ducting, but leave the top and all filters in place.
- Turn the unit on high. The airflow meter will indicate an air speed. Please set the air meter to read FPM (refer to the meter instructions to set the mode). To determine CFM see the chart below:

Airflow on high speed with all filters clean and no ducting is about 500 CFM. The unit can be run with very dirty filters and virtually no flow without harming the unit. The operator's decision to change filters should be based on filter cost vs. the unit's filtering effectiveness. If airflow is 250 CFM vs. 500 CFM, the unit will filter particles from a space at half the rate. The operator must judge if that is acceptable.

If the operator determines the filters should be changed due to low airflow, it is most economical to change them in the following order:



Change the pre-filter (top) first. This is the least expensive filter. Recheck the airflow. If the airflow is acceptable, no other filters need to be changed.

If the airflow is still too low, the HEPA filter must be changed. To remove the HEPA filter, follow these steps:

1. Loosen the eight screws one revolution
2. Rotate all eight clips out of the way.
3. Remove old filter.
4. Installing the new filter is the reverse of these instructions.



The photo depicts clip in a locked position. Turn counter-clockwise to unlock.



3.2B Optional Activated Carbon/Potassium Permanganate Filters

An optional gas phase filters are available from Therma-Stor. They use a blend of activated carbon and potassium permanganate. This blend removes the vast majority of contaminants encountered in most filtering applications. The activated carbon removes the heavier volatile organics while the potassium permanganate removes lower molecular weight contaminants. This is well suited to the smoke odors present after fire damage.

The life of the media blend depends upon both the hours used and the contamination level. Another advantage of the blended media versus activated carbon only is that part of the blend changes color as it loads up with contaminants. It starts out black, then turns pink, then brown, and finally white. It is best changed when it passes the brown stage and begins to turn white. It has lost most of its effectiveness at that point.

When a carbon filter is installed, no other pre-filter is necessary. This allows the operator to check the media color through the top grill of the unit without removing the top. The carbon/potassium permanganate filter is the same size as the pleated pre-filter. Install it in place of the pleated pre-filter.

4. Service

CAUTION

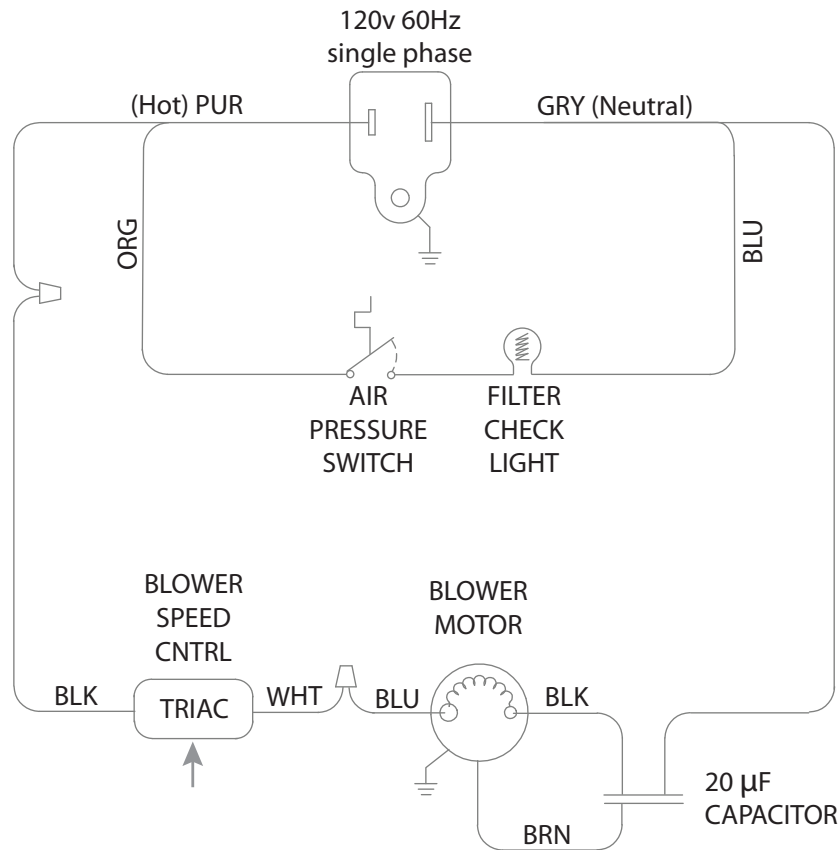
CAUTION: Servicing the Quest PowerHEPA 500 System with its high voltage circuitry presents a health hazard that could result in death, serious bodily injury, and/or property damage. Disconnect the appliance from the power supply before servicing. Only qualified service people should service this unit.

4.1 Warranty

A warranty certificate has been enclosed with this unit. Read it before any repair is initiated. If a warranty repair is required, call the factory first at 1-800-533-7533 for warranty claim authorization and technical assistance.



5. Wiring Diagram



6. Service Parts

Item	Part No.	Description
1	4031877	Air Filter, Pleated, 1" x 18" x 18"
2	4031864	Air Filter, HEPA, 2.5" x 18" x 18" (99.97% Efficient)
3	4031863	HEPA filter hold down clip
4	4033856	Impeller Fan
5	4024773	Impeller Fan Speed Control
6	4032143	Impeller Fan Speed Control Knob
7	4033336	Cord & Wire Harness
8	4033031-08	Run Capacitor, 20 mfd, 370 VAC
9	4031861	10" Lay flat duct collar ring

Optional Parts

4031878	Air Filter, Disposable Carbon/Potassium Permanganate
4028357	Duct, Flex, 16" x 25'
4024935	Duct, Lay Flat, 10" x 250'



Always follow manufacturer instructions

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Quest PowerHEPA 500 Limited Warranty

Warrantor:

Therma-Stor LLC
4201 Lien Rd
Madison, WI 53704
Telephone: 1-800-533-7533

Who Is Covered: This warranty extends only to the original end-user of the Quest PowerHEPA 500 HEPA System, and may not be assigned or transferred.

First Year Warranty: Therma-Stor Products warrants that, for one (1) year the Quest PowerHEPA 500 HEPA System will operate free from any defects in materials and workmanship, or Therma-Stor Products will, at its option, repair or replace the defective part(s), free of any charge.

End-User Responsibilities: Warranty service must be performed by a Servicer authorized by Therma-Stor Products. If the end-user is unable to locate or obtain warranty service from an authorized Servicer, he should call Therma-Stor Products at the above number and ask for the Therma-Stor Products Service Department, which will then arrange for covered warranty service. Warranty service will be performed during normal working hours.

The end-user must present proof of purchase (lease) upon request, by use of the warranty card or other reasonable and reliable means. The end-user is responsible for normal care. This warranty does not cover any defect, malfunction, etc. resulting from misuse, abuse, lack of normal care, corrosion, freezing, tampering, modification, unauthorized or improper repair or installation, accident, acts of nature or any other cause beyond Therma-Stor Products' reasonable control.

Limitations and Exclusions: If any Quest PowerHEPA 500 HEPA System part is repaired or replaced, the new part shall be warranted for only the remainder of the original warranty period applicable thereto (but all warranty periods will be extended by the period of time, if any, that the Phoenix Guardian HEPA System is out of service while awaiting covered warranty service).

UPON THE EXPIRATION OF THE WRITTEN WARRANTY APPLICABLE TO THE Quest PowerHEPA 500 HEPA SYSTEM OR ANY PART THEREOF, ALL OTHER WARRANTIES IMPLIED BY LAW, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL ALSO EXPIRE. ALL WARRANTIES MADE BY THERMA-STOR PRODUCTS ARE SET FORTH HEREIN, AND NO CLAIM MAY BE MADE AGAINST THERMA-STOR PRODUCTS BASED ON ANY ORAL WARRANTY. IN NO EVENT SHALL THERMA-STOR PRODUCTS, IN CONNECTION WITH THE SALE, INSTALLATION, USE, REPAIR OR REPLACEMENT OF ANY GUARDIAN HEPA SYSTEM OR PART THEREOF BE LIABLE UNDER ANY LEGAL THEORY FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES INCLUDING WITHOUT LIMITATION WATER DAMAGE (THE END-USER SHOULD TAKE PRECAUTIONS AGAINST SAME), LOST PROFITS, DELAY, OR LOSS OF USE OR DAMAGE TO ANY REAL OR PERSONAL PROPERTY.

Some states do not allow limitations on how long an implied warranty lasts, and some do not allow the exclusion or limitation of incidental or consequential damages, so one or both of these limitations may not apply to you.

Legal Rights: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

