Therma-Stor LLC
Driven by performance. Powered by design.™

PHOENIX™ RESTORATION EQUIPMENT

Owner's Manual — Phoenix Axial Air Mover

Installation, Operation & Service Instructions

Read and Save These Instructions

The Phoenix Axial Air Mover is the industry's only Air Mover specifically engineered with patent pending FOCUS™ Technology. FOCUS™ Technology revolutionizes evaporative drying by producing air velocities greater than competitive product offerings. This highly focused air flow is directed towards the restoration industry's problematic drying areas namely, carpet and pad, sub-floor, sill plate and walls. No other fan dries the sill plate as quickly! Finally, the Phoenix Axial Air Mover with FOCUS™ Technology sustains these air velocities further than any other Axial Air Mover.

The Phoenix Axial Air Mover includes a 2-speed motor delivering a focused airstream of approximately 3000 cfm, lightweight stackable enclosure designed to fit existing vehicle rigging, on-board duplex GFCI outlet, circuit breaker, superior cord management and hour meter.

Conventional air movers create a circular air jet. With a circular air jet the only way to get air into the square corner is to point the fan towards the corner. This angle toward the wall wastes valuable air velocity and throw distance. FOCUS™ Technology creates an air jet with a square corner, resulting in optimized drying ability. In addition, the Axial Air Mover features built in 4.5° positioning which increases the fans ability to dry.

Dry fast, smart and profitably with Phoenix.

Phoenix Axial Air Mover
PN 4025200

Phoenix Axial Air Mover

- Approximately 3000 CFM air flow directed where you need it.
- Operator interface conveniently located for easy access, featuring: power indicator lamp, large three-position switch, circuit breaker, GFCI outlet, and hour meter.
- Daisy-chain up to four Phoenix Axial Air Movers on a single circuit.
- Integral circuit breaker eliminates nuisance trips to the breaker box.
- Axial Air Mover itself is also GFCI protected.
- Units interlock for ease of stacking during storage and handling.
- Weighs 2.5 lbs less than competitive units.
- Linear low density polyethylene construction.
- Low bearing temperatures increase motor life.
- Permawick® , low maintenance, long life lubrication.

Specifications subject to change without notice.

TS-285
Revised 10/07

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Serial No. _____

Purchase Date _____/_____/_____

Dealer's Name _____

1 Safety Information

- Do not operate the unit with a cut or frayed power cord. Replace cord if it becomes damaged.
- Do not unplug the unit by pulling on the cord. Grasp the plug firmly and pull it out of the wall socket or power receptacle.
- Always use a grounded outlet.
- Never operate electrical equipment in standing water.
- Never operate with the safety grills removed. Personal injury may result.
- Do not stick your fingers or other objects through the safety grills.
- Do not restrict airflow to the unit. This may cause the unit to overheat.
- Unit should never be serviced or cleaned while it is plugged in.
- Do not plug more than 9.0 amps total into the GFCI outlet.
- Do not sit or stand on the unit or use as a shelf or table.
- Check GFCI protection before each use by pushing "test" button. If operating properly, "reset" button will pop out.
- Before leaving an Axial Air Mover unattended, ensure children do not have access to the equipment. Do not allow children to play with or near the unit or in its air flow.
- To reduce the risk of fire or electric shock, do not use this air mover with any solid-state speed control device.

LIRE ET CONSERVER CES INSTRUCTIONS

- Risque de choc électrique Peut causer des blessures ou la mort. Débrancher toutes les alimentations en courant électrique à distance avant l'entretien ou le nettoyage.
- Ne pas utiliser l'appareil avec un cordon d'alimentation coupé ou effiloché.
- Ne pas débrancher l'appareil en tirant sur le cordon. Tenir la fiche fermement et la tirer hors de la prise murale ou la prise d'alimentation électrique.
- Toujours utiliser une prise mise à la terre.
- Ne jamais utiliser l'équipement électrique dans de l'eau stagnante.
- Ne jamais utiliser sans les grilles de protection. Des blessures risquent d'en résulter.
- Ne pas passer les doigts ou d'autres objets dans les grilles de protection.
- Ne pas diminuer le débit d'air arrivant jusqu'à l'appareil. L'appareil risque de trop chauffer.
- Ne pas brancher plus de 9 ampères au total au différentiel.
- Ne pas s'asseoir ou se tenir debout sur l'appareil; ne pas l'utiliser comme étagère ou table.

- Vérifier la protection du différentiel avant chaque utilisation en appuyant sur le bouton “ test “. Si l’appareil fonctionne correctement, le bouton “ reset “ ressort.
- Avant de laisser un appareil aéraulique axial sans surveillance, s’assurer que les enfants n’ont pas accès à l’équipement. Ne pas laisser les enfants jouer avec l’appareil ou à proximité de l’appareil ou dans l’air qu’il projette.
- Pour réduire le risque d’incendie ou de choc électrique, ne pas utiliser ce ventilateur avec un dispositif de commande de vitesse à semi-conducteurs.

2 Intended Application

The Phoenix Axial Air Mover has changed the drying industry by minimizing overall drying time on water restoration jobs. The Phoenix Axial Air Mover uses patent pending FOCUS Technology to maximize air velocity across floors and along walls for longer distances. By maximizing the air velocity, water evaporates more quickly from the carpet, pad, sub-floor, wall, and sill plate.

3 Safety Certifications

The Phoenix Axial Air Mover (P/N 4025200) conforms to UL STD 507. Certified to CAN/CSA STD C22.2 No. 113.

4 Specifications

Part No.	4025200
Power	1/4 hp 1-phase 110/120 VAC 2-speed 4-pole, PSC Electric Motor.
CFM	Approximately 3000
Cord	20 ft Power Cord
Outlet	15A UL Rated GFCI Duplex Receptacle
Current Draw	2.5 Amps
Voltage	115 VAC
Warranty	Year One - 100% parts and labor (all components) Year Two - 100% parts only (all components) Years Three through Seven - Only materials and workmanship of the housing are covered.

Dimensions

	Cabinet
Width	19.9”
Height	19.5”
Depth	15.2”
Weight	29.5 Lbs

5 Power Requirements

5.1 Daisy Chaining

The Phoenix Axial Air Mover draws 2.5 amps. The 12 amp, on-board circuit breaker will allow four (4) Phoenix Axial Air Movers on one circuit. When daisy-chaining the Phoenix Axial Air Mover, turn on one Phoenix Axial Air Mover at a time to prevent excessive current inrush caused by four units starting at once.

A ground fault in the Phoenix Axial Air Mover or anywhere on the circuit will cause the Axial Air Mover’S GFCI to trip. After rectifying the ground fault, reset the GFCI by pressing the reset button.

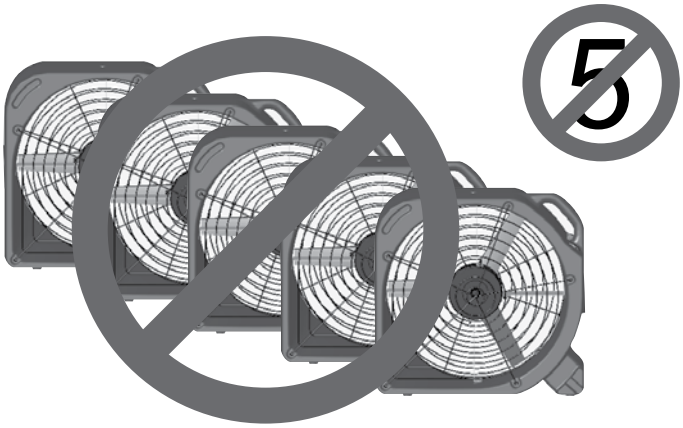


Figure 1: Too many Axial Air Movers daisy-chained

5.2 Recommended Use

Recommended use(s) of on-board duplex GFCI are shown.

Note: Standard 115 VAC electrical outlets.

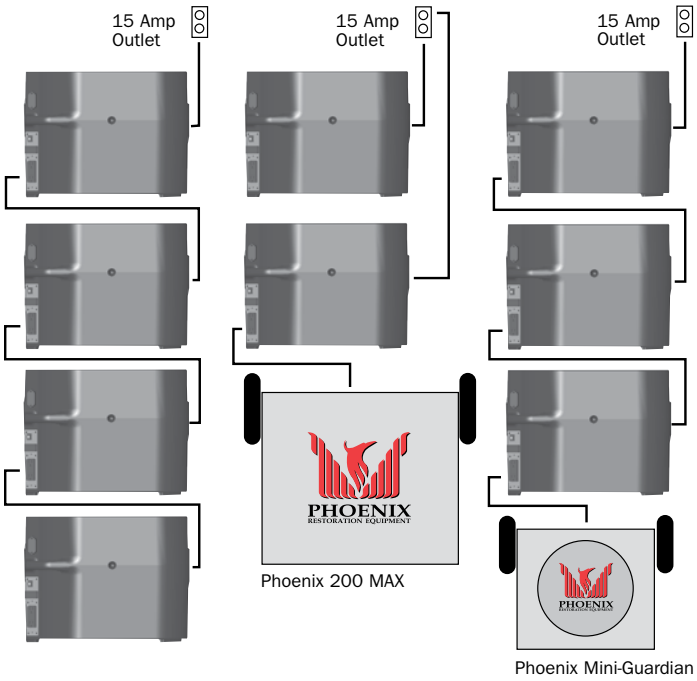


Figure 2: Duplex GFCI use

5.3 Integrated Cord Wrap

The Phoenix Axial Air Mover features integrated cord management. Wrap the cord around the cord wrap as shown and secure the cord with the clasp on the plug.

Figure 3: Cord wrap

6 Applications

6.1 Sizing for Water Restoration Jobs

Current industry standards call for one air mover per 10-16 linear feet of wall space, dependent upon the Class of water damage. For commercial structures, the industry standard calls for one air mover for every 50-60 square feet.

The water restoration industry based these estimates on the air mover technology available when writing the standards. Following these equipment-sizing standards when using the Phoenix Axial Air Mover will result in dramatically faster drying times. If the restoration professional desires to merely achieve industry standard drying times, he can use fewer Phoenix Axial Air Movers than standard equipment standards allow.

6.2 Placement

Current industry guidelines suggest placing air movers at a 15° - 45° angle to wall. These guidelines apply to air movers without FOCUS Technology. FOCUS Technology allows the restoration professional to place the Phoenix Axial Air Mover at an angle nearly parallel to the wall.

The test graph shown below depicts immediate air flow at the FOCUS Technology corner. The Axial Air Mover sustains this air flow for more than 20 feet and maximizes the air velocity across the floor and along the wall when placed the at 4.5° angle from the wall.

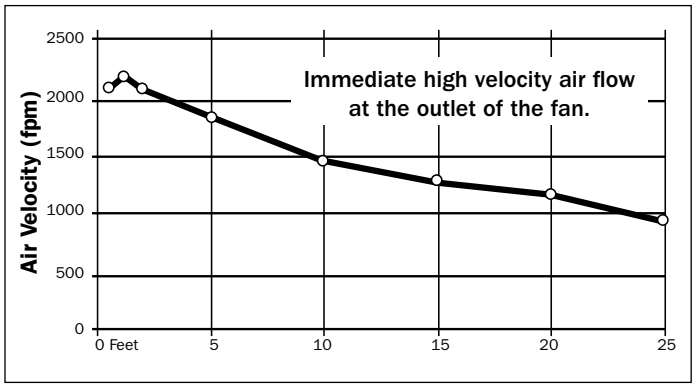


Figure 4: Airflow of the Phoenix Axial Air Mover measured 3.5” parallel to wall.

Figure 5: 4.5° to wall as shown

By touching the front edge of the output side of the axial air mover against the wall and rotating the rest of the unit against the wall, the restoration professional will place the axial air mover at 4.5° due to the housing’s built-in design. Industry experts agree placing Axial Air Movers 45° angle to the wall wastes air flow and reduces the performance by forcing air up the wall.

The best set up angle for quickly and completely drying the sill plate is 4.5°. Set-up angles greater than 4.5° may be used under unique circumstances such as corner air flow and structure variations. Set-up angle should never exceed 23°.

6.3 Orienting of Directional Drying System

The axial air mover dries in counter-clockwise and clockwise directions for optimum ease of use. The axial air mover ships with rubber feet on one side of the unit for counter-clockwise drying.

When the water restoration professional needs to employ clockwise drying (such as the need to dry a door jamb), simply rotate the axial air mover 90° so the FOCUS Technology corner points toward the door jamb and floor for the clockwise drying.

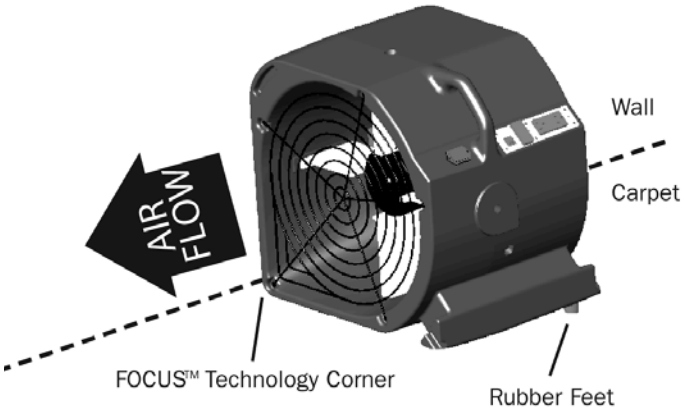


Figure 6: Placement for counter-clockwise drying

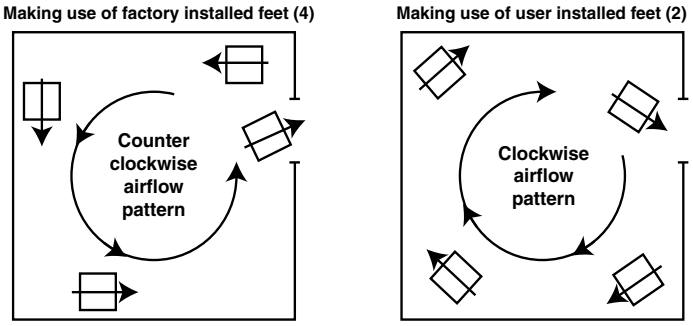


Figure 7: Birds eye view of room set-up

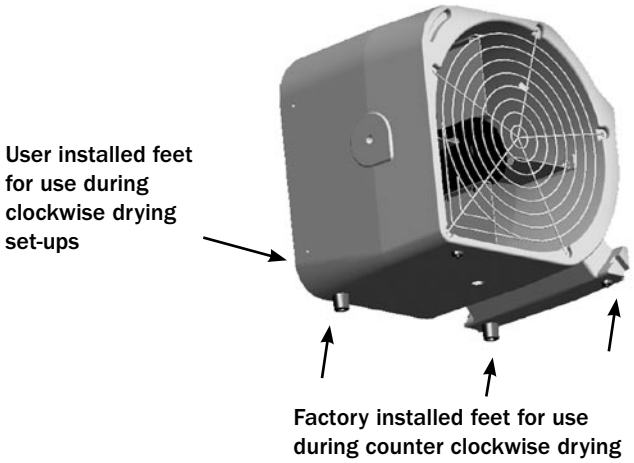


Figure 8: Clockwise feet locations

If the water restoration professional dries in the clockwise direction often, we suggest attaching the two (factory provided) rubber feet into the threaded holes on the side of the unit. By attaching the rubber feet and creating the optimal downward angle of 4.5°, the Phoenix Axial Air Mover will maximize air velocity across the floor and wall when drying in the clockwise direction.

7 Operating Instructions

The Phoenix Axial Air Mover as packaged is ready to be put into service. Inspect the unit completely for any shipping damage. Place the unit on the ground. Check the GFCI to ensure it is not tripped. Orient the unit so the desired air flow direction is the same as the arrow indicator sticker in the FOCUS Technology corner on the interior of the unit. Plug the unit into a grounded outlet and select the drying mode shown in Figure 9.

⚠CAUTION

CAUTION: The Phoenix Axial Air Mover consumes 2.5 Amps. Do not plug devices requiring more than 9.0 Amps of current into the duplex outlet.

8 Operator Panel Features

8.1 Run-Time Hour Meter

The operator interface panel is equipped with an Automatic LCD (Liquid Crystal Display) Hour meter. This hour meter displays cumulative run time. The hour meter meets IP65 for moisture and dust protection and is designed to survive harsh restoration and water recovery applications. The hour meter features non-volatile eeProm memory. This type of memory cannot be erased, nor reset. This feature ensures accurate time tracking.

The display can be used to track time-of-operation and time-to-dry. Some restoration professionals use the hour meters to help them establish hourly billables.

8.2 12 Amp Resettable Circuit Breaker

The 12 AMP thermal response resettable circuit breaker protects the unit and devices connected to its duplex GFCI outlet.

The circuit breaker is designed to sense the total current draw through the circuit. The circuit breaker “trips” when more than 12 amps of electrical current are drawn through

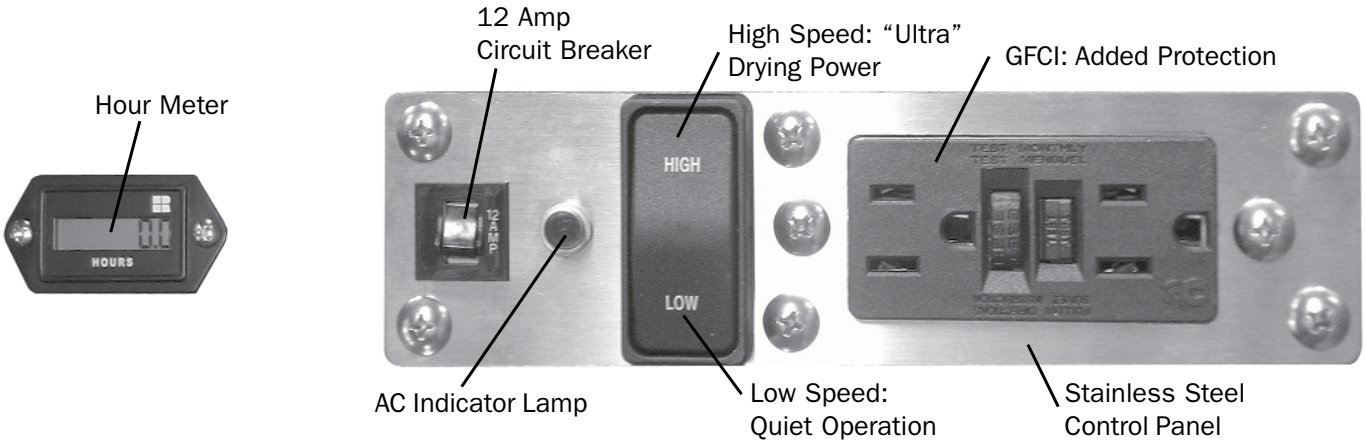


Figure 9: Axial Air Mover Operator Panel

the device's power cord. Should an over-current condition occur, the Axial Air Movers' on-board circuit breaker prevents nuisance visits to a remote power junction box.

IMPORTANT

IMPORTANT: Total amperage of the Axial Air Mover plus all devices plugged into the receptacle must not exceed 12 amps. The circuit breaker will not allow for loads in excess of 12 amps, although there is a time delay before the overloaded circuit is broken.

8.3 Power Indication Lamp

The red, sealed, high intensity AC voltage power indication lamp allows operators to visually identify the operation status of several Phoenix Axial Air Movers at a distance, with a single glance. The power indication lamp will remain lit when the AC power cord is plugged into a standard "powered" AC power outlet and the 3-position drying selector switch is in either the HIGH or LOW operation position. The power indication lamp will remain unlit when the AC power cord is unplugged, the 3-position drying selector switch in the OFF position, the on-board GFCI or 12 Amp circuit breaker is tripped, or the connected, standard AC wall outlet power has been turned off.

8.4 3-Position Drying Selector Switch

The 3-position drying mode selector switch. This switch is used to select the Phoenix Axial Air Mover's mode of operation. The 3 modes of operation are OFF, LOW or HIGH.

IMPORTANT

IMPORTANT: When the Phoenix Axial Air Mover is plugged into a standard "powered" wall outlet the Phoenix Axial Air Mover's duplex outlets are electrically "HOT" and AC voltage is present.

OFF - The Phoenix Axial Air Mover is not drying. The power indication lamp is unlit. If the unit is plugged into a standard "powered" wall outlet all devices connected to the unit's duplex GFCI outlet receive AC voltage.

LOW - The Phoenix Axial Air Mover is in "Normal" Drying mode. This mode provides rapid drying and very quiet operation. The power indication lamp will be lit. All devices connected to the devices duplex GFCI outlet will receive AC voltage.

HIGH - The Phoenix Axial Air Mover is in "Fast" drying mode. This mode provides the industries most rapid drying while maintaining low noise operation. The power indication lamp will be lit. All devices connected to the devices duplex GFCI outlet will receive AC voltage.

8.5 GFCI Protection and the On-Board Duplex VAC Outlet

The standard AC voltage outlet GFCI (Ground Fault Circuit Interrupter) protection promotes operator safety in wet applications. GFCI devices trip when a fault to electrical "ground" is sensed.

It is recommended to check the GFCI protection prior to operation. To check, push the "TEST" button located on the GFCI duplex outlet. If operating properly the "RESET" button on the GFCI outlet will pop out. Depending on your Axial Air Movers specific equipment, a tripped GFCI may be indicated by a small LED. The device can only be "RESET" when the Axial Air Mover is connected to a wall outlet providing standard voltage. This duplex AC outlet allows the inter-connection of other AC powered devices. The sum total amperage of all devices plugged into the receptacle must not exceed 9 amps.

9 Maintenance

WARNING

WARNING: Disconnect the unit from power before servicing, lubrication or cleaning. Replace the wire safety grill after servicing, lubrication or cleaning.

9.1 Servicing

Before each use inspect for damage, blocked inlet or outlet, or any excess buildup of foreign material.

Inspect the GFCI to ensure it is not in a "tripped" condition. Push "RESET" to reset the GFCI.

When the Phoenix Axial Air Mover is first turned on, check for excessive vibration. If the unit vibrates excessively or if blade rubs on housing, turn off the unit immediately. Have a service technician inspect the unit to locate the problem.

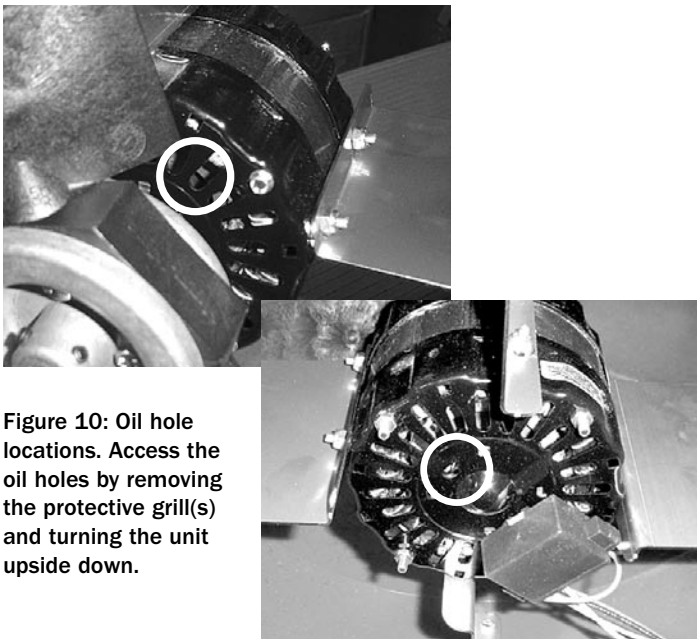


Figure 10: Oil hole locations. Access the oil holes by removing the protective grill(s) and turning the unit upside down.

9.2 Motor Lubrication

Oil the unit every six months with 3 - 4 drops of SAE 20 weight non-detergent oil. Lubricate the motor with a drop of oil after each washing.

IMPORTANT

IMPORTANT: The approved oil for lubrication is SAE 20 weight non-detergent oil, specifically designated for use with electric motors.

9.3 Cleaning

The housing is made of a durable and washable polyethylene. When cleaning, the use of solvents is NOT recommended.

When washing inside the unit, disconnect the unit from its power source. Protect the operator interface panel with a cloth. Clean inner barrel, grills and blade. Wipe down motor exterior with a damp cloth. If the motor gets wet during cleaning, simply allow ample time for motor to dry out completely before restarting. If you clean your device frequently perform motor lubrication more frequently as well.

If you wash the Axial Air Mover and do not plan to use it within 24 hours, allow the fan to drip dry for 10 minutes and then let run for 5 minutes. Before storing it, apply oil as described above.

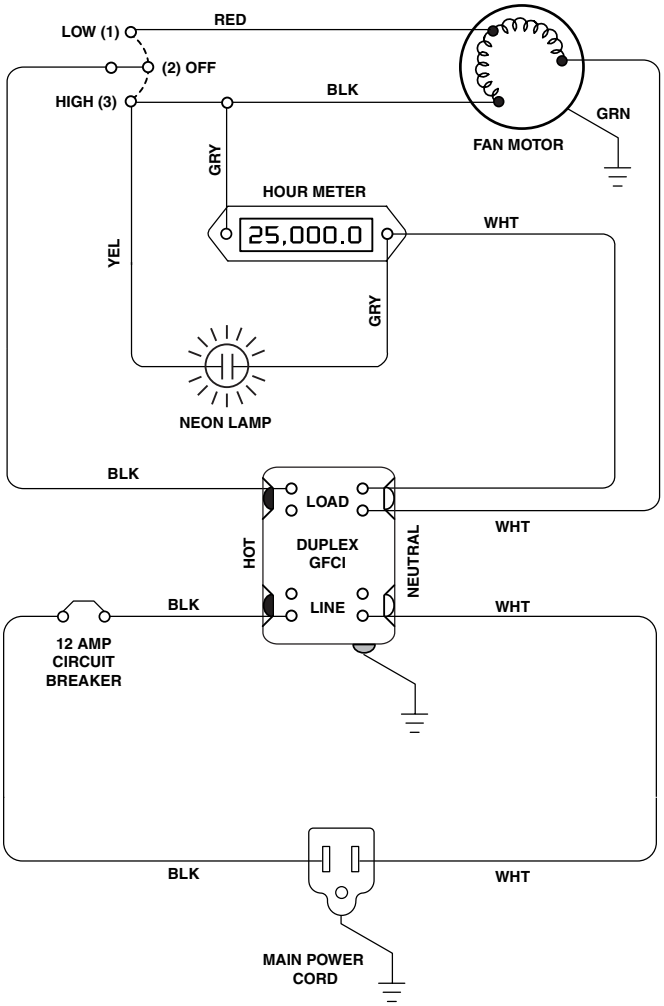
10 Replacement Parts and Optional Accessories

Contact the factory at 1-800-533-7533 to order replacement parts, or optional accessories

4025203	Breaker, CKT, 12A
4025204	Switch, Rocker, On-Off-On
4025205	Outlet, Duplex, GFCI, 15A
4025206	Grill, Safety, Intake
4025207	Grill, Safety, Exhaust
4025460	Axial Air Mover Stand
4025299	Stand Hardware Kit
4025092	Motor
4025095	Blade
4021597	Hour Meter

Figure 11: Optional stand allows the Axial Air Mover's air flow to be directed in a 360° range of movement. (PN 4025460)

11 Wiring Diagram



Specifications subject to change without notice.

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Phoenix Axial Air Mover Limited Warranty

Warrantor:
Therma-Stor LLC
PO Box 8680
Madison, WI 53708
Telephone: 1-800-533-7533

Who Is Covered: This warranty covers Phoenix Axial Air Movers.

First Year Warranty: 100% parts and labor (all components)

Second Year Warranty: 100% parts only (all components)

Years Three through Seven: Only materials and workmanship of the housing are covered.

If a defect in materials or workmanship occurs within the warranty period, Therma-Stor LLC will repair or replace the defect.

End-User Responsibilities: Warranty service must be performed by a servicer authorized by Therma-Stor Products. To obtain warranty service you must obtain a return material authorization (RMA). To obtain an RMA you must present proof of purchase or (lease), by use of a warranty card, original sales receipt or other reasonable and reliable means.

To obtain an RMA call Therma-Stor LLC at the above number and ask for the Therma-Stor LLC Service Department, which will then issue an RMA# and arrange for, at our option, either repair or replacement.

Freight: Freight to and from the servicer is the responsibility of the end-user. The end-user is responsible for normal care and proper return packaging.

Limitations and Exclusions: 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 LLC's reasonable control.

If any Phoenix Axial Air Mover part is repaired or replaced, the new part shall be warranted for the balance of original warranty (but all warranty periods will be extended by the period of time, if any, that the Phoenix Axial Air Mover with FOCUS Technology is out of service while awaiting covered warranty service).

Warranty service will be performed during normal working hours.

UPON THE EXPIRATION OF THE WRITTEN WARRANTY APPLICABLE TO THE PHOENIX AXIAL AIR MOVER 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 LLC ARE SET FORTH HEREIN, AND NO CLAIM MAY BE MADE AGAINST THERMA-STOR BASED ON ANY ORAL WARRANTY. IN NO EVENT SHALL THERMA-STOR LLC, IN CONNECTION WITH THE SALE, INSTALLATION, USE, REPAIR OR REPLACEMENT OF ANY PHOENIX AXIAL AIR MOVER 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.