Therma-Stor LLC
4201 LIEN RD. • MADISON, WI 53704

FIREBIRD COMPACT PRO | PORTABLE HEATER

PHOENIX

OWNER'S MANUAL

Installation, Operation & Service Instructions
– READ AND SAVE THESE INSTRUCTIONS –

The Firebird Compact Pro portable electric heater features multiple power receptacles for connection to common 120VAC outlets. The Compact Pro can output up to 20,000 Btu of clean, safe heat at 250 CFM. The Compact Pro's remote thermostat provides a means to control the temperature in the drying chamber, while its internal temperature cutout ensures safe operation.

The Phoenix Firebird Compact Pro

- Built-in DryTAG 2
- Listed by ETL to UL Safety Standards
- 15 Amp Operation at 120VAC up to 4 independent circuits (20,000 Btu)
- Remote Thermostat with 25' connecting wire (included with unit)
- Standard MERV-13 air filter included
- Multiple ducting options
- 8" Outlet Duct, 8" Inlet Duct Optional
- Stainless Steel Cabinet
- Double-Walled, Screened Enclosure for heating elements
- Automatic Internal 140°F Safety Thermal Cutout
- Stackable for easy storage and transportation

Phoenix PN 4045700-01
ServPro PN 4045700-05

C ETL LISTED US
Intertek

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Serial No. _____

Purchase Date _____/_____/_____

Dealer's Name _____

Read the operation and maintenance instructions carefully before using this unit. Proper adherence to these instructions is essential to obtain maximum benefit from your Phoenix Firebird Compact Pro.

⚠CAUTION

TO PROVIDE CONTINUED PROTECTION AGAINST RISK OF ELECTRIC SHOCK, CONNECT TO PROPERLY GROUNDED OUTLETS ONLY.

POWER CORDS MUST BE 12 GA MINIMUM AT 25 FT OR LESS, GREATER THAN 12 GA AT LONGER LENGTHS, AND MUST HAVE A THREE-BLADE GROUNDING-TYPE PLUG.

⚠ ATTENTION

POUR ASSURER UNE PROTECTION CONTINUE CONTRE LES ÉLECTROCUTIONS, NE BRANCHEZ QU'À DES PRISES DE COURANT MISES À LA TERRE CORRECTEMENT.

LE CORDON D'ALIMENTATION DOIT ÊTRE AU MOINS DE CALIBRE 12 GA (POUR LES LONGUEURS DE 25 PIEDS ET MOINS), DE PLUS DE 12 GA POUR DES LONGUEURS PLUS LONGUES ET CONTENIR UNE FICHE DE MISE À LA TERRE À TROIS FILS.IMPORTANT INSTRUCTIONS

⚠WARNING

- Read all instructions before using this heater.
- DO NOT OPERATE near children or invalids.
- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. If provided, use handles when moving this heater. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains at least 36" (.91 m) from the front of the heater and keep them away from the sides and rear.
- For temporary use only, not for comfort heat. See NFPA 70 Article 590.
- Always unplug unit when not in use.
- DO NOT OPERATE with damaged cord, plug, or after unit malfunctions, has been dropped or damaged in any manner. Return to authorized service facility for examination or repair.
- Unit Intended for INDOOR USE ONLY; DO NOT USE OUTDOORS.
- This heater is not intended for use in bathrooms, laundry areas and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
- DO NOT run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.
- To disconnect device, turn controls off, then remove plug from outlet.
- Connect ONLY to properly grounded GFCI outlets.
- DO NOT insert or allow foreign objects to enter any ventilation or exhaust openings as this may cause an ELECTRIC SHOCK or FIRE, or damage the heater.
- To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, such as a bed, where openings may become blocked.
- Device has hot and arcing or sparking parts inside. Do not use in areas where gasoline, paint, or flammable liquids are used or stored.
- Use device only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- Cords used for 120V service shall be No. 12 AWG minimum size rated not less than 1440 Watts.

SAVE THESE INSTRUCTIONS

CONSIGNES IMPORTANTES

- Lisez les consignes en entier avant d'utiliser cet appareil de chauffage.
- ÉVITEZ TOUTE UTILISATION lorsqu'en présence d'enfants ou de personnes handicapées.
- Cet appareil devient CHAUD lorsqu'en fonction. Pour éviter les brûlures, ne laissez pas la peau nue entrer en contact avec les surfaces chaudes. Lorsque disponibles, utilisez les poignées pour déplacer cet appareil. Prévoyez un champ de dégagement pour les matériaux

combustibles tels les meubles, oreillers, literies, papiers, vêtements et rideaux d'au moins 36'' (0,91 m) de distance d'avec la façade de l'appareil de chauffage et maintenez-les bien éloignés des côtés et de l'arrière.

- Conçu pour utilisation temporaire seulement et non comme chauffage d'appoint. Voir l'article 590, normes NFPA 70.
- Débranchez toujours l'unité après utilisation.
- N'UTILISEZ PAS un appareil présentant un cordon ou un branchement endommagé ou suivant tout dysfonctionnement, chute ou endommagement d'une quelconque façon. Retournez plutôt l'appareil à un centre de service autorisé pour inspection ou réparation.
- Cette unité est prévue pour une UTILISATION EN INTÉRIEUR SEULEMENT; NE L'UTILISEZ PAS À L'EXTÉRIEUR.
- Cet appareil de chauffage n'est pas conçu pour une utilisation dans les salles de bain, les salles de lavage ou autres espaces intérieurs similaires. Ne placez jamais cet appareil en milieu humide où il pourrait tomber dans une baignoire ou autre réceptacle contenant de l'eau.
- ÉVITEZ de glisser le cordon d'alimentation sous un tapis. Ne recouvrez pas le cordon d'alimentation avec des carpettes, chemins de plancher ou recouvrements similaires. Évitez de glisser le cordon d'alimentation sous des meubles ou appareils. Assurez-vous que le cordon se trouve éloigné des zones de passage ou là où il pourrait créer un trébuchement.
- Pour débrancher l'appareil, fermez les boutons de contrôle et retirez la fiche de la prise de courant.
- Ne branchez cet appareil qu'à une prise de courant avec disjoncteur de fuite à la terre (DDFT).
- N'insérez AUCUN corps étranger dans la ventilation ou les ouvertures d'échappement; cela peut créer une DÉCHARGE ÉLECTRIQUE, un INCENDIE ou endommager l'appareil de chauffage.
- En prévention d'un éventuel incendie, ne bloquez aucune entrée d'air ou échappement de quelque façon que ce soit. Évitez d'utiliser sur les surfaces souples telles un lit où les entrées risquent d'être bloquées.
- L'appareil comporte des pièces chaudes pouvant produire des arcs électriques (étincelles). Ne pas utiliser là où de l'essence, de la peinture et des liquides inflammables sont utilisés ou entreposés.
- Utilisez cet appareil uniquement aux fins décrites dans le manuel. Toute utilisation non recommandée par le fabricant risque de créer un incendie, une décharge électrique ou des blessures corporelles.
- Les rallonges utilisées pour un branchement en 120 V doivent être au moins de calibre no 12 AWG et être approuvées pour 1 440 watts au minimum.

CONSERVEZ CES CONSIGNES.

1 Specifications

Part No.	4045700-01 (Phoenix) 4045700-05 (ServPro)
Power	Blower Circuit: 1 Amp at 120VAC 60Hz, 1 Phase
	120VAC 60Hz, 1 Phase Heater Circuits (up to 4):
	12 Amp / circuit = 17°F temperature rise/ circuit: 5,000 Btu
	Maximum Heat: 20,000 Btu with 70°F Maximum Temperature Rise at 250 CFM
Blower	250 CFM
Filters	Pleated Media MERV-13
Duct Options	Outlet – 8" Flex-Duct
Warranty	1 year 100% of Parts and Labor

Dimensions

	Unit	Shipping
Width	13"	17"
Height	12.5"	17"
Depth	26"	30"
Weight	35 lb	42 lb

2 Operation

2.1 Transporting

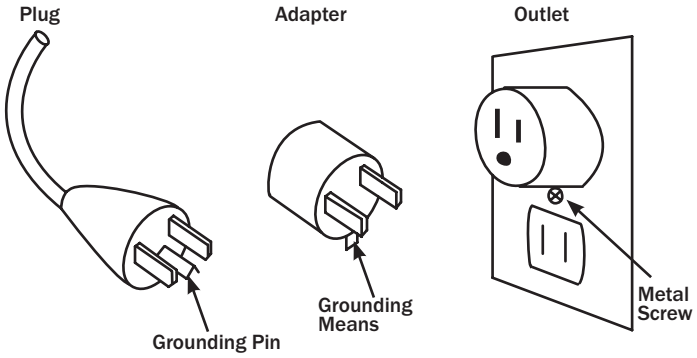
The Phoenix Firebird Compact Pro must always be upright when transported by vehicle. The Compact Pro is equipped with rubber corners to permit stacking for storage. If units are transported, they must be secured with restraining straps to prevent damage and possible injury.

2.2 Electrical Requirements

The Phoenix Firebird Compact Pro requires a 120VAC outlet to power the onboard blower, control and 1st heater circuit. Three aditional heating elements are separately powered by additional cords and receptacles.

120VAC heating elements each require cord connection to appropriate receptacles rated at 15A or more. One cord and receptacle are required per heating element. Power cords should be appropriately sized. POWER CORDS MUST BE 12 GA MINIMUM AT 25 FT OR LESS, GREATER THAN 12 GA AT LONGER LENGTHS, AND MUST HAVE A THREE-BLADE GROUNDING-TYPE PLUG. An adapter is available for

connecting to two-slot receptacles. The green grounding lug extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. The adapter should not be used if a three-slot grounded receptacle is available.



2.3 Ducting

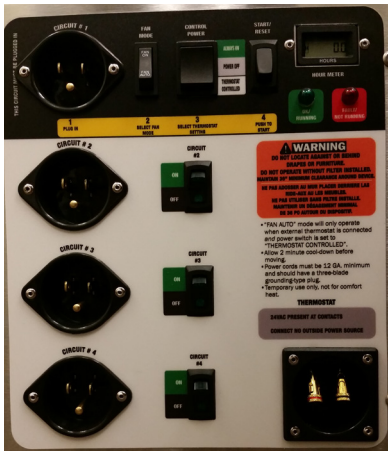
The Phoenix Firebird Compact Pro can be ducted at the inlet, the outlet or both. The Firebird Compact Pro inlet and outlet duct are designed to accommodate 8" flexible duct. When selecting flexible ducting keep in mind anticipated outlet temperatures. Air temperature increase is typically 50 to 80 degrees F. Adding ducting decreases airflow which can increase outlet temperatures by up to 40 additional degrees F.

NOTE: It is strongly discouraged to use mylar ducting as this could burn and cause a fire.

2.4 Control Panel

Fan Mode Switch: This switch allows the user to operate in 'FAN ON' or 'FAN AUTO' mode. In 'FAN ON' mode, the blower will remain on whenever the unit is energized. This mode is recommended for normal operation where constant air circulation is desired. In 'FAN AUTO' mode, the blower will only energize when there is a demand for heat from the remote thermostat connection. To use this mode, the CONTROL POWER switch must be set to 'THERMOSTAT CONTROLLED.' This mode is recommended for applications that do not require constant air circulation during heating.

Control Power Switch: The CONTROL POWER switch can be used to turn the unit ON, OFF, or set the unit to be controlled by an external thermostat. In 'ALWAYS ON' mode, the Compact Pro uses an internal thermostat preset at 140F. Heat will continue to be produced until the air flowing into the inlet reaches 140F. At this point, internal safeties will turn off the heating elements until the inlet air temperature reaches 130F. In 'THERMOSTAT CONTROLLED' mode, the Compact Pro looks for a closed circuit at the THERMOSTAT connection on the front of the control panel. Any dry contact switch or the included remote thermostat with 25' of wire can perform this function.



Start/Reset Switch: The START/RESET Switch is used to enable the Compact Pro to produce heat. If at any time power to the control circuit is lost or if a fault condition occurs, the Compact Pro will go into the FAULT/NOT RUNNING mode. Pushing the START/RESET switch will energize the control circuit and restart the Compact Pro.

OK/Running Lamp: The OK/RUNNING lamp will illuminate when the control circuit is energized. If the lamp is lit, the Compact Pro is under the control of either the internal or external thermostat (depending on which thermostat is selected with the control power switch). In this state, the heater will be on until it reaches cycling temperatures (130F-140F) and will then self-regulate at this range.

FAULT/NOT RUNNING Lamp: If the FAULT/NOT RUNNING lamp is lit, the contactor control circuit is not energized, which will disable the heater circuits and no heat will be produced.

Hour Meter: The digital hour meter measures the cumulative time that the unit is turned on to tenths of an hour. It stores and displays the total when the unit is unplugged. It resets to zero after 99,999.9 hours of operation.

Heat ON/OFF Switches: These switches individually control the heating elements. Each switch connects and disconnects the power from the receptacle next to it. These switches are lighted to indicate when power is connected and the corresponding heating element is on.

Remote Thermostat Connection: There are two spring loaded terminals for connecting the thermostat wiring on the control panel. Connect one wire to each terminal. For applications where the Firebird Compact Pro is placed outside the space to be heated (e.g. ducting heat into a chamber), the 25' cord allows you to place the thermostat inside the heated space.

In addition to the included thermostat, any dry-contact switch or other type of control that connects the terminals together will cause the heating elements to run. The thermostat circuit is low voltage (24VAC). DO NOT CONNECT POWER TO THE THERMOSTAT TERMINALS.

3 Maintenance

3.1 Air Filter

The Phoenix Firebird Compact Pro is equipped with a pleated fabric air filter that must be checked regularly. The standard filter is a MERV-13 high efficiency filter. Operating the Firebird Compact Pro with a dirty or obstructed filter will reduce airflow eventually causing the heating element to shut off. Installing a clean filter or removing the obstruction to restore airflow will allow the heating element to operate again.

The filter can generally be vacuumed clean several times before needing replacement. Replacement filters can be ordered from the factory or purchased locally if available.

⚠WARNING

WARNING: DO NOT operate the unit without the filter or with a less effective filter as the heating coils inside the unit could become clogged and require disassembly to clean.

4 Service

⚠WARNING

WARNING: Servicing the Phoenix Firebird Compact Pro with its high voltage circuitry presents a health hazard which could result in death, serious bodily injury, and/or property damage. Only qualified service people should service this unit.

Do not operate the unit without the front cover in place. High voltage is present, heater burnout may result.

4.1 Technical Description

The compact Pro uses a wound nichrome heating element to provide multiple heat settings depending on the application requirements or available power. The heating elements are operated by contactors operated by a 24VAC control circuit. For safety, there are a set of thermal switches that will de-energize the heating elements if the temperature in the element chamber rises to an unacceptable level caused by lack of airflow or high ambient temperature. An additional safety switch limits the incoming air temperature to approximately 140F. This switch shuts off the heating elements and automatically resets when the temperature falls to approximately 130F.

4.2 Troubleshooting

Low voltage heating circuits require dedicated 15A minimum service for each circuit (up to 4 total).

Blower not running

1. Unit unplugged, no power to outlet
2. Control Switch not working
3. Wiring fault inside device
4. Defective blower or blower capacitor

Blower running but no heat when Ok/Running lamp is on

1. Power switch is set to “Thermostat” and no thermostat is connected, or thermostat is open
2. High temperature limit reached (140°F)
3. Heating relays not operating
4. Wiring fault inside device
5. Defective heating element, pressure switch, or temperature limit switch

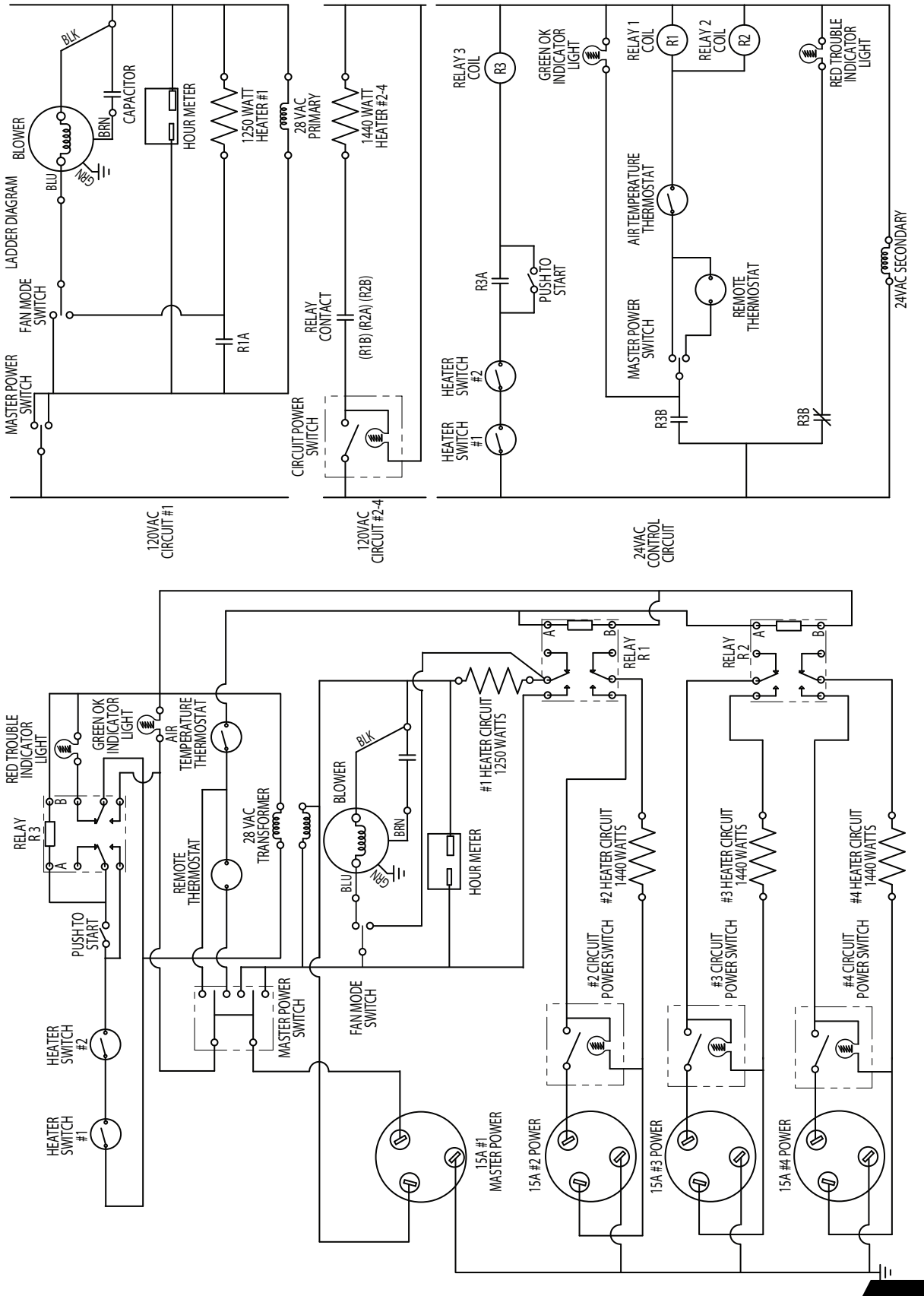
Fault/Not Running lamp illuminated

1. Press Start/Reset button
2. Reduce the length of inlet or outlet duct (if ducted)
3. Check duct for kinks or sharp bends in inlet or outlet duct (if ducted)
4. Impeller is obstructed or slow
5. Voltage is low
6. Create openings in heated cavities to reduce backpressure.

5 Options and Accessories

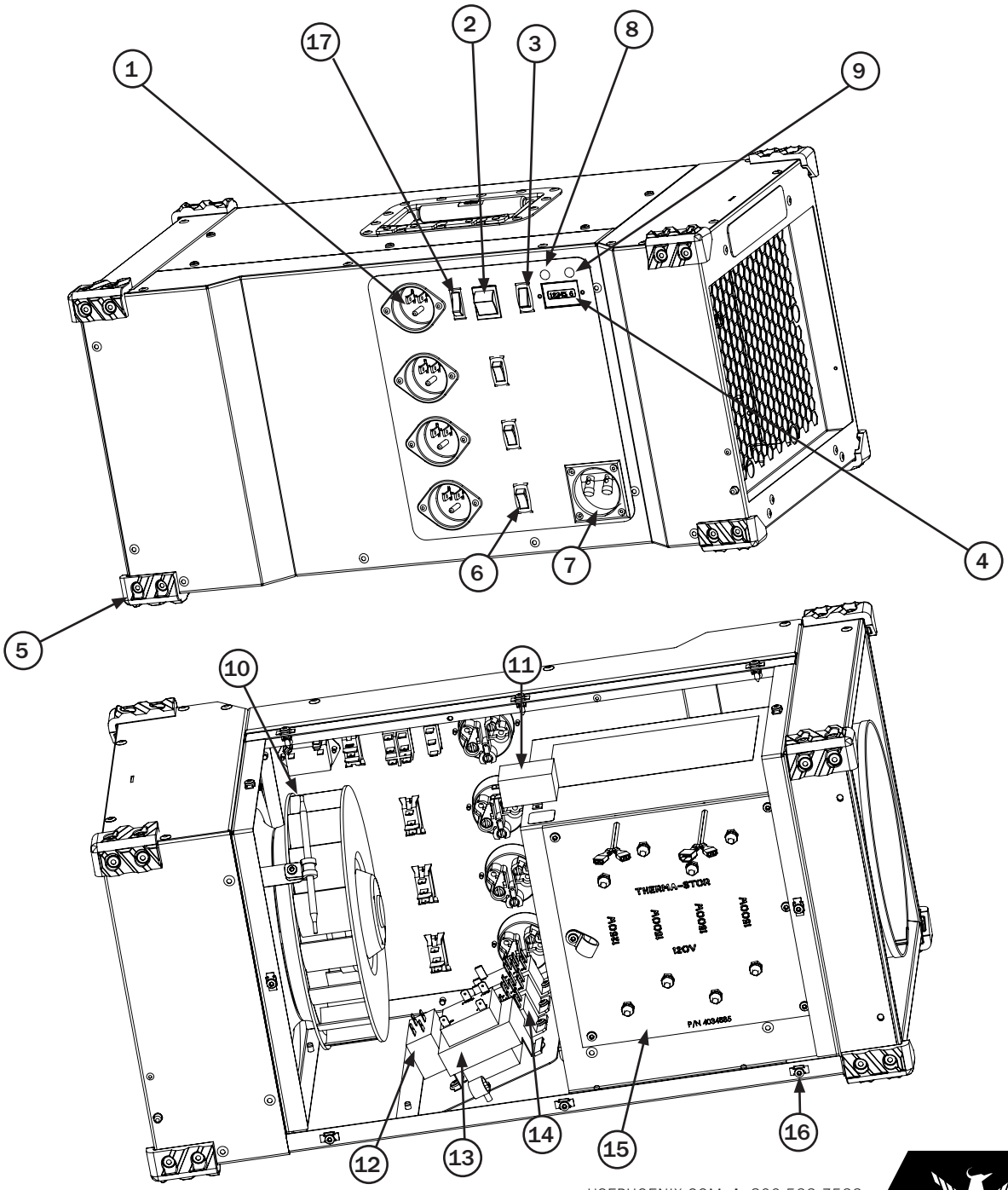
4033895	Duct Kit, Compact Heater, 8” inlet (no flex Duct)
4027415	8” x 25’ Flex Duct
4032773	Cord Kit, (2) 25’ Lighted Cords & (2) 50’ Lighted Cords
4037724	9” x 11 3/8 x ¾” Mini-Pleated MERV-13 Filter
4037736	Filter Package, 12 PK; 9” x 11 3/8 x ¾” Mini-Pleated MERV-13 Filter
4037735	Filter Package, 4 PK; 9” x 11 3/8 x ¾” Mini-Pleated MERV-13 Filter
4027327	Phoenix Remote Thermostat Kit

6 Wiring Diagram



7 Service Parts

Item	Description	QTY	Part No.	Item	Description	QTY	Part No.
1	Flanged 120V Inlet	4	4039492	10	Blower	1	4032769
2	Master Power Switch	1	4030941	11	Thermostat	1	4030614
3	Rocker Switch	1	4021796	12	10mfd Capacitor	1	4033031-05
4	Hour Meter	1	4028795	13	24VAC Transformer	1	4022487
5	Foot	8	4032784	14	Relay, DPDT	3	4029575
6	Heat On/Off Switches	3	4021822	15	Heater Element	1	4034885
7	External TSTAT Connector	1	4036122	16	Tinnerman Clip	10	4032761
8	Green Indicator Light	1	4034878	17	Switch, Fan Mode	1	4025560
9	Red Indicator Light	1	4034886				



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 Phoenix Firebird Compact Pro, and may not be assigned or transferred.

Year One: Therma-Stor LLC warrants that, for one (1) year the Phoenix Firebird Compact Pro will operate free from any defects in materials and workmanship, or Therma-Stor LLC 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 ThermaStor LLC. If the end-user is unable to locate or obtain warranty service from an authorized Servicer, he should call Therma-Stor LLC at the above number and ask for the Therma-Stor 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 enduser is responsible for normal care. This warranty does not cover any defect, malfunction, etc. resulting from misuse, abuse, lack of normal care, corrosion, tampering, modification, unauthorized or improper repair or installation, accident, acts of nature or any other cause beyond Therma-Stor LLC's reasonable control.

Limitation and Exclusions: If any Phoenix Firebird Compact Pro 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 Firebird Compact Pro is out of service while awaiting covered warranty service).

UPON THE EXPIRATION OF THE WRITTEN WARRANTY APPLICABLE TO THE PHOENIX FIREBIRD COMPACT PRO 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 LLC BASED ON ANY ORAL WARRANTY. IN NO EVENT SHALL THERMASTOR LLC, IN CONNECTION WITH THE SALE, INSTALLATION, USE, REPAIR OR REPLACEMENT OF ANY PHOENIX FIREBIRD COMPACT PRO 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 limitation 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.

WARRANTY REGISTRATION CARD

IMPORTANT WARRANTY INFORMATION - DO NOT DISCARD

REGISTER YOUR PRODUCT.

WARRANTY

SERIAL
NUMBER ▶

PART
NUMBER ▶

www.thermastor.com/registration

WARRANTY

Register your product using the serial number and part number above at www.thermastor.com/registration

This is important Warranty Information. Please DO NOT DISCARD!