

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!



OPERATING INSTRUCTIONS AND OWNER'S MANUAL

MODEL#
HSP70ID HSP100ID
HSP200ID HSP300ID

READ INSTRUCTIONS CAREFULLY: YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS. Read and follow all instructions. Place instructions in a safe place for future reference. Do not allow anyone who has not read these instructions to assemble, light, adjust or operate the heater.

PORTABLE INDUSTRIAL OIL-FIRED INDIRECT HEATERS



HSP70ID



HSP100ID



HSP200ID



HSP300ID

⚠ WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Service must be performed by a service agency.

⚠ WARNING: Improper adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for correct installation and operational procedures. For Assistance or additional information consult a service agency.

⚠ WARNING: This is an indirect oil-fired portable heater. It uses air (oxygen) from the area in which it is used. Provisions for adequate combustion and ventilation air must be provided. Refer to "FRESH AIR AND VENTILATION" on page 5

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

⚠ IMPORTANT: READ THIS OWNER'S MANUAL CAREFULLY AND COMPLETELY BEFORE TRYING TO ASSEMBLE, OPERATE, OR SERVICE THIS HEATER. IMPROPER USE OF THIS HEATER CAN CAUSE SERIOUS INJURY OR DEATH FROM BURNS, FIRE, EXPLOSION, ELECTRICAL SHOCK, AND/OR CARBON MONOXIDE POISONING.

⚠ GENERAL HAZARD WARNING:
ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.

⚠ WARNING: FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER, OR CARDBOARD A SAFE DISTANCE AWAY FROM THE HEATER. AS RECOMMENDED BY THE INSTRUCTIONS NEVER USE THE HEATER IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNER, DUST PARTICLES, OR UNKNOWN CHEMICALS.

⚠ DANGER: CARBON MONOXIDE POISONING MAY LEAD TO DEATH. USING A PORTABLE HEATER IN AN ENCLOSED AREA CAN PRODUCE DEADLY CARBON MONOXIDE.

CARBON MONOXIDE POISONING:
Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the heater may not be working properly. Get fresh air at once! Have heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, persons with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

⚠ WARNING: NOT FOR HOME OR RECREATIONAL VEHICLE USE

THE STATE OF CALIFORNIA REQUIRES THE FOLLOWING WARNING:

⚠ WARNING: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information visit www.P65Warnings.ca.gov

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CONTACT INFORMATION

RETAIN THIS MANUAL FOR FUTURE REFERENCE. FOR QUESTIONS, PROBLEMS, MISSING PARTS BEFORE RETURNING TO RETAILER PLEASE CALL WITH MODEL NUMBER AND SERIAL NUMBER OF HEATER:

866-447-2194

MONDAY-FRIDAY 8-5 EASTERN TIME
OR E-MAIL USING THE HEATSTAR WEBSITE:
WWW.HEATSTARBYENERCO.COM

In order to provide the best service possible HEATSTAR is now giving you more ways to get in touch with us. Find informational videos at:

 YouTube: youtube.com/heatstarTV

HEATSTAR'S full line of product are now at:
WWW.HEATSTARBYENERCO.COM

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SPECIFICATIONS

MODEL	HSP70ID	HSP100ID	HSP200ID	HSP300ID
Heat Input (kBtu/hr)	74.9	112	180	285
Air Flow (CFM)	910	1060	1060	1950
Fuel Types	<ul style="list-style-type: none"> • #1 or #2 Fuel Oil • K-1 Kerosene 			
Fuel Consumption (gal/hr)	0.53	0.86	1.27	2.02
Tank Capacity (gal)	11.6	17	17	27.7
Danfoss Nozzle Capacity (gal/hr) Spray Angle (deg) Spray Pattern	Capacity: 0.40 Angle: 80° Pattern: Solid	Capacity: 0.65 Angle: 80° Pattern: Solid	Capacity: 1.00 Angle: 80° Pattern: Solid	Capacity: 1.5 Angle: 80° Pattern: Solid
Pump Pressure (psi) [bar]	174 [12]	174 [12]	188 [13]	174 [12]
Power Supply	1 Phase, 120V, 60Hz, 3A	1 Phase, 120V, 60Hz, 7.5A	1 Phase, 120V, 60Hz, 13A	1 Phase, 120V, 60Hz, 11.4A
Power Consumption (kW)	0.36	0.9	1.6	1.4
Dimensions (L" x W" x H")	45x15x26	48.5x22.5x39	53x22.5x39	63x28x37
Dry Weight (lb)	73	135	148	271
Full Weight, Diesel (lb)	156	257	270	469

If you need assistance or heater information such as a instructions manuals, labels, etc. contact the manufacturer.

CLEARANCES TO COMBUSTIBLES

Clearances between these HEATSTAR PRO indirect heaters and adjacent combustible material (which is part of the building or its contents) shall not be less than:

- Top: 2ft (0.61m)
- Sides: 2ft (0.61m)
- Front: 5ft (1.524m)

THEORY OF OPERATION

Unlike direct combustion heaters, which send combustion products into the space with hot air, These HEATSTAR PRO indirect-fired keep combustion products separated from clean hot air by means of a heat exchanger. As combustion occurs in the combustion chamber, combustion by-products escape through the chimney and away from the user through the options described in "FRESH AIR AND VENTILATION" on page 5. A fan blows clean ambient air across the outside of the combustion chamber which warms the air as it is pushed toward the space.

PRECAUTIONS

Caution: When using Thermostat, heater can start unexpectedly. Turn heater off when unattended.

- ⚠ WARNING:**
- DO NOT USE GASOLINE, NAPHTHA OR VOLATILE FUELS.
 - STOP HEATER BEFORE ADDING FUELS.
 - ALWAYS FILL OUTDOORS AWAY FROM OPEN FLAME
 - DO NOT OPERATE HEATER WHERE FLAMMABLE LIQUIDS OR VAPORS MAY BE PRESENT
 - DO NOT START HEATER WHEN EXCESS FUEL HAS ACCUMULATED IN THE CHAMBER
 - DO NOT PLACE COOKING UTENSILS ON TOP OF THE HEATER.
 - PLUG ELECTRICAL CORD INTO A PROPERLY GROUNDED THREE-PRONG RECEPTACLE.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

Please observe the following precautions when operating your HEATSTAR product.

1. Check the heater thoroughly for damage. DO NOT operate a damaged heater.
2. Only a qualified service person should service and repair heater.
3. Before using the heater, read and understand all instructions and follow them carefully. The manufacturer is not responsible for damages to goods or persons due to improper use.
4. Operate only on a stable, level surface.
5. Not suitable for operation with external tank.
6. Check that fire-fighting equipment is available and suitable to the potential of the heater.
7. The use of the unit shall be in accordance with the regulations and legislation of authorities having jurisdiction.
8. Make sure heater is always under surveillance and keep children and animals away from it.
9. Do not operate the unit in close proximity to combustible surfaces or materials.
10. Heaters used near tarpaulins, curtains or other similar covering materials must be kept at a safe distance. It is advised to use fire-proof covering material.
11. If the heater will be installed, an exhaust gas pipe connection must be installed. Refer to Fresh Air and Ventilation on page 5.

Caution: When this heater is connected to a flue pipe, the flue pipe shall terminate in a vertical section at least two feet long and sufficient draft shall be created to assure safe and proper operation of the heater.

12. Heaters must be powered only with the correct voltage and frequency values as specified on the heater's identification plate or specifications table.
13. Keep all air inlet (rear) and air outlet (front) clear, free of debris or any blockage.
14. Do not start the heater when the chamber is hot.
15. Do not attempt to use heater to cook or warm food.
16. Use original spare parts when replacing the burner, strictly complying with indications

regarding capacity, type of nozzles and pump pressure. An increase in burner power could damage the heater.

17. Turn off and unplug heater and let cool before servicing or transporting.
18. Unplug heater when not in use.

UNPACKING & ASSEMBLY

WARNING: The packaging material is not a toy. Keep the plastic bag out of the reach of children; danger of suffocation!

UNPACKING

1. Remove all protective material which may have been applied to the heater for shipment.
2. The heater is placed on a platform. Lift it delicately using hooks and chains. Use the holes on the structure to lift the heater.
3. Check the heater for possible shipping damage. If any damage is found immediately contact the manufacturer at 866-447-2194

UNIT ASSEMBLY

These heaters have fittings for an optional handle and chimney. If desired, these parts and the required nuts and bolts for fastening are contained in the heater's packaging. Please refer to Figure 1 for guidance with unit assembly.

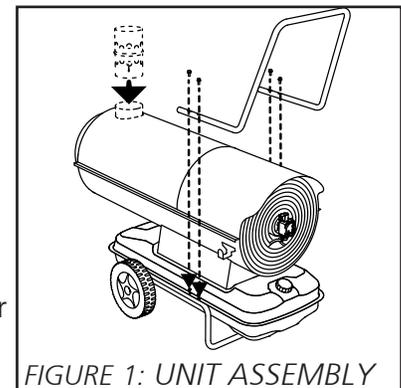


FIGURE 1: UNIT ASSEMBLY

HSP100ID, HSP200ID, HSP300ID DUCT ADAPTERS

The HSP100ID and HSP200ID come with a 14 inch duct adapter part number **F105111**. The HSP300ID comes with a 16 inch duct adapter part number **F105121**. Assembly and operation instructions for your duct adapters are included in its packaging.

ADDITIONAL ACCESSORIES

Table 1 details additional accessories approved for use with the specified heaters. Instructions for assembly and operation of accessories are included in accessory's packaging.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

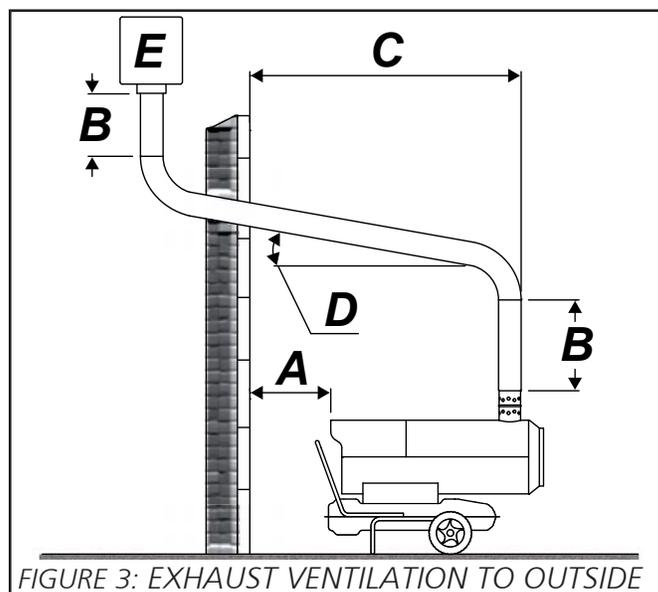
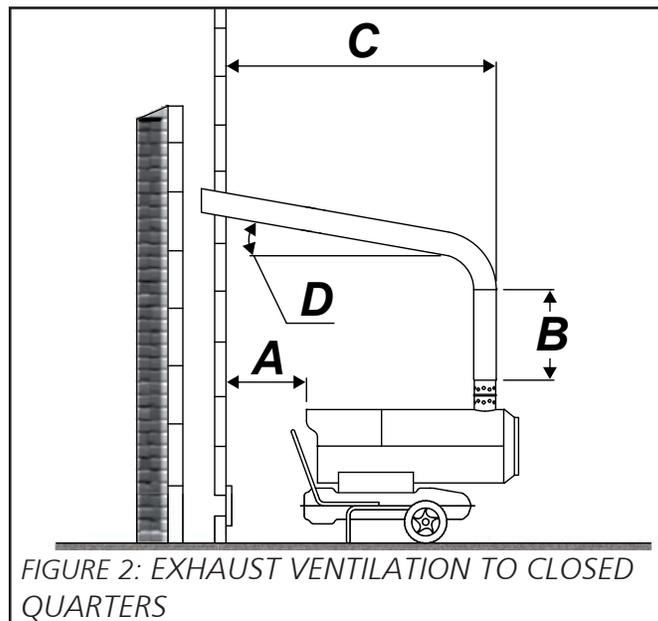
TABLE 1: ADDITIONAL ACCESSORIES CHART		
Part Number	Description	Heaters
F105112	12" Air Recycling Kit	HSP100ID HSP200ID
F105123	16" Air Recycling Kit	HSP300ID
F105114	Heated Filter	HSP70ID
F105106	16 ft Digital Thermostat	HSP100ID HSP200ID HSP300ID
F105108	32 ft Digital Thermostat	HSP100ID HSP200ID HSP300ID

FRESH AIR AND VENTILATION EXHAUST

The gases produced by combustion are vented up through the chimney near the front of the heater. Before operation of the heater, ventilation for exhaust gases through the chimney must be installed. A certified venting system must be used at all times. All venting must correspond with local codes. Figures 3 and 4 illustrate the approved techniques for ventilation of fumes through walls. The dimensions of A,B,C, and D are given in table 2.

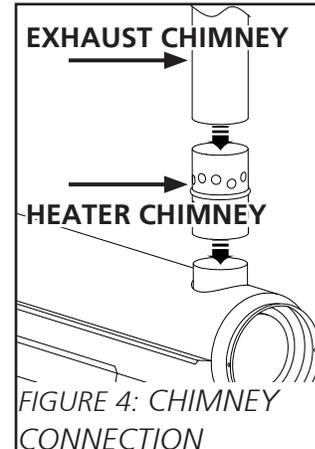
TABLE 2: VENTILATION DIMENSIONS	
A	greater than or equal to 4ft
B	greater than or equal to 4ft
C	As short as possible
D	greater than 5 inches (at least 1 inch for every 10 inches of dimension C)
E	Windproof cap

The exhaust chimney (illustrated in Figures 2 and 3), which connects to the heater chimney (Figure 4), requires a diameter of 4.7 inches or greater for the HSP70ID model and 5.9 inches or greater for the HSP100ID, HSP200ID, and HSP300ID models. If the heater is not connected to an exhaust chimney which vents flue gases as specified in Figures 3 or 4, it must be provided with an essentially vertical steel flue gas exhaust and a draught regulator, respecting the specifications provided in this user manual.



EXHAUST SPECIFICATIONS

- The chimney should have a minimum of 0.04" W.C. draft to ensure safe operation of the unit.
- A vent cap should be installed in situations where downdrafts occur.
- Horizontal runs of flue pipe should have a rise of 1 in 10 away from the heater.



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AIR INTAKE

A rough estimate of minimum opening for ventilation to support heater operation is 1in² for each 1,000 BTU of the heater. Please refer to Table 3 to determine the approximate minimum required opening for ventilation of the space containing the heater unit.

Model	Minimum Opening (ft ²)
HSP70ID	0.52 ft ²
HSP100ID	0.78 ft ²
HSP200ID	1.25 ft ²
HSP300ID	1.98 ft ²

OPERATION

BEFORE SWITCHING HEATER ON

Before any attempt of starting the heater is made, familiarize yourself with warnings, specifications and precautions page 2 - 4.

- Check that the fuel is appropriate. Check that there is sufficient fuel in the fuel tank by reading the fuel gage embedded near the fuel filter. If not already closed, close the tank cap by rotating it clockwise. It is recommended to use winter diesel oil below ambient temperatures of 41 °F.
- Check that minimum safety clearances from combustibles, listed in "CLEARANCES TO COMBUSTIBLES" on page 3, is achieved in all directions.
- Make sure that flue gas is adequately ventilated from the chimney, refer to "FRESH AIR AND VENTILATION" on page 5.
- Attach a duct to the outlet if directed venting of output clean hot air is desired. Ducting can be installed with the specific clamp or quick coupling. Refer to "ACCESSORY CHART" on page 20 for the correct Duct adapter.
- Check that your electrical supply and any extension cable can meet the requirements listed in the specifications table.

⚠WARNING: Not suitable for use on wood floors or other combustible materials.

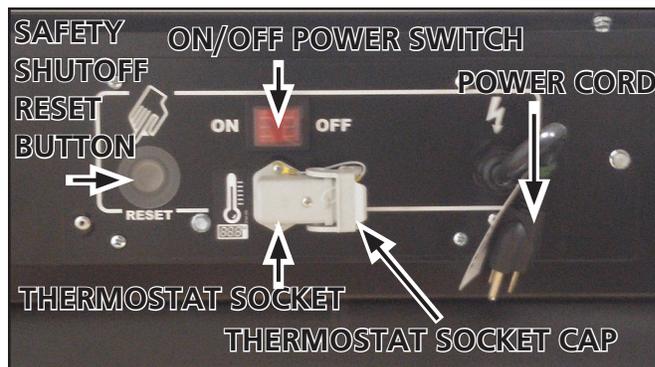


FIGURE 5: CONTROL PANEL

TURNING ON THE HEATER

Refer to Figure 5 for the layout of the control panel. The heater turns on by flipping the power switch from "OFF" to "ON". The burner box will begin firing, which will heat up the combustion chamber. Within 30 seconds the blower fan will activate.

THE EXTERNAL THERMOSTAT SOCKET

The heater can only work automatically when a control device, such as a thermostat or a timer, is connected to the heater. **F105106**, a 16ft digital Thermostat, and **F105108**, a 32ft analog thermostat are both approved for use by the manufacturer with HSP100ID, HSP200ID, and HSP300ID. Connection to the heater is made by removing the thermostat socket cap and connecting the room thermostat to the socket. If no room thermostat will be connected the cap must be inserted into the socket.

SWITCHING OFF THE HEATER:

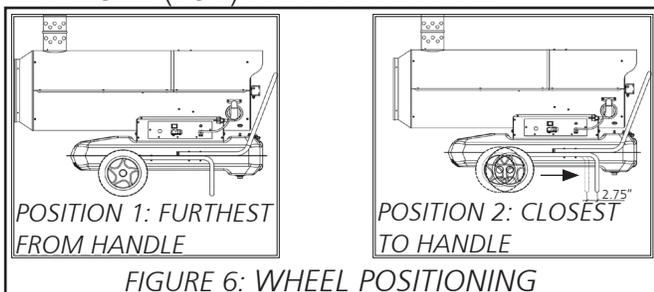
The heater turns off by flipping the power switch from "ON" to "OFF". The burner box will turn off, and the fan will continue running to cool off the burner box. **Do not unplug the heater until this cooling cycle has totally ended.** This may take up to 5 minutes. Once the heater has completely cooled down and the unit is unplugged, ensure that the fuel tank cap is properly closed to prevent fuel leakage during transport and/or storage. To keep the heater in the best possible conditions, store the heater in a dry and safe place after carrying out the procedure in "CLEANING THE FUEL TANK" on page 8.

RESETTING THE HEATER

The appliance stops when an anomaly occurs. If the reset button turns on with a steady red light it means the heater needs to be reset. To reset the heater, press the reset button all the way down. Identify and remove the cause that stopped the appliance (for instance, obstruction of air intake and/or outlet, obstruction to the free rotation of fan, etc.). Please contact an appointed service center for assistance.

TRANSPORTATION

For user convenience, adjustment of heater's foot frame can reposition the wheels along the direction show in Figure 6. Only adjust the wheels when the heater is on a level surface, supported by means other than the foot frame, and the fuel tank is empty. Adjust the wheels by removing the screws and nuts which secure the foot frame to the heater, slide to foot frame such that the wheels are in Position 1 or Position 2, and secure again. Position 1 allows easy movement with an empty or half full fuel tank. If the heater will be subjected to substantial movement with a full tank, move the wheels 2.75 inches (7cm) to be in Position 2.



⚠ WARNING: BEFORE STARTING ANY MAINTENANCE ADJUST WHEELS TO POSITION 1

STORAGE

IN ORDER TO KEEP THE HEATER IN THE BEST POSSIBLE CONDITIONS, WE RECOMMEND FOLLOWING THE PROCEDURE BELOW:

- Clean the fuel tank by the method described page 8.
- Place the heater in a dry place away from potential external damage.

CONTROL AND SAFETY DEVICES

SAFETY THERMOSTAT

The high limit safety thermostat blocks machine operation when malfunctioning occurs. The safety thermostat is normally a closed electrical switch.

FLAME CONTROL EQUIPMENT

The electronic control box coordinates the operation between the fuel solenoid valve, which blocks or allows flow of fuel to the spray nozzle, and the photocell, which detects the light intensity (or absence) of a flame. The coordination of flame brightness and fuel control allows for stable flame conditions.

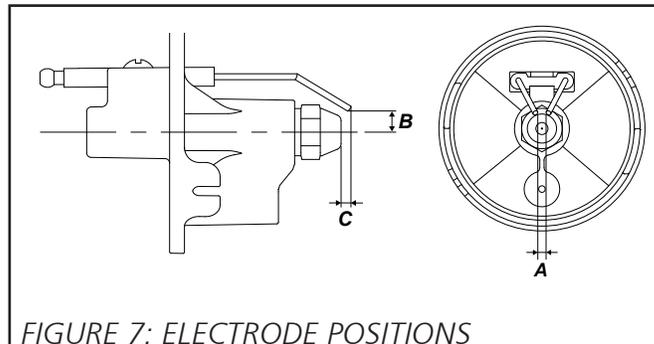
ELECTRODES

Fastened directly on the plate of the combustion chamber, the generated spark between electrodes ignites the fuel mixture. To ensure a proper arc between electrode tips maintain the following distances illustrated in figure 7 below; between the nozzle and electrodes (left) and the electrode tips (right):

A = 0.11 inches,

B = 0.23 inches,

C = 0.11 inches



MAINTENANCE

Adherence to "PREVENTATIVE MAINTENANCE SCHEDULE" on page 8 will ensure a long trouble free life to your heater.

⚠ WARNING:

Never service heater while it is plugged in, operating or hot. Severe burns or electrical shock can occur.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

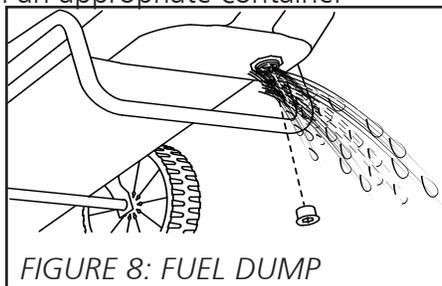
TABLE 4: PREVENTATIVE MAINTENANCE SCHEDULE		
COMPONENT	MAINTENANCE FREQUENCY	MAINTENANCE PROCEDURE
Fuel tank	Clean once a year or as required. Recommended before and after long periods of storage.	Empty and rinse the tank with clean fuel (see below)
Intake Filter	Clean or replace once a year or as required (make sure they are intact)	Clean or replace the filters (see Figures 7 or 8).
Fuel pump filter	Clean or replace once a year or as required (make sure they are intact)	Contact a technical service center. Service of these components should only be performed by a qualified serviceman. Qualified service professionals may contact the manufacturer for a service manual.
Electrodes	Clean as required	
Fan blades	Clean as required	
Combustion chamber	Clean as required	

⚠ WARNING:

Never service heater while it is plugged in, operating or hot. Severe burns or electrical shock can occur.

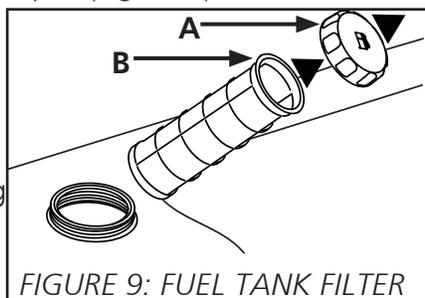
CLEANING THE FUEL TANK

Empty any fuel already in the tank by setting up an appropriate container for catching the fuel below the drain plug under the heater. Remove the 3/4 inch round head drum plug drain cap at the bottom of the tank (Figure 8) and catch the fuel. Remove any residue in the fuel tank by pouring in clean fuel and rinsing the tank again. Dispose of the fuel in an appropriate container in accordance with the current safety regulations. Reattach the drain plug and the fuel tank cap.



CLEANING THE FUEL TANK FILTER

1. Remove fuel tank cap A (Figure 9)
2. Take filter B out from the tank
3. Clean the filter with clean fuel, without damaging it
4. Put the filter back into the tank
5. Close the cap



REPLACING THE INTAKE FUEL FILTER (HSP70ID)

The in-line filter (Figure 10) of the HSP70ID model can be replaced by the following procedure:

- Remove the clamps on either side of the filter by squeezing each clamp's ends together.
- Remove filter from hoses.
- Replace the filter with an original spare part, inserting it into the fuel hose in the same orientation depicted, which it was originally.
- Put the clamps back onto the fuel line, securing the filter in place.



CLEANING THE INTAKE FUEL FILTER (HSP100ID, HSP200ID, HSP300ID)

The filter assembly (Figure 11) of the HSP100ID, HSP200ID, HSP300ID models can be cleaned by the following procedure:

- Unscrew the fuel filter cup A.
- Take out the filter B from the cup. Keep gaskets C for later use.
- Clean the filter B with clean fuel and compressed air, without damaging it.
- Put the filter back in the cup
- Put the cup back on, reassembling the gaskets correctly.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

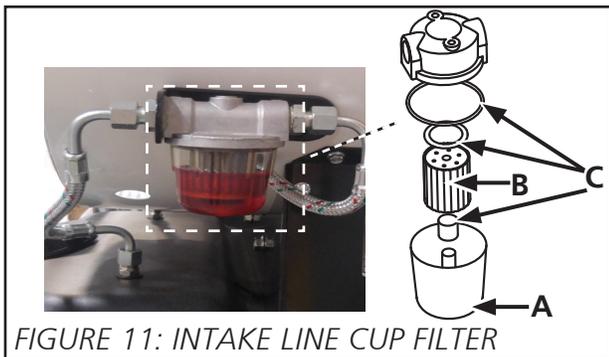


FIGURE 11: INTAKE LINE CUP FILTER

ADJUSTING THE AIR DAMPER

Adjusting the air damper controls the balance of the air/fuel mixture in order to allow for an efficient combustion and mitigate damage to the heater. Consult Figure 12 for guidance. At higher altitudes, the thinness of the air may require widening the air damper gap to facilitate proper

mixing. Access the air damper by removing the top outer casing of the heater, near the handles. Adjust gap "A" by loosening the nut on the clamp, sliding the clamp, and then retightening the nut.

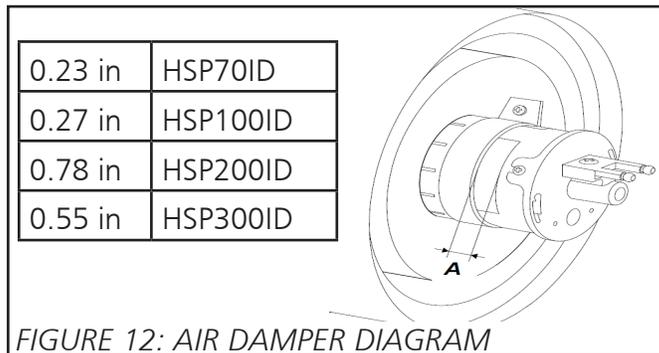


FIGURE 12: AIR DAMPER DIAGRAM

TROUBLESHOOTING

OBSERVED SYMPTOM	POSSIBLE CAUSE	REMEDY
The heater does not start or does not operate	Power switch in "OFF" position	Set power switch to "ON" position
	No power supply	<ul style="list-style-type: none"> • Insert the power plug into the extension cord correctly. • Check voltage of your electric supply system. • Remove control panel and check fuse
	Incorrect setting of the room thermostat (if present)	Set the room thermostat to a temperature higher than the ambient temperature
	Electronic control board malfunctioning	<ul style="list-style-type: none"> • Reset the heater • Replace the control box
	No Fuel	Top up fuel and reset heater
Smoke while operating	External substances or dirt in the fuel circuit	<ul style="list-style-type: none"> • Empty, rinse and refill the tank • Rinse the filter • Contact HEATSTAR customer service.
	Obstructed inlet air vent	• Remove all air vent obstructions
	Incorrect pump pressure or air fuel mixture	<ul style="list-style-type: none"> • check fuel type, clean fuel tank • high altitude (1000m+ above sea level) decrease pump pressure by 29 psi (see service manual) • adjust air damper
The heater does not turn off	Faulty electronic system	<ul style="list-style-type: none"> • Replace solenoid coil or complete solenoid • Contact HEATSTAR customer service.

PARTS ORDERING INFORMATION:

PURCHASING: Accessories may be purchased at any HEAT STAR local dealer or direct from the factory
FOR INFORMATION REGARDING SERVICE

Please call Toll-Free 866-447-2194 • www.heatstarbyenerco.com

Our office hours are 8:00 AM – 5:00 PM, EST, Monday

through Friday. Please include the model number, date of purchase, and description of problem in all communication.

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DIAGNOSTICS

In lockout condition with the pushing of the unlock button for more than 5 seconds, the diagnostic routine is activated (alarm signal with blinks).

The alarm signal is turned off for a number of times that depends on the lockout type with a pause of 2 seconds between a series of blinks and the next. The table below shows the lockout type or the malfunctioning with the number of blinks.

TABLE 5: ERROR CODES	
Blinks Code of Alarm Signal (red LED)	Potential Cause
2 off Blinks ••	Flame failure at the end of safety time «TS»: - Defective or soiled fuel valves - Defective or soiled flame detector - Poor adjustment of burner or no fuel - Defective ignition equipment
3 off Blinks •••	Air pressure switch failure to close or the Revolutions Per Minute are below the minimum set value (TGRD6x-TGRD8x). Preheater thermostat failure to close (TGRD7x-TGRD9x). Safety thermostat failure to close (TGRDxx).
4 off Blinks ••••	Extraneous light/Flame simulation at start-up
5 off Blinks •••••	Air pressure switch failure to open or the Revolutions Per Minute are more than the minimum set value (TGRD6x-TGRD8x).
6 off Blinks ••••••	Air pressure switch failure or the Revolutions Per Minute, in running position, are below the minimum value (TGR6x-TGR8x). Safety thermostat failure in running position (TGRDxx).
7 off Blinks •••••••	Flame failure in running position.
8-14 off blinks	Generic internal failure

During the time cause of fault diagnosed, the control output are deactivated (the burner remains shut down, lockout condition). Diagnostics of the cause of fault is quit and the burner is switched on again by resetting the burner control, pushing the lockout reset button for about 1 sec. (< 3 seconds).

On request, with option "RL1" (see option no. 16), diagnostic messages are displayed also on remote lockout signalling (SB) and diagnostic routine can be enabled also by remote reset pushbutton (RE).

Signals During Operation

In the various operation conditions the device is able to signal the operation state through a multicoloured LED located in the reset button (on board of the device). The colours legend is as follows:

TABLE 6: COLOURS LEGEND	
Color Pattern	Operation State
Stable Green: 	Operating state with good flame signal
Stable Orange: 	Ignition State
Stable Red: 	Lockout State
Blinking Green: 	Operating State with bad flame signal
Blinking Orange: 	Ignition State with good flame signal
Blinking Red: 	Diagnostics in lockout state or parasite flame
Alternating Green/Orange: 	Ignition State with bad flame signal
Alternating Red/Orange: 	Low/high voltage

It's possible to change upon request the operation status signals of multicoloured LED.

Controller Reset

Non-volatile lockout (manual reset)

When the controller goes to a non-volatile lockout, in order to reset the system, the reset button must be pressed until the lockout signal is shut off (< 5 seconds).

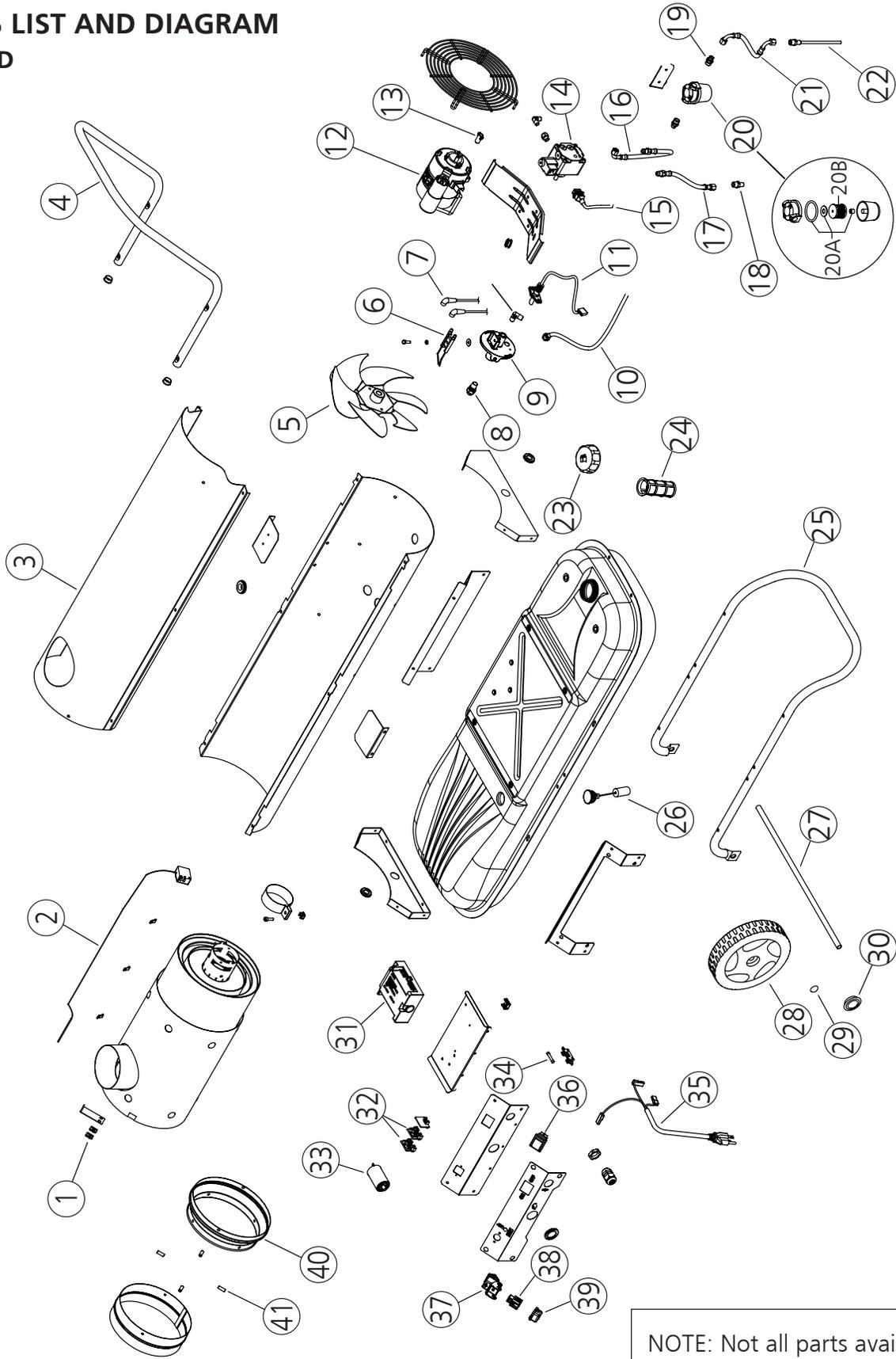
Volatile lockout (electrical reset)

In case of a volatile lockout, the controller can be reset by interrupting and then restoring the power supply. It's not possible to reset the system by shutting off the heating demand device.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

PARTS LIST AND DIAGRAM

HSP70ID



NOTE: Not all parts available. For questions contact manufacturer.

⚠WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

PARTS LIST AND DIAGRAM**HSP70ID**

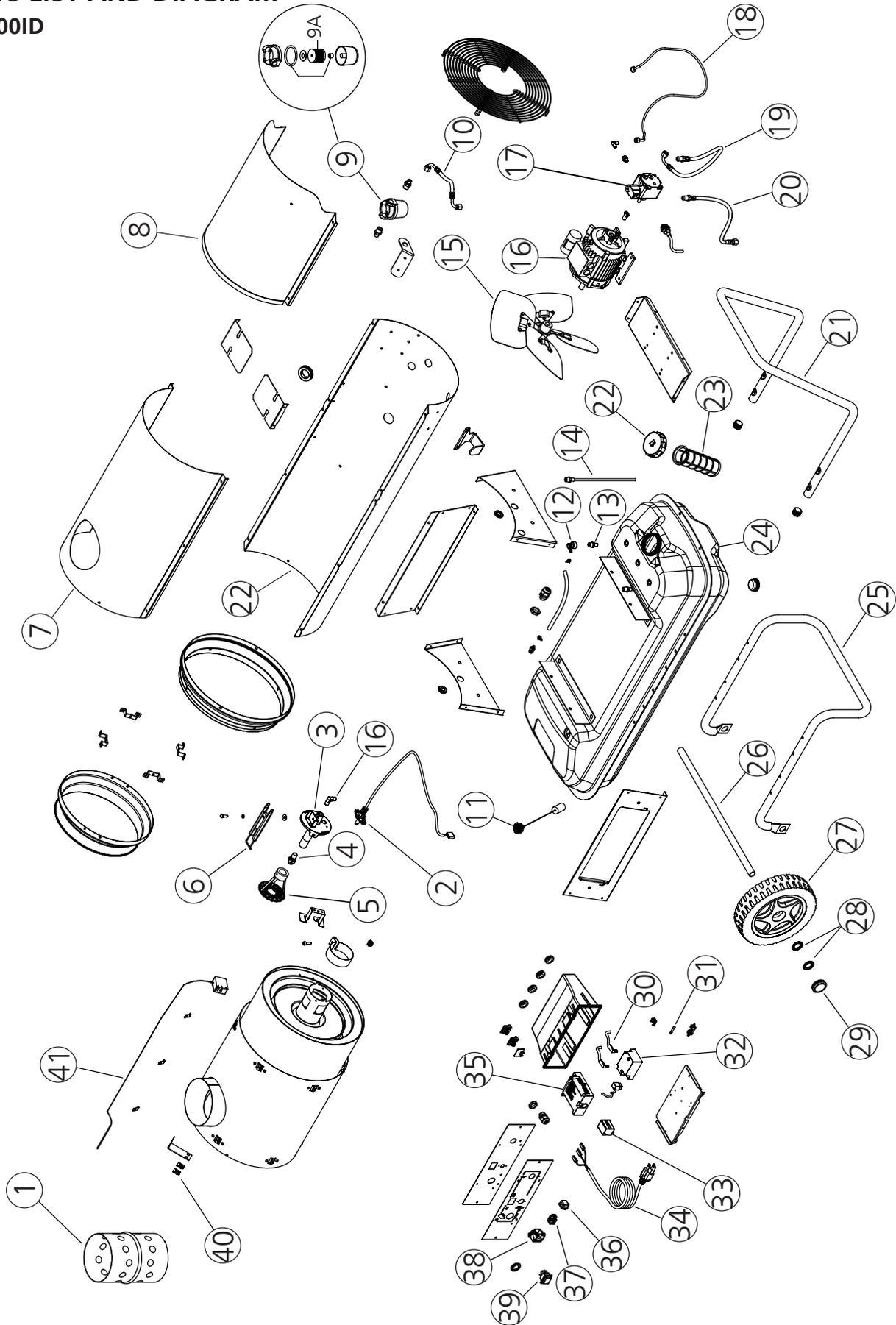
#	P/N	PART DESCRIPTION
1	51076	THERMOSTAT BULB CLIP
2	51073	SAFETY THERMOSTAT
3	51327	UPPER SHELL
4	51326	HANDLE
5	51056	FAN
6	51059	BIFILAR ELECTRODE
7	51306	HIGH TENSION WIRES
8	51013	NOZZLE
9	51529	COMBUSTION HEAD
10	51061	FUEL LINE-PUMP-NOZZLE
11	51307	PHOTOCELL SENSOR
12	51079	MOTOR
13	51157	MOTOR COUPLING
14	51075	PUMP
15	51515	PUMP POWER CORD
16	51488	FUEL LINE - PUMP-FILTER
17	51489	FUEL LINE - PUMP-TANK
18	51009	STRAIGHT CONNECTION
19	51137	NIPPLE, CONNECTOR
20	51058	FUEL FILTER
20a	51269	FILTER KIT
20b	51270	FILTER CARTRIDGE

#	P/N	PART DESCRIPTION
21	51007	FUEL LINE - FILTER-TANK(RETURN LINE)
22	51526	SUCTION LINE-IN-TANK
23	51309	TANK CAP
24	51243	TANK FILTER
25	51505	WHEELS SUPPORT
26	51507	FUEL GAUGE
27	51325	WHEELS AXLE
28	51310	WHEEL
29	51311	WHEEL BLOCK WASHER
30	51324	WHEEL CAP
31	51011	BRAHMA TGRD71
32	51312	TERMINAL BLOCK
33	51313	CAPACITOR
34	51104	FUSE
35	51534	POWER CORD NEMA
36	51194	SWITCH
37	51190	ROOM THERMOSTAT SOCKET
38	51191	ROOM THERMOSTAT PLUG
39	51193	ROOM THERMOSTAT CUP
40	51514	OUTLET CONE
41	51532	SPACER

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

PARTS LIST AND DIAGRAM

HSP100ID



NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!**PARTS LIST AND DIAGRAM****HSP100ID**

#	P/N	PART DESCRIPTION
1	51018	CHIMNEY
2	51064	PHOTOCELL SENSOR
3	51530	BURNER HEAD
4	51000	NOZZLE
5	51057	BURNER HEAD DIFFUSER
6	51159	BIFILAR ELECTRODES
7	51322	UPPER SHELL
8	51323	UPPER SHELL - MOBILE
9	51315	FUEL FILTER
9a	51520	FILTER CARTRIDGE
10	51007	FUEL LINE-FILTER TANK
11	51229	FUEL GUAGE
12	51143	90° AIR CONNECTION
13	51009	STRAIGHT CONNECTION
14	51008	SUCTION LINE-IN-TANK
15	51053	FAN
16	51078	MOTOR
17	51075	PUMP
18	51060	FLEX. FUEL LINE-PUMP-NOZZLE
19	51005	FUEL LINE - PUMP-FILTER
20	51006	FUEL LINE - PUMP-TANK

#	P/N	PART DESCRIPTION
21	51320	HANDLE
22	51134	TANK CAP
23	51242	TANK FILTER
24	51524	TANK,HSP100ID,HSP200ID
25	51491	WHEELS SUPPORT
26	51038	WHEELS AXLE
27	51016	WHEEL
28	51156	BLOCK WASHER
29	51158	WHEEL CAP
30	51071	HIGH TENSION WIRES
31	51104	FUSE
32	51160	HIGH TENSION TRANSFORMER
33	51012	RELAY
34	51534	POWER CORD
35	51043	BRAHMA TGRD91
36	51193	THERMOSTAT CAP
37	51191	PLUG,ROOM,TSTAT
38	51190	THERMOSTAT SOCKET
39	51194	SWITCH
40	51076	THERMOSTAT BULB CLIP
41	51073	SAFETY THERMOSTAT

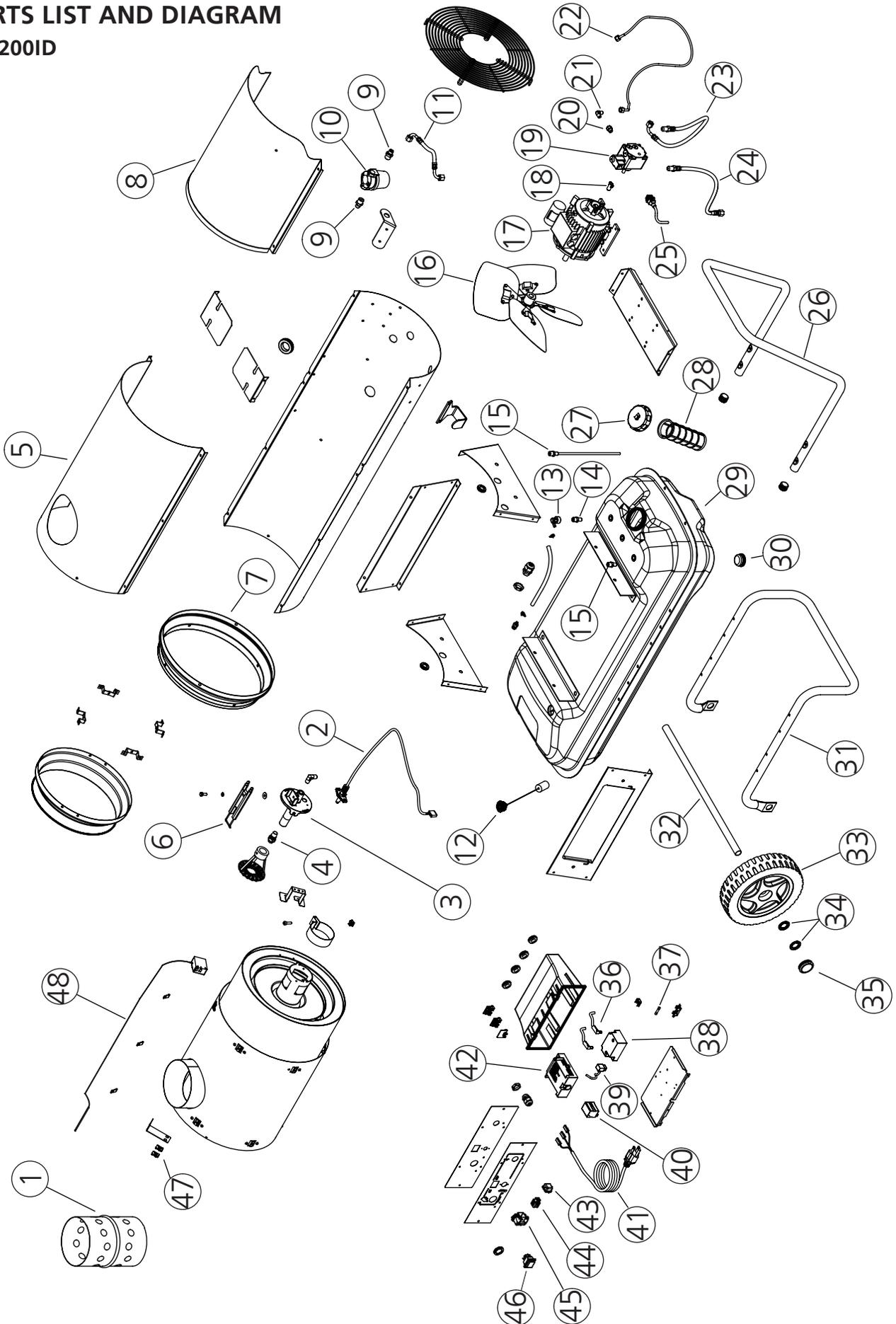
NOTE: Not all parts available. For questions contact manufacturer.

⚠WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

PARTS LIST AND DIAGRAM

HSP200ID



NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!**PARTS LIST AND DIAGRAM
HSP200ID**

#	P/N	PART DESCRIPTION
1	51018	CHIMNEY
2	51064	PHOTOCELL SENSOR
3	51530	BURNER HEAD
4	51001	NOZZLE
5	51321	UPPER SHELL
6	51159	BIFILAR ELECTRODES
7	51510	OUTLET CONE
8	51034	UPPER SHELL - MOBILE
9	51137	NIPPLE CONNECTOR
10	51315	FUEL FILTER
11	51007	FUEL LINE - FILTER TANK
12	51229	FUEL GAUGE
13	51143	90° AIR CONNECTION
14	51009	STRAIGHT CONNECTION
15	51008	SUCTION LINE-IN-TANK
16	51053	FAN
17	51316	MOTOR
18	51157	MOTOR PUMP COUPLING
19	51075	FUEL PUMP
20	51192	STRAIGHT FUEL CONNECTION
21	51063	90° FUEL CONNECTION
22	51060	FLEX. FUEL LINE-PUMP-NOZZLE
23	51005*	FUEL LINE - PUMP-FILTER
24	51006	FUEL LINE - PUMP-TANK

#	P/N	PART DESCRIPTION
25	51077	PUMP VALVE POWER CORD
26	51320	HANDLE
27	51134	TANK CAP
28	51242	TANK FILTER
29	51524	TANK
30	51146	TANK DRAIN CAP
31	51491	WHEELS SUPPORT
32	51038	WHEELS AXLE
33	51016	WHEEL
34	51156	BLOCK WASHER
35	51158	WHEEL CAP
36	51071	HIGH TENSION WIRE
37	51104	FUSE
38	51160	HIGH TENSION TRANSFORMER
39	51072	HIGH TENS. TRANS. PWR. CORD
40	51012	RELAY
41	51534	POWER CORD
42	51043	BRAHMA TGRD91
43	51193	THERMOSTAT CAP
44	51191	THERMOSTAT PLUG
45	51190	THERMOSTAT SOCKET
46	51194	SWITCH
47	51076	THERMOSTAT BULB CLIP
48	51492	SAFETY THERMOSTAT

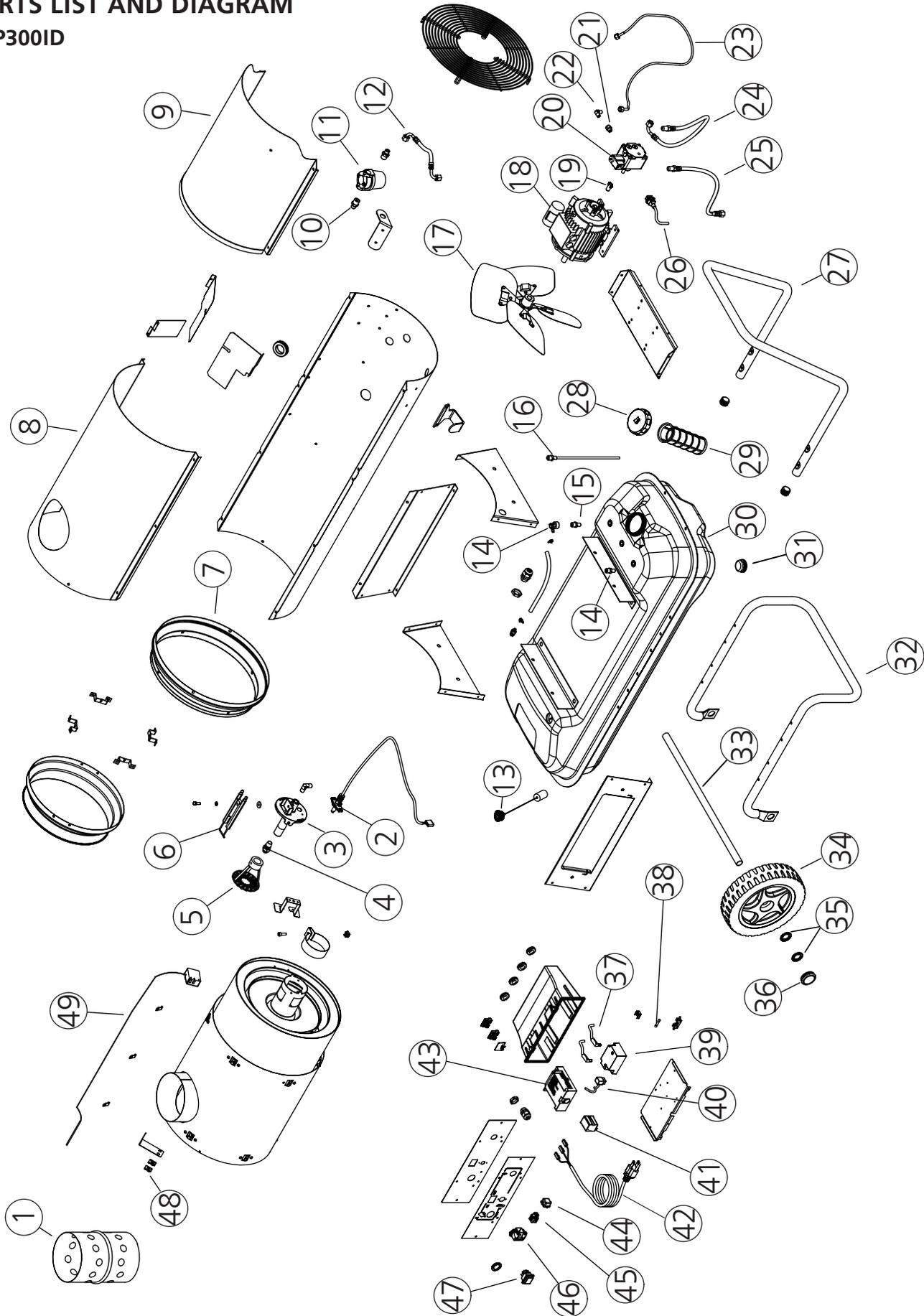
NOTE: Not all parts available. For questions contact manufacturer.

⚠WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

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PARTS LIST AND DIAGRAM

HSP3001D



NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

PARTS LIST AND DIAGRAM

HSP300ID

#	P/N	PART DESCRIPTION
1	51018	CHIMNEY
2	51064	PHOTOCELL SENSOR
3	51055	BURNER HEAD
4	51535	NOZZLE
5	51057	BURNER HEAD DIFFUSER
6	51159	BIFILAR ELECTRODES
7	51512	OUTLET CONE
8	51319	UPPER SHELL
9	51318	UPPER SHELL - MOBILE
10	51137	NIPPLE CONNECTOR
11	51315	FUEL FILTER
12	51007	FUEL LINE - FILTER TANK
13	51229	FUEL GAUGE
14	51143	90° AIR CONNECTION
15	51009	STRAIGHT CONNECTION
16	51008	SUCTION LINE-IN-TANK
17	51052	FAN
18	51030	MOTOR
19	51157	MOTOR PUMP COUPLING
20	51074	FUEL PUMP
21	51192	STRAIGHT FUEL CONNECTION
22	51063	90° FUEL CONNECTION
23	51060	FLEX. FUEL LINE-PUMP-NOZZLE
24	51005	FUEL LINE - PUMP-FILTER
25	51006	FUEL LINE - PUMP-TANK

#	P/N	PART DESCRIPTION
26	51077	PUMP VALVE POWER CORD
27	51317	HANDLE
28	51134	TANK CAP
29	51242	TANK FILTER
30	51523	TANK
31	51146	TANK DRAIN CAP
32	51491	WHEELS SUPPORT
33	51028	WHEELS AXLE
34	51154	WHEEL
35	51156	BLOCK WASHER
36	51158	WHEEL CAP
37	51071	HIGH TENSION WIRE
38	51104	FUSE
39	51160	HIGH TENSION TRANSFORMER
40	51072	HIGH TENS. TRANS. PWR. CORD
41	51012	RELAY
42	51534	POWER CORD
43	51043	BRAHMA TGRD91
44	51193	THERMOSTAT CAP
45	51191	THERMOSTAT PLUG
46	51190	THERMOSTAT SOCKET
47	51194	SWITCH
48	51076	THERMOSTAT BULB CLIP
49	51492	SAFETY THERMOSTAT

NOTE: Not all parts available. For questions contact manufacturer.

⚠WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

PARTS LIST: ACCESSORY CHART

PART #	DESCRIPTION	HSP70ID	HSP100ID	HSP200ID	HSP300ID
F105107	KIT 12" Duct adapter	ON BOARD	N/A	N/A	N/A
F105111	KIT 14" Duct adapter	N/A	IN BOX	IN BOX	N/A
F105112	KIT 12" Air Recycling Kit	N/A	OPTIONAL	OPTIONAL	N/A
F105114	Heated Filter	OPTIONAL	ON BOARD	ON BOARD	ON BOARD
F105121	KIT 16" Duct adapter	N/A	N/A	N/A	IN BOX
F105123	KIT 16" Air Recycling kit	N/A	N/A	N/A	OPTIONAL
F105106	Digital Thermostat 33 ft	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
F105108	Analog Thermostat 33 ft	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL

ON BOARD accessories come already attached to the unit.

IN BOX accessories are packaged with the heater and come with instructions on operation and installation.

OPTIONAL accessories may be ordered.

Accessories that are NOT APPLICABLE may not be used with the specified unit.

PARTS ORDERING INFORMATION:

PURCHASING: Accessories may be purchased at any HEAT STAR local dealer or direct from the factory
FOR INFORMATION REGARDING SERVICE

Please call Toll-Free 866-447-2194 • www.heatstarbyenerco.com

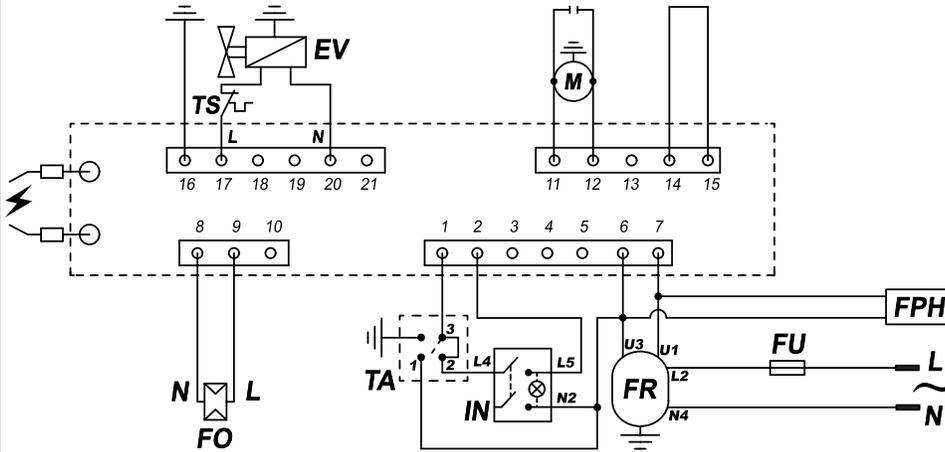
Our office hours are 8:00 AM – 5:00 PM, EST, Monday

through Friday. Please include the model number, date of purchase, and description of problem in all communication.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

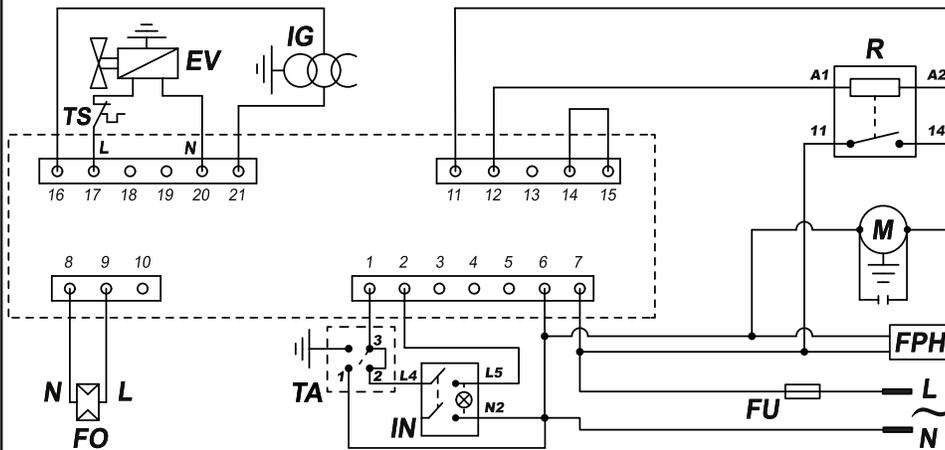
WIRING

HSP70ID WIRING DIAGRAM



- FO: Photoresistance
- TA: Ambient thermostat
- FR: Filter noise
- FPH: Pre-heating filter
- M: Motor
- R: Relay
- IN: Switch
- EV: Electric Valve
- TS: Overheat thermostat
- FU: Fuse
- N: Neutral
- L: Line

HSP100ID, HSP200ID, HSP300ID WIRING DIAGRAM



- FO: Photoresistance
- TA: Ambient thermostat
- FR: Filter noise
- FPH: Pre-heating filter
- M: Motor
- IN: Switch
- EV: Electric Valve
- TS: Overheat thermostat
- FU: Fuse
- N: Neutral
- L: Line

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NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!



OPERATING INSTRUCTIONS AND OWNER'S MANUAL

MODEL#
HSP70ID HSP100ID
HSP200ID HSP300ID

READ INSTRUCTIONS CAREFULLY: YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS. Read and follow all instructions. Place instructions in a safe place for future reference. Do not allow anyone who has not read these instructions to assemble, light, adjust or operate the heater.



WARNING:

USE ONLY MANUFACTURER'S REPLACEMENT PARTS. USE OF ANY OTHER PARTS COULD CAUSE INJURY OR DEATH. REPLACEMENT PARTS ARE ONLY AVAILABLE DIRECT FROM THE FACTORY AND MUST BE INSTALLED BY A QUALIFIED SERVICE AGENCY.

REPLACEMENT PARTS ORDERING INFORMATION:

PURCHASING: Accessories may be purchased at any HEATSTAR by Enerco local dealer or direct from the factory

FOR INFORMATION REGARDING SERVICE

Please call Toll-Free 866-447-2194

WWW.HEATSTARBYENERCO.COM

Our office hours are 8:00 AM – 5:00 PM, EST, Monday through Friday.

Please include the model number, date of purchase, and description of problem in all communication.

LIMITED WARRANTY

The company warrants this product to be free from imperfections in material or workmanship, under normal and proper use in accordance with instructions of The Company, for a period of one year from the date of delivery to the buyer. The Company, at its option, will repair or replace products returned by the buyer to the factory, transportation prepaid within said one year period and found by the Company to have imperfections in material or workmanship.

If a part is damaged or missing, call our Technical Support Department at 866-447-2194. Address any Warranty Claims to the Service Department, Enerco Group, Inc., 4560 W. 160TH ST., Cleveland, Ohio 44135. Include your name, address, telephone number, serial number off heater and include details concerning the claim. Also, supply us with the purchase date and the name and address of the dealer from whom you purchased our product.

The foregoing is the full extent of the responsibility of the Company. There are no other warranties, express or implied. Specifically there is no warranty of fitness for a particular purpose and there is no warranty of merchantability. In no event shall the Company be liable for delay caused by imperfections, for consequential damages, or for any charges of the expense of any nature incurred without its written consent. The cost of repair or replacement shall be the exclusive remedy for any breach of warranty. There is no warranty against infringement of the like and no implied warranty arising from course of dealing or usage of trade. This warranty will not apply to any product which has been repaired or altered outside of the factory in any respect which in our judgment affects its condition or operation.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Enerco Group, Inc. reserves the right to make changes at any time, without notice or obligation, in colors, specifications, accessories, materials and models.

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