

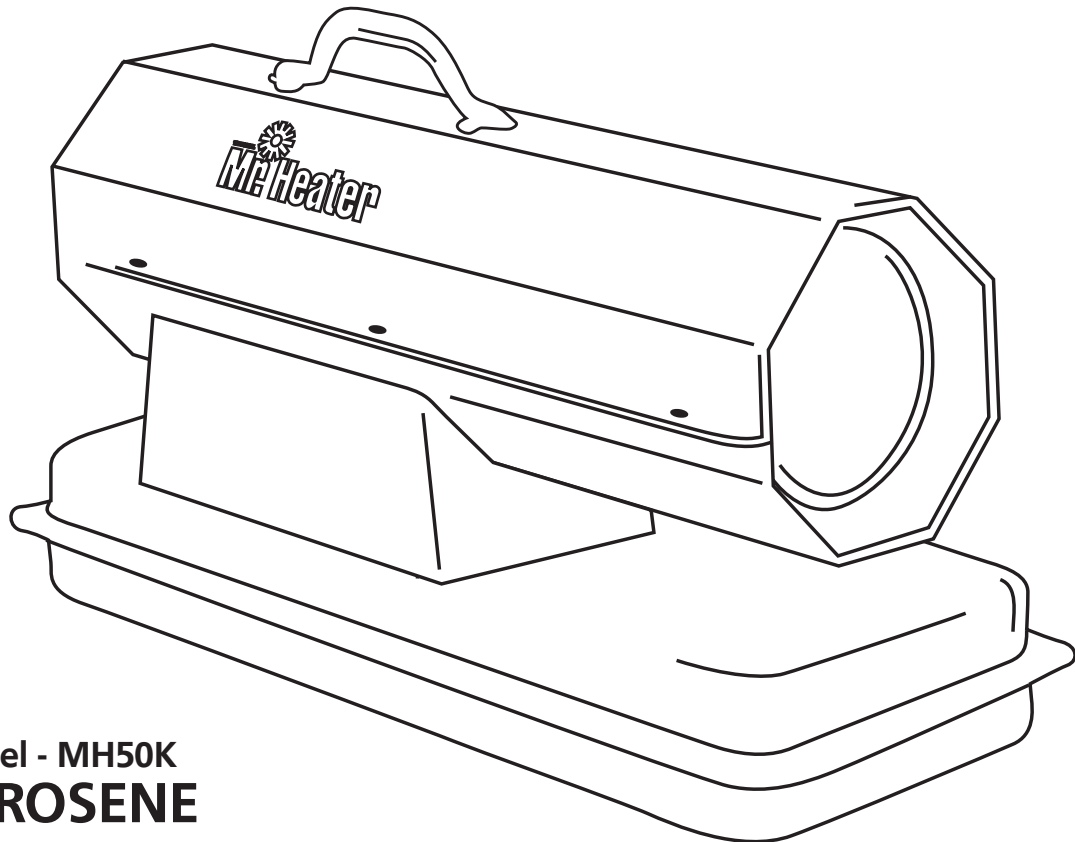


OPERATING INSTRUCTIONS AND OWNER'S MANUAL

Model #

MH50K

READ INSTRUCTIONS CAREFULLY: 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.



Model - MH50K
**KEROSENE
FORCED-AIR HEATER**

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 qualified service agency.

This is an unvented portable heater. It uses air (oxygen) from the area in which it is used. Adequate combustion and ventilation air must be provided. Refer to page 3.

WARNING:

⚠ YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS, SO PLEASE READ THESE INSTRUCTIONS BEFORE YOU OPERATE THIS HEATER.

GENERAL HAZARD WARNING:

- ⚠ FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK.
- ⚠ ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.
- ⚠ IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS, ETC. CONTACT THE MANUFACTURER.

WARNING:

⚠ NOT FOR HOME OR RECREATIONAL VEHICLE USE

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.

WARNING:

⚠ **The State of California requires the following warning:**
COMBUSTION BY-PRODUCTS PRODUCED WHEN USING THIS PRODUCT CONTAIN CARBON MONOXIDE, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS (OR OTHER REPRODUCTIVE HARM).

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SPECIFICATIONS

MODEL NO.	MH50K
GAS TYPE	Kerosene, #1 Fuel
BTU RATING.	50,000 BTU/hr
AIR SUPPLY PRESSURE	3.6 psig
ELECTRICAL INPUT	115V, 60HZ, 3.5a
MINIMUM OPERATING VOLTAGE	110V
IGNITION	Direct Spark, continous
SPARK GENERATOR	Ingnitor 7000V.sec. 10ma
PRIMARY FLAME SAFETY	Solid State Control
FUEL TANK CAPACITY	4 gallons
FUEL CONSUMPTION38 gal/hr

OPERATING PRECAUTIONS

This is a kerosene, direct-fired, forced air heater. It's intended use is primarily temporary heating of buildings under construction, alteration or repair.

Direct-Fired means that all of the combustion products enter the heated space. Even though this heater operates very close to 100 percent combustion efficiency, it still produces small amounts of carbon monoxide. Carbon monoxide (called CO) is toxic. We can tolerate small amounts but not a lot. CO can build up in a heated space and failure to provide adequate ventilation could result in death.

The symptoms of inadequate ventilation are:

- headache
- dizziness
- burning eyes and nose
- nausea
- dry mouth or sore throat

So, be sure to follow advice about ventilation in these operating instructions.

Forced Air means that a blower or fan pushes the air through the heater. Proper combustion depends upon this air flow; therefore, the heater must not be revised, modified or operated with parts removed or missing. Likewise, safety systems must not be circumvented or modified in order to operate the heater.

When the heater is to be operated in the presence of other people the user is responsible for properly acquainting those present with the safety precautions and instructions, and of the hazards involved.

SAFETY PRECAUTIONS

1. Check the heater thoroughly for damage. DO NOT operate a damaged heater.
2. DO NOT modify the heater or operate a heater which has been modified from its original condition.
3. Use only Kerosene or #1 fuel oil. Never use gasoline, naphtha, paint thinner, alcohol or other fuels of any kind.
4. For indoor use only. Use only in well ventilated areas. Provide at least 2 sq. ft. of opening near the floor and 2 sq. ft. of opening near the ceiling. (Also see "Operating Precautions").
5. Install the heater such that it is not directly exposed to water spray, rain and/or dripping water.
6. Maintain minimum clearance from normal combustible material (like paper) at least 8 ft. from the heater outlet and 3 ft. from the top, sides and inlet. Locate 10 ft. from canvas or plastic coverings and secure them to prevent flapping or movement.
7. Due to the high surface and exhaust temperatures, adults and children must observe clearances to avoid burns or clothing ignition.
8. Never use in areas normally for habitation and/or where children may be present.
9. Operate only on a stable, level surface.
10. Do not use with ductwork. Do not restrict inlet or exit.
11. Use only the electrical power specified. The electrical connection and grounding must comply with National Electrical Code - ANSI/NFPA 70 (USA) and CSA C22.1 Canadian Electrical Code, Part 1 (Canada).
12. Use only a properly grounded 3-prong receptacle or extension cord.
13. Do not move, handle or service while hot or burning.
14. Use only in accordance with local codes and federal ordinances.

OPERATING INSTRUCTIONS

UNPACKING

1. Remove all protective material which may have been applied to the heater for shipment.
2. Remove heater from carton.
3. Check the heater for possible shipping damage. If any damage is found immediately notify the dealer from whom you purchased the heater.

PREPARING FOR OPERATION

1. Check the heater for possible shipping damage. If any is found, *immediately* notify the factory.
2. Follow all of the "Precautions".
3. Fill the fuel tank with clean kerosene, No. 1 fuel oil or No. 1 diesel fuel only. Kerosene is recommended for use when the temperature drops below 0°F (-18°C). In extremely cold weather, condensation may develop in the tank and it is recommended that a tablespoon of de-icer be added for each gallon (4 liters) of fuel in the tank. When filling the heater, use at least 2 gallons (8 liters) of fuel. Be sure heater is level and do not overfill. Use a funnel or can with a long fill spout.
IMPORTANT: Before filling fuel tank the first time or after extended storage periods, drain the fuel tank of any moisture or condensation.
4. Locate heater at a safe distance from combustible materials. Model MH50K is not suitable for use on wood floors or other combustible materials. When used, the heater should rest on suitable insulating material at least 1 inch thick and extending 3 ft. or more beyond the heater in all directions.

START

1. Plug heater into a well grounded 115V, 60HZ, 1Ø source of power.
In cold weather, starting may be improved by holding a finger over the end of the pressure adjusting screw until the heater starts. This unit is equipped with a circuit breaker located near the power cord. If the unit does not start, check to see that the reset button is pressed in.

STOP

1. Unplug the heater.

RESTART AFTER SAFETY SHUTDOWN

1. Wait 5 minutes.
2. Push reset button.

MAINTENANCE AND STORAGE

⚠ WARNING: To prevent personal injury, unplug the heater from the wall outlet before servicing. For maximum efficiency and trouble-free service, make the following periodic maintenance, cleaning and inspections.

DAILY SCHEDULE

1. GENERAL. Make general visual inspection of heater for loose or damaged parts. Check nuts and bolts to insure against looseness caused by vibration or rough handling. Damaged parts should be repaired or replaced before using heater again. Check heater operation to be sure it is operating normally (See "Servicing" section for description of normal

operation).

2. FILTERS. Dirty air or fuel filters will cause an imbalance in the air-fuel mixture. The best indication that this condition exists is an increase in odors or difficulty getting your heater to ignite. This heater should never be operated without the filters in place. If required, clean filters as described under "500 Hours" and "Annual Schedules".

500 HOUR SCHEDULE

1. AIR INTAKE FILTER. Remove and wash the filter element with a mild detergent, dry thoroughly and replace. Do not oil the filter element. If your heater is used where there is considerable dust or dirt, clean as often as necessary (approximately every 50hrs.).
2. REMOVE DUST. Clean heater twice a season (more often under dusty conditions). Remove accumulated dust from the transformer, burner, motor and fan blades with compressed air. Wipe area clean with a clean dry cloth. Inspect area to insure all foreign materials are removed, especially around the burner and combustion area.
3. CAD CELL. Clean the glass portion of the cad cell with a soft dry cloth.
4. NOZZLE. Accumulation of dirt from fuel and carbon from the compressor vanes will eventually fill up the passages in the nozzle, resulting in reduction of fuel and air flow. Pressure will gradually increase giving improper fuel-air mixture and excess odor and smoke. If this occurs, replace the fuel nozzle.
5. FUEL TANK. Clean twice a season (during frequently used periods, clean twice a month). Drain and flush the fuel tank with clean fuel oil.

ANNUAL SCHEDULE

1. AIR OUTPUT FILTER. Remove the air output filter and tap the contaminated side gently on a solid object to remove contaminants. Compressed air or liquids should not be used to clean this filter. Reinstall cleaned filter in filter body in the same position as it was when removed. If the filter appears extremely dirty, replace it with a new filter of the same type. When replacing the filter cover, be sure the gasket is firmly in place and the screws in the filter cover are tight to prevent air leaks.
2. FUEL FILTER. Remove the fuel filter from fuel line and direct compressed air through the filter in the opposite direction of fuel flow. Safety glasses should be worn when using compressed air.
3. AIR AND FUEL LINES. If the air or fuel lines are removed during cleaning, be sure all connections are tight before operating unit.
4. AIR PRESSURE SETTING. The air pressure has been properly set at the factory. If the air pressure is out of adjustment, it will most likely be caused by dirty air filters, a partially plugged nozzle, an air leak in the system or improperly set pressure. If adjustment becomes necessary, first determine the proper pressure setting for your heater which is printed on the serial label located on the fuel tank. Remove the plug from the air filter cover and attach an accurate pressure gauge calibrated to a maximum reading of 15 PSI. Start the heater and note the pressure reading. If the pressure is low, slowly turn the pressure adjusting screw in (Clockwise) until the correct pressure is obtained. If the air pressure is high, turn the adjusting screw out (counter-clockwise) until the pressure is correct. When correct pressure is reached, unplug the heater, remove the gauge and replace the plug.

STORAGE

Store the heater in a dry location free from fumes or dust.

At the end of each heating season, clean the heater as described in the MAINTENANCE section. Drain and flush the fuel tank with clean fuel. The manufacturer recommends completely filling the tank with fuel for extended storage to minimize condensation inside the tank.

SERVICING

A hazardous condition may result if a heater is used that has been modified or is not functioning properly. When the heater is working properly:

- The flame is contained within the heater.
- The flame is essentially yellow.
- There is no strong disagreeable odor, eye burning or other physical discomfort.
- There is no smoke or soot internal or external to the heater.
- There are no unplanned or unexplained shut downs of the heater.

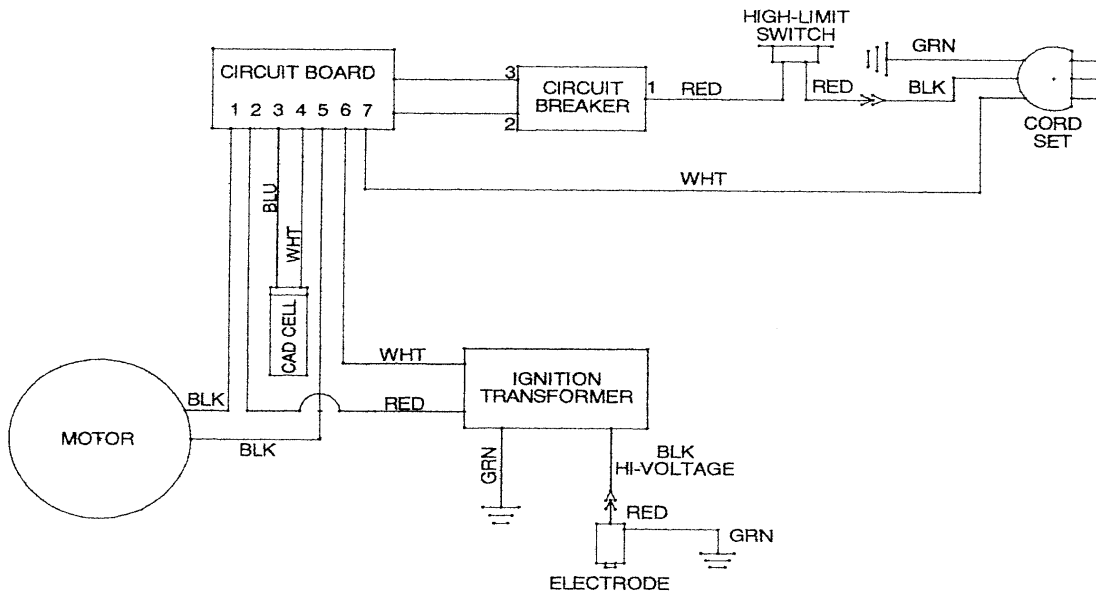
The parts lists and wiring diagram show the heater as it was constructed. Do not use a heater which is different from that shown. Heater performance is effected by air pressure setting. If there is any uncertainty about the air pressure setting, have it checked.

A heater which is *not* working right must be repaired, but *only* by a trained, experienced service person.

In-warranty products will be repaired with no charge for either parts or labor. Please include a brief statement indicating date, place of purchase, the nature of the problem and proof of purchase.

Out-of-warranty products will be repaired with a charge for parts and labor.

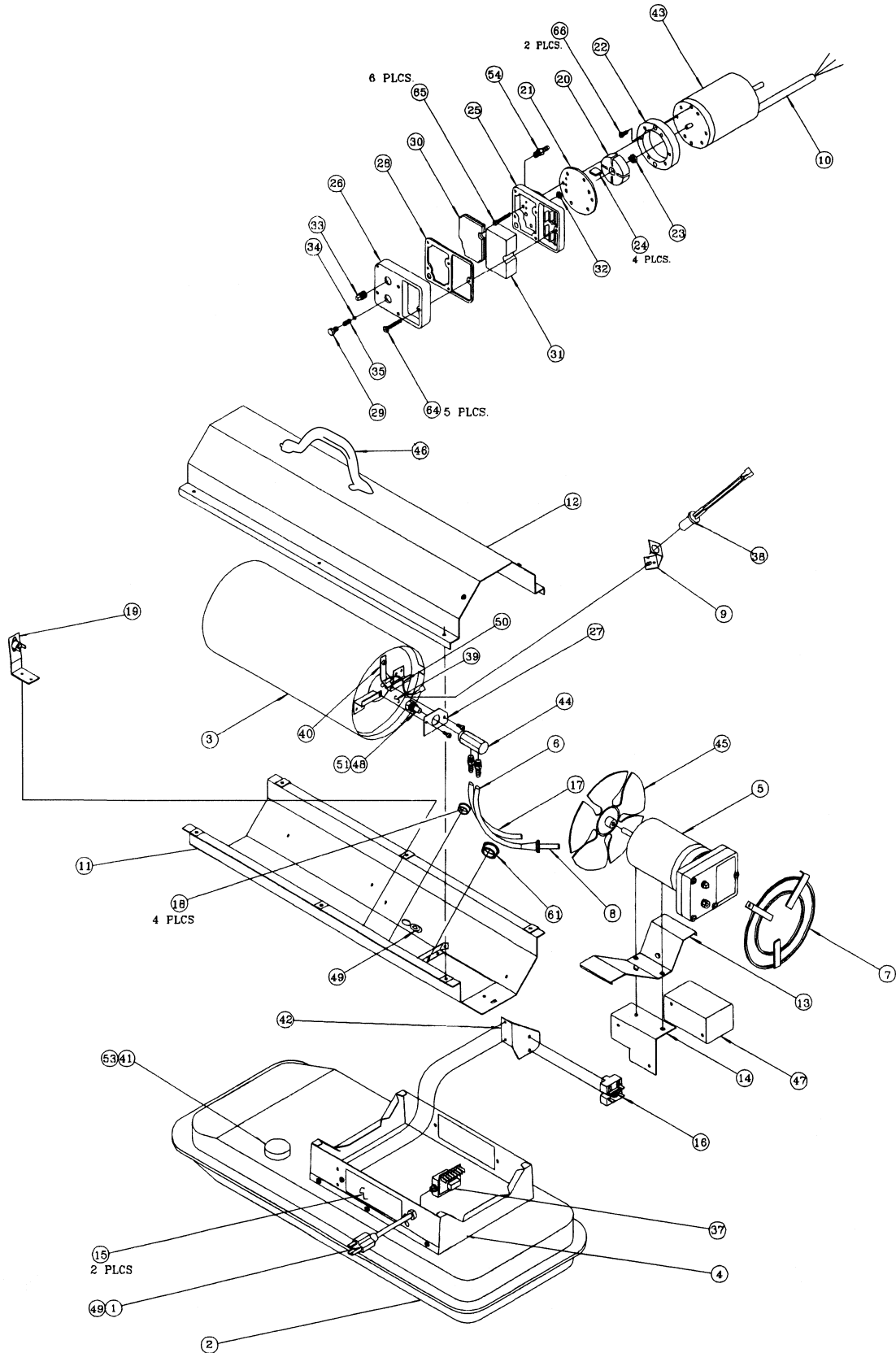
MODEL-MH50K WIRING DIAGRAM



Mr. Heater • Kerosene Forced Air Construction Heater • Parts List • Model #MH50k

Item	Part No	Description	Item	Part No	Description
1	1036	Power Cord Assembly	37	6863	Oil Flame Cntrl Assy.
2	1676	Fuel Tank Assembly	38	6865	Cad Cell Flame Sensor
3	1679	Radiation Sheild Assy.	39	—	Comb. Cntr. Cyl. Assy.
4	1688	Control Box Assy.	40	3843	Electrode Mtg. Brkt.
5	1682	Power Pac Assembly	41	6993	Oil Fuel Cap
6	1686	Fuel Tube Assy.	42	—	Start Relay Brkt.
7	1685	Grille Assembly	43	7399	Motor, 1/4 HP
8	—	Fuel Filtler Assembly	44	7790	Nozzle Adapter
9	4011	Oil Cad Cell Bracket	45	7421	Fan
10	3449	Motor Cord Sleeve	46	7095	Handle
11-1	1802	Bottom shell	47	1684	Ignitor Assy.
12-1	3701	Top Shell	48	7416	Fuel Air Aspir. Nozzle
13	3704	Motor Mounting Brkt.	49	6223	Strain Relief Bushing
14	3705	Ignition Mounting Bkt.	50	1803	Electrode Assembly
15	—	Access Panel	51	7429	Extrnl. Retaining Ring
16	—	Start Relay	•		
17	3725	Air Tube	53	3487	Fuel Cap Gasket
18	6225	Snap Bushing	54	6847	Hose Barb Fitting
19	1796	High Limit Control Ass'y	•	3707	Left Side Panel
20	6831	Air Pump Rotor	•	7094	Clip Handle Mtg.
21	6832	Backing Plate	•	1683	Lead Wire Ass'y., Green
22	6833	Air Pump Cylinder	•	—	Lead Wire Ass'y., Black
23	6834	Nylon Air Pump Insert	61	7424	Snap Bushing, Nylon
24	6835	Air Pump Vane	•	—	Snap Bushing, Nylon
25	6836	Lower Housing	•	—	Fuel Filter Bushing
26	6837	Upper Housing	64	6838	Screw, Tapping #9 x 1 1/4"
27	4171	Nozzle Mounting Plate	65	6908	Screw, Machine #10 x1 1/4"
28	6839	Gasket	66	6906	Screw, Machine #10 x 1/2"
29	6842	Adjusting Screw	•	—	Knob, Thermostat
30	6843	Outlet Filter	•	—	Thermostat Panel Assy.
31	6844	Inlet Filter	•	—	Bracket Thermostat Mtg.
32	6848	O Ring	•	—	Thermostat Assembly
33	6849	Nylon Pipe Plug	•	—	Clamp Loop
34	6850	Relief Ball, 1/4" Dia.			
35	6851	Spring, 24 O.D. x .58			

Mr. Heater • Kerosene Forced Air Construction Heater • Model #MH50k

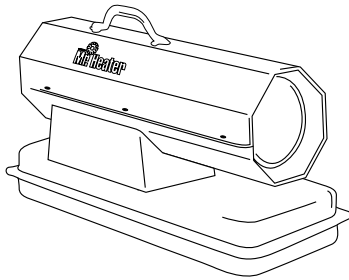




OPERATING INSTRUCTIONS AND OWNER'S MANUAL

Model #

MH50K



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.

PARTS ORDERING INFORMATION:

PURCHASING: Accessories may be purchased at any Mr. Heater local dealer or direct from the factory

FOR INFORMATION REGARDING SERVICE

Please call Toll-Free 800-251-0001 • www.mrheater.com

Our office hours are 8:30 AM – 5:00 PM, EST, Monday through Friday.

Email to: techservice@enerco-mrheater.com

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 800-251-0001.

Address any Warranty Claims to the Service Department, MR. HEATER INC., 4560 W. 160TH ST., CLEVELAND, OHIO 44135. Include your name, address and telephone number 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.

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



UL-733/ANSI A10.10-1990

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