

INFRARED OIL HEATER

VAL6 MPX

SUNLIGHT WARMTH TO THE COLD SPACE

Owner's Manual



English

IMPORTANT




- This Owner's Manual provides important information on proper handling, operation, and maintenance. FAILURE TO FOLLOW THE INSTRUCTIONS, PRECAUTIONS, OR SAFETY TIPS IN THIS MANUAL AUTOMATICALLY VOIDS ALL WARRANTIES, EXPRESS OR IMPLIED.
- FAILURE TO COMPLY WITH THE INSTRUCTIONS, PRECAUTIONS, AND SAFETY TIPS IN THIS MANUAL 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.
- Read and thoroughly understand this Owner's Manual before using the heater in any way, including unpacking, assembling, fueling, inspecting, lighting, operating, adjusting, turning off, cooling down, moving, or storing the heater.
- Please keep this Manual for the user's need and reference.
- Do not allow anyone who has not read and understood this Owner's Manual to assemble, inspect, light, operate, adjust, turn off, cool down, refuel, move, or store the heater.
- The requirements of local authorities having jurisdiction shall be followed.
- The installation of the unit shall be in accordance with the regulations of the authorities having jurisdiction.



Contents


1. Special precautions	2	4. Inspection	11
2. Names of components	6	4-1. Daily inspection	12
3. How to use	7	4-2. Periodic inspection	13
3-1. Preparation for operation	7	5. How to replace the Nozzle & Fuse	13
3-2. Operating procedures	9	6. How to store the heater	14
3-3. How to connect the Control Device	10	7. Troubleshooting	15
3-4. Use of the Heat Shielding Mat	11	8. Specifications	16
3-5. Operation with Portable Generator	11	9. Safety labels	17
		WARRANTY POLICY	18

1 Special precautions

◆ This Manual explains necessary precautions that must be strictly followed for proper and safe operation. Precautions are divided into 3 categories  **Danger**,  **Warning**, and  **Caution**. Please read and understand well the details and meanings of each category.




 **DANGER** "DANGER" means that failure to follow the given precaution (s) may lead to death, serious injury and/or major fire.

 **WARNING** "WARNING" means that failure to follow the given precaution (s) may likely result in death, serious injury, fire and/or possible explosion.

 **CAUTION** "CAUTION" means that failure to follow the given precaution (s) may result in serious injury and/or property damage.


* Depending upon the circumstances, even the category of "CAUTION" can lead to grave damage to persons and/or property. Caution and recommendation listed in each category are equally important for safe operation, so be sure to follow the precautions in all 3 categories.

■ Following signs, used throughout this Manual, are defined as follows:

	Prohibited (This indicates "actions that are strictly forbidden".)
	Mandatory (This indicates "actions or instructions" that must be carried out.)
	Caution (This indicates "actions" that require careful attention)

Important Notice

WARNING

- When operating or servicing this heater, please follow all instructions described in this Manual.
- When replacing parts, use only the genuine parts made or approved by the manufacturer of the heater. Please note that we shall not be held responsible or liable for any damage or accident that results from using any unapproved or non-genuine parts.
- We shall not be held liable or responsible for any damage or accident that results from disobeying or not properly carrying out any instructions in this Manual, or from the improper modification or operation of the heater.
- The State of California requires the following warning:
 **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).**













1. As we cannot predict every possible situation of danger while operating this heater, the contents described in this Manual could not fully foresee a whole range of possible dangers. So, when operating or doing daily inspection (to this heater), please pay full attention not only to the contents of this Manual and the Labels on the heater itself, and also be constantly alert for factors that might affect the safe operation of the heater. Do not hesitate to stop operation and contact your dealer if you have any questions about any matter not discussed in this Manual.
2. If you have any question or want to know more detailed information about the heater, please contact your dealer.
3. If any irregular or missing page(s) is found in this Manual, please contact your dealer and we will exchange it with a new one.
4. Please keep the set of Standard Parts supplied with the heater.
5. The operator of the heater is responsible for warning anyone who works around the heater or comes near the heater of the dangers of the heater and the safety precautions that must thereby be taken pursuant to this Manual.

Purpose of this Owner's Manual

















This Manual aims to supply the user with detailed information on how to properly use, operate and service this VAL6 Heater.

To Help Ensure Safe Operation, Comply with the Following Precautions














* It is important that the safety precautions listed below are understood and followed prior to first operation of the heater. These precautions must also be followed thereafter.

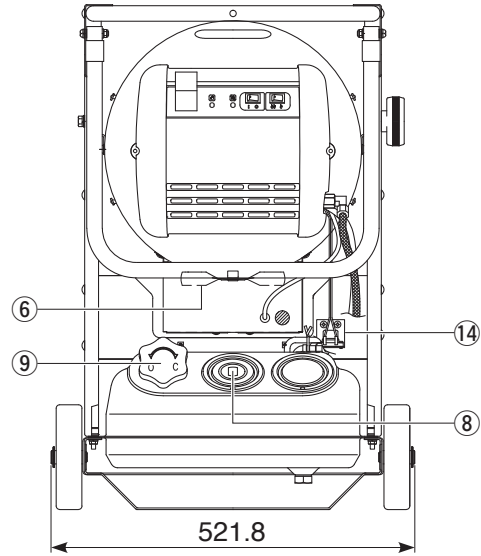
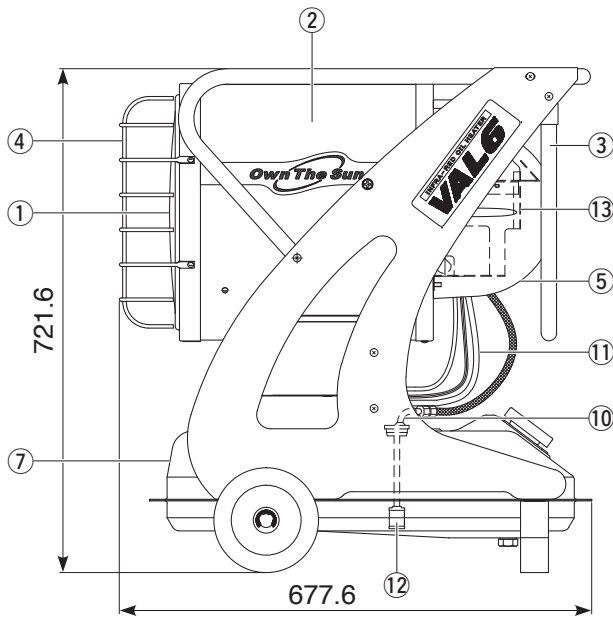
 DANGER			
1	Use of gasoline prohibited	Never use gasoline, for any purpose, for example, for cleaning or as fuel, in connection with, or around, operation or storage of the heater, as a fire and/or explosion may result.	
2	Use of flammables prohibited	Never use or store the heater where thinner, gasoline, liquid propane gas, or other highly flammable vapors, etc., are present, because these may lead to explosion or fire.	
3	Ventilation required	Never use the heater in poorly ventilated areas. Poor ventilation allows a build-up of carbon monoxide produced by the heater, especially if there is also inadequate combustion. CARBON MONOXIDE is a colorless and odorless poisonous gas that may lead to death or other injury. Always provide a fresh supply of outside or circulating air whenever the heater is used. Some people are more affected by carbon monoxide than others, including pregnant women, persons with heart disease, lung disease, anemia, and/or under the influence of alcohol. High altitude also creates a higher danger of susceptibility to carbon monoxide. Danger signs that a person may be suffering from carbon monoxide poisoning include, headache, dizziness, burning eyes and nose, nausea, and dry mouth or sore throat. If any of these symptoms occur, immediately seek medical attention, ventilate the area, and turn the heater off. This heater requires approximately at least 2,800 cm ² (3.06 ft ²) opening per unit when it is used indoor.	
 WARNING			
1	Keep aerosol containers away from the heater	Never place sealed, pressurized containers (such as aerosol cans) near the heater as exposure to heat from the heater may build up pressure in the container and cause it to explode with deadly force.	
2	Never use the heater where flammable dusts are present	Never operate the heater where highly flammable dusts (of wood, paper, textile, etc.) are present. Dusts, after sucked and heated by the heater, will be blown out “sparked” and cause a fire.	
3	Be careful of hot surfaces on and around the heater	Portions of the heater (both while the heater is in operation and for 30 minutes or more after the heater is turned off), are hot to the touch and may burn the skin and/or ignite clothing and other combustible materials. Avoid touching the burner and nearby areas while the heater is in operation and for at least 30 minutes after it is turned off. Also do not move or service the heater while it is operating or hot.	
4	Do not service the heater while burning	Do not service or handle the heater while burning, in operation, hot or plugged-in to avoid any injury and/or trouble.	
5	Modification of the heater prohibited	Never modify the heater by any means. Any modification may increase the chance of burns, fires, explosions, or other problems before, during, and after operation of the heater.	
6	Be careful of electrical shock	To avoid electrical shock, never use the heater where exposed to rain, snow or high humidity. If the heater or any part of it becomes immersed in water, immediately contact a qualified service agency to inspect the heater and determine if anything needs to be replaced prior to further operation. Make sure the power plug is disconnected from the electrical outlet, before starting daily inspection and maintenance.	
7	Never use the heater for any residential application	This heater is for industrial use only. Never use the heater for any residential application at all time. Wrong use of this heater can result in potential death, serious injury, fire and/or possible explosion.	

To Help Ensure Safe Operation, Comply with the Following Precautions

 CAUTION			
1	Keep flammable materials away from the heater	To avoid a fire, please keep all flammables more than 2.5m (8.2ft.) away from the front of the radiation disk, and more than 2m (6.56ft.) away from all sides (left/right and top/rear) of the heater.	
2	Do not block the heater	To avoid a fire, never place any object within one (1) meter (3.28 feet) from (the front of) the radiation disk.	
3	Do not try to ignite the heater more than 3 times in a row	If the heater does not ignite the first time, do not try to ignite more than two more times in a row thereafter because a fire may result. If the heater does not ignite after the third attempt, stop trying and consult your dealer prior to further operation of the heater.	
4	Do not operate the heater unattended	Do not leave the heater unattended while it is in operation or cooling down so that unexpected problems, such as fire, can be dealt with immediately.	
5	Placing the heater on combustible matter or flooring is prohibited	The heater is for use on non combustible matter or flooring only unless the shielding mat, part #503002-05001 is used. Materials of shielding mat : glass cloth and aluminum film Dimension of shielding mat : 1200 x 1200 x (3.5) mm (L x W x H)	
6	Operation of the heater when either the heater or the operator is wet is prohibited	Do not use the heater where it is exposed to water, e.g. rain or snow, and do not operate the heater with wet hands or if it becomes wet. Water contact may cause an electric shock or other danger or malfunction.	
7	Do not use the heater in high altitudes	When the heater is used in an altitude higher than 1000m (3000 ft) above sea level, some adjustments will be required. Please contact your dealer about the adjustments. The heater, if not duly adjusted, may cause a fire.	
8	Stop using the heater when anything irregular is found	If a burning smell or smoke occurs during operation of the heater, immediately turn off the heater and consult your dealer. Further operation may result in a fire or other hazard.	
9	Do not move the heater while in operation	Moving the heater while it is on or otherwise in operation is prohibited. Movement may result in a fire, especially if the heater is overturned or unbalanced.	
10	Turn the heater off by operation switch	Be sure to shut off the heater by switching off. Do not stop the heater by unplugging. Doing so may cause trouble in the heater.	
11	Turn off while refueling	Never refill the fuel tank when the heater is on or it is still hot. Refueling while the heater is still operating or hot may cause a “flash back” of flames to the fuel container or other hazard, causing serious injury and/or property damage. For the same reason, refueling should only be done outdoors and away from any open flame. In addition, spilling fuel on a carpet while refueling or otherwise creates an additional fire hazard.	
12	Use only the correct voltage	Only electrical voltage and frequency specified on the model plate must be used, to avoid a fire, electrical shock and/or damage.	
13	Ground the heater before operation	Prior to operation, confirm that the heater is properly connected to a grounded power cord and outlet. Attempting to use or operating the heater without proper grounding may result in dangerous electrical shock.	
14	Do not pull out the power plug by pulling on the power cord	When disconnecting the power cord, always pull out the plug, never the cord, to unplug the cord. To pull out the cord may damage the cord itself and result in fire through electrical shock or short circuit.	
15	Do not damage the power cord	Do not place excessive force on the cord by bending, pulling, twisting, pinching or remodeling. Also, do not place any heavy objects on the heater, etc. that may damage it, to avoid a fire and electric shock.	

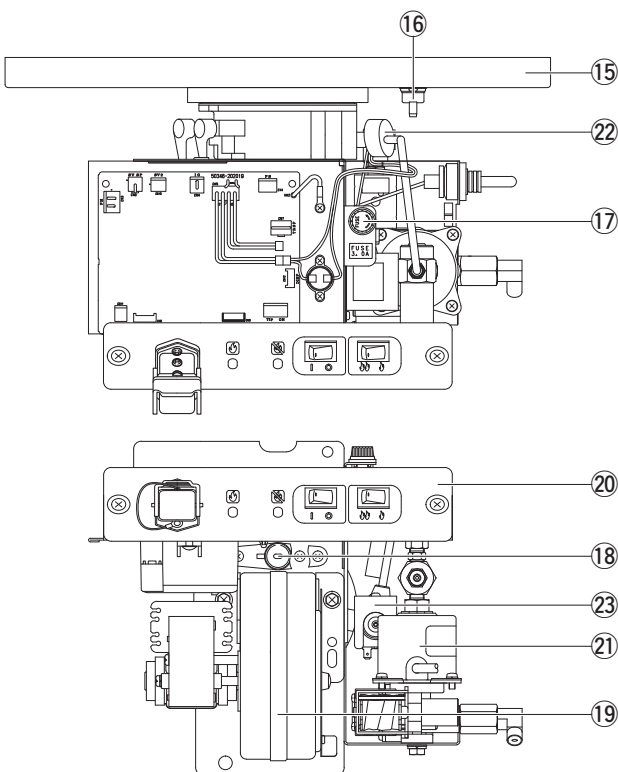
To Help Ensure Safe Operation, Comply with the Following Precautions

 CAUTION			
16	Use gloves	When cleaning the heater, use gloves, to avoid any injury to hand or fingers. Use of gloves while operating and moving the heater is also recommended.	
17	Make sure the flame is extinguished and the power off before leaving the heater unattended	After shutting off the heater, make sure that the flame is extinguished and the power disconnected before leaving the heater unattended. It is also not safe to leave the heater unattended while it is cooling off or to leave it in any area where children are present or may come upon it.	
18	Do not dispose of the heater illegally	When you dispose of the heater, please do not dispose of it illegally and consult your local authorities or specialists on how to properly dispose of it.	
19	Do not use the heater in the following places or conditions	<p>To prevent accident or injury, do not use the heater in the following places or under the following conditions:</p> <ul style="list-style-type: none"> • On vibrating, trembling, or unstable flooring • On ladders, scaffolds, or sawhorses • On any floor that is slanted, sloped, or not level • On stairs or anywhere where it might block access to emergency exits • Near unstable or stacked materials • In windy, humid, or dusty areas, and areas where metal particles are present • In areas where the flow of people or vehicles is impeded or obstructed <p>Always use caution in determining where to place the heater for use or storage and take into account both present and potential future dangers.</p>	
20	Do not operate in extreme temperatures	Make sure that the heater operates at temperatures between -20° and 40°C (-4° and 104°F). If the heater operates at more than 40°C (104°F), the heater will overheat and result in fire.	
21	Provide the Owner's Manual to the new owner	If the heater is sold or given to a new owner, make sure that this Owner's Manual is transferred to the new owner along with the heater.	
22	Do not use fuel of low quality	Do not use fuel of low quality such as discarded oil or fuel mixed with water.	
23	Be careful when moving or storing the heater	When the heater is moved or stored, it must be in a level position to avoid a leakage of fuel.	
24	Keep away from children	The heater should not be used, cooled, or stored where children could have access to it. The heater must not be ignited, operated, maintained, attended to, or otherwise used in any way by children.	
25	Children or the handicapped are not to operate this heater	This heater is not to be operated by children or physically handicapped or person without proper knowledge and experience unless they have been given proper supervision or instruction.	
26	Never look directly straight into the radiation disk	While the heater is in operation, avoid looking straight into the radiation disk. It may cause eye injury.	
27	Do not use the heater in an environment subject to corrosive gas.	Do not use the heater in an environment subject to corrosive gas. (Ex. ammonia arising from livestock barn) Parts can become corroded and cause unit to operate improperly.	



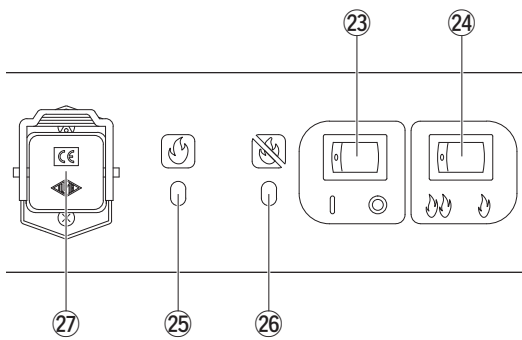
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| <ul style="list-style-type: none"> ① Radiation disk ② Casing ③ Handle ④ Guard ⑤ Burner Cover ⑥ Blower ⑦ Fuel Tank | <ul style="list-style-type: none"> ⑧ Fuel Gauge ⑨ Fuel Tank Cap ⑩ Suction Pipe ⑪ Return Line ⑫ Filter Element ⑬ Burner Section ⑭ Tip-over Switch |
|--|---|

◆ Burner Section



- ⑮ Insulating Board
- ⑯ Overheat Prevention System
- ⑰ Fuse
- ⑱ Flame Monitor
- ⑲ Fan Motor
- ⑳ Switch Section
- ㉑ Fuel Pump
- ㉒ Fuel Preheater
- ㉓ Solenoid Valve

◆ Switch Section



- ②③ **Operating Switch**
This ignites or extinguishes the flame. (Refer to pages 9.)
- ②④ **Change-over Switch**
This changes over combustion in two steps.
- ②⑤ **Operating Lamp**
This is lit while (the heater is) operating and cooling down.
- ②⑥ **Misfire Lamp**
This is lit when the flame is extinguished irregularly.
- ②⑦ **External Thermostat Connector**

When the flame is extinguished, turn “OFF” the operating switch. Then turn “ON” the operating switch again after the cause of misfire is solved.

Description of Safety Devices

①④ Tip-over Switch	Automatically extinguishes the flame when motion or an impact is detected during operation. Operating condition : The misfire lamp lights and if the heater is operating, the fan will cool down the heater for about 3 minutes (hereafter referred to as post purge).
①⑥ Overheat Prevention System	Automatically extinguishes the flame should the heater overheat. Operating condition : The misfire lamp lights and if the heater is operating, the fan will cool down the heater for about 3 minutes (hereafter referred to as post purge).
①⑦ Electrical System Protection (Fuse)	Cuts off power to the heater should an electrical surge pass through the circuit caused by damage to the heater, etc. Operating condition : The whole operation stops.
①⑧ Flame Monitor	This automatically extinguishes the flame when ignition fails or flame goes out during the operation. This monitor, when it detects any irregularity before ignition, automatically extinguishes the flame. Operating condition : The misfire lamp lights and if the heater is operating, the fan will cool down the heater for about 3 minutes (hereafter referred to as post purge).
②② Fuel Preheater	This fuel preheater warms the fuel up to prevent its viscosity from rising. This starts to operate at the time of plugged-in if the ambient temperature is below 5°C (41°F).
Anomaly detection system for fan motor	This automatically extinguishes the flame when some errors are detected in fan motor such as cable disconnection.

3

How to use

3-1. Preparation for operation



DANGER

- Never use highly flammable fuel like gasoline, to avoid fire.
- Never contaminate or mix fuels. For example, never contaminate kerosene with gasoline by using a gasoline container to carry kerosene. Even a small amount of gasoline, or other volatile fuels, in kerosene is hazardous. Store kerosene only in containers specifically labeled and approved for kerosene and do not use the container for any other fuels or chemicals.



CAUTION

- Please refuel only while the heater is turned off and completely extinguished.
- Use only the electric power (voltage and frequency) specified on the model plate of the heater to operate the heater. Using electrical power different from the specifications may result in fire, electrical shock, and/or damage.
- Please confirm the ground/earth cable is properly connected, to prevent electrical shock.
- When disconnecting the electric power cord, be sure to always pull the plug out by itself. Do not pull out the plug by pulling on the power cord. Also, do not allow or cause excessive force to be exerted on the cord at any time to avoid damaging it and causing a fire or shock hazard. The heater should not be operated with the power cord in a taut or tightened position to further avoid damage to the cord, accidental unplugging of the electricity, and fire and/or shock.

■ Refueling

Observations

- Please use “kerosene” or “Fuel-Oil no heavier than No.2 (Diesel)” and do not use poor quality or foul fuel, to help avoid ignition, operating, and other problems.

1 Remove the fuel cap and insert a handy suction pump into the fuel tank.

2 Watch the fuel gauge while refueling. When the gauge reaches the maximum level, stop refueling.

3 Wipe off any fuel that has spilled onto the fuel tank or elsewhere. Replace the fuel cap and tighten it securely. Do not operate the heater with a loose fuel cap or without a fuel cap.

■ Adjust the angle of the main unit

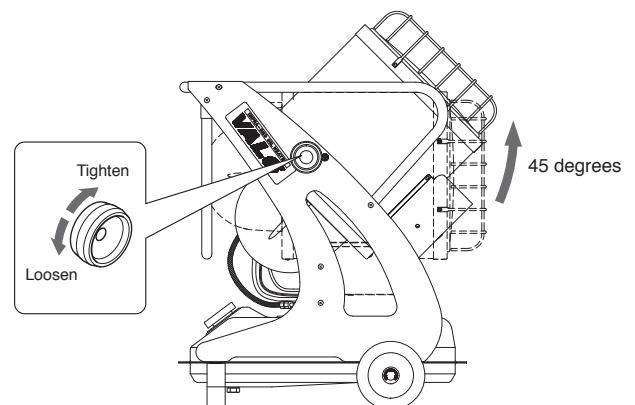


CAUTION

- Do not adjust the angle of the main unit while the heater is plugged in, operating, or hot to avoid severe burns and electric shock.

Prior to operation, loosen the knob bolt to move and set the main heater unit at the desired angle, and tighten the knob bolt firmly.

The vertical angle of the radiation disk is adjustable up to 45 degrees.



■ Connecting the power supply



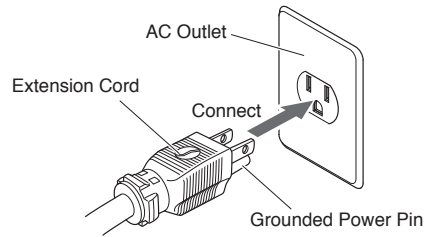
CAUTION

- Do not use an adapter to change the power plug or power outlet from grounded (3 prongs or inlets) to ungrounded (2 prongs or inlets) as this improperly overrides the safety function in grounding the heater by the provided power plug. Also if the power cord or plug need to be replaced, please be sure to replace it only with genuine or manufacturer-approved replacement parts.

- 1 Make sure that the operating switch is “OFF”, then plug the heater’s power plug into approved, grounded, three-wire extension cord.
- 2 Plug extension cord into standard 120 volt/ 60 Hz, 3-prong grounded outlet.

Extension Cord Size Requirement

- 6 to 10 feet (1.8 to 3 meters) long, use 18 AWG (0.75 mm²) rated cord
- 11 to 100 feet (3.3 to 30.5 meters) long, use 16 AWG (1.0 mm²) rated cord



3-2. Operating procedures



CAUTION

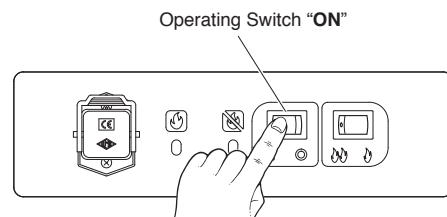
- If you detect smoke or a burning smell coming from the heater, turn the heater off immediately to help prevent a fire, contact your dealer and the heater inspected before further operation.
- More than three consecutive attempts to ignite the heater may cause a fire. If the heater does not ignite after three consecutive attempts, stop trying and contact your dealer for an inspection of the heater.
- When using the heater, be careful so that the floor surface (in front of it) may not get overheated.
- Do not operate the heater, while fuel tank is dirty and foul, to prevent poor ignition or improper burning.

■ Ignition Procedures

Observations

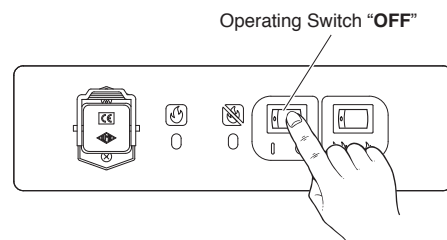
- When switching on the heater, please make sure that the heater is ignited properly and its combustion is stable.

- 1 Use the fuel gauge to check if the fuel is sufficiently filled up in the tank.
- 2 Turn “ON” the operating switch, and the heater will ignite in about 5 seconds.



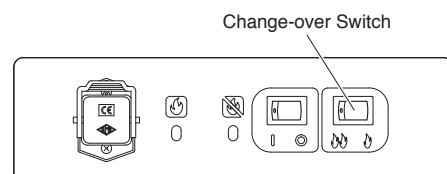
If ignition fails, try again as follows

Stop the operation completely. Wait for the operating lamp to turn off. After the operating lamp has turned off, try step 2 above again. **DO NOT TRY TO IGNITE THE HEATER MORE THAN THREE TIMES IN A ROW AS FIRE MAY RESULT.**



■ Changing combustion speed

The heater has two-step combustion and it can be changed by change-over switch.



■ Shut-Down Operation



CAUTION

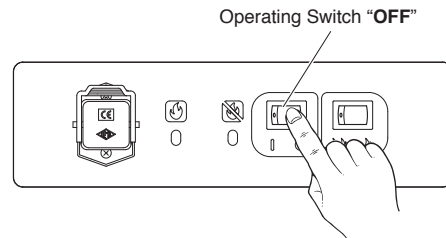
- After the operation is shut down, please make sure that the flame is completely extinguished before leaving the heater unattended or moving or storing it.

Observations

- Before you disconnect the power plug from the AC outlet, please make sure that the fan motor is stopped.
- Never disconnect the power plug while the heater is operating (cooling operation), it will cause nozzle to be clogged.

Turn “OFF” the operating switch, and the heater flame will be extinguished, then the cooling operation will also automatically stop after about three (3) minutes.

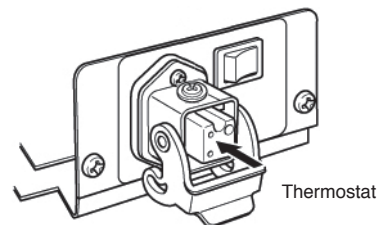
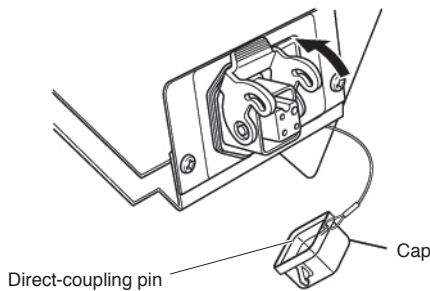
- If the heater is used for only a short period of time after refueling, air inside of the fuel pipe may cause the flame to flicker when the heater shutting down. This is not abnormal.



3-3. How to connect the Control Device

To connect the thermostat

Take the cap off and hook up thermostat plug (No need to rewire)



Don't forget to put the cap back unless the thermostat is connected to heater. Without the cap, heater won't operate at all with all circuit cut off. Therefore, there is the direct-coupling pin inside the cap and it must be used.

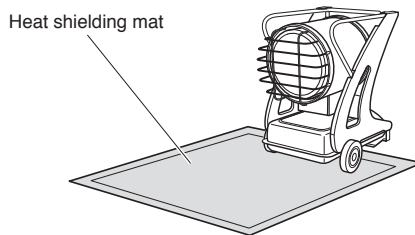


CAUTION

- When the heater is controlled by another device (such as a thermostat or a timer), the heater could turn itself on at any time.
- When the heater is controlled by another device, extra care must be taken to ensure that the heater is not accidentally turned on without someone nearby who can immediately attend to any problems when the heater is ignited, operating, and cooling off.

3-4. Use of the Heat Shielding Mat.....

To avoid unexpected fire or trouble, NEVER use the heater on combustible flooring unless the heat shielding mat, which is available as an option, is used.



3-5. Operation with Portable Generator.....



WARNING

- Before operating the heater from a portable generator, please confirm that the generator has been properly connected to the ground earth. To operate the generator without proper grounding may result in electrical shock. Please refer to the owner's manual supplied by the generator's manufacturer.

The heater operates within the voltage range of 108 Volts to 132 Volts. Before plugging the heater into the generator, the output voltage of generator should be verified.

If the voltage does not measure in this range, the heater should not be plugged into the generator.

4 Inspection



WARNING

- Never inspect or service the heater while it is burning, in operation, hot or plugged-in to avoid any injury and/or trouble.



CAUTION

- Before starting any inspection or service, to avoid electric shock, please make sure the heater is shut down and that the power cord is disconnected.
- When cleaning the heater, please wear gloves to prevent possible injury.

Observations

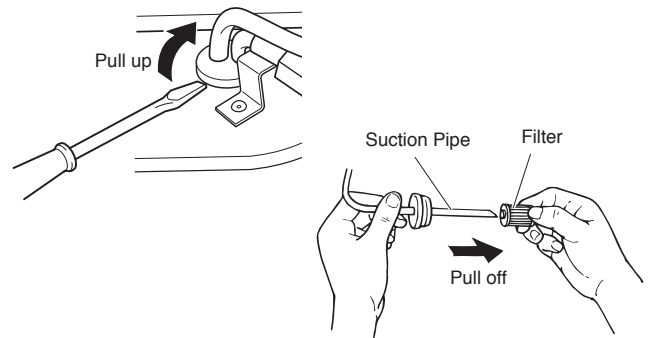
- Prior to each operation check the heater for signs of damage. Do not operate a damaged heater. Have it inspected and repaired by a qualified service agency.
- Prior to each operation check the heater for signs of fuel leakage. Do not operate a heater with fuel leakage. Have it inspected and repaired by a qualified service agency.

4-1. Daily inspection.....

■ Inspection of the filter and drainage of water from the fuel tank

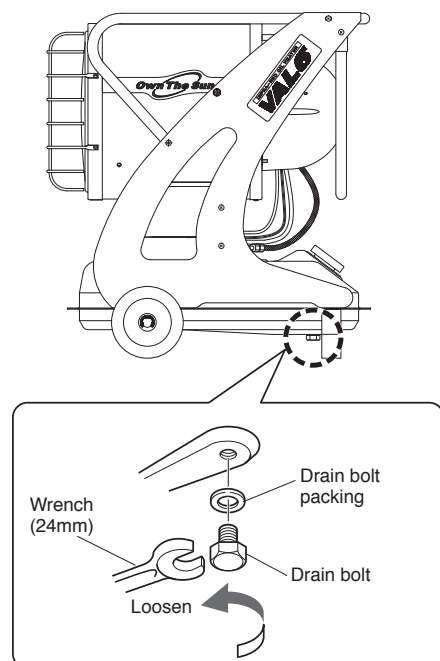
Checking the filter element

- 1 Remove the suction pipe from the fuel tank.
- 2 If the filter is dirty, replace it with a new one.
- 3 Return the suction pipe to the fuel tank and firmly secure.



Drainage of water from the fuel tank

- 1 Remove the fuel cap and insert a suction pump into the tank.
- 2 Remove as much fuel as possible (with the suction pump). Be sure that the fuel being removed is put only into a can or other container approved in your area for holding flammable liquids such as kerosene and Fuel-Oil no heavier than No.2 (Diesel)
- 3 Tighten the fuel cap firmly.
- 4 Prepare an empty container of about 3 liters (0.7gallons) capacity: to hold kerosene and water remaining in the fuel tank, place the container under the drain bolt (of the fuel tank).
- 5 Next, use a 24mm wrench to remove the drain bolt and tilt the fuel tank until the fuel is completely drained out of the tank. (At the same time, be careful not to lose the drain bolt packing.)
- 6 Restore the drain bolt packing and tighten the drain bolt firmly so that fuel can not leak out (of the fuel tank).
- 7 Wipe off kerosene or water spilled over the tank and the surrounding area.
- 8 Be sure to dispose of in a safe manner as approved in your local area the kerosene, etc, placed in the empty container and the materials used to clean up any spilled kerosene, etc. Safely clean and/or dispose of the empty container as also approved in your local area.



■ Inspecting the tip-over switch

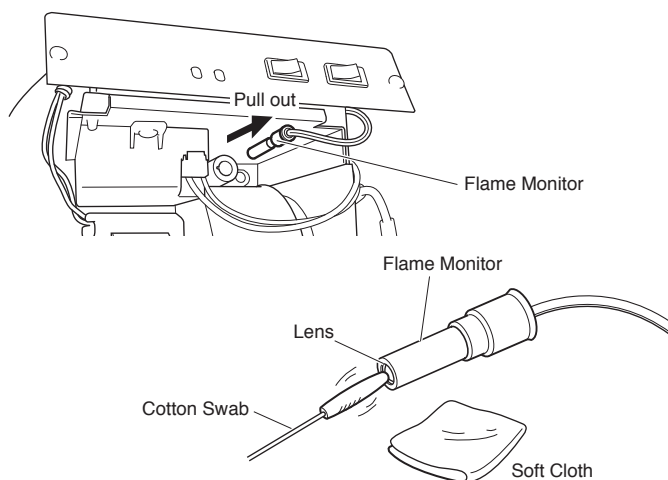
- 1 While the heater is operating, grasp the handle and shake the heater up and down, and from side to side.
- 2 Check if the tip-over switch has automatically extinguished the flame.
- 3 If the tip-over switch did not activate, shut down the heater and contact the dealer from whom you purchased the heater.

■ Inspection and cleaning of the flame monitor

Observations

- When removing the flame monitor, hold it by its main assembly; do not pull out the cord.

- 1** Remove the burner cover and pull out the flame monitor, and check whether or not its lens is dirty/foul.
- 2** If the lens is dirty/foul, clean the surface of the lens with a soft cotton swab or cloth until it is clear. Do not use any cleansers of any type, e. g., glass cleaner, to clean the lens.
- 3** Replace the flame monitor. Then securely replace the burner cover using the provided screws.



■ Inspection of “dirt/dust” on the main unit

- 1** Check whether or not dirt/dust is on and around the heater.
- 2** If dirt or dust is found, remove it with a vacuum cleaner or a soft, non-abrasive, cloth. Do not use any cleansers of any type, especially spray cleansers, as they may leave a residue or infiltrate the operating mechanism of the heater and cause a fire or clog or otherwise damage the heater.

4-2. Periodic inspection.....

The heater must be checked periodically, and especially after periods of sustained or heavy use, for safe and proper operation, and for service maintenance. Have your dealer inspect the heater no less than twice a year.

5 How to replace the Nozzle & Fuse



WARNING

- Never service the heater while it is burning, in operation, hot or plugged-in to avoid any injury and/ or trouble.

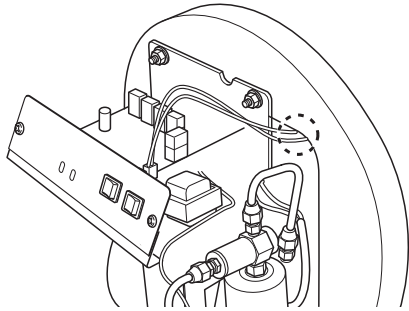


CAUTION

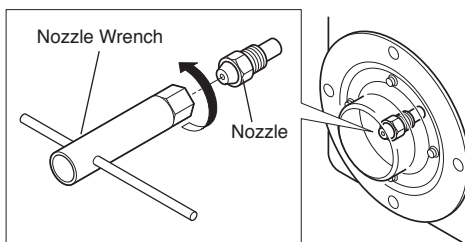
- Before starting any service to avoid electric shock, please make sure the heater is shut down and that the power cord is disconnected.
- When servicing the heater, please wear gloves to prevent possible injury.

■ Replacing a nozzle

- 1 Unscrew two screws of the burner cover and take the burner cover off.
- 2 Disconnect the red wire of overheat protection at the back of the burner base.



- 3 Unscrew three nuts and pull out the burner unit.
- 4 Replace with a new nozzle by using the provided nozzle wrench.



- 5 Tighten the nozzle using the nozzle wrench until the nozzle is fixed.

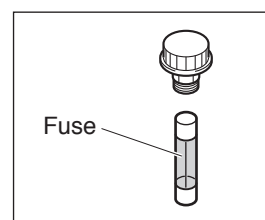
Observations

- Be careful not to touch electrodes

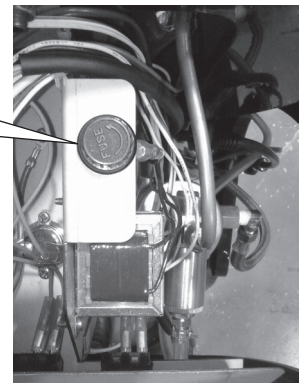
- 6 Put the burner unit back with three nuts removed.
- 7 Put the red wire back.
- 8 Put the burner cover back with two screws removed.

■ Replacing a fuse

- 1 Unscrew two screws of burner cover and remove the burner cover.
- 2 Unscrew the screw cap of fuse holder and take out the fuse.
- 3 Replace with a new one.
- 4 Put the screw cap back into fuse holder.
- 5 Put the burner cover back with two screws removed.



Open a screw cap and take out a fuse. Check whether the fuse is blown out.



6 How to store the heater



CAUTION

- If the heater is stored or not used for an extended period of time, empty the fuel tank to help prevent fuel leakage and other possible fire dangers.

When you store the heater, please disconnect the power plug from the extension cord and/or the AC outlet and store the heater indoors where it is less humid.

Observations

- Do not store the fuel over summer months for use during next heater season. Using old fuel could damage the heater.

■ When you face problems with your heater, please refer to this check-list before consulting with your dealer.

In case satisfactory results do not result by referring to the table, or you have problems not described in this table, please contact your dealer. While consulting with him, please describe the problem you have, together with model name and serial number of your heater.

(For finding the heater's serial number, please refer to page 17.)

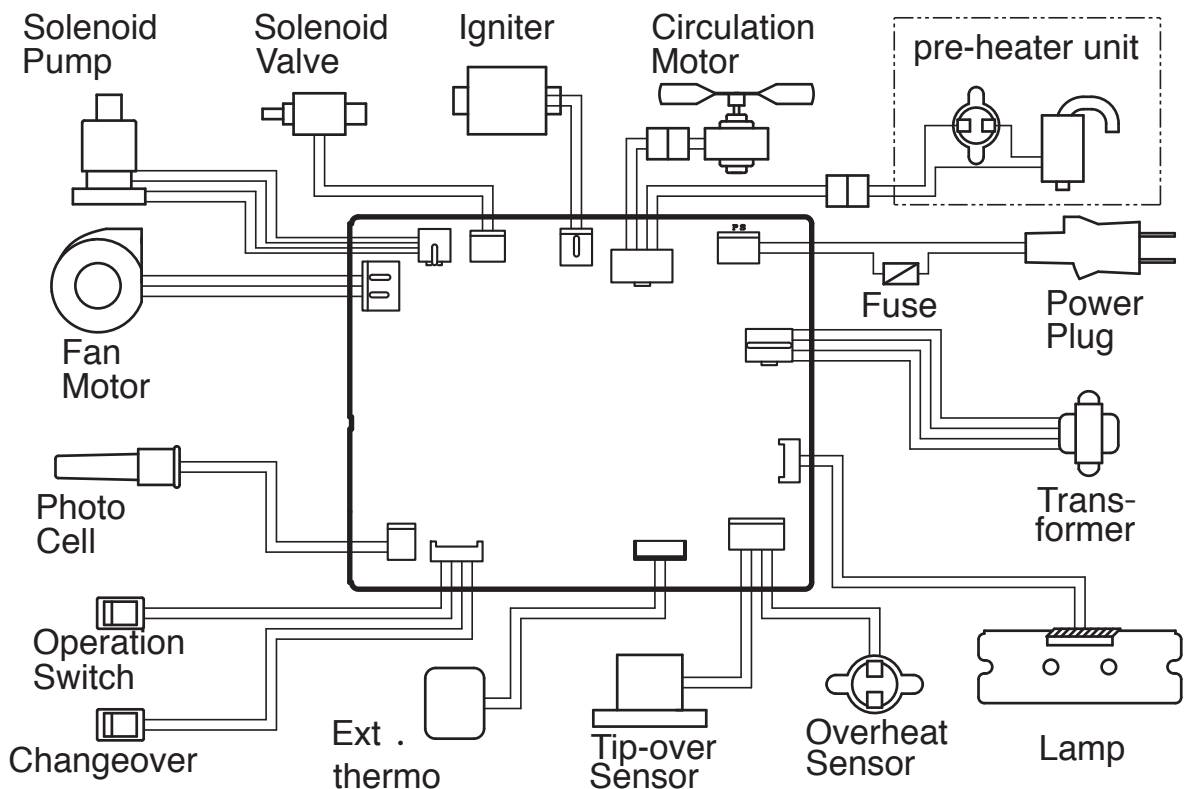
Phenomenon	Possible Cause	Remedy
The heater does not start. (The lamp does not light up.)	Power cord is not connected with an AC outlet. Power supply is cut off.	Please connect the power cord with an AC outlet, and check the power supply.
	Blown fuse	Replace fuse with a new one. (Please refer to page 14.)
The heater does not start. (The lamp is lit.)	Safety devices are working.	Please confirm if "Flame Monitor" is exposed to any type of light (sunlight or electric lamp, etc.), and move the heater to prevent the radiation disk from detecting any type of light directly.
The heater does not ignite.	No fuel in the fuel tank.	Please pour fuel into the tank.
	There is water in the fuel tank.	Please clean up the tank and fill it with fresh/clean fuel.
	Fuel filter element is clogged.	Check the filter element and replace it with a new one.
	Nozzle is clogged	Replace nozzle with a new one. (Please refer to page 14.)
The flame goes out during the operation.	Wrong or foul fuel is used.	Please clean up the fuel tank and fill it with fresh/new fuel.
	Flame monitor is dirty.	Please clean up the Flame Monitor (Please refer to page 13).
	Fuel filter element is clogged.	Please check the filter element and replace it with a new one.

If the following phenomenon takes place, it is usually not a sign of trouble. Please check again before consulting with your dealer.

Phenomenon	Explanation
When used for the first time, smoke or smell comes out of the heater.	Because fuel is burning together with dusts, etc. This phenomenon will disappear after a short while.
At the time of ignition or shut-down of the heater, noise comes from the burner section.	Noise is caused by expansion or shrinkage of the burner section due to temperature's up and down. This is not irregular.

Model Type	VAL6MPX5	Power Consumption	When igniting : 110 W
Type	Radiated / Direct-fired		When burning : 145 W
Ignition System	High intensity discharge	Electric Fuse	3A
Fuel	Kerosene or Fuel-Oil no heavier than No.2 (Diesel)	Operating Noise Level	High : 59.4 dB
			Low : 57.8 dB
Fuel Consumption	High : 0.48GAL/h , 1.55kg/h	Airflow	110 CFM
	Low : 0.42GAL/h , 1.38kg/h	Safety Systems	• Tip-over Switch
Heat Output	High : 62,500 BTU , 18 kW		• Flame Monitor
	Low : 55,500 BTU , 16 kW		• Electrical System Protection
Tank Capacity	6.6 gallons		• Overheat Prevention
Continuous Operating Time	High : 13.7 hours		• Anomaly detection system for fan motor
	Low : 15.7 hours	Accessory	• Nozzle
Dimensions (inch)	28.4 (H) × 20.5 (W) × 26.6 (D)		• Filter Element
Weight (w/empty tank)	70.5 Lbs , 32 Kg		• Nozzle Wrench
Power Supply	AC 120V (60Hz)		

Wiring Diagram



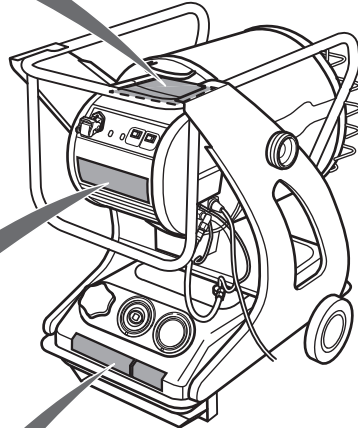


Safety Labels

- Safety labels provide important information for safe use of the heater. So, please do not remove or soil them.
- If any of the labels is unreadable or removed, please ask your dealer for a new one and replace with the new one.

Caution Label

Read Owner's manual before using./Veuillez lire le mode d'emploi avant de faire usage de l'appareil.	
<p>Warning/Avvertissement</p> <ol style="list-style-type: none"> Never repeat switching on and off sequence more than 3 times. In such a case, consult with your distributor. N'essayez pas de commuter l'appareil de chauffage sur marche et arrêt plus de trois fois de suite. Si la nécessité se produit, consultez votre distributeur. Never use heater in the presence of flammable or volatile gas such as spray can. Ne jamais utiliser l'appareil de chauffage en présence de produits inflammables ou de gaz inflammables tels que ceux provenant d'aérosols. Use only in places free of flammable vapor or high dust content such as chips and wastepaper. Utilisez uniquement l'appareil de chauffage dans les endroits dénués de vapeurs inflammables ou dans les endroits dénués de poussière ou en présence de copeaux de bois, de papiers. Never touch heater until heater has cooled off. Ne jamais toucher l'appareil de chauffage tant qu'il n'a pas refroidi d'aérosols. 	<p>Operation/Fonctionnement</p> <p>Start/Redémarrage</p> <ul style="list-style-type: none"> Turn operation switch on and combustion will start in about 5 seconds. Mettez l'appareil en marche pour que la combustion démarre environ 5 secondes plus tard. In case of non-ignition, turn switch off and on again. Si l'incandescence ne se produit pas, coupez l'alimentation puis refaites une tentative. <p>Stop/Arrêt</p> <ul style="list-style-type: none"> Turn operation switch off and combustion will stop. Arrêtez l'appareil pour que la combustion s'arrête. Operation lamp and blower remain ON for 3 minutes after turning switch off and then stop automatically. La lampe témoin de fonctionnement reste allumée et la soufflerie reste en marche pendant 3 minutes après avoir communiqué sur arrêt puis l'arrêt est automatique. <p>Caution/Précautions</p> <ol style="list-style-type: none"> Keep heater away from flammable materials by 6 feet or more. Maintenez l'appareil de chauffage des matériaux inflammables à au moins 5 pieds. Do not use heater in places subject to rain, snow or high temperatures. N'utilisez jamais l'appareil de chauffage dans les endroits où il risque d'être exposé à la pluie, la neige ou à des températures élevées. For use on non combustible flooring only. Le chauffage doit être utilisé sur un revêtement de sol non combustible à moins que le tapis ignifuge. Never refuel while it is hot, operating or plugged-in condition. Ne ravitaillez jamais l'appareil quand il est encore chaud, quand il est en marche ou qu'il est raccordé à la prise d'alimentation. Never move heater while in operation. Ne déplacez jamais l'appareil pendant qu'il est en marche.
<p>AMPI/LAMPE TÈMOIN MEAN (MOYEN) / ACTION (ACTION) RUN/EN FONCTION AIRPURGE OR FIRING, COOLING (GREEN/VERT) PURGE D'AIR OU PHASE DE REFOUILLISSEMENT MISSFIRE/RATES D'ALLUMAGE MISSFIRE/RATES D'ALLUMAGE EN RAISON DE (RED/ROUGE) FUEL EMPTY (OR AIR) / ÉPUISÉMENT DU COMBUSTIBLE (OU DE PRÉSENCE D'AIR</p> <p>High altitude use (over 3000 feet) Air volume must be adjusted accordingly. (more opening of the air-mix door for the higher altitude) Air adjustment is located at inside of the cover. (Usage à haute altitude (au-dessus de 2 000 pieds) Le volume d'air doit être ajusté en conséquence. (Plus grande ouverture du volet d'ajustement de l'air en présence d'une altitude supérieure. Le réglage d'air se trouve à l'intérieur du capot.) The requirements of local authorities having jurisdiction shall be followed. Les conditions imposées par les autorités locales ayant juridiction doivent être suivies.</p> <p style="text-align: right;">> PET < 50346-202013</p>	



Danger Label

<p>WARNING/AVERTISSEMENT</p> <p>Always unplug heater before servicing and checking. Débranchez systématiquement l'appareil de chauffage avant tout entretien et vérification.</p>	<p>WARNING/AVERTISSEMENT</p> <p>Never touch heater until heater has cooled off. Ne touchez jamais l'appareil de chauffage tant qu'il n'a pas refroidi complètement.</p>	<p>DANGER/DANGER</p> <p>Use heater only in well ventilated areas. Utilisez uniquement l'appareil de chauffage dans les endroits parfaitement aérés.</p>	<p>DANGER/DANGER</p> <p>Never use heater where highly flammable vapors are present. N'utilisez jamais l'appareil de chauffage en présence de vapeurs inflammables.</p> <p style="text-align: right;">50300-201-023</p>
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Caution on Refueling Label / Maintenance Label

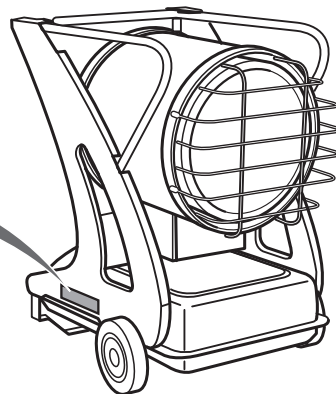
<p>DANGER / DANGER / GEFAHR / PELIGRO</p> <p>Never use gasoline. Ne jamais se servir d'essence. Kein Benzin verwenden! No emplee nunca gasolina.</p>	<p>MAINTENANCE / ENTRETIEN WARTUNG / MANTENIMIENTO</p> <p>FILTER FILTRE FILTRO</p>	<p>DANGER/DANGER</p> <p>Never plug off until heater tops completely. Ne jamais débrancher avant l'arrêt complet de rechauffer.</p> <p>Commercial-industrial occupancies only Occupation à titre commercial ou industriel uniquement</p> <p style="text-align: right;">>PETC 50346-203018</p>
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Specifications Label

VAL6MPX5	
OUTPUT Puissance de sortie	H:62,500BTU/h,18kW L:55,500BTU/h,16kW
FUEL CONSUMPTION Consommation de combustible	H:0,48GAL/h,1,55kg/h L:0,42GAL/h,1,38kg/h
FUEL OIL Combustible	Kerosene or Fuel-Oil no heavier than NO.2 (Diesel) /Kerosene ou gasoil
POWER CONSUMPTION Puissance consommée	100W with ignition spark/a l'allumage 120W with combustion/en combustion
ELECTRIC REQUIREMENTS / Conditions électriques	120V 60Hz
SERIAL NO. 50346- Numero de serie	CE
Shizuoka Seiki Co., Ltd.	
The requirements of local authorities having jurisdiction shall be followed. Les conditions imposées par les autorités locales ayant juridiction doivent être suivies.	
Made in Japan	

Floor Temperature Caution Label

<p>WARNING AVERTISSEMENT</p> <p>Heat shielding mat Tapis de protection thermique</p>	<p>Use the heater with a heat shielding mat on the combustible or heat sensitive floor.</p> <p>Heat shielding mat [Part# 50300-205001 (1,200 x 1,200 x 3.5mm)] to be placed under the radiation disk to prevent from discoloring or burning the floor.</p> <p>Utilisez le radiateur avec une protection thermique placée sur le sol, s'il est en matière inflammable ou sensible à la chaleur.</p> <p>Protection thermique [Part# 50300-205001 (1,200 x 1,200 x 3.5mm)] à placer sous la zone de rayonnement pour éviter que le sol ne soit décoloré ou brûlé.</p>
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English

WARRANTY POLICY

VAL6 Infrared Heater series

SHIZUOKA SEIKI warrants that its heaters and component parts will be free from defects in material and workmanship for a period of 24 months from date of purchase, when properly installed, operated, and maintained in accordance with the installation and Maintenance Instructions, safety guides and labels contained with each unit. If any component proves defective in either material or workmanship during the limited warranty period, Shizuoka Seiki, at its option, repair the defective part or equipment, or replace it with a new part or equipment.

Proof of purchase and warranty qualification must be established at time of return.

**A copy of the bill of sale must be provided at time of return.*

Claim Procedure

All claims are to be submitted to the warranty processing center at 1 877-VAL-VAL6 (in the USA). After the initial evaluation by phone discussion, the most appropriate agent or specific procedure will be informed.

This limited warranty does not apply to heater, component or replacement part damage resulting from incorrect installation, misuse, abuse, accident, act of God, neglect, mishandling, contaminated fuel, modification, incorrect environments, or wear from ordinary use.

The warranty set forth above is the exclusive warranty provided by Shizuoka Seiki and all other warranties, including any implied warranties or merchantability or fitness for a particular purpose, are expressly disclaimed. In the event any implied warranty is not hereby effectively disclaimed due to operation of law, such implied warranty is limited in duration to the duration of the applicable warranty stated above. The remedies set forth above are the sole and exclusive remedies available hereunder. Shizuoka Seiki will not be liable for any incidental or consequential damages directly or indirectly related to the sales, handling or use of the equipment, and in any event Shizuoka Seiki in connection with the equipment, including for claims based on negligence or strict liability, is limited to the purchase price.

Some states do not allow limitation on how long and implied warranty lasts, so the above limitation may not apply to you. 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 also have other rights which vary from state to state.



USER REGISTRATION

Please enter the following temporary ID & Password and complete the user registration form on our website. By completing your registration, you will obtain your own ID & Password.

This allows you to download the owner's manual and/or parts list from our website.

- ID: VAL6
- Password: shizuoka
- <http://www.shizuoka-seiki.co.jp/eg.html>

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