

HIPERS HEATERS

USER MANUAL

- ▶ Thank you for purchasing the HIPERS Heater.
Please read this user manual carefully before you operate this heater.
- ▶ It is recommended that you put this manual where the user can easily find it. It is obligatory that the user read "Notice for Safety" carefully before using, and they should be aware of this notice whenever using this heater.
- ▶ This heater is designed for your country only. If you use it in another country, you have to check the electricity first, and if the electricity condition is the same, you can use it.
- ▶ A warranty card is enveloped in this manual.
- ▶ The contents (features and specifications) in this manual are subject to change without notice.



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NOTICE FOR SAFETY

This is for protecting the user's safety and preventing any property damage. Please read carefully and follow the instructions in this manual. It is classified as "Warning" and "Caution" by the contents.













WARNING In cases of misuse, it may cause serious wounds or death.

CAUTION In cases of misuse, it may cause a slight injury or property damage.

Meaning of symbols

 Forbidden  Obligatory

WARNING

- | | |
|---|--|
|  Use an AC 220/230V (50 Hz) power supply only. (Otherwise, it may cause a fire or an electric shock.) |  Use the proper fuse. (Otherwise, it may cause malfunctioning or a fire.) |
|  In the case of cleaning, you must take out the plug from the outlet and wait until the furnace is cooled down sufficiently. (Otherwise, it may cause an electric shock or a burn.) |  Put a plug into the outlet tightly with Earth (-) only. (It may cause an electric shock.) |
|  It is dangerous to turn off this heater by taking out the power plug. (It may cause a malfunction or electrical shock.) |  Please turn it off using the ON/OFF button. (Otherwise, it may cause an electric shock or a burn.) |
|  Do not use a damaged power cord or plug or a loose outlet. (It may cause shorts, fire, or a shock.) |  Do not fold the power cord or put heavy material on it. (It may be damaged by the covering material, which might cause a fire or an electric shock.) |
|  Do not take out the plug while holding the cord or with wet hands. (It may cause a fire or an electric shock.) |  Do not place any inflammable material near the heater, including curtains, carpet, paper, match, clothes, etc. (It is exposed to the danger of fire or a burn.) |
|  Do not extend the power cord with connecting another cable in the middle. (It may cause a fire or an electric shock.) |  Do not place or use any inflammable near the heater, including fuel, gas, thinner, benzene, spray, solvents, volatile organic compounds, etc. (It is exposed to the danger of fire or explosion.) |

※ Place this manual noticeably near the heater so that, if necessary, the user can always find it easily.

NOTICE FOR SAFETY

CAUTION



You must ventilate well while you are using the heater, and do not use it in a stuffy area where ventilation is not possible.
(You need to ventilate with fresh air 1~2 times per hour.) (In cases of incomplete combustion due to a lack of oxygen, carbon monoxide can be increased to cause an accident from poisoning.)



It is dangerous to use this heater for a long time in a closed room, especially if there are children, the elderly, or the weak.
(It is recommended that the user open the windows to let fresh air into the room if the room is stuffy.)



It is dangerous to put your hands or anything else into the grill or furnace or to apply a considerable shock or force to the heater.
(It is exposed to fire, burn, or electric shock.)



Do not place any inflammable vinyl or plastic goods on top of the heater or cover the heater grill with clothes.
(It is exposed to fire or burn.)



Do not place any electrical items or heavy materials on top of the heater.
(It may cause malfunctioning or electrical shock, or if the heavy material falls, the user can be injured by shock or a burn.)



Do not touch any of the heated material, such as the grill, furnace, etc. While the heater is operating or just after extinguishing, the grill and furnace are hot, so do not touch any of those parts. Especially pay more attention to keeping children away from hot materials.
(they may cause a burn).



Do not move or transport during the operation.
(It may cause a fire or a burn.) (In case of moving, you must turn off heaters and take our power plug.)



It is recommended not to use this heater in highly elevated areas.
(Do not use this heater in areas where it is higher than 1500m above sea level.)



Do not use this heater for anything other than heating.
(Do not use this heater for keeping pet animals.)



You need frequent ventilation in areas 700~1500 m above sea level.
(Due to the lack of oxygen, carbon monoxide can be increased to cause an accident from poisoning.)



Do not operate this heater while you are sleeping. (Due to no ventilation while you are sleeping, the room easily gets stuffy and lacks oxygen.)



Pay attention to avoiding water entering the heater during cleaning.
(It may cause a fire or electric shock.)



Do not use this heater in unstable places.
(Do not use this heater on an inclined surface or a shaking support. This heater may fall down, which may cause a fire or malfunction.)

※ Place this manual noticeably near the heater so that, if necessary, the user can always find it easily.

NOTICE FOR SAFETY

CAUTION



When storing this heater, be sure that you store it in a dry place indoors instead of in a hot and humid environment.

(Otherwise, it gets rusty or goes into trouble.)



You must take the plug out of the outlet if there is a flash of lightning or thunder or if you haven't used it for a long time.

(Otherwise, it is exposed to the danger of electrical shock, a short circuit, or a fire.)



Do not put an excessive physical shock on the remote controller, and do not disassemble it arbitrarily.



Call your local after-sales service agent in case the power cord is damaged.

(Otherwise, it is exposed to the danger of electric shock, a short circuit, or a fire.)



Do not put this heater on an unstable surface of the ground, such as an inclined or bumpy surface.

(The heater may not work.)



Do not shower water on the heater directly, nor use benzene, thinner, or alcohol for cleaning.

(Otherwise, it is exposed to the danger of electrical shock, a short circuit, or a fire.)



If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or a similarly qualified person in order to avoid a hazard.

(Otherwise, it is exposed to the danger of electrical shock, a short circuit, or a fire.)



Do not operate this heater in a place where it gets wet from the humidity, such as a bathroom.

(It may cause an electrical short circuit or an electrical shock accident.)

TIPS BEFORE INSTALLATION...

1. Make sure the safety in the place where you wish to use this heater ensured.

■ The ground surface and surrounding area should be plain, non-flammable, and solid.

■ You need to have sufficient space surrounding the heater, at least 15cm from the wall and the left and right sides, and at least 1 meter from the ceiling and the front side, without any obstacles.

■ You need to use an exhaust duct when operating in small spaces.

(Recommended duct specification: 75mm or more diameter)

(Be sure there are no raindrops entering the exhaust duct end.)

(You must ventilate frequently with fresh air by opening a window or fan.)

■ You must put an extinguisher beside the heater.

■ There must not be direct sunlight or excessive heat near the heater.

■ After you fix the installation, lock the caster to avoid unexpected movement.

■ Do not use this heater near a fabric, carpet, plastic, or vinyl curtain that may cover the heater in case of falling down, but in the wind or by any physical force that may cause a fire.

■ The heater must not be located immediately below a socket outlet.

■ Positioned so that the plug is accessible.

2. You must use diesel or kerosene as fuel.

If you use other fuel, it may cause excessive soot or malfunction.

■ In the case of refueling, make sure the heater is turned off.

■ To be made by the manufacturer or his service agent, who should be contacted if there is an oil leakage.

■ Regulations concerning the disposal of oil when scraping the appliance have to be followed.

3. The proper electricity is 220/230V, 50 Hz. It will be applied and adjusted as per the customer's request. You must supply power as per its requirements only once they are adjusted.

STRUCTURE & DESCRIPTION

STRUCTURE & DESCRIPTION FOR MODEL ※ This design may be changed for improved efficiency.



REMOTE CONTROL

1. ON/OFF
When the heater turns ON or OFF, you can press this button.

2. OFF TIMER
Every time you press this button, the heater repeats set-up and cancels.

3. TIME SELECT BUTTON
To select the time control mode

4. TEMP SELECT BUTTON
To select the temperature control mode.

5. UP / DOWN
To set or change the temperature or time

- ① Connect the power cord of the heater to the outlet.
- ② When you connect a power plug, the current temperature is displayed.
- ③ When you press the UP/DWON button, the desired temperature is displayed.
- ④ You can set the desired temperature between "0~40°C (1°C per press).

STRUCTURE & DESCRIPTION

CONTROL PANEL

DHOE-120~DHOE-350F

1. ON / OFF

2. TEMP SELECT BUTTON
To select the temperature control mode.

3. TIME SELECT BUTTON
To select the time control mode.

4. UP / DOWN
To select the time control mode.

5. IR RECEIVER FOR REMOTE CONTROL

6. OFF TIMER
To select whether off-timer mode is operated or not.

DHOE-90

1. ON / OFF

2. TEMP SELECT BUTTON
To select the temperature control mode.

3. TIME SELECT BUTTON
To select the time control mode.

4. UP / DOWN
To select the time control mode.

5. IR RECEIVER FOR REMOTE CONTROL

6. OFF TIMER
To select whether off-timer mode is operated or not.



CAUTION

- When the heater turns off, the motor (to cool the heater) is operated.
- It is dangerous to turn off this heater by taking out the power plug. It may cause a malfunction or electrical shock. Please stop the heater using the ON/OFF button.
- If the malfunction is caused by a power outage, the customer is responsible for the repair.

HOW TO USE

OPERATION & STOP

DHOE-120~DHOE-350F

1. Connect the power plug (you can see the current temperature), then press the on/off button. (Check "SET tem/time," the number on the right side.)

But if this heater operates in case it is first used from purchase, turn the air screw left around three times and then start by pressing the "ON/OFF" switch. The heater will be turned on with a "beep" sound and automatically operated. Fasten the air screw after 4 seconds. If the "E1" error is displayed, press the "ON/OFF" switch more times.



2. Select the desired operation type using the "TEMP or TIME" button.



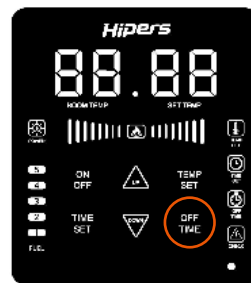
Current Temperature Setting Temperature



Current Temperature Setting Time (10~25min)

3. Set the time or temperature by pressing the "Temp select button" or "Time select button."

"Temperature": You can set the desired temperature between "0~40°C."
 "Time": Set the desired time limit between "10~25min" (5min per press).



※ Tip

In order to operate, the setting temperature should be higher than the current temperature.

- After power on, the default mode is temperature control mode.

During the operation, if you push the ON/OFF button, the heater will stop and the off-timer function will be cancelled.

Circulation fans operate in a minute after turning on the heater and stop in two minutes after turning off the heater.
 (This fan is for circulating heat and a cooling heater.)

The model equipped with a "solenoid valve (by-pass device)" makes the remaining oil return to the oil tank. For 10 seconds, from the time the burner is off, the solenoid valve is in operation, which makes the remaining oil return to the oil tank, and by this device, the smell caused by unburned gas is remarkably shrunk.

HOW TO USE

TEMPERATURE CONTROL

This mode enables the user to set the desired temperature, and once it is fixed, this heater works automatically, running and stopping repeatedly to meet this temperature. (If power is on and the heater starts operation, the temperature control mode will be operated by default.)

1. Push the ON/OFF button.



2. By pressing the "Set Temp" button, select the temperature control mode.
At that time, the temperature control lamp will light up.



3. By pushing the "▲" or "▼" buttons, select the desired temperature.
- The setting range is 0~40°C.
- The default value is 25°C.
During the time you push "▲", "▼", "setting temperature" is increased or decreased very fast.
The "room temperature" display range is: -9~50°C.



4. During operation, "room temperature" and "setting temperature" are displayed, and if you push the ON/OFF button and make the operation stop, only "room temperature" is shown.

5. When "setting temp" is higher than 2°C than "room temp", heaters operate, and when "setting temp" is less than 1°C than "room temp", the operation stops.
Room temp. < Setting temp. & over 2°C gap : Operate.
Current temp. > Setting temp. : Stop.



※ Tip

The current temperature is less than -9°C (16°F), the display of the temperature is 'LO', and more than 50°C (99°F), it is displayed as 'HI' (50°C is not the same value as 99°F; actually, 37°C is the same value as 99°F).

The setting temperature is increased or decreased by 1°C by pushing the (▲/▼) button if you push the button for more than 2 seconds. The value is increased or decreased by 1°C in 0.2 seconds. If you push the ▲ and ▼ buttons simultaneously for 5 seconds, the unit is converted from °C to °F (the default unit is °C).

HOW TO USE

TIME CONTROL

This mode enables the user to set the desired time, and once it is fixed, this heater works automatically, running and stopping repeatedly to meet this time. (If power is on and the heater starts operation, the temperature control mode will be operated by default.)

1. Push the ON/OFF button.



2. By pushing the "Set Time" button, select time control mode.
At that time, the time control lamp is lit.



3. By pushing the "▲" or "▼" buttons, select the desired time.

The setting range is 10~25 min.

The default value is 25 °C.

Each time the "▲" and "▼" buttons are pressed, the time changes by 5 minutes.

ex1) 5 minutes setting: repeat 5 minutes operation + 5 minutes break.

ex2) 25-minute setting: repeat 25-minute operation + 5-minute break.

HOW TO USE

OPERATION & STOP

DHOE-90

1. Connect the power plug (you can see the current temperature), then press the on/off button. (Check "SET tem/time," the number on the right side.) But if this heater operates in case it is first used from purchase, turn the air screw left around three times and then start by pressing the "ON/OFF" switch. The heater will be turned on with a "beep" sound and automatically operated. Fasten the air screw after 4 seconds. If the "E1" error is displayed, press the "ON/OFF" switch more times.



2. Select the desired operation type using the "TEMP or TIME" button.

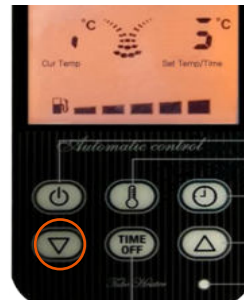


Current Temperature **Setting Temperature**



Setting Time (10~25min)

3. Set the time or temperature by pressing the "Temp select button" or "Time select button."
 "Temperature": You can set the desired temperature between "0~40°C."
 "Time": Set the desired time limit between "10~25min" (5min per press).



※ Tip

- In order to operate, the setting temperature should be higher than the current temperature.
- After power on, the default mode is temperature control mode.
- During the operation, if you push the ON/OFF button, the heater will stop and the off-timer function will be cancelled.

Circulation fans operate in a minute after turning on the heater and stop in two minutes after turning off the heater. (This fan is for circulating heat and a cooling heater.)

The model equipped with a "solenoid valve (by-pass device)" makes the remaining oil return to the oil tank. For 10 seconds, from the time the burner is off, the solenoid valve is in operation, which makes the remaining oil return to the oil tank, and by this device, the smell caused by unburned gas is remarkably shrunk.

HOW TO USE

TEMPERATURE CONTROL

This mode enables the user to set the desired temperature, and once it is fixed, this heater works automatically, running and stopping repeatedly to meet this temperature.
(If power is on and the heater starts operation, the temperature control mode will be operated by default.)

1. Push the ON/OFF button.



2. By pressing the "Set Temp" button, select the temperature control mode.
- At that time, the temperature control lamp will light up.



3. By pushing the "▲" or "▼" buttons, select the desired temperature.
- The setting range is 0~40°C.
- The default value is 25 °C.
* During the time you push "▲", "▼", "setting temperature" is increased or decreased very fast.
- The "room temperature" display range is: -9~50°C.



4. During operation, "room temperature" and "setting temperature" are displayed, and if you push the ON/OFF button and make the operation stop, only "room temperature" is shown.

5. When "setting temp" is higher than 2°C than "room temp", heaters operate, and when "setting temp" is less than 1°C than "room temp", the operation stops.
- Room temp. < Setting temp. & over 2°C gap : Operate.
- Current temp. > Setting temp. : Stop.



※ Tip

- The current temperature is less than -9°C (16°F), the display of the temperature is 'LO', and more than 50°C (99°F), it is displayed as 'HI' (50°C is not the same value as 99°F; actually, 37°C is the same value as 99°F).
- The setting temperature is increased or decreased by 1°C by pushing the (▲/▼) button if you push the button for more than 2 seconds. The value is increased or decreased by 1°C in 0.2 seconds.
- If you push the ▲ and ▼ buttons simultaneously for 5 seconds, the unit is converted from °C to °F (the default unit is °C).

HOW TO USE

This mode enables the user to set the desired temperature, and once it is fixed, this heater works automatically, running and stopping repeatedly to meet this temperature.
(If power is on and the heater starts operation, the temperature control mode will be operated by default.)

TIME CONTROL

1. Push the ON/OFF button.



2. By pushing the "Set Time" button, select time control mode.
- At that time, the time control lamp is lit.



3. By pushing the "▲" or "▼" buttons, select the desired time.
- The setting range is 10~25 min.
Each time the "▲" and "▼" buttons are pressed, the time changes by 5 minutes.
ex1) 5 minutes setting: repeat 5 minutes operation + 5 minutes break.
ex2) 25-minute setting: repeat 25-minute operation + 5-minute break.



HOW TO USE

ITEMS TO CHECK BEFORE INFROMING OF TROUBLE

If the following error or trouble signs are displayed on the operation panel

| Displayed messages | Description of troubles | Items to check and required actions |
|---|--|---|
| E1. No ignition | The burner is misfiring | <ul style="list-style-type: none"> - The lack of fuel - There is air in the fuel tube (▶ air discharge). - Photocell pollution (▶ cleaning) |
| E2. Photocell (flame sensor) | Photocell trouble Detrcion of residual flame | <ul style="list-style-type: none"> - Unplugged Photocell (▶ plug), Phototube Trouble (▶ exchange) If the heater is stopped just after ignition, there is residual flame (no change; ▶ Re-operation). |
| E3. Temperature sensor | Temperature sensor trouble | <ul style="list-style-type: none"> - Check if the temperature sensor connector is loosening. (Firmly connect the connector if it is loosened.) |
| E4. Overheating sensor | The product is overheated | <ul style="list-style-type: none"> - Check if there are any nump signs inside the burner. (Ask the survivor.) - Check if the overheat protector wire is disconnected. (Operate the heater again after connecting the wire.) |
| E5. Slope | Tile of heater | <ul style="list-style-type: none"> - Check if the heater is moved (a tilt may occur if the heater is shaken or moved). Operate the heater again. - The inversion switch wire is disconnected. (Operate the heater again after connecting the wire.) |
| E6. Lack of fuel | Lack of fuel | <ul style="list-style-type: none"> - Refuel and operate. |
| E7. | | |
| E8. | | |
| E9. Poor communication with the main PCB | Burner fan motor if a data error occurs more than three times or the signal is disconnected for more than one second during communication with the main PCB malfunction. | <ul style="list-style-type: none"> - Auto-release |
| HI | Temperature is above 50 °C | <ul style="list-style-type: none"> - Check that the temperature sensor is installed inside. (Install the sensor outside.) |

If the troubles E1 ~ E9 occur, check the causes and take the required action.

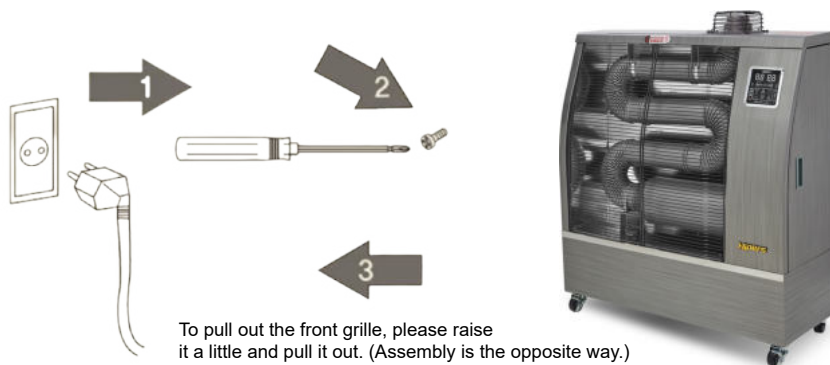
If you press the power button twice, you may restart the heater.

If the troubles persist even after taking the actions indicated in the below table,

| Troubles | Items to check | Required action |
|--|---|---|
| All lamps on the operation panel are turned off. | <ul style="list-style-type: none"> - Power failure - The power plug is unplugged. - Fuse burns out. | <ul style="list-style-type: none"> - Plugging - Changing Fuse |
| The lamp is repeatedly turned off and turned on. | <ul style="list-style-type: none"> - Select the time (check the lamp). | <ul style="list-style-type: none"> - Select the temperature. |
| The heater is operated with no indication of oil. | <ul style="list-style-type: none"> - Flowmeter wiring is unplugged. | <ul style="list-style-type: none"> - Line connection |
| Something burning smells during the initial operation. | <ul style="list-style-type: none"> - Foreign substances are burned inside the gasket. | <ul style="list-style-type: none"> - To disappear after 1 or 2 hours |
| The fuel smell is unusual. | <ul style="list-style-type: none"> - There is a smell when the heater is stopped as soon as it starts. - On oil supply, spilling fuel | <ul style="list-style-type: none"> - Operate 15' or more. - Remove spilled oil. |
| The room temperature is higher than the normal one. | <ul style="list-style-type: none"> - Check if the location of the temperature sensor (it may occur if the sensor is installed inside). | <ul style="list-style-type: none"> - Fix the sensor at the correct position. |

CLEANING & MAINTENANCE

CLEANING & MAINTENANCE



In case you keep the heater for a long time and you want to maintain its clean status, please power off and cool down the heater, pull out the plug as shown in the above picture, and clean according to the following instructions.

- Please pull out the front grille by raising it and pulling it out to the front.
- Please clean the heating reflection, which is on the back side of the heater and burner area. The combustion tube has a ceramic coating. (Be careful not to damage the coated surface.)

※ DO NOT DISASSEMBLE THE BURNING PARTS.

- Please wipe out the front controller area with soft wool.
- After finishing the cleaning, please assemble the front grille for the heater.

STORING

To store the heater, cool down the heater and plug out and wrap with plastic cover and keep in the well air-flowing place. You'd better consume all the oil in the tank.



CAUTION

To keep a heater in an outdoor or humid place is a major cause of problems.

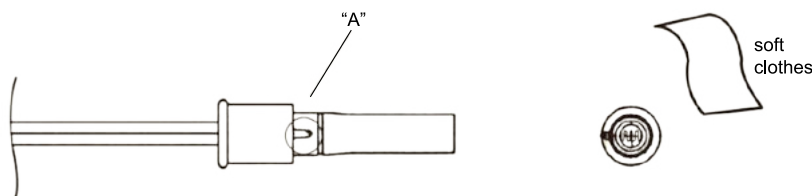
DAILY CHECK POINTS & ADJUSTMENT

DAILY CHECK POINTS

CLEAN OF FLAME SENSOR (Photocell, CDS)

- If the detection part of the photocell is contaminated by soot or other dirt, the performance can be lowered, which may cause a problem.
- Please take out the photocell carefully, which is placed in the lower part of the burner.
- Please clean the detection part of the photocell with soft clothes.

Be sure a photocell is fixed correctly. (Mark "A" should be inserted fully.)



CLEAN OF COMPONENTS

- If you need to change components, please contact us.
- In case of a repair or exchange of components, please contact the service center operated by our distributor's head office.
- Do not try to repair this heater by non-licensed service personnel because it may cause a worse condition, so please contact the local service center or distributor that is designated by our company.

DAILY CHECK POINTS & ADJUSTMENT

ADJUSTMENT

► IN CASE OF SUDDEN STOP DURING OPERATION

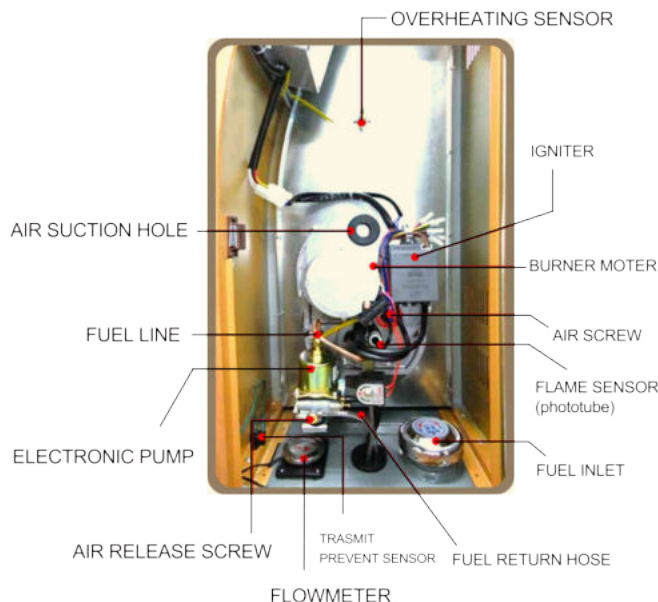
- Please check if now is operating in the time control operation? If so, the heater can be rest for 5min.
- Please check if now the setting temp, is less than the current temp.
- Please check if the heater is stop by pressing On/Off switch by remote controller or front controller.
- Please check if the heater is stop by sleep timer function.
- Please check if the heater is stop by auto-self-checking.

► AIR FLOW-OUT

- In case that Electric pump so noisy and burner no ignition, main cause of the problem is air flow into the electric pump and not distribute oil. If oil is all consumed without remaining in the tank, air can be flow into inside electric pump.
- The method to flow-out air
 - Operate the heater
 - When the electric pump operated , turn on the air outflow screw to counter-clockwise. And you wait till air flow out and oil start to come out.
 - When you see oil start to come out, turn off the air outflow screw to clockwise (In case much air inside, please repeat same way 2~3times.)

► DETAIL OF BURNER STRUCTURE

When you contact service person with a problem, please refer the below detail structure of the burner.



TROUBLE SHOOTING

Please check the points below before you think trouble has occurred.

! Is Power ON?



! Is Fuel enough?



! Is Flame sensor clean?



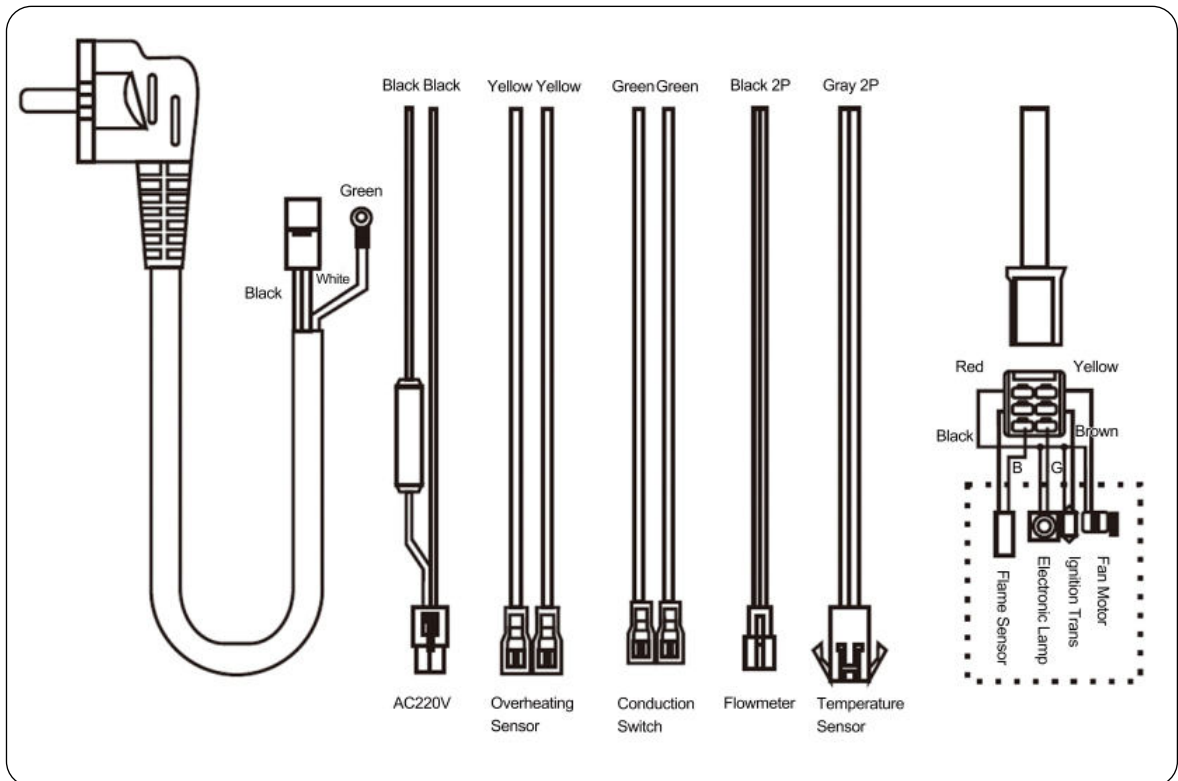
| PROBLEM | | CAUSE | SOLUTION |
|---------------------------|---|---|--|
| NO OPERATION | No power supply? | | Check if the power supply is proper. (ex. 220/230Vac, 50Hz) |
| | Check that the power plug is disconnected. | | Plug the power plug into the outlet. |
| | Is the fuse short? | | Replace the fuse with a new one. (250Vac, 3.15A) |
| NO FAN MOTOR OPERATED | "Lack of Fuel" light on? | Lack of fuel | Fill it up with kerosene from the diesel. Do not mix or use these two different fuels. |
| | Is the set temperature lower than the current temperature? | | Set the temperature to be higher than the current (room) temperature. |
| | Is the misfire lamp on? | Air in the electric pump. | Remove the air from the electric pump. (Refer to page 13.) |
| | Is the overheating lamp on? | Under the operation of overheating prevention | Ventilate with fresh air in the room and turn off the heater for a while. |
| | Can you see "E2" on the display? | Error on temperature sensor | Select timer control mode from temperature control mode. |
| NO IGNITION ON THE BURNER | Is the fuel filter stuffy? | Filter is contaminated. | Clean the filter with compressed air, or replace it with a new one. |
| | Is the air suction valve adjusted excessively or too small? | | Call the after-sales service agent. |
| | The voltage is low. | In cases of low voltage | The burner will not work properly, so use a booster to elevate the voltage. (A/S) |

TROUBLE SHOOTING

| PROBLEM | | CAUSE | SOLUTION |
|------------------------------------|---|--|--|
| IMMEDIATE STOP JUST AFTER IGNITION | "Lack of Fuel" light ON? | Running out of fuel | Fill up the fuel. |
| | Check if the fuel if Diesel of kerosene | It may cause less performance & trouble | Drain the existing fuel and fill with Diesel of kerosene only. |
| | Water of ant other impurities on fuel? | It may cause less performance & trouble | Replace the fuel with good quality one |
| | Is flame sensor located well? | In different position, it causes an error | Place the sensor in original location. |
| | Is flame sensor dirty? | Error because of soot of dirt | Call after sales service agent. |
| | Noise in fuel pump? | Excessive air in the pump and nozzle. | Remove the air in the electric pump. |
| EXCESSIVE SOOT IS GENERATED | Check if the fuel if Diesel of kerosene | It may cause less performance & trouble | Drain the existing fuel and fill with Diesel of kerosene only. |
| | Water of ant other impurities on fuel? | It may cause less performance & trouble | Replace the fuel with good quality one |
| | Is air suction valve adjusted excessively or too small? | Error on Temperature sensor | Call after sales service agent. |
| | Is tube clogged? | Smoke may flow backward | Clean the tube by removing soot inside of tube, of replace with new one. |
| NOISE IN BURNER | Is Fuel filter stuffy? | Dirty filter with impurities and contamination | Clean or replace with new one |
| | Noise in fuel pump? | Excessive air in the pump and nozzle | Remove the air in the electric pump. |

SPECIFICATION

| Model | DHOE-90 | DHOE-120 | DHOE-150 | DHOE-210 | DHOE-250 | DHOE-350 |
|--|-------------------------------------|-------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---------------|
| Fuel | Green Diesel | Green Diesel | Green Diesel | Green Diesel | Green Diesel | Green Diesel |
| Heating Output (kcal/h) | 9,000 | 12,000 | 15,000 | 21,000 | 25,000 | 35,000 |
| Fuel Consumption (ℓ/h) | 1.0 | 1.2 | 1.5 | 2.1 | 2.3 | 3.8 |
| Heating Area | 36 ~ 53 m ² (11~16PY) | 55 ~ 88 m ² (17~27PY) | 66 ~ 133 m ² (20~40PY) | 135 ~ 237 m ² (41~72PY) | 166 ~ 265 m ² (50~80PY) | 231~330 |
| Electric Power Consumption | 50 W | 50 W | 50 W | 65 W | 110 W | 120 W |
| Size (WxDxH) | 740x320x1020 | 940x320x1020 | 1290x320x1020 | 1290x320x1190 | 1340x350x1420 | 1370x400x1750 |
| Weight | 42 kg | 45 kg | 60 kg | 63 kg | 90 kg | 116kg |
| Used | Heating | Heating | Heating | Heating | Heating | Heating |
| Power Supply | AC220V/50Hz | AC220V/50Hz | AC220V/50Hz | AC220V/50Hz | AC220V/50Hz | AC220V/50Hz |
| Tank Capacity | 28 ℓ | 30 ℓ | 45 ℓ | 45 ℓ | 80 | 90 |
| Diameter of Smoke Pipe (In case of Using) | 90mm | 100mm | 100mm | 100mm | 100mm | 100mm |



WARRANTY CARD

This **HIPERS** heater gives you more reliable performance, comfort, and durability the more you use it because it is produced under a strict quality assurance system, including various inspections during and after production, reliance tests, etc. In case you encounter any problems, please contact the local service agent or a distributor. If the problem occurs due to a production failure or a natural malfunction, we will offer you free repair service under our warranty clause.

GENERAL

1. The warranty period is months after the purchase date.
 - If the problem is caused by the mistake or misuse of the customer, we will charge a repair cost even if it is within the warranty period.
2. This warranty card is valid within your country.
3. Please keep this warranty card for better service in case of trouble.
4. Please contact your local distributor or after-sales service agent.
5. Please fill out this form after purchasing.

| | |
|------------------|---------------------------------|
| DESCRIPTION | Portable infrared diesel heater |
| MODEL | |
| DATE OF PURCHASE | |

| | | | |
|-----------------|-----------------|-------|-----|
| WARRANTY PERIOD | () Months | PRICE | U\$ |
| DISTRIBUTOR | NAME OF COMPANY | | |
| | TELEPHONE NO. | | |

| | | | |
|----------|---------------|--|--|
| CUSTOMER | NAME | | |
| | ADDRESS | | |
| | TELEPHONE NO. | | |

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