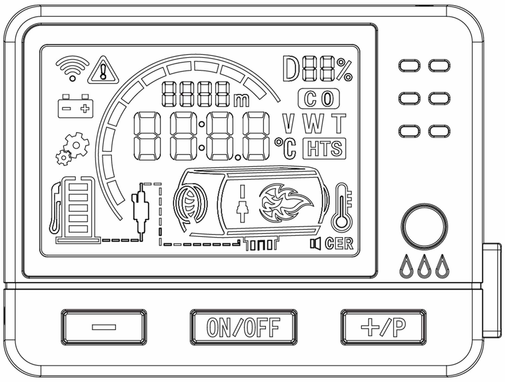
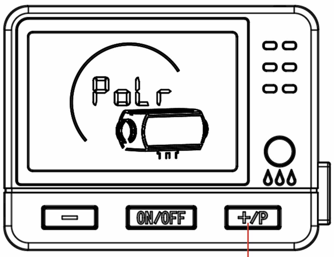
Instruction of switch



Heating	Glow plug	Fault	Fan
CER Buzzer	Fuel pump	Voltage	
Setting	Oil volume	Shell Temperature	
88% Combustion efficiency		Remote control signal	
HTS Over temperature sensor		D Use time (days)	



(1)

Long press

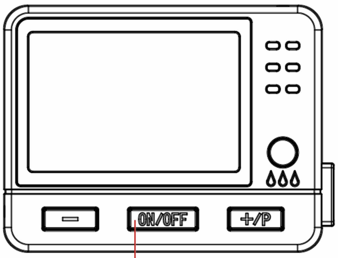
I. Pumping Mode

After the initial installation of the split heater, please fill fuel to the oil circuit first.The heater could be ignited normally only when the diesel flows into the burner from the tank.

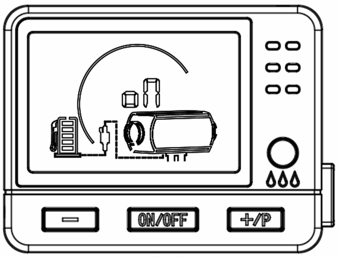
Operation method:

Long press the "+/P" switch to light the screen up in off status (the buzzer sounds once only). When the screen shows Polr (Figure 1)， release the button to turn on Fuel Pumping mode. The oil pump goes into fasting pumping status (pumping 500 times). The heater will ignite and start to operate automatically after pumping the diesel into the burner. If the diesel wasn't pumped into the burner successfully, please repeat the operation above to restart the pumping procedure. The number of times you start fuel pumping mode depends on the length of the the oil pipe. You will figure out if it works properly by observing the filling processing of the oil tube.

Please note this process applies to the initial installtion of the spilt type and when there is no fuel in the oil pipe only. Do not use it normally in case the combustor chamber been flooded.



Click



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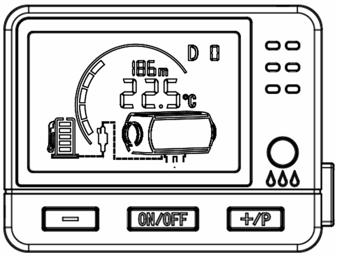

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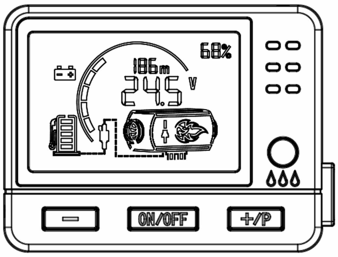

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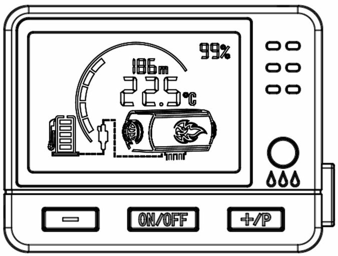

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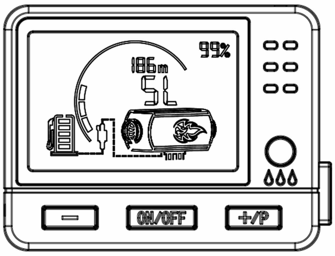
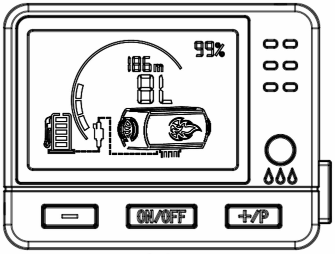


(6)

II. Starting Up

Short Press the “ON/OFF” switch in off status, when the display shows "on" (figure 2) and the buzzer sounds once only, the heater is turned on. The display of the screen (figure 3 & figure 4) shows current temperature and altitude respectively. Short Press the " - " and " +/P " switch to set the power "P"（from 1.4kw to 5kw) and temperature "T"(from 10℃ to 30℃, 50°F to 86°F) you want. When the screen displays as figure 5, it means the heat is running properly.

Note: When the heatig is running, long press “💧💧💧” to swtich the display of figure6, figure7, and figure8. Setting complete after the buzzer sounds only once.



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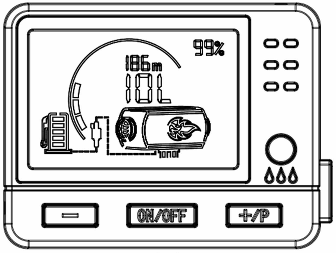
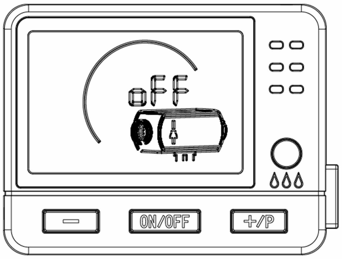


(8)

III. Shut Down

Long press “ON/OFF” siwtch when the heater is running. The heater goes into shutting down process after the buzzer sounds once only and the screen shows "off"(figure 9) .When screen displays "----" as figuer 10, the screen turns off the heater stops working.

Note: It is forbidden to cut off the power during the shutting down process.



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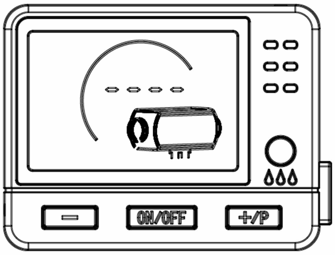


(10)

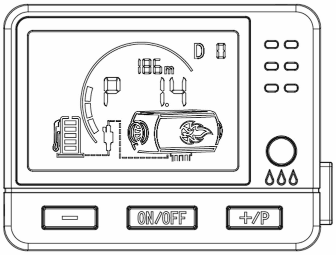
IV. Mode Setting

Short press the “ON/OFF” swtich when the heater is running to enter into Mode Setting.

1. It is Power mode when the screen displays P1.4-5 as figure 11. The heater will work at the set power value to heating continuously
2. It is Temperature mode when the screen displays t10℃ ~ 30℃. The heater will automatically heating in variable frequency mode after the temperatue is set.(Figure 12)

Note: The 2 mode types can only be switched, but not been used at the same time. The heater will operate as the mode you set last time.

For example: Power mode will be inactivated if you set temperature mode after setting power mode.



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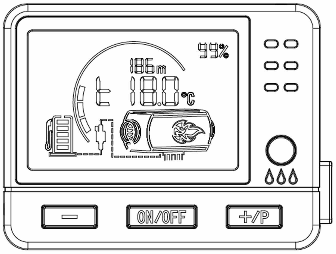

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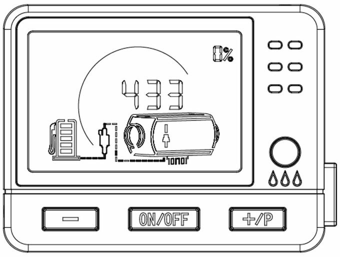


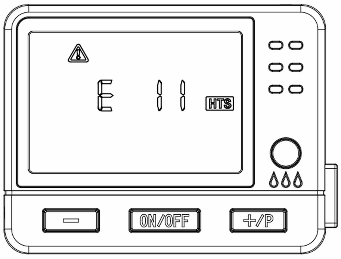
(13)

V. Remote Controller Pairing

Press the "turn off" button of the controller first when in off status and then press "💧💧💧"

The controller and the switch pairs successfully after the screen displays 433 as figure 13 and the buzzer sound once.

Note: The heater has been paired with the controller before delivery, no operation needed.



(14)

VI. Error and Fault

It is fault alarm when the icon “⚠” and “HTS” blinks, buzzer sounds at high frequency and the screen displays E11 as figure 14, please refer to the fault code chart to solve the problem.

FAULT CODE

Fault Code	Fault Description	Fault Location & Solutions
E0	Control unit error	Replace the circuit board.
E1	Fail to start(have already tried to start the heater for 3 times)/Fail to form flame	① Insufficient fuel. Check if there is enough fuel in the oil tank. ② There are bubbles in the oil pipe and the oil supply is discontinuous. Check： 1. the installation position and angle of the pump. 2. if the pump works properly. 3. if the amount of produced oil reached the standard. 4. if there is leakage in the oil pump and oil tube. ③ Fuel pump fail to pump diesel: Replace the fuel pump. ④ Air inlet and exhaust are blocked: Check if anything is stuck in the air inlet and exhaust outlet. ⑤ White smoke, black smoke appears upon starting the heater. Excessive carbon accumulation. Please unplug the oil inlet pipe, and start the heater to let it dry running for 3-4 times, until the heater reporting fault. Observing the smoking condition. Plug the oil pipe back and start the heater to ignite when there is no smoke. If ignition failed: 1. check whether the air inlet of the combustion chamber is blocked. 2. disassemble the machine and clean up the carbon deposition. 3. replace the machine.
E2	Flame off(Repeated 3 times already)	① There are bubbles in the oil pipe and the oil supply is discontinuous. Check if there is leakage in the oil pump and oil tube. ② Insufficient oil output of the fuel pump. Replace corresponding oil pump. ③ Poor air intake and exhaust. (generally, it will cause carbon depositions). Check the air intake and exhaust to make sure the air duct is unobstructed ; It is recommended to clean up the carbon deposition before use.

E3	Under voltage or over voltage	① Confirm if the voltage of the power supply matches the voltage of the heater. ② Poor wire contact Check 1. if Positive and Negative end of the wire harness are connected to the battery properly. 2. if the joint of the wire harness is firmly connected. ③ Power converter can not provide enough current. ④ Additional incompatible power cord was plugged in. If the cable is not long enough,please extent with separate connection. The cable has to be at least 2.5mm^2 pure fine copper. The cable must be connected firmly and groundly. ⑤ Power converter voltage output is unstable.
E4	Premature ignition identification	There is residue fuel existing due to illegal shutdown. Restart the heater.
E6	Open circuit or short circuit of Temperature sensor	① Overheat of the heater caused by insufficient installation room. ② The temperature sensor of the circuit board is damaged. Replace the circuit board.
E7	Open circuit or short circuit of fuel pump	① Poor contact between the wire harness and socket of the pump. Reconnect them. ② Fuel pump failure: Replace the fuel pump. ③ Control circuit board failure (rarely): Replace the circuit board.
E8	Motor	① Motor blades are stuck :Reinstall the case of the heater; it may be damaged during shipping. ② Defective motor:Replace the Motor/ Replace the heater. ③ Motor stalls, starts 3 times continuously and shut down. Check if the hall sensor on the circuit board is bent or damaged. ④ Poor contact between the wire harness of motor and the socket of control circuit board.Reconnect them.
E9	Glow plug failure	① Short-circuited of glow plug: Replace the glow plug (seldom occurs on Kyocera glow plug). ② Unstable voltage:Check power connection, fuse and battery voltage. ③ Damaged circuit board (Rarely):Replace the circuit board. ④ Poor contact between wire harness of glow plug and the socket of the control circuit board. Reconnect them.
E10	Overheat	① Higher volume fuel pump is connected by mistake. Check if the pump is installed properly. Seldom occurs. ② Air duct of air inlet or outlet of the heater is blocked. 1. Weather is not cold enough. 2. Air duct of air inlet or outlet of the heater is blocked. 3. Poor heat dissipation due to small installation room. ③ Temperature sensor failure: 1. Temperature sensor drops. 2.Temperature sensor is damaged. 3. Temperature sensor damaged due to humid weather conditions.
E11	Open circuit or short circuit of temperature sensor	① Temperature sensor failure:Replace the temperature sensor. ② Poor contact between the terminals of the temperature sensor and the circuit board ports, or the wire of the sensor may be break.
E12	Open circuit of glow plug	① Poor contact between the terminal of the glow plug and port of the circuit board. ② Unstable voltage:Check the power connection,fuse or the battery voltage. ③ Damaged circuit board:Replace control circuit board.
C4	Control Switch	Replace the control switch.
C2/C7	Control Switch	① Check if the wire of the control switch is not connected well. ② Replace the control switch.