



Stirling Generator Manual

Model: RS1000



Technical Data

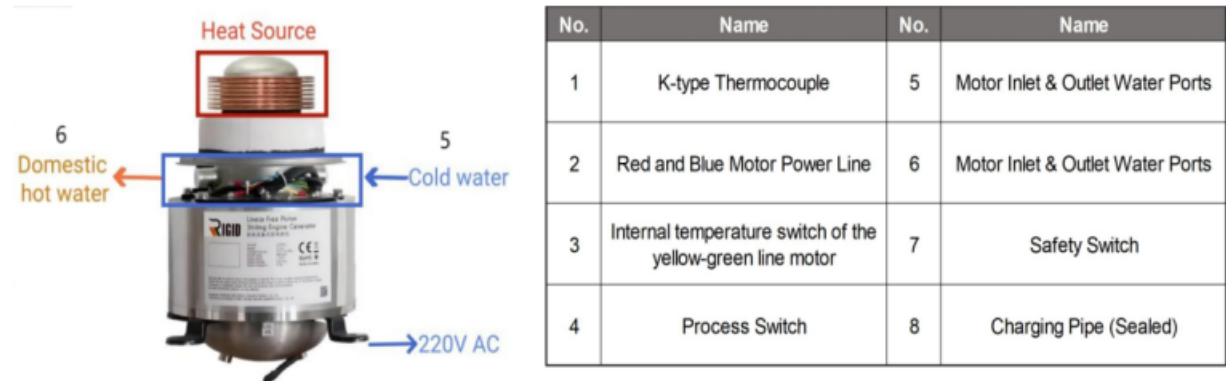
Model	Stirling RS1000	
Power Capacity	W	1050
Length	mm	394
Width	mm	394
Height	mm	447.5
Weight	Kg	55
Lowest Temperature with 10cm insulation	℃	180
Rated Voltage	V	220
Maximum Voltage	V	260
Internal Pressure at 25℃	MPa	2.3
Rated Frequency	Hz	50
Ambient Operating Temperature	℃	-30 to 60
Product Life	Hr	80000
Cooling Method	-	Water
Maximum Temperature at Hot End	℃	560

Safety Precautions

1. The machine contains high-pressure gas inside. Do not strike during operation or transportation. Only professional technicians from our company may disassemble, cut, or drill this machine.
2. The machine does not contain any user-serviceable parts. If any abnormalities occur during operation, please contact our after-sales department.
3. Before starting the machine, the motor's cooling system must be fully connected before proceeding to the next step.
4. The motor must be suspended with the four supplied suspension springs, and the height of all four springs must be kept the same.
5. After power generation stops, the cooling system should continue running for a while. The cooling system can only be shut down when the machine head temperature has dropped to 50 °C.

I. Machine Appearance Diagram

(for reference only)



II: Water Pipe Connection Method

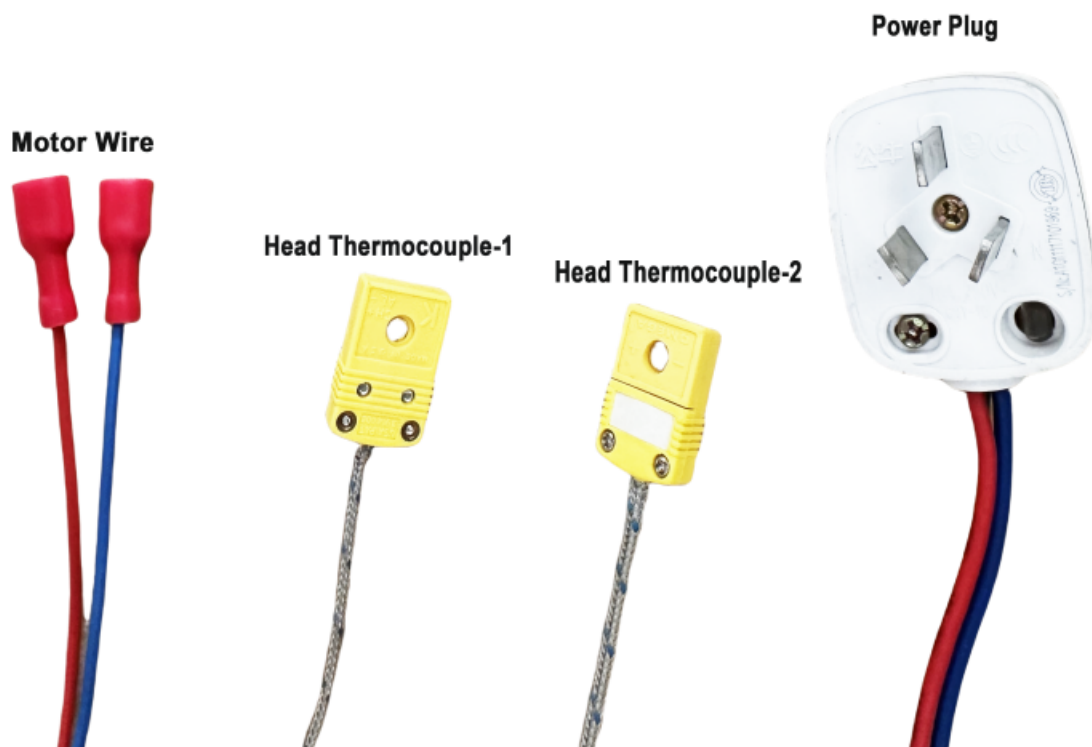
First, take a water pipe and connect one end to the motor inlet/outlet (5) (as shown in the diagram). Secure it tightly with a clamp. Connect the other end of the pipe to the water pump or to the municipal water faucet (with a flow rate of no less than **10L/m**), and secure it tightly with a clamp. Then, take another water pipe and, using the same method, connect it to the motor inlet/outlet (6), securing it tightly with a clamp. The other end of this pipe should be placed into a water barrel (ensure the water flows within a space of at least **80L** for circulation after the connection is made).

Take the water pipe from one end of the motor and connect it to the inlet of the circulation water pump (example), securing it tightly with a clamp. Then, connect the outlet of the circulation water pump to the water tank inlet using a water pipe and secure it tightly with a clamp.

III. Wiring Method

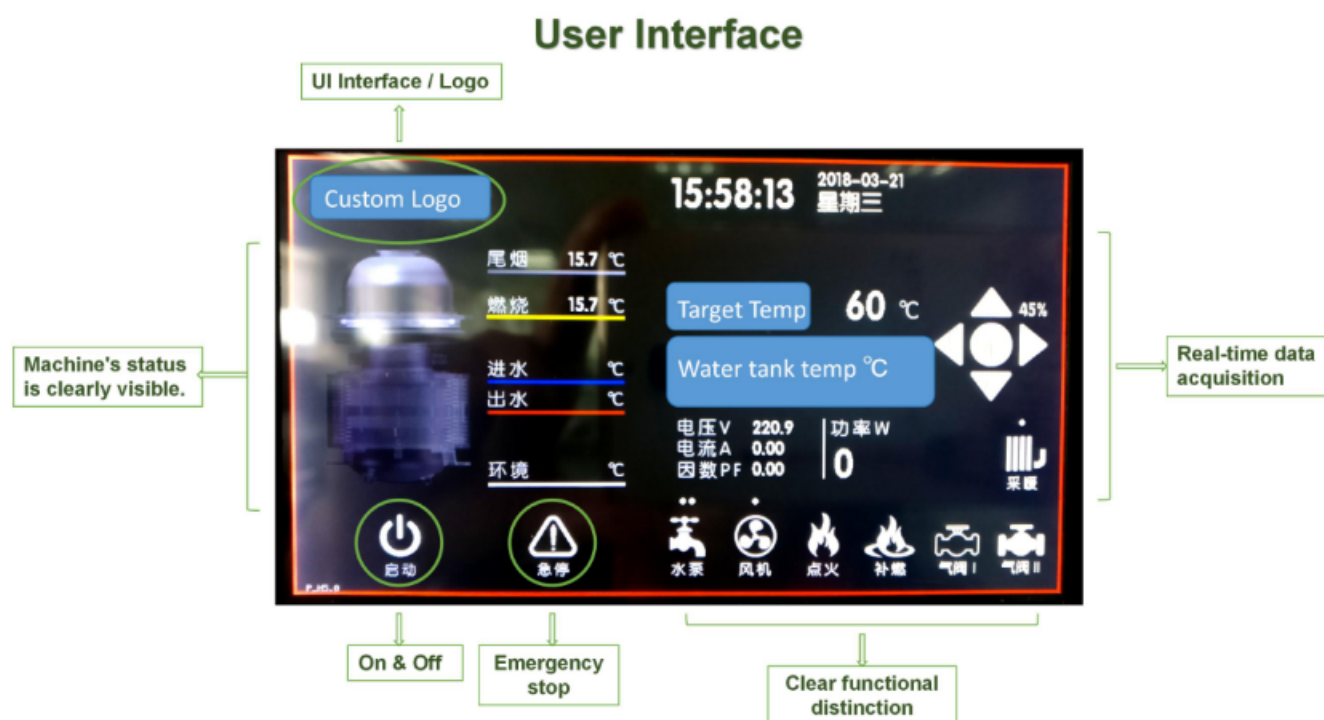
The control box wiring method is shown in the diagram.

1. Take one water pipe and connect one end to the motor's water inlet/outlet (5) (see diagram), secure with a hose clamp, and connect the other end to the water pump or a municipal water tap, then secure with a clamp. Take another water pipe and connect it to the motor's water inlet/outlet (6), fix it with a clamp, and place the other end into a water bucket (ensuring that water flows in a circulating loop).
2. Connect one end of the motor water pipe to the inlet of a circulating water pump, secure with a clamp, then connect the water pump's outlet to the water tank inlet using another water pipe, securing both ends with clamps.



IV. UI Display Description

This control system uses a resistive touchscreen for parameter display and motor control. The interface is shown in the figure.



User Interface (Custom available)



V. Operating Instructions

Turn on: start generating electricity

1. After preparation, begin operation: before heating the machine head, first turn on the circulating water pump to allow coolant flow, then confirm the display screen is functioning normally.
2. Begin heating the machine head. The temperature displayed on the control system screen will gradually rise. When it reaches the starting temperature of 180°C, press the start button on the touchscreen to start the motor. The display will then show the motor's current output voltage, current, power, and other parameters. When the active power is a negative value and decreasing, the motor has successfully started, and the electricity generated is directly fed into the national grid.
3. If, after pressing the start button, the screen shows active power as a positive value and it stays for more than 5 seconds, this means the motor failed to start. At this point, press the emergency stop button on the screen to stop the motor. When the machine head temperature exceeds 200°C, attempt to restart.

4. If the machine head temperature is too high (above 250 °C) and the motor still cannot start normally, stop heating the machine head and wait for the temperature to drop back to the starting temperature before trying again.
5. Once the motor has started normally, all relevant parameters will be displayed on the screen. Output power can be controlled simply by controlling the machine head temperature. The machine head temperature must not exceed 525 °C.

Turn off: Stop generating electricity

To stop power generation: first shut off the heat source of the machine head (the water pump must continue operating normally). The motor power will decrease as the head temperature decreases. When the active power is in the range of -20 ~ 0, press the emergency stop button on the screen to stop the motor.

Notes

If any abnormality occurs during power generation (such as severe motor vibration), first shut off the heat source.

After power generation ends, if the machine head is still at high temperature, do not turn off the cooling water. The cooling water can only be shut down once the machine head temperature drops below 50 °C.