

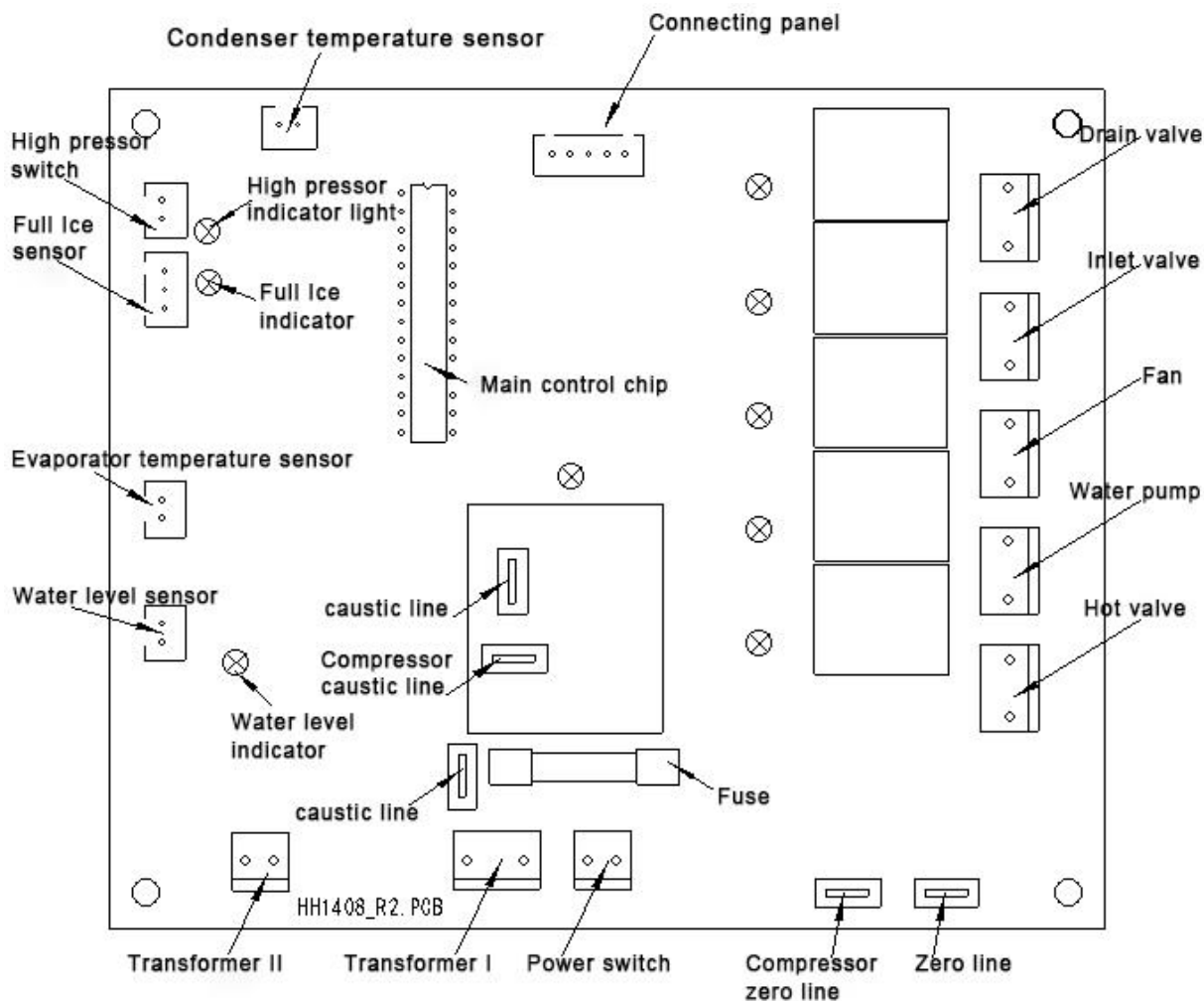
Flowing Ice Machine Controller Operation Manual

I. Technical parameters

- | | |
|---|----------------------------------|
| 1. Voltage | Alternating current 220V/50Hz |
| 2. Load output | 3000W / 1group
500W/ 5 groups |
| 3. Ice making delay time | 0~30min (Adjustable) |
| 4. Maximum deicing time | 6min |
| 5. Full ice delay time | 3min |
| 6. Fan start up and shut down temperature | 23°C |

II. Wiring method

The structure and wiring diagram of the main control panel of the controller are as follows:



Panel structure and wiring diagram are as follows:



III. Working Progress

1. After power on, the display screen will be on and off after 1 second. Then enter the power on delay state, the de icing indicator light is on, and the digital tube displays the power on delay time. The hot valve is opened and the water valve and fan are controlled. After 30 seconds, the press will be opened, and after 5 seconds, the hot valve will be closed to start ice making.

- Press **Power**, enter shutdown state.
- Press **Clean**, enter clean state.
- Press **Mode**, enter ice making state.
- Press **Ice Thickness** (Over 5s), enter the setting state.

2. During the ice making process, the ice making indicator is on, and the digital tube displays the ice making time. The compressor continues to open, the thermal valve is closed, and the fan is opened. The fan is controlled after 30 seconds, open the water pump after 30 seconds, controlled the water valve

within the first 5 minutes and close it after 5 minutes. When the time exceeds 23 minutes or detected the water temperature to be lower than 1 °C, the ice making indicator will flash and the set ice making time will be delayed. When the delay time is up, the ice making will end.

- Press **Power**: Enter shutdown state.
- Press **Clean**: The indicators of water shortage, high temperature and timeout flash at the same time (to be cleaned at the end of de icing) or go out.
- Press **Mode**: Press the button for the first time to enter the countdown of 30 seconds to judge whether drainage is required, and press the button for the second time to enter the deicing state.
- Press **Ice Thickness** (Over 5s): Enter the setting state.

3. After ice making, it will enter the de icing state, the de icing indicator light will be on, and the digital tube will display the de icing time. The compressor continues to open, the thermal valve opens, the water valve is controlled, and the water pump and fan are closed. The maximum deicing time is limited to 6 minutes. If the ice is not removed within 5 minutes, turn on the water pump for 1 minute. If the ice still remains, turn to ice making. For more than 6 minutes for three times, turn to de icing timeout shutdown.

- Press **Power**: Enter shutdown state.
- Press **Clean**: The indicators of water shortage, high temperature and timeout flash at the same time (to be cleaned at the end of de icing) or go out.
- Press **Mode**: Enter ice making state (ice is not full) or ice is full (ice is full).
- Press **Ice Thickness** (Over 5s): Enter the setting state.

4. After the ice is removed, if the ice in the refrigerator is not full, it will enter the ice making state for a new cycle. If the refrigerator is full of ice, it will enter the ice full shutdown state, and the ice full indicator will be on. The water

pump, compressor, heat valve, water feeding valve and fan are all closed. If the ice is taken away, the ice full indicator will flash within 180 seconds of the ice being full. After 180 seconds of the ice being full, it will enter the ice making state for a new cycle. If the ice is not removed, it is always in the ice full state.

- Press **Power**: Enter shutdown state.
- Press **Clean**: Enter power on delay state.

IV. About overtime shutdown, water shortage shutdown, overpressure shutdown and condenser overtemperature shutdown

1. Overtime shutdown: If the continuous 3 times of deicing time exceeds the maximum time, turn to deicing timeout shutdown. In case of overtime shutdown, all electrical appliances are shut down, the timeout indicator is on, and the digital tube displays the shutdown time. After 45 minutes, switch to the power on delay state.

- Press **Power**: Enter shutdown state.
- Press **Mode**: Enter the power on delay state.

2. Shutdown due to water shortage: If water shortage is detected for 5 consecutive minutes, it will be switched to shutdown due to water shortage. When the machine is shut down due to water shortage, the water valve is opened for 30 seconds every 4 minutes, the rest of the electrical appliances are closed, the water shortage indicator is on, and the digital tube displays the shutdown time. If water is detected, switch to power on delay state.

- Press **Power**: Enter shutdown state.
- Press **Mode**: Enter the power on delay state.

3. Condenser over temperature shutdown: when the condenser temperature exceeds 70 °C , all electrical appliances are shut down (the fan continues to operate for 3 minutes), the high temperature indicator is on, and the digital tube displays the shutdown time. After the condenser is shut down for 45 minutes due to over temperature, it will be switched to the power on delay state.

- Press **Power**: Enter shutdown state.
- Press **Mode**: Enter the power on delay state.

4. Over pressure shutdown: In the process of ice making, if the high pressure switch (HPS) is disconnected, it will turn to the over pressure shutdown state. In case of over pressure shutdown, all electrical appliances shall be shut down, high temperature and timeout indicators shall be on at the same time, and the digital tube shall display the shutdown time. 10 minutes after pressure recovery, switch to power on delay state.

- Press **Power**: Enter shutdown state.
- Press **Mode**: Enter the power on delay state.

V. About Drainage

Open the drain valve 30 seconds before the end of ice making and drain water for 30 seconds for each 3 ice molds.

VI. About Cleaning

1. In the state of power delay, press **Clean**, It can enter the cleaning state immediately. In the state of ice making and deicing, press **Clean**, it can enter the cleaning state only after the deicing is completed. At this time, the indicator lights of water shortage, high temperature and timeout flash at the same time. Press **Clean** again, the indicator lights of water shortage, high temperature and timeout are off at the same time.

2. In the cleaning state, the indicators of water shortage, high temperature and timeout are on at the same time. If the water is not enough, fill the water first, then turn on the water pump, and turn off the rest. After 15 minutes, open the drain valve for 2 minutes to complete the cleaning.

- Press **Power**: Enter shutdown state.
- Press **Mode** or Press **Clean**, finish cleaning.

VII. Ice Thickness Operation


1. Press **Ice Thickness** (Over 5s):Enter the setting state.The digital tube flashes to display the ice making delay time set.


2. In the state of pressing **Ice Thickness** Add 1 to the content displayed by the digital tube (return to 0 when it exceeds 30).

3. The setting range of ice making delay time is 00-30. The unit is minute.

4. In the **Ice Thickness** state, if no button is pressed within 10 seconds, it will automatically return to the working state and save the settings.

VIII. Temperature sensor failure

1. When the condenser temperature sensor is open or short circuited, the digital tube displays once every 7 seconds. 

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