CAUTIONS

1. Please ensure that the power supply and electrical outlet are in good contact and the earth wire must be firmly grounded!

2. Please make sure there is stable and normal voltage for the working chiller!
   As the refrigeration compressor is more sensitive to the power supply and voltage, the operating voltage of our standard products is of 220~230V (110V model is of 100~120V), if you need a wider operating voltage range, customization is available for us.

3. Unmatched power frequency can cause the chiller damage!
   Please choose model of 50Hz or 60Hz according to actual circumstance.

4. To protect the pump, it's strictly forbidden to run the chiller without water in the storage water tank!
   The pump is packed after draining whole water in the tank, so please make sure the tank has water inside before machine starting, otherwise it's easy to have the pump damaged. When the water level is below the green (NORMAL) range of the water level gauge, the cooling capacity of our chiller will go down slightly. Hence please ensure the water level is within the green (NORMAL) range. To drain through circulating pump is strictly prohibited!

5. Please be sure that the air inlet and air outlet are in good ventilation!
   There must be at least 50cm from obstructions to the air outlet which is on the top of the chiller, and should leave at least 50cm between obstructions and the side air inlet.

6. The filter screen must be regularly cleaned!
   It’s essential to unpick and wash the dust gauge, or the serious blockage will cause breakdown to the chiller.

7. Please pay attention to the effect of the condensate water!
   With greater ambient humidity, when the water temperature is lower than the ambient temperature, the condensate water will generate on the surface of water circular pipes and the cooled components if above circumstance appears, it is recommended to set a higher water temperature or keep pipes and cooled parts warm.

PROFESSIONAL USE ONLY!

The appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction, children being supervised not to play with the appliance!
Installation

It is very simple to install this industrial cooling machine. The installation for the first time of the new machine can be carried out by following steps:

1. Open the package to check if the machine is intact and all the necessary accessories are completed.

2. Open the injection port to feed cooling water. (Do not spill out the water!) Observing the water level gauge and adding water slowly, be careful not to have the water overflowed. For the cooling of carbon steel equipment, the water should be added an appropriate amount of cooling water additive (anti-corrosion water aqua). Users in cold area should use non-corrosive antifreeze fluid.

3. Connect the water inlet and outlet pipes well according to system conditions.

4. Plug in power and turn on the power switch. (Do not start up without water in the water tank!)  
   (1) Power switch turned on, the circulation pump of the chiller starts working. The first time of operating may cause more bubbles in the pipe, leading to a false alarming occasionally, but running for a few minutes later, it will go back to normal. 
   (2) After the first boot, you must immediately check whether the water pipe leaks. 
   (3) Power switched on, if the water temperature is below the set value, it is normal that fans and other components of the machine do not work. The temperature controller will automatically control the working conditions of the compressor, magnetic valve, fans and other parts based on the set controlling parameters.
   (4) As it takes a longer time to start over the compressor and other components, according to different conditions, the time is range from seconds to minutes, so do not turn off the power and again on frequently.

5. Check the water level in the water tank. The first startup of the new chiller empties the air in the water pipe, leading a slight water level decline, but in order to keep the water level in the green area, it’s allowed to add adequate water again. Please observe and record the current water level, and inspect it again after the chiller running for a period of time, if the water level drops obviously, please re-inspect the water pipeline leakage.

6. Adjust parameters of temperature controller. CW-6000/6100/6200 series use an intelligent thermostat. Normally users do not need to adjust it. If it is really necessary, please refer to page 17, “Operating status and parameters adjustment”.

Operation and parameters adjustment

T-506 new temperature controller does not need to be adjusted the controlling parameters. It will self-adjust controlling parameters for meeting equipment cooling requirements. T-506H new intelligent temperature controller works in defaulted constant temperature control mode with water temperature set at 25°C which can be adjusted as needed. T-506 and T-506H temperature controllers have the same functions and structure except default settings.

1. Temperature control panel introduction

   - Actual Temp
   - Set Temp
   - Comp
   - SV
   - Heating
   - Room Temp
   - ST DLA

   (1) ON, compressor working
   (2) ON, solenoid valve working
   (3) ON, heating rod working
   (4) ON, controller working in intelligent control mode
   (5) ON, controller working in constant temperature control mode
   (6) ON, controller working in parameters setting mode
   (7) ON, alarm output status
   (8) ON, displaying room temperature
   (9) ON, starting up delay status

   (1) Press button to show the room temperature, seconds later default display restored. (Meanwhile, Room Temp light is on, displaying room temperature).
   (2) buttons are for modifying parameters values and buttons are for switching parameter items.
   (3) RST button: confirm.
   (4) SET button: setting function.
2. **Restore to factory settings**
Before machine startup, press and hold buttons until the controller displays rE, 6 seconds later after releasing the buttons, the controller works in normal order. All parameters values settings of the controller have been restored to factory settings.

3. **Alarm function**
   (1) **Alarm Display:**
   
   ![Alarm Display Diagram]
   
   When alarm occurs, the error code and the temperature will be alternately displayed.
   
   (2) **To suspend the alarm:**
   In alarming state, the alarm sound could be suspended by pressing any button, but the alarm display remains until the alarm condition is eliminated.

4. **Thermostat parameters list**

<table>
<thead>
<tr>
<th>Order</th>
<th>Code</th>
<th>Item</th>
<th>Range</th>
<th>T-506 Temperature controller Factory Setting</th>
<th>T-506H Temperature controller Factory Setting</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F0</td>
<td>Temperature setting</td>
<td>F9~F8</td>
<td>25</td>
<td>25</td>
<td>Constant temperature controller</td>
</tr>
<tr>
<td>2</td>
<td>F1</td>
<td>Temperature difference value</td>
<td>-15~+5</td>
<td>-2</td>
<td>-2</td>
<td>Control effecting</td>
</tr>
<tr>
<td>3</td>
<td>F2</td>
<td>Cooling hysteresis</td>
<td>0.1~3.0</td>
<td>0.8</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>F3</td>
<td>Way of control</td>
<td>0~1</td>
<td>1</td>
<td>0</td>
<td>1: intelligent control effecting</td>
</tr>
<tr>
<td>5</td>
<td>F4</td>
<td>Alarm for over high</td>
<td>1~20</td>
<td>10</td>
<td>10</td>
<td>0: constant temperature</td>
</tr>
<tr>
<td>6</td>
<td>F5</td>
<td>Alarm for over low</td>
<td>1~20</td>
<td>15</td>
<td>15</td>
<td>water temperature</td>
</tr>
<tr>
<td>7</td>
<td>F6</td>
<td>Alarm for over high</td>
<td>40~50</td>
<td>45</td>
<td>45</td>
<td>room temperature</td>
</tr>
<tr>
<td>8</td>
<td>F7</td>
<td>Password</td>
<td>00~99</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>F8</td>
<td>The allowed highest</td>
<td>(F9+1)~40</td>
<td>30</td>
<td>30</td>
<td>water temperature</td>
</tr>
<tr>
<td>10</td>
<td>F9</td>
<td>The allowed lowest</td>
<td>1~(F8-1)</td>
<td>20</td>
<td>20</td>
<td>water temperature</td>
</tr>
</tbody>
</table>

**ALARM AND OUTPUT PORTS**

In order to guarantee the equipment will not be damaged while cooling water circulation is out of control, CW-6000/6100/6200 series chillers possess alarm protection.

1. **Alarm output port and wiring diagram.**

   ![Alarm Output Port Diagram]

2. **Alarm causes and working status table.**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Display</th>
<th>Alarm code</th>
<th>Buzzer</th>
<th>OUT H1</th>
<th>OUT H2</th>
<th>OUT H1</th>
<th>H3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulating pump works properly</td>
<td></td>
<td></td>
<td></td>
<td>Disconnection</td>
<td>Breakover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blocked cooling water circulation loop</td>
<td>E6</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm of water shortage</td>
<td>E6</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faulted circulating pump</td>
<td>E6</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrahigh room temp</td>
<td>E1</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrahigh water temp</td>
<td>E2</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultra low water temp</td>
<td>E3</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faulted room temp sensor (Constant temperature invalid)</td>
<td>E4</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faulted water temp sensor</td>
<td>E5</td>
<td>Sounds</td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chiller power failure</td>
<td></td>
<td></td>
<td>Breakover</td>
<td>Disconnection</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: the flow alarm is connected to the normally open relay and normally closed relay contacts, requiring operating current less than 5A, working voltage less than 300V.