CW-5200
Industrial Chiller
User Manual

Read Carefully Before Use
Keep for Future Reference

Safety Information

⚠ Warning!

- **DO NOT** use this product with an incompatible, unstable, or ungrounded power supply. Only use with well-grounded 3-prong 110V/60Hz outlets. Do not use a 3 to 2-prong adapter to allow it to run from an ungrounded outlet.

- **DO NOT** run this chiller without first filling it with an adequate amount of distilled water or specially formulated laser-safe antifreeze. If neither is available, deionized water is preferable to tap water, which can cause faster scaling and microbial growth that will shorten the life expectancy of your chiller and attached devices.

- Place this chiller in a dry well-ventilated environment away from heat sources but warm enough to avoid freezing temperatures.

- Ensure at least 1 ft. (30 cm) of open space next to its side air inlets.

- Ensure at least 1′8″ (50 cm) of open space above its top air outlet.

- When cooling a laser engraver, take care that this device does not cause the room's humidity to exceed safe levels. Some smaller rooms may require additional ventilation to ensure safe engraving.

⚠ Caution!

- Remember that the **OUTLET** of the water chiller should connect to the **INLET** of the product to be cooled. Similarly, the water chiller's inlet should be connected to the other machine's water outlet.

Specifications

Input Voltage	110–120 V~ 60 Hz	
Dimensions	22.8×11.3×18.1 in.	58×28.8×46 cm
Compressor Power	0.67 hp	0.5 kW
Fan Power	0.03 hp	0.02 kW
Water Pump Power	0.04 hp	0.03 kW
Refrigeration Capacity	0.39 ton	1.39 kW
Refrigerant	R410A	
Refrigerant Charge	10.6 oz.	300 g
Max. Working Temperature	113°F	45°C
Tank Capacity	1.6 gal	6 L
Inlet / Outlet Fitting	0.4 in.	10 mm
Max. Lift	42.7 ft.	13 m
Max. Flow	3.17 gal/min	12 L/min
Net Weight	57.3 lb.	26 kg

Package List

1 × Industrial Chiller   1 × Alarm Signal Output Plug

1 × Power Cord   1 × Spare Fuse

Parts Diagram

Front

Control Panel

Air Inlet & Filter

Back

Filling Port

Cooling Water Outlet   Alarm Output Terminal

Cooling Water Inlet   Power Switch

Water Level Gauge

Spare Fuse

Water Drain   Power Socket
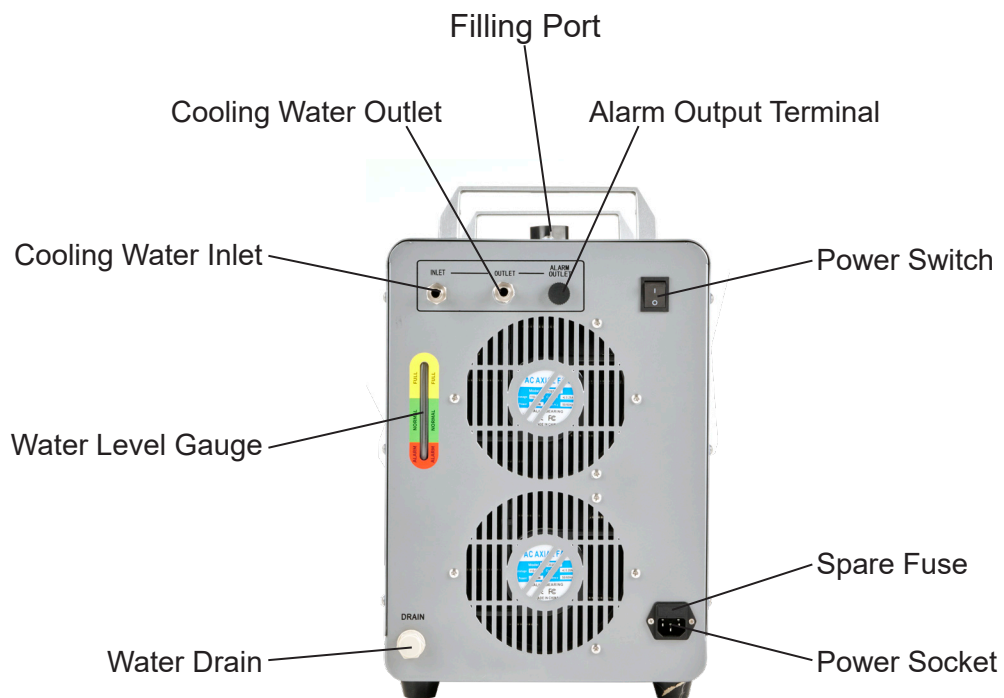
Installation

1. Fill the water tank with distilled or deionized water. For cooling carbon steel equipment, include the appropriate amount of anticorrosive additive. **DO NOT** fill completely. Pay attention to the water gauge and ensure that the water level at the appropriate level.

   Use the water level gauge and ensure the level is between the middle and top of the green area. "FULL" is actually overfull. Pour slowly and do not allow the water to overflow.

2. Connect the chiller's water outlet port to the water inlet of the product to be cooled and connect the chiller's water inlet port to the water outlet of the product to be cooled.

3. Plug in the power cable and turn on the water chiller. The pump will begin working. There may be some bubbles at first. These should disappear after a minute or two. Don't worry if the fans and other components of the chiller do not activate. They are usually automatically controlled and will not begin working until they are needed by the machine.

4. Check the water level of the tank again using the water level gauge. The water level of the chiller may be lowered as it fills the cooling path in your device.

   If necessary, carefully add more water to the chiller to maintain appropriate levels of water. Keep the level between the middle and top of the green area.
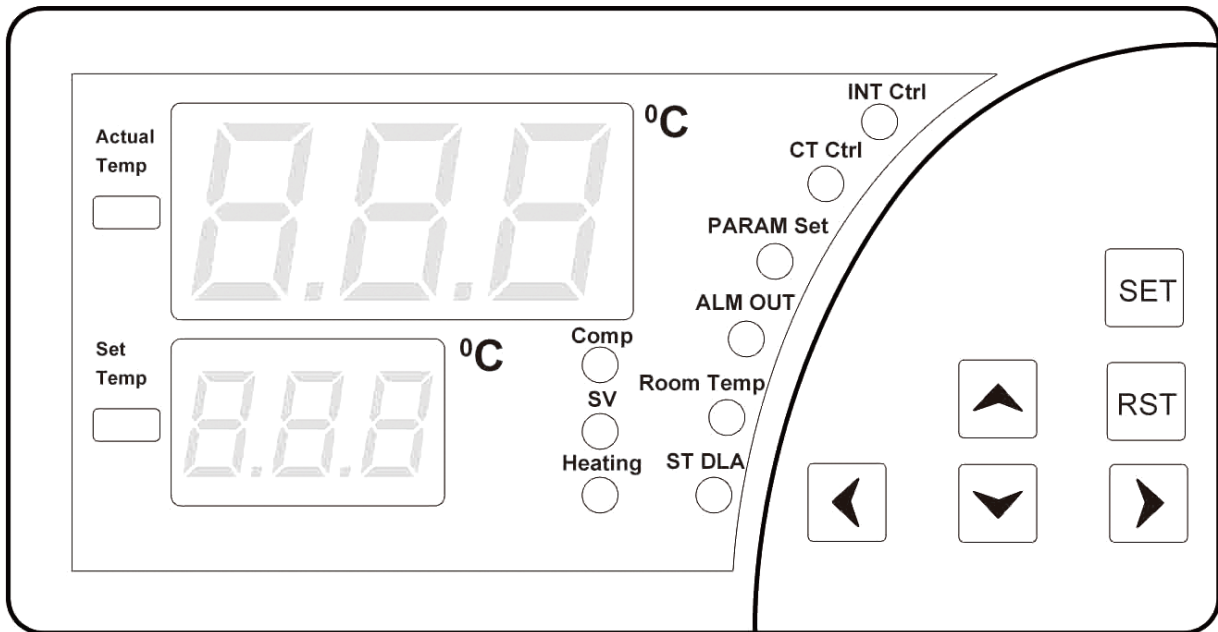
   If the water level drops sharply or continues to go down during normal use, turn off your device and examine the water pipes and cooling path for leakage. Repair any such leaks before restarting the devices and continuing work.

5. Adjust the water chiller's parameters with the control panel as needed.

Operation

Control Panel

Comp	Compressor indicator light
SV	Solenoid valve indicator light
Heating	Heating rod indicator light
INT Ctrl	Intelligent control mode indicator light The temperature will be kept 3°F (2°C) cooler than the room Users can adjust this value as needed
CT Ctrl	Constant temperature mode indicator light A constant 77°F (25°C) temperature will be maintained Users can adjust this value as needed
PARAM Set	Parameter setting mode indicator light
ALM OUT	Alarm status indicator light This light comes on when an alarm is sounding
Room Temp	Room temperature indicator light Hold ▼ to display the current ambient room temperature
ST DLA	Startup delay indicator light This light comes on during startup as the device checks its power supply
RST	Enter button
SET	Settings button

Temperature Adjustment

Press **SET** to enter settings mode. Use ▲ and ▼ to modify the desired water temperature. Press **RST** to save and exit. Press **SET** to exit without saving. If no activity is detected for 20 seconds, settings mode will also exit without saving. The set temperature will be displayed on the lower readout, and the chiller will bring the actual water temperature to that level over time.

Password Protection

Press ▲ and then hold **SET** until "00" is displayed in the Actual Temp display and "PAS" is displayed in the Set Temp display. Use ▲ and ▼ to select your password and press **SET** to save and exit.

Parameter Adjustment

Enter your password again and the device will enter the advanced settings mode. Use ▲ and ▼ to cycle through the parameters. Use ▲ and ▼ to modify the current parameter. Press **RST** to save and exit. Press **SET** or wait to exit without saving any changes.

Order	Code	Item	Range	Defaults	Note(s)
1	F0	Water Temperature	F9–F8	25	Celsius value of constant temperature mode
2	F1	Temperature Difference	−15 to +5	−2	Celsius value of the difference between water and air temperatures in intelligent control modeCelsius
3	F2	Cooling Hysteresis	0.1–3.0	0.8	Celsius value of the acceptable deviation from F0 and F1 values
4	F3	Control Mode	0–1	1	1 is intelligent control mode 0 is constant temperature mode
5	F4	Overheated Water Alarm	1–20	10	Celsius value above the F0 and F1 values causing an alarm
6	F5	Overchilled Water Alarm	1–20	15	Celsius value below the F0 and F1 values causing an alarm
7	F6	Overheated Room Alarm	40–50	45	Celsius value of the ambient room temperature causing an alarm
8	F7	Password	00–99	8	
9	F8	Highest Allowed Water Temperature	F0–40	30	Celsius value of the highest acceptable temp. in intelligent mode
10	F9	Lowest Allowed Water Temperature	1–F0	20	Celsius value of the lowest acceptable temp. in intelligent mode

For example:

Code	Item	Defaults	Value in Case 1	Value in Case 2	Value in Case 3
F0	Water Temperature	25		28	25
F1	Temperature Difference	−2	-3		
F2	Cooling Hysteresis	0.8	0.5	2.0	1.0
F3	Control Mode	1	1	0	0
F4	Overheated Water Alarm	10	10	5	4
F5	Overchilled Water Alarm	15	10	10	14
F6	Overheated Room Alarm	45	45	45	45
F7	Password	8	8	8	8
F8	Highest Allowed Water Temperature	30	31	30	30
F9	Lowest Allowed Water Temperature	20	25	5	5

Case 1: The chiller is in intelligent control mode and requires the water to be between 77–88°F (25–31°C). With the ambient room temperature kept constant, the water temperature will remain 5°F (3°C) lower with a deviation of ±0.9°F (±0.5°C). An alarm will sound if the water temperature is 18°F (10°C) higher or lower than this target.

Case 2: The chiller is in constant temperature mode and requires the water to be at 82°F (28°C) with a deviation of ±3.6°F (±2°C). An alarm will sound if the water temperature is 9.6°F (5°C) higher than this target or if the water is 18°F (10°C) lower than this target.

Case 3: The chiller is in constant temperature mode and requires the water to be at 77°F (25°C) with a deviation of ±1.8°F (±1°C). An alarm will sound if the water temperature goes above 86°F (30°C) or below 50°F (10°C).

Restore Factory Settings

While the chiller is in standby mode, press and hold ▲ and ▼ until "rE" is displayed. All settings have now been returned to factory defaults.

Maintenance

- Regularly clean the air filter of dust and debris with a soft cloth or vacuum.

- Periodically clean the inside of the inlet and outlet hoses to ensure no clogs form. To do this, soak the hoses in a mild detergent solution with a low concentration of biocide (e.g. bleach) for 8–24 hours. Rinse the hoses with tap water before reinstalling them.

- Periodically clean the water tank with a mild detergent solution with a low concentration of biocide (e.g. bleach) to prevent and remove scaling.

- Disconnect the chiller from its power supply and drain all water before transporting it or placing it in storage.

Troubleshooting

Potential Problems	Usual Solution(s)
The chiller does not turn on.	Check your electrical connections, fuse box, and circuit breaker.
Condensation forms on the chiller.	Increase chilling temperature or decrease the ambient room temperature.
Water drainage is slow.	Open the water tank inlet to allow air to flow more freely.
Scaling builds up in the water tank.	Clean with a mixture of water, mild detergent, and bleach.

Error Messages

When alarms occur, an error code will be displayed as above. The alarm noise can be muted by pressing any button on the control panel.

Error Message	Meaning
E1	The ambient room temperature is too high. Reduce it or cease work.
E2	The water temperature is too high. Cease work and replace or cool it. More refrigerant may be needed. Other problems which might exist include obstructed air flow from a clogged filter or inadequate space around the chiller's vents, an unstable power supply, an excessive heat load from the machine being cooled, or a poor parameter configuration.
E3	The water temperature is too low. Cease work and replace or heat it.
E4	The room temperature sensor has malfunctioned. Cease work and repair or replace it.
E5	The water temperature sensor has malfunctioned. Cease work and repair or replace it.
E6	The water flow has a problem. Cease work and check for low water, obstructions, or a pump malfunction.

Contact Us

Thank you for choosing our products! If you have any questions or comments, contact us at **help@cs-supportpro.com** and we'll resolve your issue ASAP!

For a .pdf copy of the latest version of these instructions, use the appropriate app on your smartphone to scan the QR code to the right.