

OMTech CW-5200

OMTech CW-5200 6L Industrial Water Chiller Instruction Manual

For CO2 Laser Engraving & Cutting Machines

1. PRODUCT OVERVIEW

The OMTech CW-5200 Industrial Water Chiller is designed to provide efficient and stable cooling for CO2 laser engraving and cutting machines. It features a 6-liter water tank, a 0.9 HP compressor, and a cooling capacity of 5186 BTU/hour, ensuring optimal performance for laser tubes up to 150W. This manual provides essential information for safe operation, setup, maintenance, and troubleshooting.



Figure 1: OMTech CW-5200 Industrial Water Chiller, front-side view.



Figure 2: The CW-5200 Water Chiller in operation with a laser engraver.

2. SAFETY INSTRUCTIONS

Read all safety warnings and instructions carefully before operating the chiller. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Ensure the chiller is placed on a stable, level surface.
- Connect the chiller to a properly grounded power outlet.
- Do not operate the chiller with damaged power cords or plugs.
- Keep the chiller away from heat sources, flammable materials, and direct sunlight.
- Ensure adequate ventilation around the chiller to prevent overheating.
- Do not immerse the chiller in water or other liquids.
- Use only distilled water or recommended laser coolant. Do not add tap water directly.
- Always disconnect power before performing any maintenance or refilling the water tank.
- Keep children and unauthorized personnel away from the operating chiller.

3. PRODUCT COMPONENTS

Familiarize yourself with the main components of your CW-5200 water chiller.



Figure 3: Front Panel Features

1. Power Switch
2. Temperature Display
3. Built-in Handles



- ① Water Injection Port ② Power Socket(with Spare Fuse)
- ③ Alarm Output Terminal ④ Cooling Water Outlet
- ⑤ Cooling Water Inlet ⑥ Water Level Gauge ⑦ Radiator Fans
- ⑧ Water Drain

Figure 4: Rear Panel Features

- 1. Water Injection Port
- 2. Power Socket (with Spare Fuse)
- 3. Alarm Output Terminal
- 4. Cooling Water Outlet
- 5. Cooling Water Inlet
- 6. Water Level Gauge
- 7. Radiator Fans
- 8. Water Drain

Water Inlet & Outlet

Made of Brass for Lasting Corrosion Resistance and Extra-Large for a Max.Flow of 2.6gal./min.



Figure 5: High-grade brass inlet and outlet ports for secure connections.

4. SETUP INSTRUCTIONS

Follow these steps for initial setup of your water chiller.

1. **Unpacking:** Carefully remove the chiller from its packaging. Inspect for any damage during transit.
2. **Placement:** Place the chiller on a flat, stable surface in a well-ventilated area. Ensure there is at least 20 cm (8 inches) of space around the unit for proper airflow.
3. **Fill Water Tank:** Unscrew the water injection port cap (1 in Figure 4). Fill the tank with approximately 6 liters (1.6 gallons) of distilled water or OMTech laser coolant. Monitor the water level gauge (6 in Figure 4) to ensure the level is within the green zone. Do not overfill.

Use with OMTech Laser Coolant for Best Results



Figure 6: Use of OMTech Laser Coolant for optimal performance.

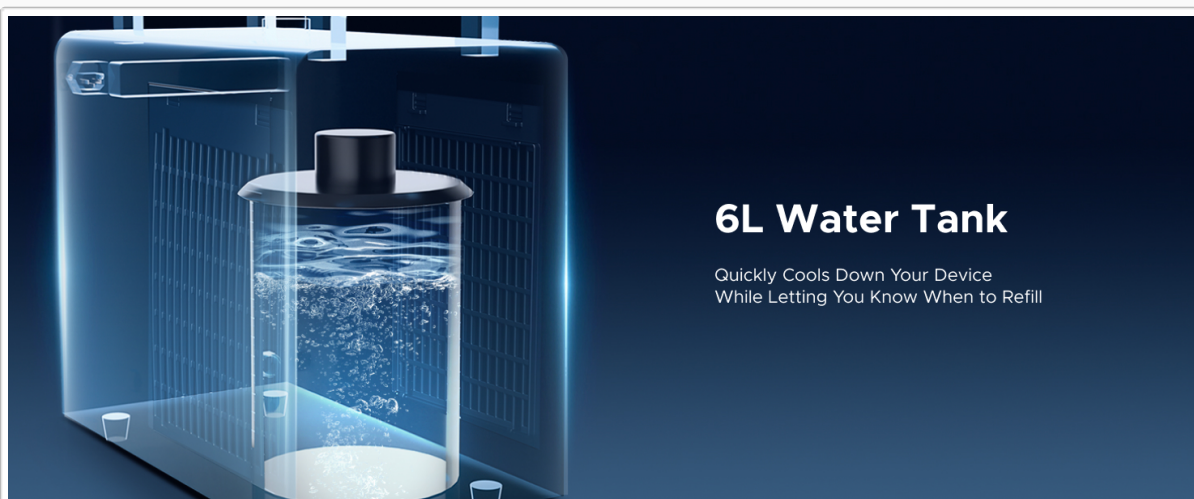


Figure 7: The 6L enclosed water tank design.

4. **Connect Water Hoses:** Connect the water inlet of your laser machine to the Cooling Water Outlet (4 in Figure 4) of the chiller. Connect the water outlet of your laser machine to the Cooling Water Inlet (5 in Figure 4) of the chiller. Secure all connections to prevent leaks.
5. **Power Connection:** Connect the power cord to the Power Socket (2 in Figure 4) on the chiller and then

plug it into a grounded electrical outlet.

5. OPERATING INSTRUCTIONS

Operating the CW-5200 chiller is straightforward once properly set up.

1. **Power On:** Flip the Power Switch (1 in Figure 3) to the 'ON' position. The chiller will start, and the temperature display will illuminate.
2. **Initial Circulation:** Allow the chiller to run for a few minutes to circulate the water and remove any air bubbles from the system. Check the water level gauge again and add more water if necessary.
3. **Temperature Monitoring:** The digital display (2 in Figure 3) shows the current water temperature. The chiller is designed to maintain the water temperature within 0.3°C of the set point.



Figure 8: Real-time temperature display for precise monitoring.

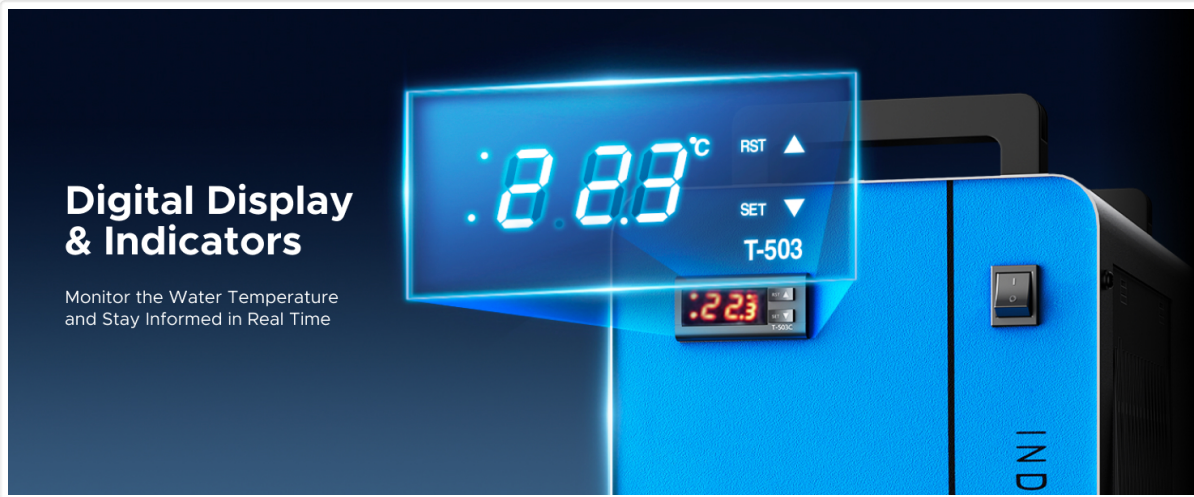


Figure 9: Digital display and indicators provide real-time feedback.

4. **Laser Operation:** Once the chiller has reached a stable operating temperature, you can begin operating your CO2 laser machine. The chiller will automatically regulate the water temperature to prevent overheating of the laser tube.
5. **Power Off:** After use, turn off your laser machine first, then switch off the chiller using the Power Switch.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your chiller.

- **Water Replacement:** Replace the cooling water every 1 to 3 months, depending on usage and environmental conditions. Always use distilled water or OMTech laser coolant.
- **Clean Radiator Fins:** Periodically clean the radiator fins (7 in Figure 4) to ensure efficient heat dissipation. Use a soft brush or compressed air to remove dust and debris.
- **Check Water Level:** Regularly check the water level gauge and refill if the level drops below the green zone.
- **Drainage:** Use the water drain port (8 in Figure 4) to empty the tank when replacing water or storing the unit.

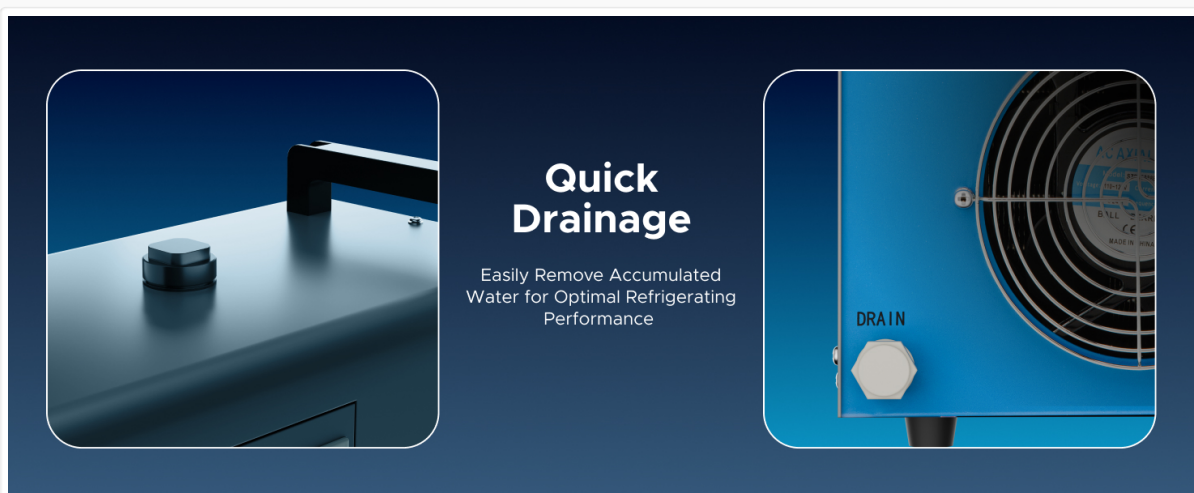


Figure 10: Quick drainage system for easy water removal.

- **Inspect Hoses:** Periodically inspect all water hoses for kinks, cracks, or leaks. Replace any damaged hoses immediately.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your CW-5200 chiller.

- **Chiller Not Turning On:**
 - Check if the power cord is securely plugged into both the chiller and the wall outlet.
 - Verify that the power switch is in the 'ON' position.
 - Check the fuse in the power socket (2 in Figure 4). Replace if blown.
- **Water Not Circulating:**
 - Ensure the water level is adequate.
 - Check for kinks or blockages in the water hoses.
 - Verify that the pump is operating (listen for pump noise).
- **High Water Temperature Alarm:**
 - Ensure the chiller's radiator fins are clean and not obstructed.
 - Verify that the ambient room temperature is not excessively high.
 - Check if the cooling fans are operating.
 - Ensure the water level is sufficient.
- **Water Leakage:**
 - Inspect all hose connections for tightness.
 - Check hoses for any damage or cracks.

If issues persist, contact OMTech customer support for assistance.

8. SPECIFICATIONS

Detailed technical specifications for the OMTech CW-5200 Water Chiller.



Figure 11: Key specifications of the CW-5200 Chiller.

Feature	Specification
Model	CW-5200
Material	Steel, ABS, Copper
Compressor Power	680W (0.9 HP)
Tank Capacity	6 Liters (1.6 Gallons)
Max. Lift	29.5 ft. (9 m)
Max. Flow Rate	2.6 gal./min. (10 L/min.)
Cooling Capacity	5186 BTU/h
Temperature Control Precision	±0.3°C
Protection Features	High Current, Low Water Flows, High Water Temps

Feature	Specification
Product Dimensions	22"D x 11.4"W x 17"H
Weight	57.3 Pounds
Power Source	Corded Electric

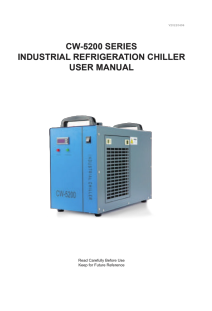

9. WARRANTY AND SUPPORT





OMTech provides comprehensive support for its products.

- **Warranty:** This product comes with a 1-year warranty. Please refer to your purchase documentation for specific terms and conditions.
- **Customer Support:** Our 24/7 global support team is available to provide expert assistance, including technical guidance.
- **Contact:** For support, please visit the official OMTech website or refer to the contact information provided with your purchase.

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Related Documents - CW-5200

	<p>CW-5200 Series Industrial Refrigeration Chiller User Manual</p> <p>Comprehensive user manual for the CW-5200 Series Industrial Refrigeration Chiller, covering installation, operation, advanced settings, troubleshooting, and specifications. Essential guide for maintaining optimal cooling performance for industrial applications.</p>
	<p>OMTech SH-G1060 100W CO2 Cabinet Laser Engraver User Manual</p> <p>Comprehensive user manual for the OMTech SH-G1060 100W CO2 Cabinet Laser Engraver, covering installation, operation, safety, and maintenance for personal and professional use.</p>

 <p>CW-3000 SERIES INDUSTRIAL REFRIGERATION CHILLER USER MANUAL</p>	<p>CW-3000 Series Industrial Refrigeration Chiller User Manual</p> <p>User manual for the CW-3000 Series Industrial Refrigeration Chiller, providing essential safety information, installation procedures, troubleshooting guides, maintenance instructions, and detailed technical specifications for various models.</p>
 <p>omtech Solis Duo Fiber & Diode Dual Laser Engraver User Manual</p>	<p>OMTech Solis Duo Dual Laser Engraver User Manual</p> <p>Comprehensive user manual for the OMTech Solis Duo Dual Laser Engraver (20W Fiber & 20W Diode). Covers safety precautions, technical specifications, component identification, assembly, software installation, operation procedures, maintenance, and additional applications.</p>
 <p>CW-5202 SERIES INDUSTRIAL REFRIGERATION CHILLER USER MANUAL</p>	<p>CW-5202 Series Industrial Refrigeration Chiller User Manual</p> <p>This user manual provides detailed instructions for the CW-5202 Series Industrial Refrigeration Chiller, covering installation, operation, safety precautions, troubleshooting, and technical specifications for optimal performance.</p>
 <p>omtech SH-G1490 130W CO₂ Grabador láser de armario Manual de usuario</p>	<p>Manual de Usuario: Grabador Láser CO2 Omtech SH-G1490 (130W)</p> <p>Guía completa de usuario para el grabador láser de CO2 Omtech SH-G1490 de 130W. Incluye instrucciones de seguridad, instalación, operación y mantenimiento para garantizar un uso seguro y eficiente.</p>