**VEVOR DC-0506**

# VEVOR DC-0506 Laboratory Chiller Circulator User Manual

Model: DC-0506

## 1. Introduction

This manual provides essential instructions for the safe and efficient operation of your VEVOR DC-0506 Laboratory Chiller Circulator. This unit is designed for precise temperature control in laboratory environments, offering both heating and cooling capabilities within a range of -5°C to 100°C. Please read this manual thoroughly before installation, operation, or maintenance to ensure proper use and to prevent damage to the equipment or injury to personnel.

## 2. Safety Information

Adherence to the following safety guidelines is crucial for safe operation:

- Ensure the unit is connected to a grounded power outlet with the correct voltage.
- Do not operate the chiller with damaged power cords or plugs.
- Always use appropriate liquid media as specified (e.g., ethanol for low temperatures). Do not use flammable or corrosive liquids without proper safety precautions and compatibility checks.
- Avoid direct contact with hot or cold surfaces during operation. Use protective gloves if necessary.
- Do not block ventilation openings on the unit. Ensure adequate clearance for airflow.
- Disconnect power before performing any maintenance or cleaning.
- Keep the unit away from water splashes or excessive humidity.
- In case of malfunction, switch off the unit immediately and consult the troubleshooting section or contact support.

## 3. Product Overview

The VEVOR DC-0506 Laboratory Chiller Circulator is a robust unit designed for precise temperature management in various scientific applications. It features a fully enclosed compressor for efficient and quiet operation, a high-definition LCD for accurate control, and a durable 304 stainless steel construction.

## Key Components

- **Control Panel:** Features an LCD display for temperature monitoring and control buttons.
- **Water Tank:** 6L capacity, made of 304 stainless steel for corrosion resistance.
- **Circulating Pump:** Ensures consistent liquid flow for stable temperature.
- **Compressor:** Fully enclosed, providing fast and stable cooling.
- **Drain Valve:** Located on the side for easy liquid drainage.
- **Internal/External Circulation Ports:** Allows for flexible integration with external equipment.

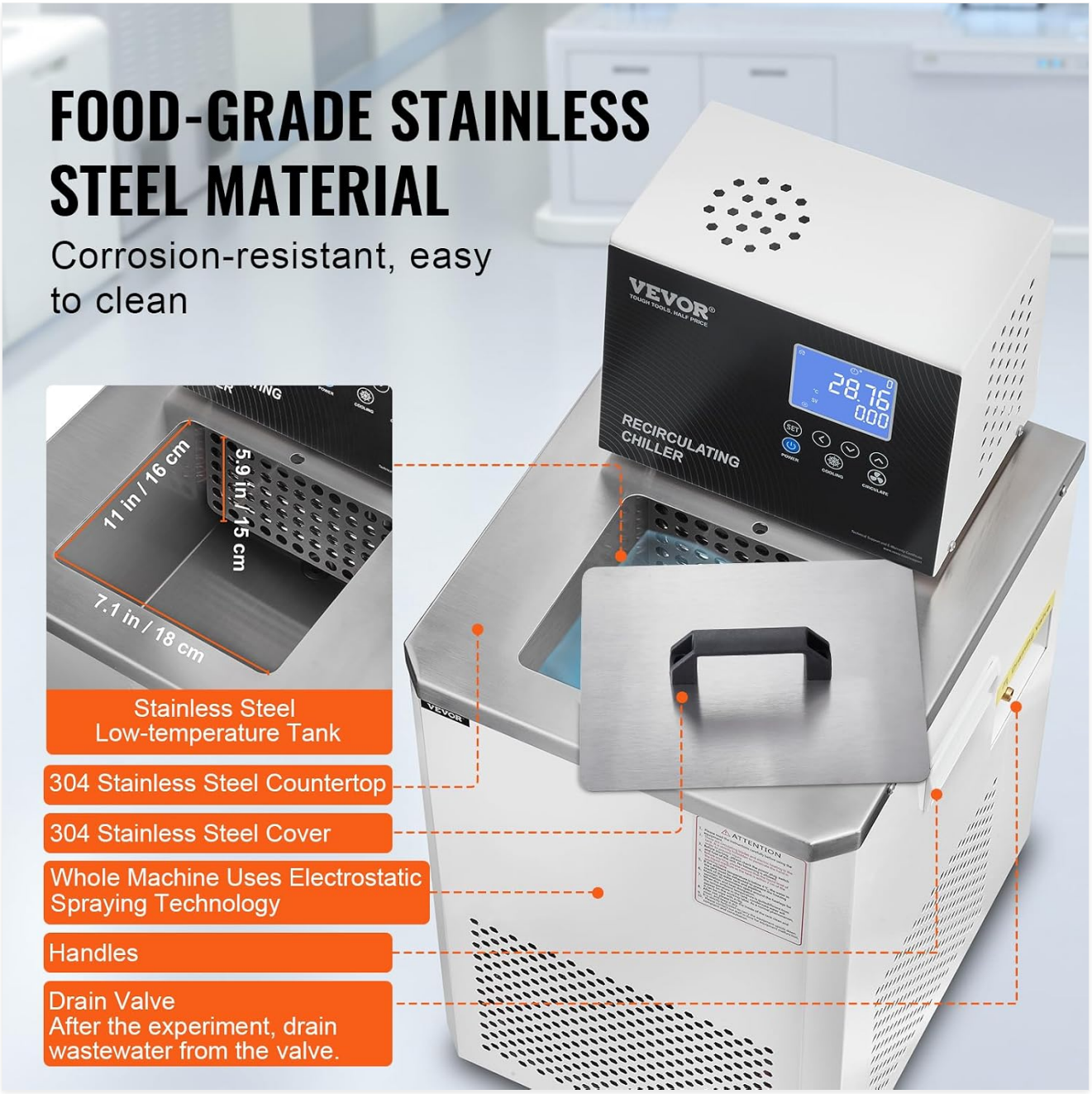


Figure 3.1: Overview of the VEVOR DC-0506 Chiller Circulator with key components labeled, including the stainless steel tank, control panel, handles, and drain valve.

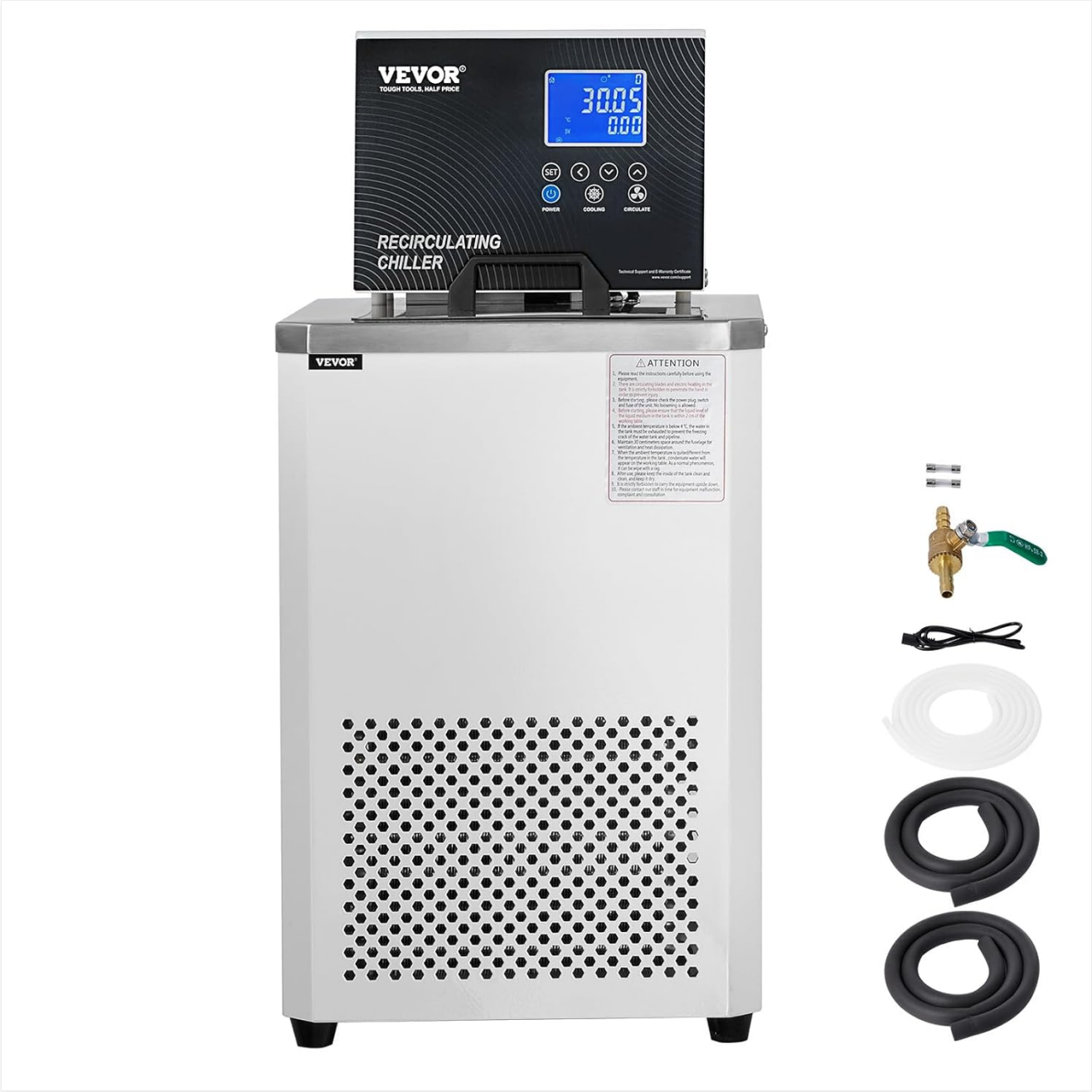


Figure 3.2: Illustration highlighting the fully enclosed compressor, responsible for efficient and quiet cooling, ensuring long-lasting temperature stability.

## 4. Setup

Follow these steps to set up your chiller circulator:

1. **Unpacking:** Carefully remove the unit from its packaging. Inspect for any shipping damage. Retain packaging for future transport or storage.
2. **Placement:** Place the chiller on a stable, level surface in a well-ventilated area. Ensure there is sufficient space around the unit for proper airflow (at least 20 cm on all sides).
3. **Connecting External Devices (Optional):** If using external circulation, connect the inlet and outlet ports of the chiller to your external equipment using appropriate tubing. Ensure all connections are secure to prevent leaks.

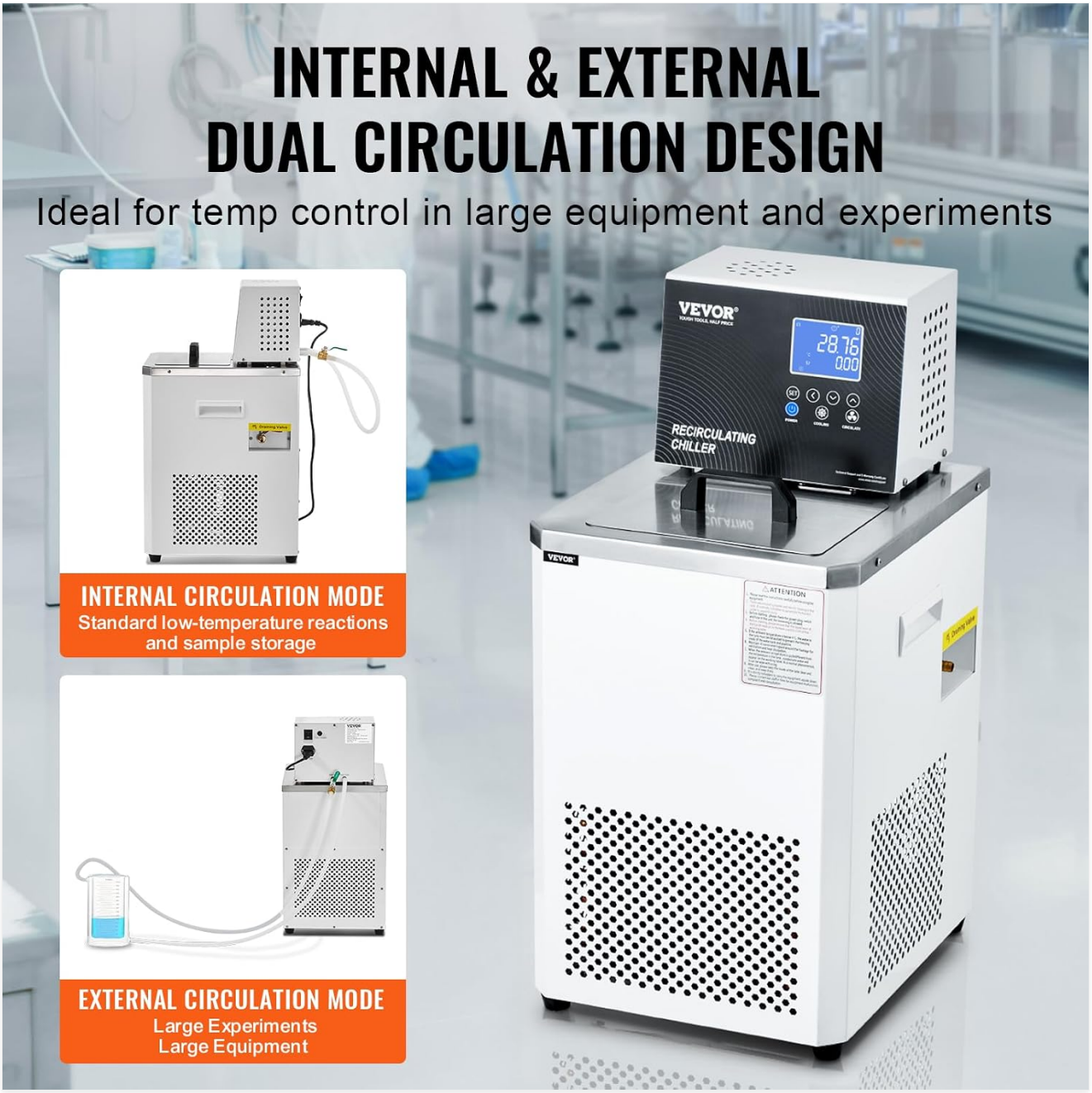


Figure 4.1: The chiller supports both internal circulation for direct bath applications and external circulation for integration with other laboratory equipment.

4. **Filling with Liquid Medium:** Open the cover of the water tank. Fill the tank with the recommended liquid medium (e.g., ethanol for temperatures below 8°C, or distilled water for higher temperatures). Ensure the liquid level is between the minimum and maximum fill lines.

Your browser does not support the video tag.

Video 4.1: This video demonstrates the process of connecting the chiller to an external device and filling the tank with the appropriate liquid medium.

5. **Power Connection:** Connect the power cord to the unit and then to a grounded electrical outlet.

## 5. Operating Instructions

The VEVOR DC-0506 features an intuitive LCD control panel for easy operation.

1. **Power On/Off:** Press the power button on the control panel to turn the unit on or off.
2. **LCD Display:** The high-definition LCD displays the current temperature and set temperature with an accuracy

of 0.01℃.

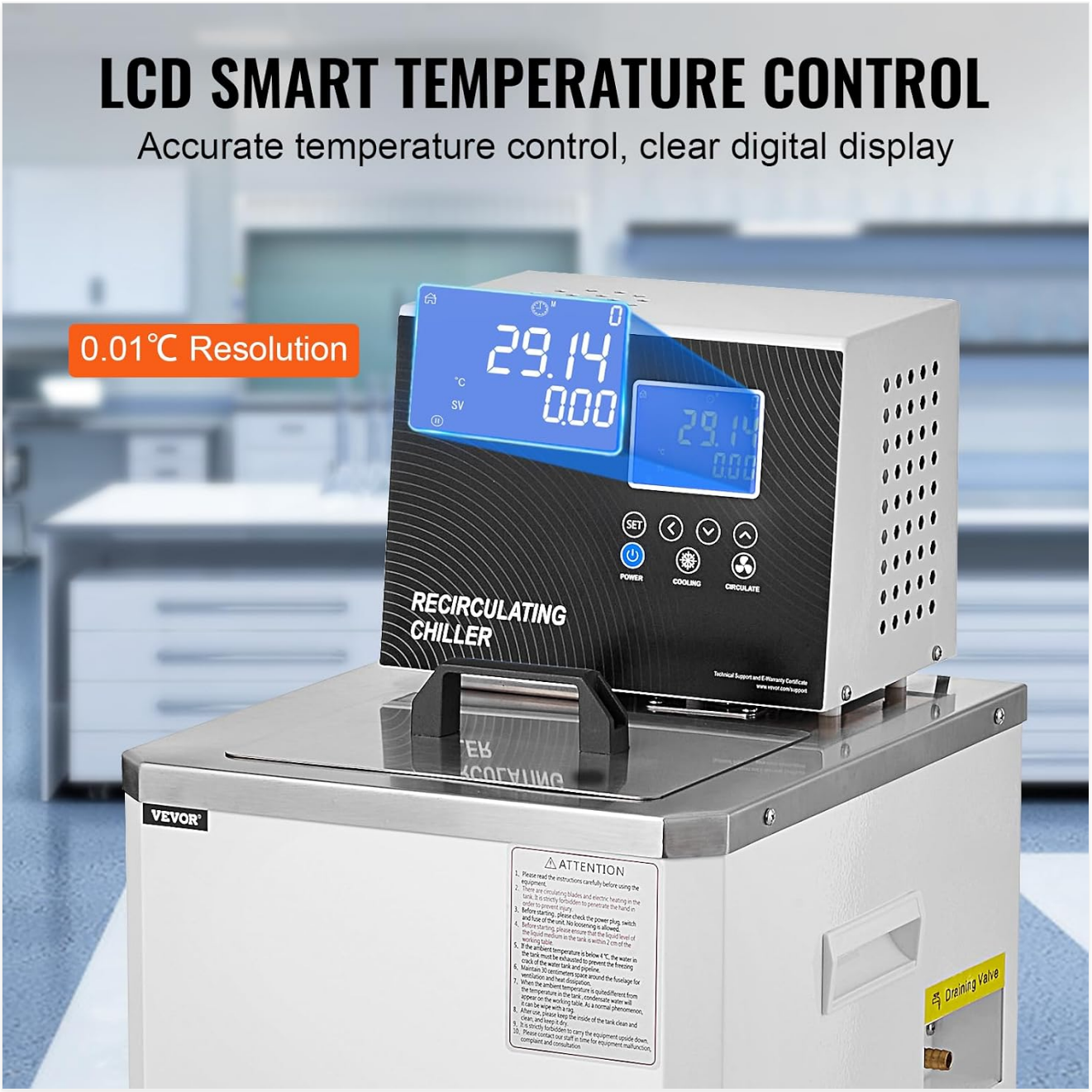


Figure 5.1: The LCD control panel provides clear digital display and precise temperature adjustment with 0.01℃ resolution.

3. **Setting Temperature:** Use the 'SET' button and arrow keys on the control panel to adjust the desired temperature. The unit will automatically work to reach and maintain this set point.
4. **Heating and Cooling Modes:** The chiller automatically switches between heating and cooling to maintain the set temperature within the range of -5℃ to 100℃.

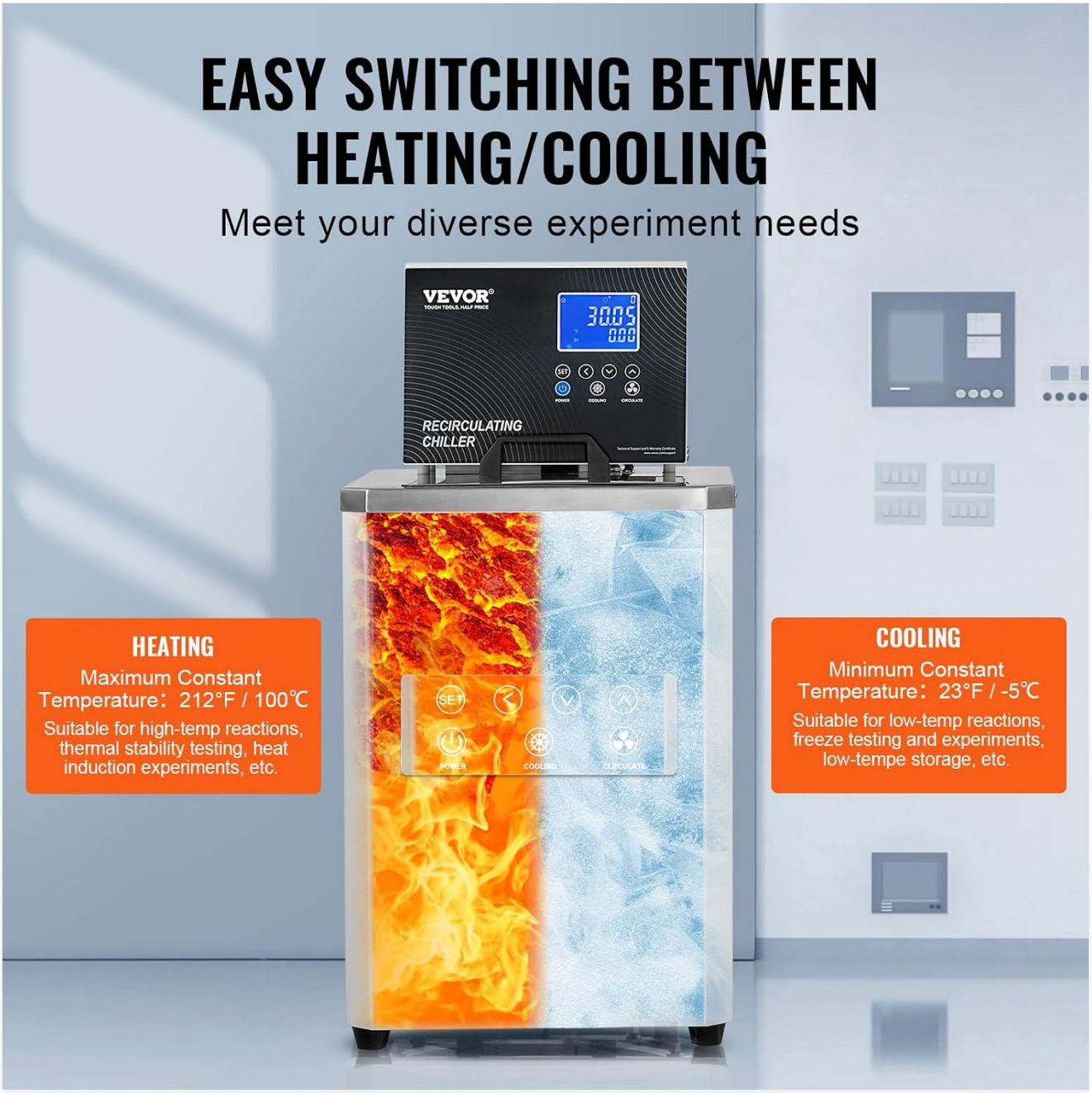


Figure 5.2: The chiller offers both heating (up to 100℃) and cooling (down to -5℃) functions, suitable for diverse experimental needs.

5. **Circulation Modes:** The unit supports both internal and external circulation. Select the appropriate mode based on your application.
6. **Safety Features:** The chiller includes built-in overheat and overcurrent protection, along with an overheat alarm, to ensure safe operation.

## 6. Maintenance

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

- **Draining Liquid:** Periodically drain the liquid medium from the tank using the drain valve. This is especially important before long periods of inactivity or when changing the liquid medium.

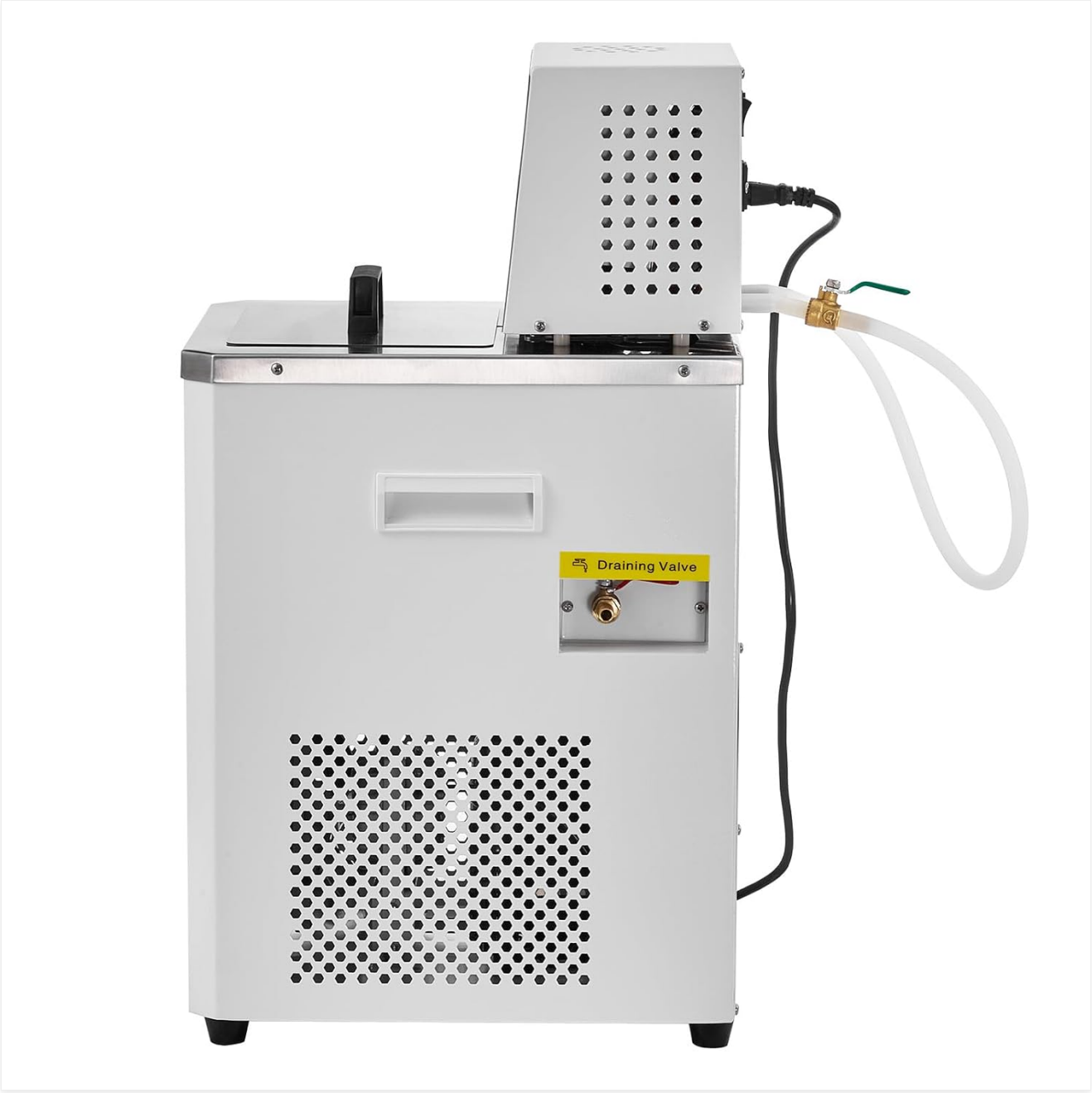


Figure 6.1: The draining valve on the side of the unit allows for convenient removal of the liquid medium after use or for maintenance.

- **Cleaning the Tank:** After draining, clean the interior of the 304 stainless steel tank with a mild detergent and rinse thoroughly with distilled water. Ensure no residue remains.

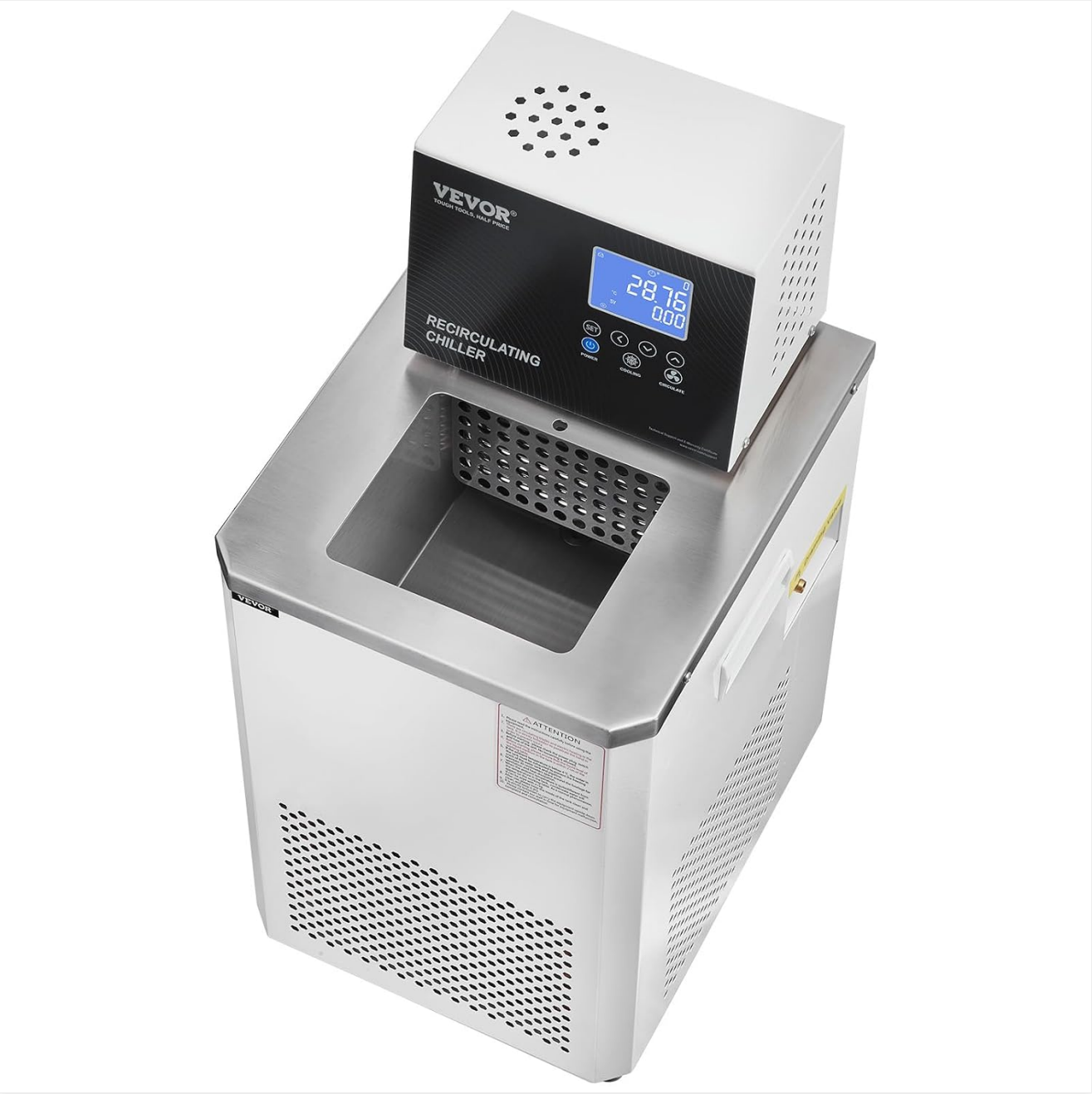


Figure 6.2: The open tank allows for easy access for cleaning and refilling of the liquid medium.

- **Exterior Cleaning:** Wipe the exterior surfaces with a soft, damp cloth. Avoid abrasive cleaners.
- **Ventilation:** Regularly check that the ventilation grilles are free from dust and debris to ensure efficient heat dissipation.
- **Fluid Replacement:** Replace the liquid medium regularly according to your experimental needs and the manufacturer's recommendations for the specific fluid used.

## 7. Troubleshooting

If you encounter issues with your chiller, refer to the following common problems and solutions:

| Problem | Possible Cause | Solution |
|---|---|---|
| Unit does not power on | No power supply; Power cord loose; Power switch off | Check power connection; Ensure power switch is on; Test outlet |

| Problem | Possible Cause | Solution |
|---|---|---|
| Temperature not stable/reached | Insufficient liquid medium; Blocked circulation; Incorrect set temperature; Ambient temperature too high/low | Check liquid level and refill; Inspect tubing for kinks; Verify set temperature; Ensure proper ventilation |
| Overheat alarm activates | Insufficient liquid; Blocked ventilation; Internal fault | Check liquid level; Clear ventilation openings; Contact support if problem persists |
| Liquid leakage | Loose connections; Damaged tubing/tank | Tighten all connections; Replace damaged tubing; Contact support for tank issues |

If the problem persists after attempting these solutions, please contact VEVOR customer support.

## 8. Specifications

Detailed technical specifications for the VEVOR DC-0506 Laboratory Chiller Circulator:

| Feature | Specification |
|---|---|
| Item Model Number | DC-0506 |
| Rated Power | 1000W (US) / 800W (EU, AU) |
| Min Constant Temperature | 23°F / -5°C |
| Max Constant Temperature | 212°F / 100°C |
| Temperature Adjustment Accuracy | 0.01°C |
| Water Tank Capacity | ≥5L |
| Water Opening Tank Size | 7.1 x 6.3 x 5.9 in / 18 x 16 x 15 cm |
| Countertop Water Tank Material | 304 Stainless Steel |
| Net Weight (Including all Accessories) | 54.5 lbs / 24.7 KG |
| Product Dimensions | 29.13 x 18.11 x 16.14 inches |

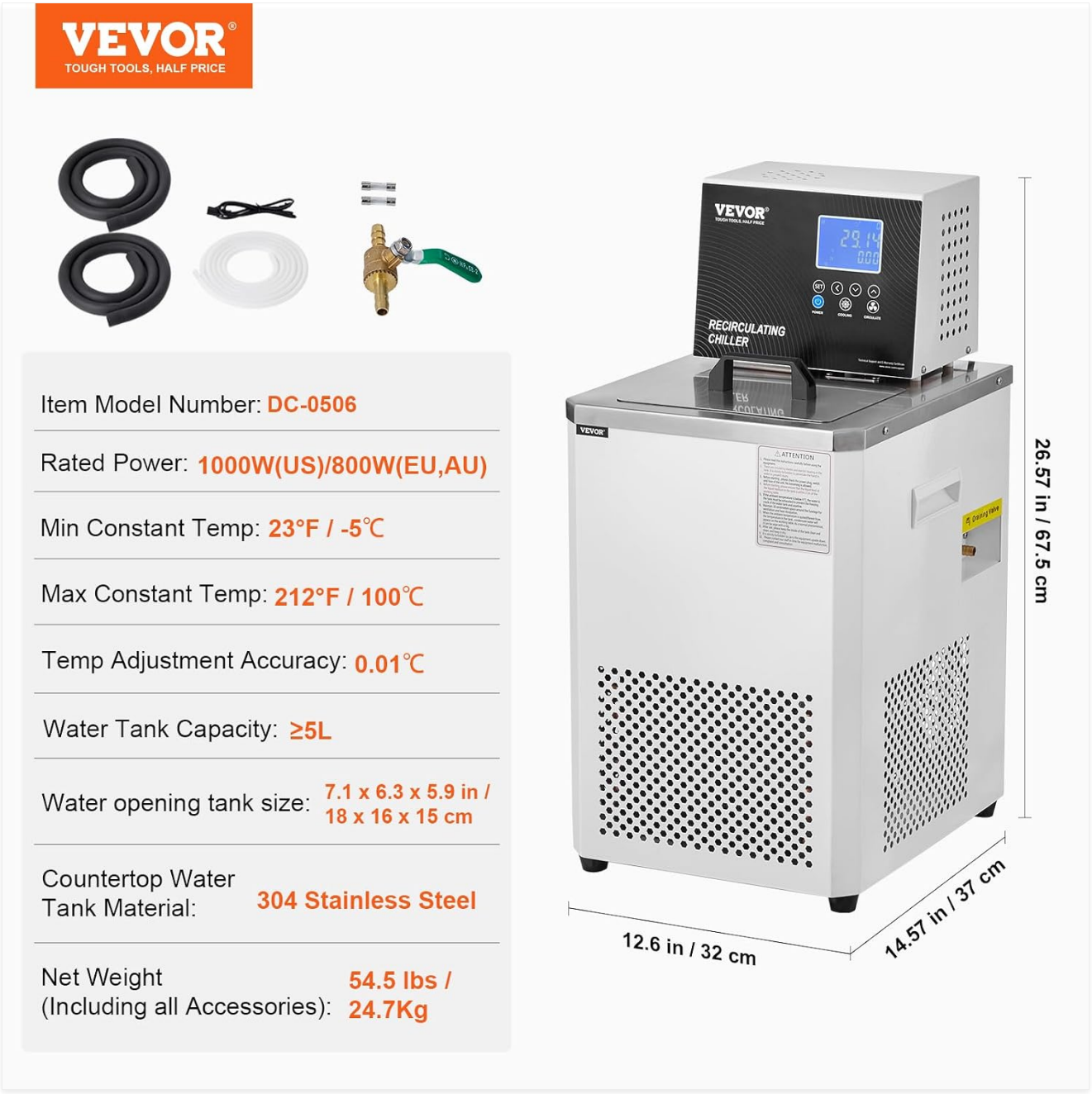


Figure 8.1: Visual representation of the chiller's dimensions and a summary of its technical specifications.

## 9. What's in the Box

Upon unpacking, you should find the following items:

- 1 x Laboratory Chiller Circulator (Model DC-0506)

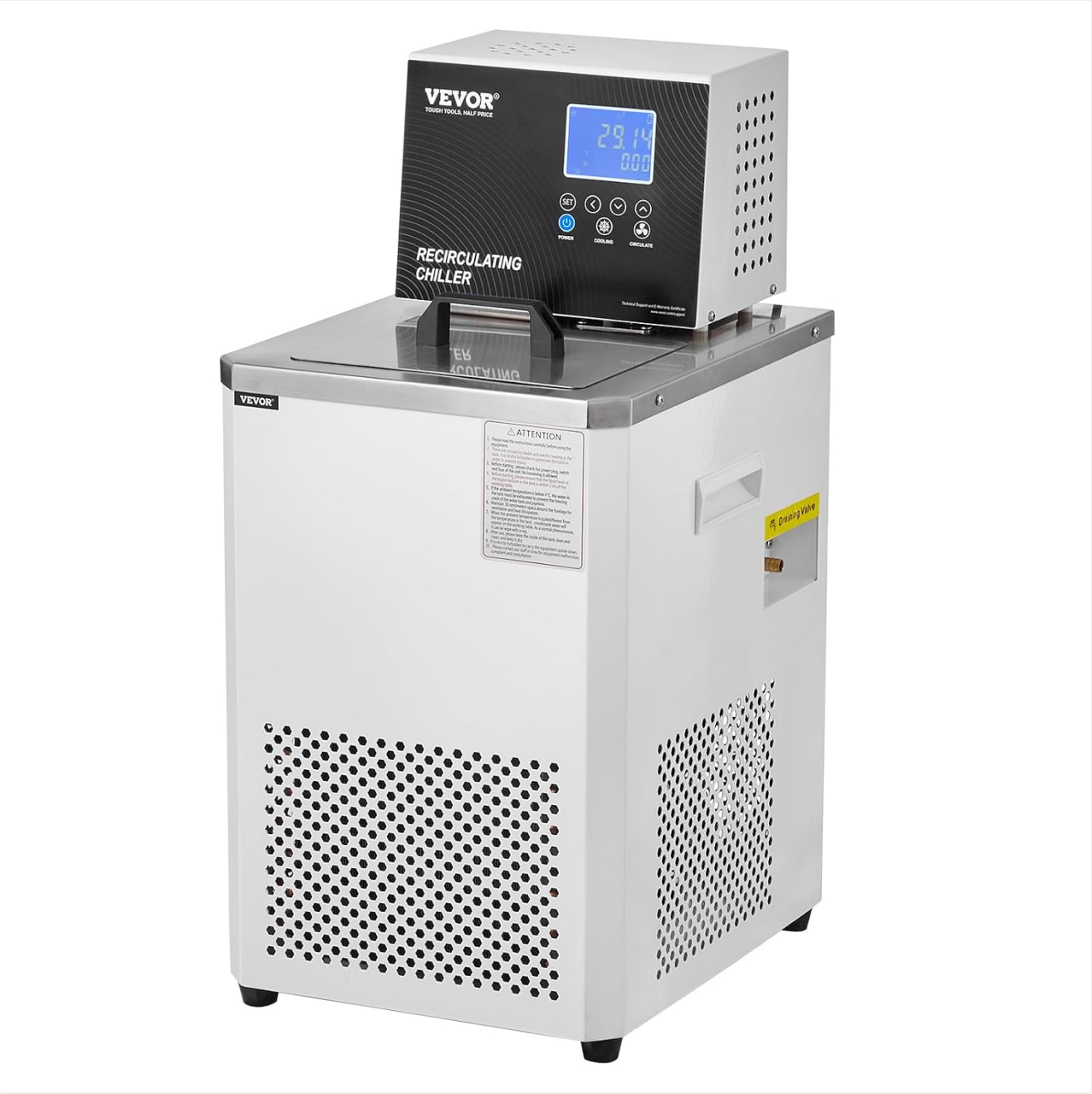


Figure 9.1: The main unit and standard accessories included with the VEVOR DC-0506 Laboratory Chiller Circulator.

## 10. Warranty and Support

VEVOR products are designed for reliability and performance. For warranty information, please refer to the documentation provided with your purchase or visit the official VEVOR website. If you require technical assistance, troubleshooting guidance, or have questions regarding your product, please contact VEVOR customer support. Have your model number (DC-0506) and purchase details ready when contacting support.