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Royal Sovereign RDHC-110

Royal Sovereign RDHC-110 Commercial Dehumidifier User Manual

Model: RDHC-110

Introduction	Safety Information	Product Overview	Setup	Operation	Maintenance
	Troubleshooting	Specifications	Warranty & Support		

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Royal Sovereign RDHC-110 Commercial Dehumidifier. This unit is designed for robust moisture removal in commercial and industrial environments, as well as for water damage restoration. Please read all instructions carefully before installation and use to ensure optimal performance and longevity of the product.

2. IMPORTANT SAFETY INFORMATION

Always observe basic safety precautions when using electrical appliances to reduce the risk of fire, electric shock, and injury. Keep this manual for future reference.

- Ensure the power supply matches the voltage requirements specified on the unit's rating label.
- Do not operate the dehumidifier with a damaged cord or plug. If the cord is damaged, it must be replaced by the manufacturer or a qualified service agent.
- Always unplug the unit before cleaning, servicing, or moving it.
- Do not block air intake or exhaust vents. Maintain adequate clearance around the unit for proper airflow.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Do not use the unit in areas where flammable liquids or gases are stored.
- Ensure the unit is placed on a stable, level surface to prevent tipping.

- Avoid placing the unit directly in water or in excessively wet conditions.

3. PRODUCT OVERVIEW

The Royal Sovereign RDHC-110 is a robust commercial dehumidifier featuring a durable metal housing, digital controls, and pneumatic wheels for portability.

3.1 Components

- Rugged Metal Housing
- Digital Control Panel
- Air Intake Grille (with removable filter)
- Air Exhaust Vent
- Water Collection Tank (5.5L capacity)
- Continuous Drainage Outlet
- Pneumatic Wheels
- Easy-Grip Handle
- Built-in Side Handles (for lifting)

3.2 Control Panel

The digital display and electronic controls allow for precise humidity level settings and timer functions.

- **Digital Display:** Shows current humidity, set humidity, or timer settings.
- **Power Button:** Turns the unit on or off.
- **Humidity Setting Buttons (Up/Down):** Adjusts the desired humidity level.
- **Timer Button:** Sets the auto-on/off timer.
- **Continuous Mode Button:** Activates continuous dehumidification.





Figure 1: Front view of the RDHC-110 Dehumidifier, showing the control panel and air intake grille.



Figure 2: Angled view of the RDHC-110, highlighting the pneumatic wheels and easy-grip handle for mobility.



Figure 3: Product dimensions: 32.5 inches height, 17 inches width, 20.3 inches depth.

4. SETUP

4.1 Unpacking

1. Carefully remove the dehumidifier from its packaging.
2. Inspect the unit for any shipping damage. If damage is found, contact your retailer immediately.
3. Remove all packing materials, including any tape or protective films.

4.2 Placement

- Place the dehumidifier on a firm, level surface capable of supporting its weight.
- Ensure there is at least 12 inches (30 cm) of clearance around all sides of the unit for proper air circulation. Do not place it against a wall or furniture.
- Position the unit away from heat sources, direct sunlight, and areas prone to splashing water.
- For optimal performance, operate the dehumidifier in an enclosed area. Close all doors and windows to the room where the unit is operating.

4.3 Drainage Options

The RDHC-110 offers two methods for water removal:

1. **Water Collection Tank:** The unit is equipped with a 5.5L internal water tank. When the tank is full, the unit will automatically shut off and an indicator light will illuminate. Empty the tank and reinsert it securely to resume operation.
2. **Continuous Drainage:** For extended operation without manual emptying, connect the included 5m (16.4 ft.) hose to the continuous drainage outlet. Route the hose to a suitable drain (e.g., floor drain, sink) ensuring it is sloped downwards to allow gravity drainage. Do not allow the hose to kink or become obstructed.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- Plug the power cord into a grounded electrical outlet.
- Press the **Power** button on the control panel to turn the unit on. The digital display will illuminate.
- Press the **Power** button again to turn the unit off.

5.2 Setting Desired Humidity Level

- When the unit is on, the digital display will show the current room humidity.
- Use the **Up** or **Down** arrow buttons to adjust the desired humidity level. The setting range is typically between 30% RH (Relative Humidity) and 90% RH.
- The unit will operate until the set humidity level is reached, then cycle on and off to maintain that level.
- To operate in continuous mode, press the **Continuous** button. The unit will dehumidify continuously regardless of the humidity level.

5.3 Timer Function

The 24-hour timer allows you to program the unit to turn on or off automatically.

- **Auto-Off Timer:** While the unit is running, press the **Timer** button. Use the **Up** or **Down** arrows to set the desired number of hours (1-24) after which the unit will turn off.
- **Auto-On Timer:** While the unit is off, press the **Timer** button. Use the **Up** or **Down** arrows to set the desired number of hours (1-24) after which the unit will turn on.
- To cancel the timer, press the **Timer** button until '00' is displayed, or simply turn the unit off and on again.

5.4 Auto Restart

In the event of a power outage, the unit is designed to automatically restart at its previous settings once power is restored.



Figure 4: Dehumidifying capacity varies with temperature and relative humidity. For example, 110 Pints/Day at 86°F, 80% RH.

6. MAINTENANCE

Regular maintenance ensures efficient operation and extends the lifespan of your dehumidifier.

6.1 Cleaning the Air Filter

The air filter should be cleaned regularly, typically every two weeks, or more frequently depending on environmental conditions.

1. Turn off the unit and unplug it from the power outlet.
2. Locate the air filter, usually behind the intake grille. The RDHC-110 features an easy-remove filter.
3. Gently slide out or unclip the filter.
4. Wash the filter with warm, soapy water. Rinse thoroughly and allow it to air dry completely before reinserting. Do not use a dishwasher or expose to direct heat.
5. Reinsert the dry filter into its position.

6.2 Cleaning the Unit Exterior

- Wipe the exterior of the unit with a soft, damp cloth.
- Do not use harsh chemicals, abrasive cleaners, or solvents, as these can damage the surface.

6.3 Storage

When storing the unit for an extended period:

- Ensure the water tank is empty and clean.
- Clean the air filter.
- Coil the power cord neatly.
- Store the unit upright in a dry, dust-free environment. The RDHC-110 is stackable for convenient storage of multiple units.

7. TROUBLESHOOTING

Before contacting customer support, review the following common issues and solutions:

Problem	Possible Cause	Solution
Unit does not turn on.	No power; Power cord not securely plugged in; Circuit breaker tripped; Water tank full or not properly inserted.	Check power outlet; Ensure cord is fully inserted; Reset circuit breaker; Empty and reinsert water tank correctly.
Unit runs but does not collect water.	Air filter clogged; Room temperature too low; Humidity level already low; Continuous drainage hose kinked or blocked.	Clean air filter; Ensure room temperature is above 41°F (5°C); Adjust desired humidity setting lower; Check and clear drainage hose.
Unit is noisy.	Unit not on a level surface; Air filter clogged; Obstruction in fan.	Place on a level surface; Clean air filter; Check for and remove any obstructions.
"Bucket Full" indicator remains on after emptying.	Water tank not fully reinserted; Float switch stuck.	Ensure water tank is pushed in completely; Gently check if the float switch inside the tank is moving freely.

8. SPECIFICATIONS

Feature	Detail
Brand	Royal Sovereign
Model Name	RDHC-110
Dehumidifying Capacity	110 Pints per day (@86°F, 80% RH)
Water Tank Volume	5.5 Liters
Recommended Floor Area	Up to 1200 Square Feet
Product Dimensions (D x W x H)	20.3" x 17" x 32.5"
Item Weight	79.4 Pounds
Material	Metal
Special Feature	Programmable, Auto Restart, Easy Remove Filter, Stackable
Included Components	Dehumidifier, 5m Drainage Hose
UPC	849023080596

9. WARRANTY & SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official Royal Sovereign website or contact their customer service department directly. Keep your purchase receipt as proof of purchase for warranty claims.

Manufacturer: Royal Sovereign

Website: www.royalsovereign.com

Customer Support: Refer to the manufacturer's website for current contact details.