PHD 200 Owner's Manual

Table of Contents

1 Owner's Manual 4

1.1 Product Introduction 5
1.2 Safety Warnings 6
1.3 Warranty and Registration 8
1.4 Controls and Operating 9
1.5 Command Hub 11
1.6 Errors and Warnings 13
1.7 At the End of the Job 15
1.8 Transport and Storage 16
1.9 Maintenance Schedule 17
1.10 Troubleshooting 19
1.11 Specifications 20
1.12 Accessories Included 21
1.13 Additional Product Information 22
1.14 Service Technicians Only 23

2 Manual de instrucciones 25

2.1 Introducción del producto 26
2.2 Advertencias de seguridad 27
2.3 Registro de la garantía 29
2.4 Controles y Instrucciones de Operacinón 30
2.5 Cómo usar el Command Hub 32
2.6 Errores y Advertencias 34
2.7 Al final de la operación 36
2.8 Transporte y Almacenamiento 37
2.9 Programa de mantenimiento 38
2.10 Solucion de problemas 41
2.11 Especificaciones 43
2.12 Piezas incluidas 44
2.13 Información Adicional 45
2.14 Solo para técnicos del servicio 46

3 Manuel du propriétaire 48

3.1 Présentation du Produit 49
3.2 Avertissements de Sécurité 50

3.3 Garantie et Enregistrement 52
3.4 Commandes et Mode d'emploi 53
3.5 Command Hub 55
3.6 Erreurs et Avertissements 57
3.7 À la Fin du Travail 59
3.8 Transport et Stockage 60
3.9 Programme d'entretien 61
3.10 Dépannage 64
3.11 Spécification 66
3.12 Pièces Incluses 67
3.13 Informations Supplémentaires 68
3.14 Pour les techniciens d’entretien seulement 69

0

1 Owner's Manual

PHD 200

Model #103806

Legend Brands, Inc.
15180 Josh Wilson Road, Burlington, WA 98233
Phone: 800-932-3030
LegendBrands.com
Patents: LBpatents.com

1.1 Product Introduction

The Dri-Eaz® PHD 200 Dehumidifier reduces humidity in enclosed environments by removing water vapor from the air. The PHD 200 is ideal for crawlspace drying, humidity control and other applications requiring high-performance dehumidification. (Not intended for professional water damage restoration.)

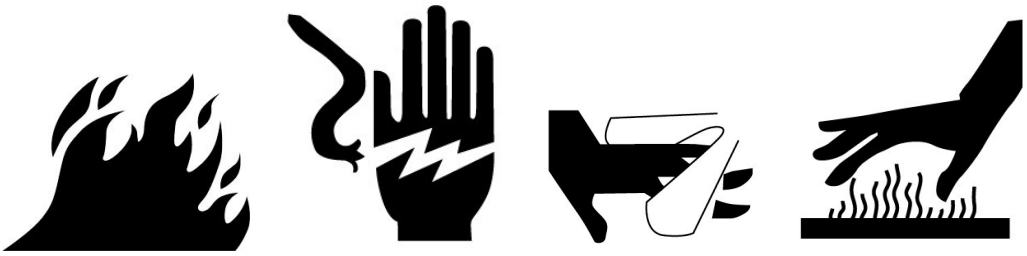
1.2 Safety Warnings

READ AND UNDERSTAND BEFORE OPERATING

SAFETY INSTRUCTIONS

⚠ WARNING

WARNING! Do not alter or modify your unit in any way. Use only replacement parts authorized by Legend Brands, Inc. Modifications or use of unapproved parts could create a hazard and will void your warranty. Contact your authorized distributor for assistance.



WARNING! Explosion or combustion hazard due to flammable refrigerant.

- Do not use or store near ignition sources, combustible gases, electric heaters or open flames.
- Do not drill into or braze the dehumidifier.
- Do not attempt to service the refrigeration system! Only authorized service center personnel should service or decommission the refrigeration system.
- Be aware that refrigerant gases can be odorless.

WARNING! Electric shock hazard, rotating fan, hot surface hazards. Unplug unit before opening cover for cleaning or servicing. Unit must be grounded.

- Inspect the power cord before use. If cord is damaged, do not use. Always grasp the plug (not the cord) to unplug.
- Insert three-prong plug on power cord into a matching electrically grounded outlet. Do not use adapter. Never cut off third prong. Do not use an extension cord.
- The unit must be operated on a 115V/60Hz circuit protected by a Ground Fault Circuit Interrupter (GFCI) device.
- Keep motor and wiring dry.
- Do not attempt to repair the unit. For Authorized Service Centers, contact Dri-Eaz.

NOTICE: Do not use in environments where corrosive chemicals are present,

such as chlorine.
NOTICE: The unit should not be used 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. Children should not be allowed to play with the unit.

CONTAINS: FCC ID 2ADHKWINC3400; IC 20266-ATWINC3400; CAN-ICES-003(B)/MB-003(B)

1.3 Warranty and Registration

Visit LegendBrands.com to register your purchase. Registration allows us to better assist you with using, maintaining or servicing your equipment and to contact you in case we have important safety information concerning your Dri-Eaz product. If you determine service is required, have your equipment model, serial number and original proof of purchase available and call your distributor for assistance with obtaining a return material authorization (RMA).

1.4 Controls and Operating

SET UNIT UPRIGHT

NOTICE: Always store, transport, and use the unit in a horizontal position. If the unit is ever placed in a vertical position, return it to the horizontal position and let it stand for at least 30 minutes before turning it on.

POSITIONING A DEHUMIDIFIER

For best results, operate your dehumidifiers in an enclosed area. Place your dehumidifier away from obstructions, and keep it away from anything that could block airflow into and out of the unit. For more information about creating an optimum drying environment, contact Legend Brands at info.LegendBrands.com.
TIP: Before installing in a crawlspace or other difficult to access location, plug in the unit and run it for approximately half an hour to ensure proper operation.

SET UP DRAIN HOSE

The PHD 200 condensate pump connects to a 20 ft. (6 m) plastic drain hose equipped with a quick-connect fitting for quick attachment to the unit. To set up the hose, unwrap the entire hose and place the unattached end in a sink, drain, bucket or outdoors – anywhere that water can drain out safely. Connect the other end of the hose to the PHD 200. If you use a bucket or other container for water collection, check it regularly to prevent overflows.
NOTICE: Uncoil and straighten the entire drain hose. Do not leave any part of the hose coiled and do not place the end of the hose higher than 20 ft. (6 m) above the bottom of the unit. Also check for kinks or other obstructions that might restrict the flow of water. Obstructions may cause a water backup and result in overflows.

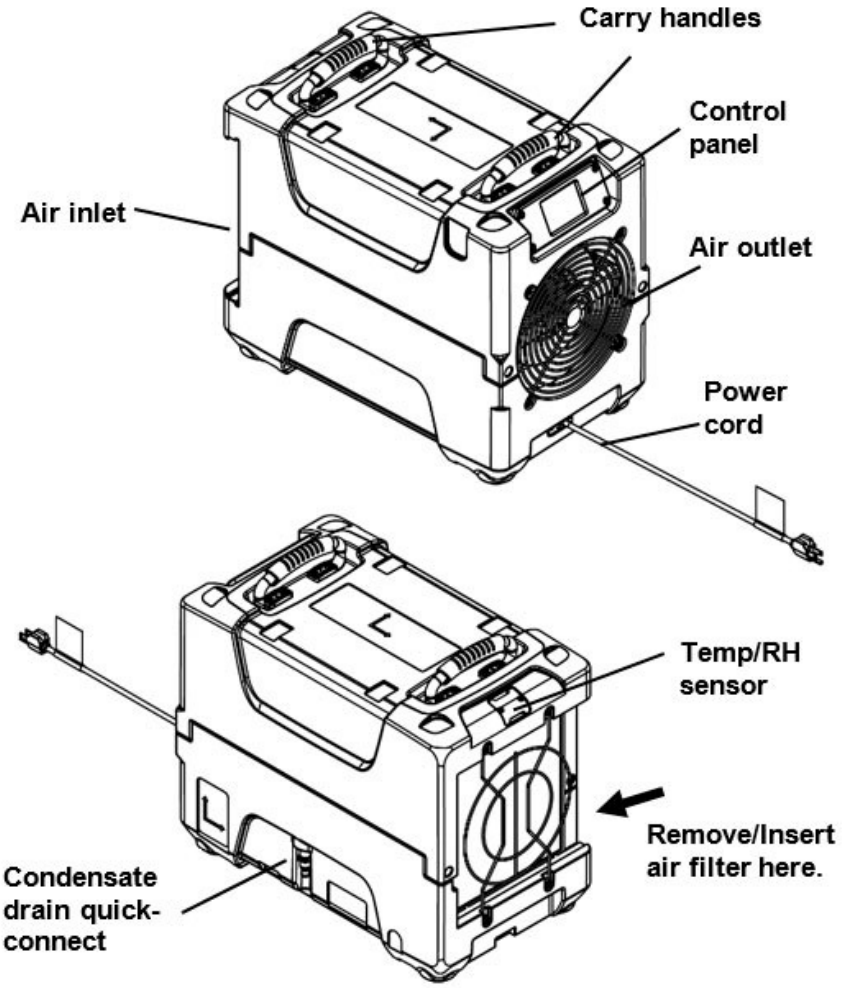
PLUG IN ELECTRICAL CORD

The PHD 200 should be plugged into a GFCI-protected 115 volt outlet rated for at least 15 amps.

Startup display and normal display modes

When unit is first plugged in to AC power, the control panel display will briefly cycle through a series of readouts. This is part of the unit's self-diagnosis procedure and no user intervention is required.

Fig. A: Parts Identification



1.5 Command Hub

HOW TO USE THE COMMAND HUB

The i-Series Command Hub provides comprehensive dehumidifier controls and detailed real-time data about the drying environment as well as job hours, self-diagnosis messages, maintenance reminders and operating status.

For detailed information and additional instructions, please visit the Command Hub page at LegendBrands.com/resources/command-center/

HOME SCREEN VIEWS

Unit OFF
Unit must be plugged in.
Top display bar:
Job hours, current time

Press MENU to access settings and configuration controls

Press PURGE to pump out condensate tank

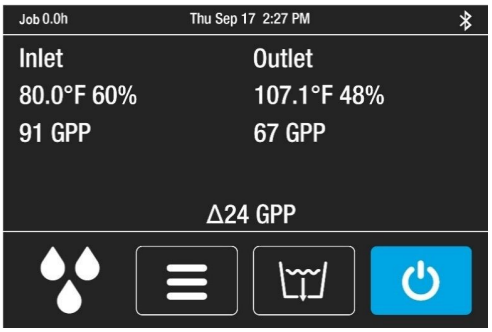
Press ON/OFF to turn unit on.

Unit ON
Press ON/OFF key to switch unit on.
Top display bar:
Job hours, current time
Information display:
Inlet/Outlet temp, %RH and GPP
Current GPP removal
Bottom menu bar:

Quick-Reference Inlet GPP.
1: < 60 GPP; 2: 60–90 GPP; 3: > 90 GPP

Press MENU to access settings and configuration controls

Press PURGE to pump out condensate tank



Press  ON/OFF to turn unit off.

1.6 Errors and Warnings

If the control system detects a problem, it will display an "Alert" symbol in the upper right corner of the screen. Press ON/OFF to view the message and OK to clear the message. NOTE: In the case of an error, the unit will not operate until the problem is resolved. Refer to the explanations and solutions shown below. If these solutions do not fix the problem, contact your local authorized service center for further assistance.

CONTROL PANEL MESSAGE	EXPLANATION AND SOLUTION
ER4 Error Defrost Thermistor Con nect —or— ER4 Error Outlet Thermistor Conn ect	Temp sensor is open, missing, or shorted. Check that temp sensors are installed correctly on control panel. If error persists, contact service.
ER5 Error Inlet RH1 Temp/RH Sen sor	Inlet Temp/RH sensor is open, missing, or shorted. Check that inlet temp/RH sensor is installed correctly on control panel and inlet shroud. If error persists, contact service.
ER6 Error Current Sensor Failure	Current sensor failure. If error persists, contact service.
ER9 Error Pump Blocked	Check for obstructions in drain hose. Check the pump.
W1 Low BATTERY	Replace coin cell battery (3V, CR2032) on control panel.
W2 BLE Error W3 Flash Reset W4 WDT Reset	Cycle power to dehumidifier. If warning persists, contact service.

1.7 At the End of the Job

To reduce the possibility of drips when moving the unit, follow these additional steps to ensure that all water is removed from the unit.

NOTICE: To ensure all water is removed from the dehumidifier, the unit will complete the defrost cycle even if the unit is turned off. If the unit is unplugged during the defrost cycle, excessive water may accumulate in the unit and may drip out when you move the unit.

NOTICE: To ensure the condensate tank empties completely while purging, make sure the unit is placed upright on a horizontal surface.

1. **Do not turn unit off or move it until it has returned to normal operating mode.**
2. **Gently rock the machine to ensure any water remaining on interior surfaces falls into the sump area.**
3. **Press the PURGE key. When the purge cycle is complete, turn the unit off.**
4. **Remove the external drain hose and drain it carefully.**
5. **Unplug the power cord.**

1.8 Transport and Storage

NOTICE: **Always unplug power cord before moving, transporting, or storing the unit.**

NOTICE: Handle the unit carefully. Do not drop, throw, or place the unit where it could fall. Rough treatment can damage this equipment and may create a hazardous condition or void warranty.

- Do not expose the control panel to moisture, snow or rain.
- Protect from freezing.
- Store and transport securely to avoid any damaging impact to internal parts.
- Secure during transport to prevent sliding and possible injury to vehicle occupants.

1.9 Maintenance Schedule

See SERVICE VIDEOS at Legendbrands.com/resources/service-technical-support/ for detailed instructions on maintaining this unit.

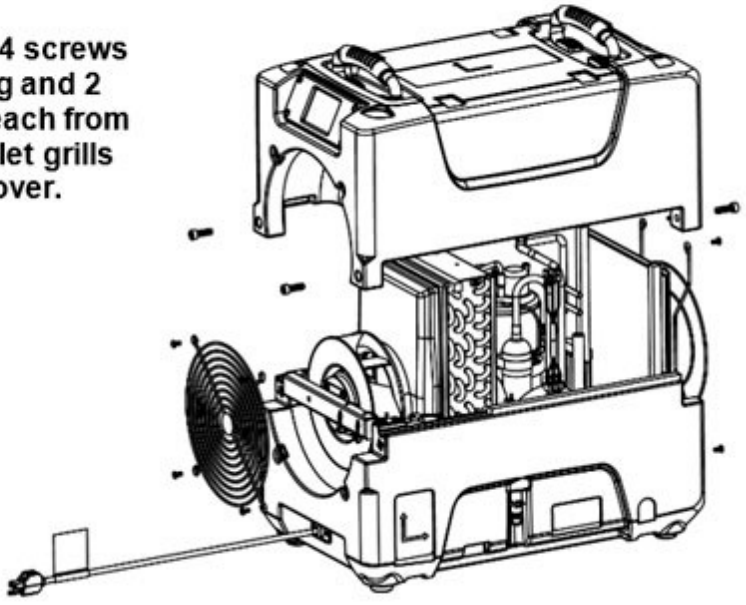
WARNING! Explosion or combustion hazard due to flammable refrigerant.

- Do not use or store near ignition sources, combustible gases, electric heaters or open flames.
- Do not drill into or braze the dehumidifier.
- Do not attempt to service the refrigeration system! Only authorized service center personnel should service or decommission the refrigeration system.
- Be aware that refrigerant gases can be odorless.

WARNING! ELECTRIC SHOCK HAZARD. Unplug unit before cleaning or servicing.
WARNING: Risk of dust and contaminants exposure. Use of respirator mask and gloves is recommended. If unit has been exposed to potentially dangerous contaminants, clean thoroughly and sanitize before reuse.
NOTICE: The unit is fitted with sensitive electronic sensors. Protect the sensors and their lead wires from damage and do not expose them to water or cleaning solution.

Fig. B: Disassembly for Cleaning

Remove the 4 screws from housing and 2 top screws each from inlet and outlet grills and lift off cover.



The following tools and supplies are needed to complete the maintenance procedures described in this manual:

Philips screwdriver
10 mm wrench
6 mm hex bit and T45 bit
¼ in. nut driver
Cleaning cloths
HEPA vacuum cleaner with soft brush nozzle and crevice nozzle.
Recommended
Cordless drill, small knife, small-jaw pliers, coil cleaning solution, rotomolded housing cleaning solution.

BEFORE EACH USE

Inspect the electrical cord for damage. Look for fraying, cuts, etc. Do not use the unit if you find any damage. Contact your local authorized distributor for service.
Inspect filter. The PHD 200 filter should be replaced when the accumulation of dust is visible.

MONTHLY

Clean pump check valve and basin. In normal use, dust can accumulate and can restrict air-flow, reducing performance and causing the unit to over-heat. Clean when dust accumulation is visible. Remove grills and cover as shown in Fig. B. Use a vacuum cleaner with a brush tool and a soft cloth to remove any debris. Take care not to damage any interior components.
To maintain appearance, wipe interior and exterior surfaces with a damp cloth. For deep cleaning and a lasting, protective shine, use an automotive interior cleaner.

AS NEEDED

Clean pump check valve and basin. Remove grills and cover as shown in Fig. B. Remove screws from pump base and lift out pump. Wipe out pump basin with a damp cloth. Inspect the pump base for build-up of debris and clean if needed. Unthread barbed fitting with check valve and rinse fitting and check valve with clean water. Reinstall check valve into barbed fitting and install the barbed fitting into pump. Do not overtighten. Reinstall pump on base. Reinstall cover and grills.
Clean coils. With the cover removed, inspect both coils. If excessive dust and debris is present, vacuum thoroughly and/or clean with coil cleaner.

1.10 Troubleshooting

FAULT	CAUSE	SOLUTION
Water drips out when moving unit	Unit was unplugged before purging was complete.	Purge unit before moving. See AT THE END OF THE JOB 15.
Unit does not operate	Unit not switched on. No power to machine.	Switch unit on. Plug in unit; check power cord connection at wall outlet.
Unit operating, but room not dry	Not enough time to dry. Poor air movement in room. Excessive moist air infiltration.	Make sure “Humidistat” is OFF. Allow more time for drying. Increase air movement with air movers. Seal off area to reduce infiltration.
Unit collects too little water	Room air is dry. Room temperature is too low. Filter is clogged. Coils are clogged.	Make sure “Humidistat” is OFF. Confirm humidity level with hygrometer. Increase room temperature. Check filter. Replace as necessary. Check coils. Clean as necessary.
If the problem you are experiencing is not listed here, call your local distributor or contact our Service Department toll-free at 800-932-3030 for further assistance.		

1.11 Specifications

Name	PHD 200 103806
Dimensions (W × H × D)	12.5 × 18.0 × 21.5 in. 31.8 × 44.7 × 54.6 cm
Weight (w/ cord & hose)	63 lbs. | 28.6 kg
Amps	6.7 amps at 80°F/60% RH
Power	115V / 60Hz
Refrigerant	R32, 0.312 kg (11.0 oz)
Max. use altitude	10,000 ft. | 3 km
Air movement	180 CFM | 5.4 CMM
Water removal	74 pts/day | 42 L/day at 80°F/60% RH (AHAM) 120 pts/day | 57 L/day at 90°F/90% RH
Operating temperature range	45°F–100°F | 7°C–38°C
Specifications are subject to change without notice. Some values may be approximate.	

1.12 Accessories Included

PARTS INCLUDED

20 ft. (6 m) of drain hose with quick-connect fitting.
1 disposable air filter. Reorder 3-pack #116689

OPTIONAL

Duct Attachment Kit #106996
Hanging Kit #106773

1.13 Additional Product Information

Additional product information and current documentation is available at LegendBrands.com.
Be sure to visit LegendBrands.com and register your purchase. Your registration will help us provide you with updated product information as needed.
For proper disposal, this unit should be taken to a recycler licensed to process refrigeration equipment.

1.14 Service Technicians Only

FOR SERVICE TECHNICIANS ONLY

Required safety procedures for servicing dehumidifiers with R32 refrigerant:

- Survey the area to ensure there are no sources of ignition that may lead to risk of fire and that there are no open flames or other potential ignition sources for refrigerant detection, and that leak detection equipment set to a percentage of the LFL and is calibrated for the refrigerant used.
- Post "no smoking" signs.
- Display component inspection procedures before repair or maintenance to electrical components, including ensuring that capacitors are discharged, that there is bonding continuity, and that no electrical components or wiring are exposed.
- Disconnect the power supply before repair.
- Follow safety procedures for removal and evacuation of refrigerant, purging the circuit with inert gas, opening the circuit by cutting or brazing, and recovering charge into the correct recovery cylinders. If venting is not allowed by national codes, purging the system with oxygen-free nitrogen if the system is to be purged, venting the system to atmospheric pressure if oxygen-free nitrogen charge is used, and ensuring that the outlet for the vacuum pump is not close to any potential ignition sources.

Before decommissioning units containing R32 refrigerant, you must make sure:

- PPE is available and being used correctly and that the technician is completely familiar with the equipment.
- The recovery process is being supervised by a competent person.
- Electrical power is available before decommissioning and isolate the system electronically.
- Refrigerants can be recovered safely, taking an oil and refrigerant sample in case analysis is required prior to reuse of recovered refrigerant.
- Equipment is available for handling refrigerant cylinders if required. Make sure that recovery equipment and cylinders conform to the appropriate standards.
- Only appropriate cylinders (designated for R32 refrigerant and labeled as such) are used for recovery, and that the correct number of cylinders for holding the total charge are available.
- Cylinders are evacuated prior to use.
- Recovery equipment is working and instructions are available.
- Calibrated weighing scales are available, that hoses have leak free disconnect couplings and are in good condition.

- The recovery machine is working properly and any potential ignition sources are sealed.
- There's not potential for mixing refrigerants in cylinders or recovery units.
- Compressors or compressor oils are properly evacuated if they are to be removed, and evacuating the compressor prior to returning the compressor to the suppliers if it is evacuated.
- Oil is drained out safely if it is to be drained out.

Decommissioning Process

- Pump down the refrigerant system if possible (otherwise making a manifold so that refrigerant can be removed from various parts), making sure that the cylinder is on the scales before recovering refrigerant.
- Operate the recovery machine in accordance with instructions, not filling cylinders to more than 80% liquid volume charge, not exceeding the max working pressure of the cylinders, and making sure that cylinders are filled correctly and removed from site after the process is completed.
- Do not charge recovered refrigerant into another system until it has been cleaned and checked.
- After completion, label the unit to show when it was decommissioned and emptied of refrigerant, that the label must be dated and signed, and ensuring that there are labels on the equipment stating that it contains flammable refrigerant.