



## OWNER'S MANUAL

# DEHUMIDIFIER

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MODELS 3PFD22, 3PFD35, 3PFD50, 3PFDP50



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## **IMPORTANT NOTE:**

Read the manual carefully. Make sure to save this manual for future reference. Illustrations in this manual are for explanatory purposes only, your actual product may look slightly different.

# IMPORTANT SAFETY INSTRUCTION

## READ THESE SAFETY PRECAUTIONS BEFORE INSTALLATION AND OPERATION.

For your safety, it is important that you read and follow the instructions in this manual to minimize the risk of personal injury, fire or electrical shock.

	<b>WARNING</b>	This symbol shows that this appliance uses a flammable refrigerant. If a refrigerant leak occurs and is exposed to an external ignition source, there is a risk of fire.
	<b>CAUTION</b>	This symbol shows that the operation manual should be read carefully.
	<b>WARNING</b>	This symbol shows that a service personnel should be handling this equipment with reference to the installation manual.

 California Proposition 65 Warning

 **WARNING: Cancer and reproductive harm - P65warnings.ca.gov**

## CAUTION

- This dehumidifier is intended for indoor residential use only and should not be used for commercial or industrial applications. Do not use outdoors
- Do not place the unit near a heat source or other heat generating appliances such as clothes dryer, heater or radiator
- Do not attempt to disassemble or repair the unit by yourself.
- Do not use or store the dehumidifier near flammable gas or combustibles, such as gasoline, benzene, thinner, or other chemicals, etc.
- Do not drink or use the water collected from the unit.
- Do not remove the water bucket during operation.
- Do not use the unit in small cramped spaces that are not well ventilated
- Do not store or use in areas where water may splash onto the unit.
- Place the unit on a level, sturdy section of the floor.
- Do not cover the intake or exhaust openings.
- Never insert your finger or other foreign objects into grills or openings. Take special care to warn children of these dangers.
- Do not climb or sit on the unit.
- Always insert the filters securely. Clean filter once every two weeks. If water enters the unit, turn the unit off and disconnect the power, contact a qualified service technician.
- Do not place foreign objects on the unit.
- The dehumidifier must be operated in an enclosed area to be most effective.

- Close all doors, windows and other outside openings to the room.
- When first using the dehumidifier, operate the unit continuously 24 hours. Make sure the plastic cover on the continuous drain hose outlet is fitted properly so there are no leaks.
- This unit is designed to operate with a working environment between 5°C/41°F and 32°C/90°F, and between 30%(RH) and 80%(RH).
- The dehumidifier should not be stored in a room with continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn this dehumidifier
- Be aware that the refrigerant contained within this dehumidifier is odorless
- Appliance should be installed, operated and stored in a room with a floor area larger than 50ft<sup>2</sup>.
- Compliance with national gas regulations shall be observed.
- Keep ventilation openings clear of obstruction.
- Servicing shall only be performed an authorized service provider recommended by the equipment manufacturer.
- Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.

## NOTE ABOUT FLUORINATED GASSES

- Continuous drainage uses gravity to pull the Fluorinated greenhouse gases are contained in hermetically sealed equipment. For specific information on the type, the amount and the CO<sub>2</sub> equivalent in tons of the fluorinated greenhouse gas(on some models), please refer to the relevant label on the unit itself.
- Installation, service, maintenance and repair of this unit must be performed by a certified technician.
- Recycling must be performed by a certified technician.



**Stand dehumidifier upright for full 24 hours before initial start up to allow refrigerant to settle.**

**Always use and store dehumidifier in an upright position.**



**CAUTION:**  
Risk of fire  
**flammable materials**

**IMPORTANT NOTE:** Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

Explanation of symbols displayed on the unit

	<b>CAUTION</b>	This symbol shows that the operation manual should be read carefully.
	<b>CAUTION</b>	This symbol shows that a service personnel should be handling this equipment with reference to the installation manual.
	<b>CAUTION</b>	This symbol shows that information is available such as the operating manual or installation manual.

## **⚠ WARNING**

(For using R290/R32 refrigerant only)

- Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
- DO NOT modify the length of the power cord or use an extension cord to power the unit.
- DO NOT share a single outlet with other electrical appliances. Improper power supply can cause fire or electrical shock.
- Please follow the instruction carefully to handle, install, clear, service the air conditioner to avoid any damage or hazard. Flammable Refrigerant R32 is used within air conditioner.
- When maintaining or disposing the air conditioner, the refrigerant (R32) shall be recovered properly, shall not discharge to air directly.
- Compliance with national gas regulations shall be observed.
- Keep ventilation openings clear of obstruction.
- The appliance shall be stored so as to prevent mechanical damage from occurring.
- A warning that the appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.
- Any person who is involved with working on

or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.

Examples for such working procedures are:

- breaking into the refrigerating circuit;
- opening of sealed components;
- opening of ventilated enclosures.
- No any open fire or device like switch which may generate spark/arcing shall be around air conditioner to avoid causing ignition of the flammable refrigerant used. Please follow the instruction carefully to store or maintain the air conditioner to prevent mechanical damage from occurring.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance) and ignition sources (for example: an operating electric heater) close to the appliance. The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that the refrigerants may not contain an odour.

## **WARNING**

(For using R290/R32 refrigerant only)

### **Transport of equipment containing flammable refrigerants**

- See transport regulations.

### **Marking of equipment using signs**

- See local regulations.

### **Disposal of equipment using flammable refrigerants**

- See national regulations.

### **Storage of equipment/appliances**

- The storage of equipment should be in accordance with the manufacturer's instructions.

### **Storage of packed (unsold) equipment**

- Storage package protection should be constructed such that mechanical damage to the equipment inside the package will not cause a leak of the refrigerant charge.
- The maximum number of pieces of equipment permitted to be stored together will be determined by local regulations.

### **Information on servicing**

#### **1. Checking the area**

- Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.

#### **2. Work procedure**

- Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.

#### **3. General work area**

- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

#### **4. Checking for presence of refrigerant**

- The area should be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

#### **5. Presence of a fire extinguisher**

- If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

#### **6. No ignition sources**

- No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. No Smoking signs shall be displayed.

## **WARNING**

(For using R290/R32 refrigerant only)

### **7. Ventilated area**

- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

### **8. Checks to the refrigeration equipment**

- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance.
- The following checks shall be applied to installations using flammable refrigerants:
  - The charge size is in accordance with the room size within which the refrigerant containing parts are installed.
  - The ventilation machinery and outlets are operating adequately and are not obstructed.
  - If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant.
  - Marking to the equipment continues to be visible and legible. Markings and signs that are illegible should be corrected.
  - Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

### **9. Checks to electrical devices**

- Repair and maintenance to electrical components should include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution should be used. This should be reported to the owner of the equipment, so all parties are advised.
  - Initial safety checks should include:
  - That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking.
  - That there no live electrical components and wiring are exposed while charging, recovering or purging the system.
  - That there is continuity of earth bonding.

### **10. Repairs to sealed components**

- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

## **WARNING**

(For using R290/R32 refrigerant only)

- Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts should be in accordance with the manufacturer's specifications.

**NOTE:** The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

### **11. Repair to intrinsically safe components**

- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use. Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.
- Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

### **12. Cabling**

- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

### **13. Detection of flammable refrigerants**

- Under no circumstances, should potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) should not be used.

### **14. Leak detection methods**

- The following leak detection methods are deemed acceptable for systems containing flammable refrigerants. Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment should be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment should be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed.
- Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipework.
- If a leak is suspected, all naked flames should be removed/ extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant should be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) should then be purged through the system both before and during the brazing process.

## **WARNING**

(For using R290/R32 refrigerant only)

### 15. Removal and evacuation

- When breaking into the refrigerant circuit to make repairs or for any other purpose conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration. Opening of the refrigeration systems should not be done by brazing.
- The following procedure shall be adhered to:
  - Remove refrigerant
  - Purge the circuit with inert gas
  - Evacuate
  - Purge again with inert gas
  - Open the circuit by cutting or brazing.
- The refrigerant charge should be recovered into the correct recovery cylinders. The system should be flushed with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task.
- Flushing should be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system.
- When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipework are to take place.
- Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

### 16. Charging procedures

- In addition to conventional charging procedures, the following requirements should be followed. Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines should be as short as possible to minimize the amount of refrigerant contained in them.
- Cylinders should be kept upright.
- Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care should be taken not to overfill the refrigeration system.
- Prior to recharging the system, it should be pressure tested with OFN. The system should be leak tested on completion of charging but prior to commissioning. A follow up leak test should be carried out prior to leaving the site.

## **WARNING**

**(For using R290/R32 refrigerant only)**

### **17. Decommissioning**

- Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample should be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.
  - Become familiar with the equipment and its operation.
  - Isolate the system electrically.
  - Before attempting the procedure ensure that:
    - When breaking into the refrigerant circuit to make repairs or for any other purpose, conventional procedures should be used.
    - Mechanical handling equipment is available, if required, for handling refrigerant cylinders.
    - Personal protective equipment is available and being used correctly.
    - The recovery process is supervised at all times by a competent person.
    - Recovery equipment and cylinders conform to the appropriate standards.
- Pump down refrigerant system, if possible.
- If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- Make sure that cylinder is situated on the scales before recovery takes place.
- Start the recovery machine and operate in accordance with manufacturer's instructions. Do not overfill cylinders. (No more than 80 % volume liquid charge).
- Do not exceed the maximum working pressure of the cylinder, even temporarily.
- When the cylinders have been filled correctly and the process is completed, make sure that the cylinders and the equipment are removed from the site promptly and all isolation valves on the equipment are closed off.
- Recovered refrigerant should not be charged into another refrigeration system unless it has been cleaned and checked.

## **WARNING**

(For using R290/R32 refrigerant only)

### 18. Labelling

- Equipment should be labelled stating that it has been de-commissioned and emptied of refrigerant. The label should be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

### 19. Recovery

- When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
- When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

- The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order.
- Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.
- The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged. Do not mix refrigerants in recovery units and especially not in cylinders. If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body should be employed to accelerate this process. When oil is drained from a system, it should be carried out safely.

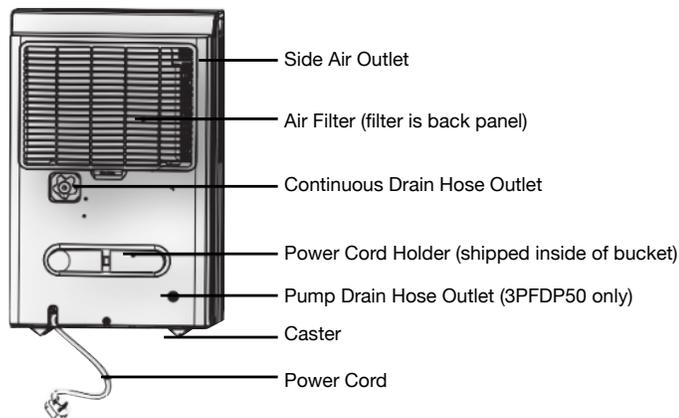
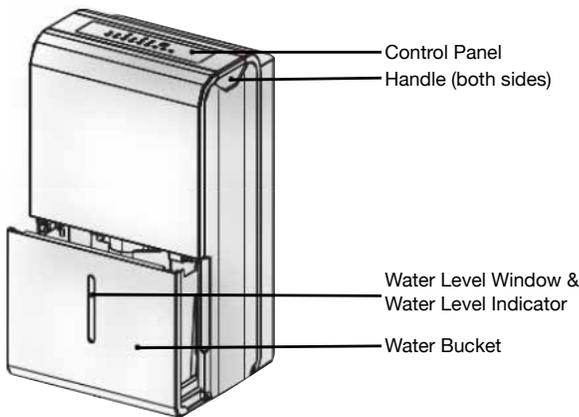
# IDENTIFICATION OF PARTS

## BEFORE YOU BEGIN

### ⚠ CAUTION

NOTE: The illustrations in the manual are for explanation purpose only. The design specifications are subject to change without prior notice. Your dehumidifier may be slightly different. The most up-to-date version of the manual can be found at [www.perfectaire.us](http://www.perfectaire.us)

Consult with customer support for details.

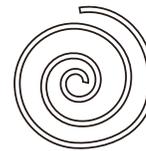


## ACCESSORIES

1x Power Cord Holder  
(Shipped inside of bucket)

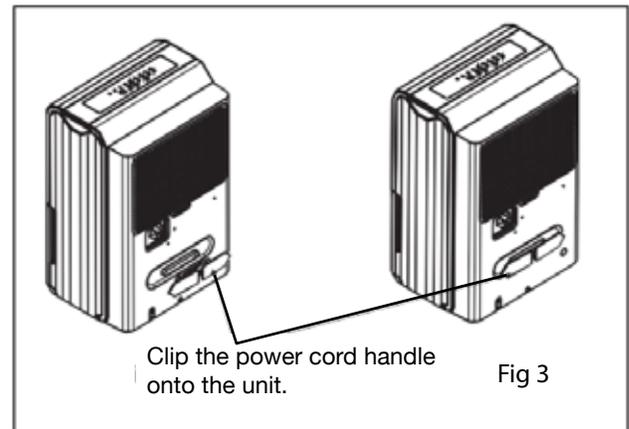


**3PFDP50 only**  
1x 40FT Pump Drain Hose (ΦOD=1/4")



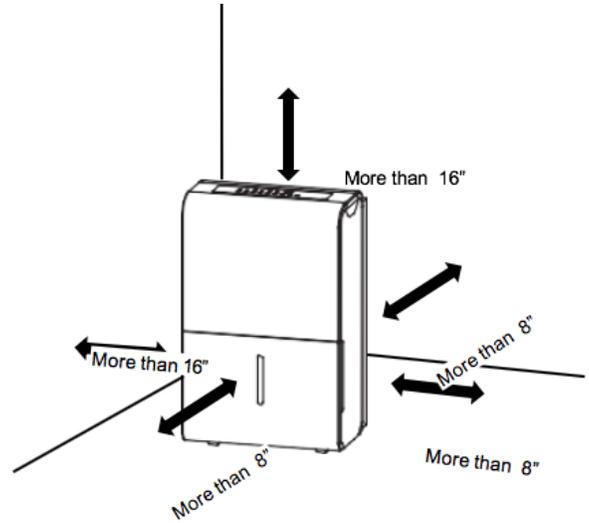
## POWER CORD HOLDER INSTALLATION

Power cord holder will be shipped inside of the water tank. During initial set up clip the power cord holder onto the back side of the unit.



# POSITIONING THE UNIT

- This dehumidifier should not be used for commercial or industrial applications.
- Place the dehumidifier on a smooth, level floor strong enough to support the unit with a full bucket of water.
- For good air circulation and best performance, allow at least 8 inches of air space on all sides of the unit and a minimum of 16 inches of air space at the side air outlet.
- Place the unit in an area where the surrounding temperature will not fall below 41°F (50°C); Lower temperatures will cause permanent damage to the unit and ice build up on the coils.

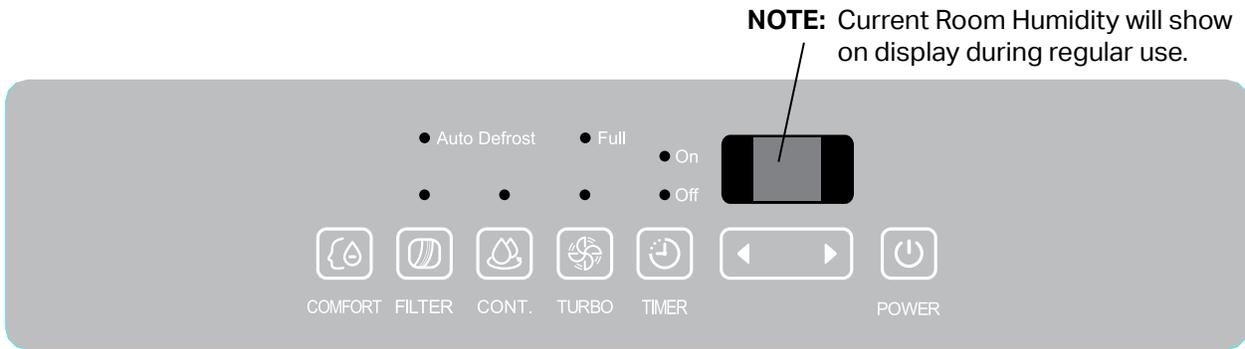


**Lockable casters are on the bottom of the unit.** Do not force the casters to move over carpet or when there is water in the bucket as this may lead to tripping and spillage.

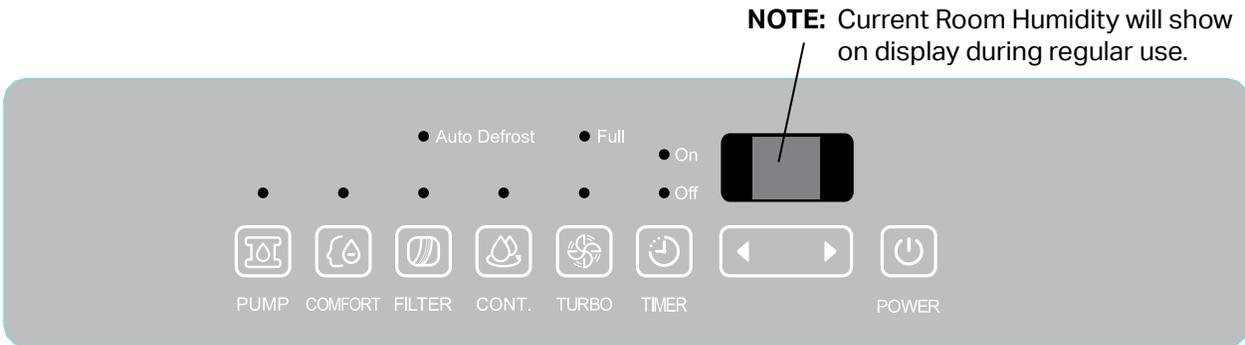
# OPERATING INSTRUCTIONS

## CONTROL PANEL FEATURES:

**NOTE:** The following control panels are for explanation purpose only. The control panel of the unit you purchased may be slightly different according to the models. Your machine may not contain some indicators or buttons. The actual shape shall prevail.



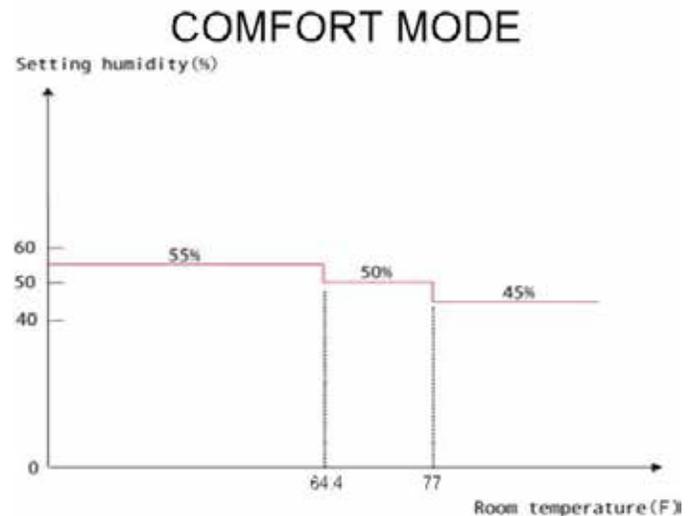
3PFD22, 3PFD35, 3PFD50



3PFDP50

### COMFORT BUTTON

- This dehumidification setting automatically keeps the humidity level in the room between 45%-55% relative humidity (based on room temperature).
- When operating in COMFORT MODE the touch pad arrow buttons (◀▶) will be deactivated and you will NOT be able to set a desired humidity level.
- To turn the comfort mode off and use the touch pad arrows again, press the COMFORT button until the indicator light turns off.



○



FILTER

## FILTER BUTTON

- The FILTER light (clean filter indicator light) will illuminate after 250 hours of fan motor operation. This feature is a reminder to clean the air filter for more efficient operation of the dehumidifier.
- Reset the timer, after cleaning the filter, by pressing and holding the FILTER button until the light turns off.
- If the unit is being used in a dusty and cold environment like a basement or crawlspace we recommend cleaning the filter more often.

○



CONT.

## CONTINUE BUTTON

- Press CONT. to activate the continuous dehumidifying mode. In this mode, the compressor and fan will run all the time.
- To turn the continuous feature off, press the CONT. button until the indicator light turns off.
- When operating in CONTINUE mode the touch pad arrow buttons  will be deactivated and you will NOT be able to set a desired humidity level.

○



TURBO

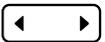
## TURBO BUTTON

- The Turbo button is to toggle between normal fan speed and the highest fan speed (Turbo).
- Press to select either High or Normal fan speed.
- Set the unit to turbo by pressing the TURBO button (green light illuminated) for maximum moisture removal.
- When the desired humidity level has been reached, press the TURBO button once more (green line will extinguish) to return to normal operation.



TIMER

## TIMER BUTTON

Timer button is used in conjunction with the  (Humidity Control) buttons to initiate the Auto start and Auto stop feature.

○ On

○ Off



TIMER

## SETTING THE TIMER

- The TIMER button can be used to set a desired ON or OFF time for the dehumidifier. The ON time or OFF time setting can only be set in increments of 0.5 hr. up to 10 hrs. and 1hr increments from 10 to 24 hrs.

### NOTE:

- If the unit is off, the timer "On" indicator be the first to illuminate.
- If the dehumidifier is on, the timer "Off" indicator will first illuminate.
- Toggle between Timer On and Timer Off by pressing the TIMER button.

- Press the TIMER button, the timer Off or On indicator light illuminates. This indicates the auto stop/start program is initiated.
- Press or hold the ◀ or ▶ button to change the desired stop/start time by 0.5 hour increments, up to 10 hours, then at 1 hour increments from 10 to 24 hours from the time the feature is set. The control will count down the time remaining until the dehumidifier stops/starts.
- Press the TIMER button again the timer On indicator light illuminates. This indicates the auto start program is initiated.
- Press or hold the ◀ or ▶ button to change the desired start time by 0.5hour increments, up to 10 hours, then at 1 hour increments from 10 to 24 hours from the time the feature is set. The control will count down the time remaining until starts.
- When the Timer On & Timer Off times are set, within the same program sequence, both On and Off indicator lights will illuminate indicating both On and Off times are programmed.
- Turning the unit On or Off at any time or adjusting the timer setting to 0.0 will cancel the Auto Start/ Stop function.
- If the water bucket is full and the LED display window displays P2, the Auto Start/Stop function will also be canceled.

## HUMIDITY SET CONTROL LEFT/RIGHT (BUTTONS)

- The humidity set control buttons are used to set the desired humidity level.
- The humidity level can be set between 35% RH (Relative Humidity) to 85% RH (Relative Humidity) in 5% increments.
- For drier air, press the ◀ button to the desired lower RH % level.
- For more humid air, press the ▶ button to the desired higher RH% level

**NOTE:** The machine will not run compressor or start dehumidifying area until the room humidity percentage rises higher than set percentage.

## POWER BUTTON

- Press to turn the dehumidifier on and off.
- Dehumidifier will power on and automatically resume last used settings.

## PUMP BUTTON (3PFDP50 ONLY)

- Press to activate the pump operation.

**NOTE:** Make sure the pump drain hose is installed into the unit and the continuous drain hose is disconnected from the unit before the pump operation is activated.  
**When the bucket is full, the pump will start to operate.**

- Refer to the next pages for removing the bucket and discarding the collected water.
- Do not use this operation when the outdoor temperature is at or below 32°F (0°C)

## LED DISPLAY

Depending on the feature selected, the LED Display will show the current relative humidity level in the room (35% - 85%), the auto start/stop setting (0.0~24) while setting the timer function, as well as the desired humidity level setting for the dehumidifier. The accuracy of the relative humidity reading in the room is ±5% for humidity levels between 30% and 90%.

# OTHER FEATURES

## ○ Full BUCKET FULL LIGHT

The Full indicator light will be illuminated when the bucket is full and ready to be emptied or if the bucket was not put back in place correctly.

## ○ Auto Defrost AUTO DEFROST

The unit will automatically enter auto defrost mode when frost/ice builds up on the evaporator coils. The compressor will cycle off and the fan will continue to run until the frost disappears. During this operation the Auto Defrost indicator light will be illuminated.

## AUTO SHUT OFF

The dehumidifier shuts off when the bucket is full, or when the bucket is removed or is not replaced in the proper position. The compressor will also automatically shut off when the desired humidity level is reached. The fan will continue to operate for an additional 3 minutes.

**NOTE:** 3PFDP50 models will activate the water pump when bucket is full.

## AUTO-RESTART

In the event of an unexpected power interruption, the unit will automatically restart with the previous function setting once the power is restored.

# REMOVING THE COLLECTED WATER

There are three ways to remove collected water:

## 1 USING THE BUCKET

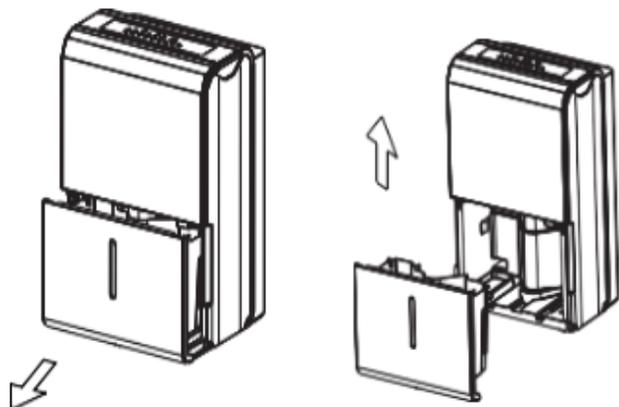
- If the unit is OFF, and the bucket is full, the FULL indicator light will illuminate.
- If the unit is ON, and the bucket is full, the compressor and fan will turn off. Then, the full indicator light will illuminate and the LED display will show code P2.

### EMPTY AND REINSERT THE BUCKET...

- Grip the left and right bucket handles securely, and carefully pull out straight so water does not spill. Do not place the bucket on the floor because the bottom of the bucket is uneven and the water may spill. Code EB will show on the display panel when the bucket is removed. Empty the water from bucket into a drain.
- The bucket must be replaced carefully and securely for the dehumidifier to operate. The code EB will disappear from the display panel and unit will re-start with the last used settings after the bucket is returned to its correct position.

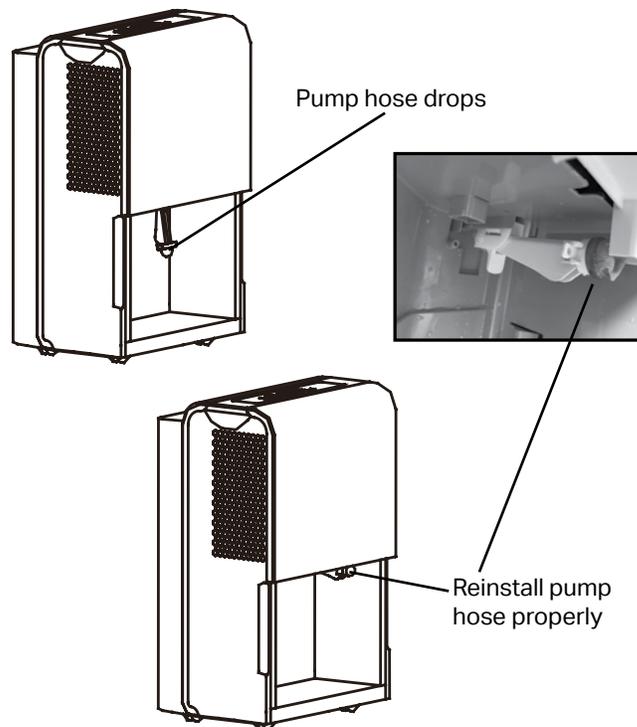
**NOTE:** For 3PFDP50 model only, before reinserting the bucket, the pump arm on the right-side of the bucket area will need to be lifted back up into position.

1. Partially remove the bucket
2. Hold both sides of the bucket with even strength, and completely remove from the unit and pour out the water.



## 3PFDP50 MODELS ONLY:

Pump arm needs to be pushed back up into place before reinserting the bucket.



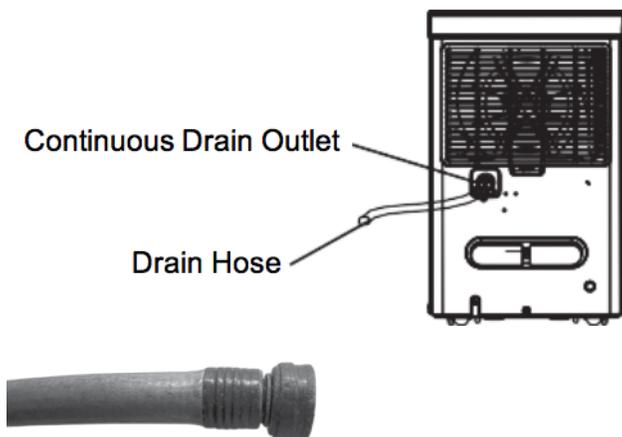
### NOTE:

- When you remove the bucket, do not touch any parts inside the unit. Doing so may damage the product.
- Be sure to push the bucket gently all the way into the unit. Banging the bucket against anything or failing to push it in securely may cause the unit not to operate.
- If the pump hose drops when you remove the bucket, you must reinstall the pump hose properly to the unit before replacing the bucket into the unit.
- If there is some water in the unit after you remove the unit after you remove the bucket, you must dry it.
- If the bucket is removed while the unit is running, the compressor and the fan will turn off, the unit will beep 8 times and the digital display will show P2.
- If the bucket is removed while the unit is turn off, the unit will beep 8 times and the digital display will show P2.

## 2 CONTINUOUS DRAINING

Continuous drainage uses gravity to pull the water out of the unit through a hose. A white screw cap covers the continuous drain outlet; Unscrew it to attach the continuous drain hose. The drainage outlet hose must be sealed with the provided cap when not in use. Failure to tightly seal the cap if drain is not in use will cause leaking water.

- A small water pan inside of the unit is already installed on the optional angle to route water out as soon as the unit creates it. Dehumidifiers are designed to be used on leveled floors. If the unit is placed on an unlevelled or even slightly forward angle the water will run into the bucket as a backup.
- Basement floors will always have a slight downward slope towards the floor drain. Place the unit so the back panel is facing the floor drain.
- The continuous drain hose must be placed in a downward angle at all time. A maximum 6ft length will prevent backups on days of extra humidity. Any upward angles or sharp bends will cause the water to either become stuck inside the hose or backup into the unit.
- A maximum 6ft length garden hose (ID $\geq$  $\Phi$ 5/16", not included) with a female threaded end (ID:M=1", not included) can be used for the continuous drainage option. The unit is not designed to secure a vinyl hose and can cause leaking water.

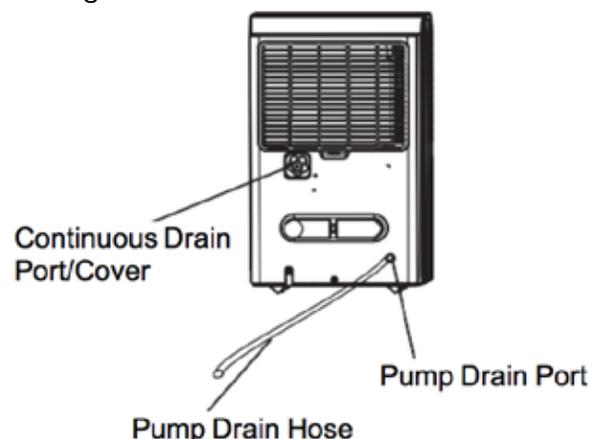


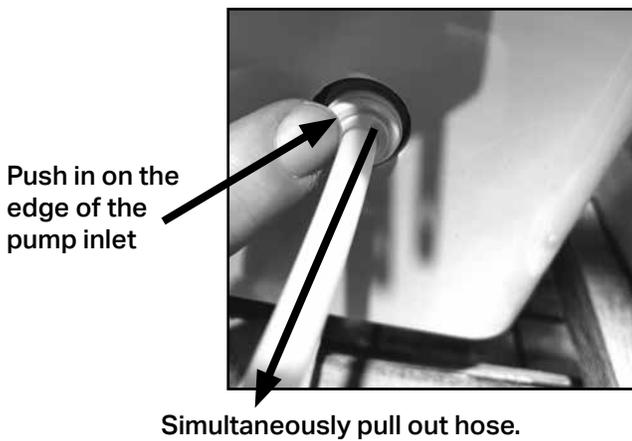
Continuous drain hose (ID $\geq$  $\Phi$ 5/16", not included) with a female threaded end (ID:M=1", not included.)

## 3 PUMP DRAINAGE (3PFDP50 ONLY)

Water pumps provide much more flexibility for drainage options. It can pump water vertically (straight up) a maximum height of 16FT and as far as 40FT length; This is ideal for routing water out a window, to a distant floor drain, or into a sink so the unit can stay on a secure floor. The pump turns on when the water bucket is completely full and will expel 32oz of water, about half of the bucket, before stopping.

- A maximum 40FT length hose ( $\Phi$ OD=1/4", included) can be used for the pump option.
- To install the hose, make sure it is pushed into the pump drain outlet to a depth of at least 1/2 inch (approx. 15 mm). Once the hose is installed to the proper depth, the holder will lock it in place. The other end of the hose is placed in a floor drain or the location water will drain.
- Then, press the PUMP button on the display panel to turn on the water pump feature. The pump will activate only when the pump light indicator on the display is on and the water bucket is full. It will expel 32oz of water, about half the bucket, and then turn off. Recommend to completely empty the water bucket and clean it every week to prevent stagnant water and mold growth.
- The hose should always be removed when the pump feature is not being used. To remove the hose, firmly press on the plastic ring around the pump hose outlet and gently pull on the hose. Do NOT force the hose to detach from the holder by only pulling on it; This will cause permanent damage to the unit. Be aware, residual water may expell from the unit when removing the hose.





## ⚠ CAUTION

Do not use this operation when the outdoor temperature is equal to or less than 32°F (0°C), otherwise water will freeze inside the hose resulting in unit failure.

**NOTE:** The pump may make a noticeable sound for 3~5 minutes on startup. It is a normal phenomenon.

## ⚠ CAUTION

The pump operation light will blink will at 1Hz if there is an operational failure of the pump. Please turn off the unit and unplug the power.

## CHECK THE FOLLOWING THINGS:

- Remove the bucket from the unit, take down the pump arm and clean the pump arm mesh filter.
- Check that the pump drain hose is not kinked or blocked.
- Empty the water of the bucket.
- Reinstall the pump hose if it is disconnected from the unit and properly reinstall the bucket.
- Turn on the unit. If the error repeats, call for service.

# CARE AND MAINTENANCE

Turn the dehumidifier off and unplug it from the wall outlet before cleaning.

- Use water and a mild detergent. Do not use bleach or abrasives.
- Do not splash water directly onto the main unit. Doing so may cause an electrical shock, cause the insulation to deteriorate, or cause the unit to rust.
- The air intake and outlet grilles get soiled easily; use a vacuum attachment or brush to clean.

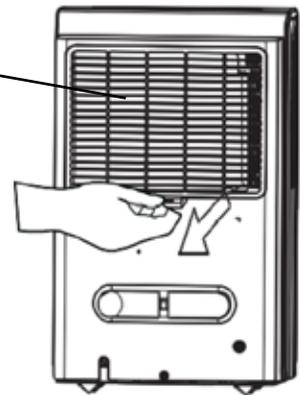
**NOTE:** Do not use a dishwasher to clean the bucket. After cleaning, the bucket must be replaced and securely seated for the dehumidifier to operate.

- Every week, clean the bucket to prevent growth of mold, mildew and bacteria.
- Partially fill the bucket with clean water and add a little mild detergent.
- Swish it around in the bucket.
- Empty and wipe down the inside of bucket with a soft cloth.
- Rinse.

## CLEANING THE AIR FILTER

- **THE FILTER IS INTEGRATED WITH THE BACK PANEL OF THE UNIT AND NOT A SEPARATE ITEM.**
- Clean the filter every two weeks based on normal operating conditions.
- To remove the filter, pull filter outwards.
- Wash the filter with clean water then dry.
- Re-install the filter, replace bucket.

Air filter is the back panel



### **CAUTION**

Do not operate the dehumidifier without a filter because dirt and lint will clog it and reduce performance

## PREPARING FOR STORAGE

- When not using the unit for long time periods
- After turning off the unit, wait one day before emptying the bucket.
- Clean the main unit, water bucket and air filter.
- Allow the entire assembly to air dry.
- Wrap the cord with onto the power cord handle
- Cover the unit with a plastic bag.
- Store the unit upright in a dry, well-ventilated place.

# TROUBLESHOOTING

Before calling for service, review the chart below.

Problem	What to check
<b>Unit does not start</b>	Make sure the dehumidifier's plug is pushed completely into the outlet.
	Check the house fuse/circuit breaker box.
	Dehumidifier has reached its preset level or bucket is full.
	Water bucket is not in the proper position.
<b>Dehumidifier does not dry the air as it should</b>	Did not allow enough time to remove the moisture. Please allow a full 24 hours to pass before expecting to see a change in room humidity level or collected water.
	Make sure there are no curtains, blinds or furniture blocking the front or back of the dehumidifier.
	Make sure the machine's set humidity percentage is lower than the current room's humidity percentage. The machine can then be run on CONT. mode for 24 hours to test.
	Check that all doors, windows and other openings are securely closed.
	Room temperature is too low, below 5 °C (41° F).
	There is a kerosene heater or something giving off water vapor in the room.
<b>The unit makes a loud noise when operating</b>	The air filter is clogged.
	The unit is tilted instead of upright as it should be.
	The floor surface is not level.
<b>Frost appears on the coils</b>	This is normal. The dehumidifier has Auto defrost feature.
<b>Water on floor</b>	Hose to connector or hose connection may be loose.
	Intend to use the bucket to collect water, but the back drain plug is removed.
	Make sure dehumidifier is on a level surface; An unlevel floor can cause the unit to lean to one side and leak water from the internal tray.
<b>The pump operation on light blinks at 1Hz</b>	Clean the filter of the pump arm inside of the bucket area.
	Check the pump hose is not kinked or blocked.
	Empty the water of the bucket.
	Unplug the machine, remove the pump hose. A dry Qtip can be used to clean dust from the pump hose inlet.
<b>ES - Tube Temperature sensor of the evaporator error</b>	Unplug the unit and plug it back in. If error repeats, call for service.
<b>AS - Humidity sensor error</b>	Unplug the unit and plug it back in. If error repeats, call for service.
<b>P2 - Bucket is full</b>	Empty the bucket and replace it in the right position
<b>EB - Bucket is removed</b>	Replace the bucket in the right position.





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