

# DEHUMIDIFIER

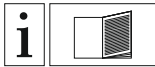
**FDE-1234**



## User Manual



Thank you for choosing this product.  
Please read this instructions manual before using it.



Read the USER MANUAL carefully before operation.



Further information is available in the USER MANUAL, SERVICE MANUAL, and the like.



Service personnel are required to carefully read the USER MANUAL and SERVICE MANUAL before operation.



Recycle unwanted materials instead of disposing of them. All appliances and packaging should be sorted and tendered at a regional recycling centre and be processed in an ecological manner.



This unit uses a flammable refrigerant.  
If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.

Figure1

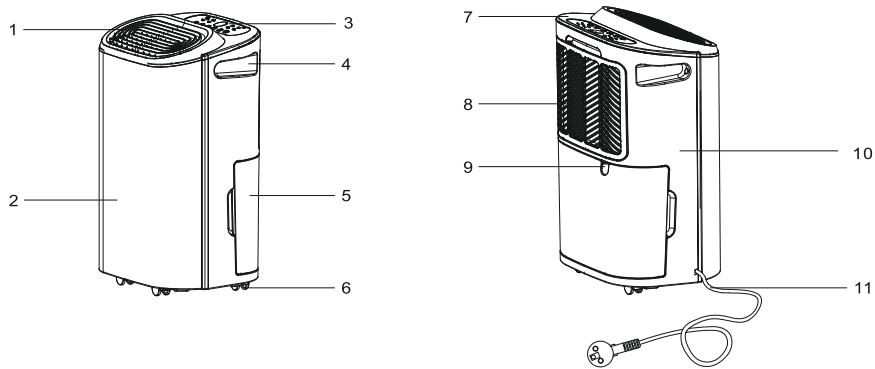


Figure2

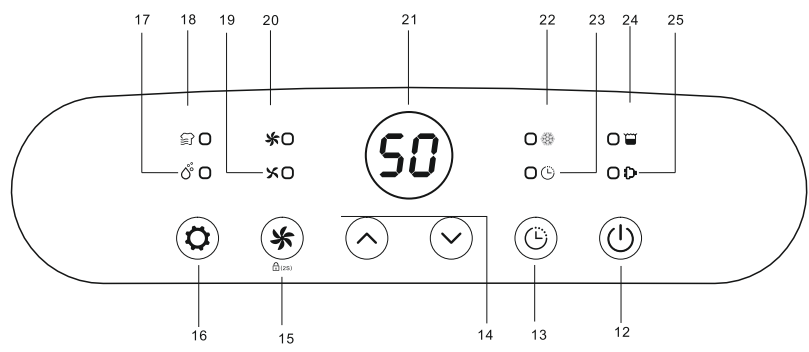
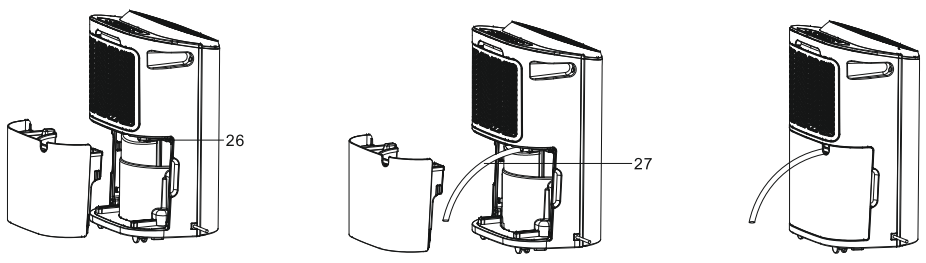


Figure3



# Parts List

## Components

1. Air Outlet
2. Front Cover
3. Control Panel
4. Handle
5. Water Tank
6. Casters
7. Top Cover
8. Air Inlet Grille
9. Drainage Outlet
10. Rear Cover
11. Power Cord

## Control Panel

12. Power Button
13. Timer Off Button
14. Up And Down Buttons
15. Fan Speed Button/Child Lock Button
16. Mode Button
17. Manual Indicator
18. Laundry Drying Indicator
19. Low Fan Speed Indicator
20. High Fan Speed Indicator
21. Humidity Reading Display
22. Defrost Indicator
23. Timer Indicator
24. Tank Full Indicator
25. On/Off Indicator

## Drainage

26. Drainage Outlet
27. Drainage Pipe (not included in packing)

# Table of Contents

Product Instructions .....	1
Safety Instructions .....	1-2
Prior to Operation .....	3
Continuous Drainage .....	3
Operation Instructions .....	4-7
Cleaning .....	8
Storage .....	9
Display Error Codes .....	9
Trouble shooting .....	10
Safety Precautions On Servicing .....	11

## Product Instructions

The dehumidifier is used to remove excessive moisture from the air. The resulting reduction in relative humidity protects buildings and their contents from the adverse effects of excess humidity.

The environmentally friendly R290 is used as the refrigerant. R290 has no damaging influence on the ozone layer (ODP), a negligible greenhouse effect (GWP) and is available worldwide. Because of its efficient energy properties, R290 is highly suitable as a coolant for this application. Special precautions must be taken into consideration due to the coolant's high flammability.

## Safety Instructions

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- The unit is designed only for use with R-290(propane) gas as the designated refrigerant.
- **THE REFRIGERANT LOOP IS SEALED. ONLY A QUALIFIED TECHNICIAN SHOULD ATTEMPT TO SERVICE!**
- Do not discharge the refrigerant into the atmosphere.
- R-290 (propane) is flammable and heavier than air.
- It collects first in low areas but can be circulated by the fans.
- If propane gas is present or even suspected, do not allow untrained personnel to attempt to find the cause.
- The propane gas used in the unit has no odor.
- The lack of smell does not indicate a lack of escaped gas.
- If a leak is detected, immediately evacuate all persons from the area, ventilate the room and contact the local fire department to advise them that a propane leak has occurred.
- Do not let any persons back into the room until a qualified service technician has arrived and that technician advises that it is safe to return.
- No open flames, cigarettes or other possible sources of ignition should be used inside or in the vicinity of the units.
- Component parts are designed for propane and non-incentive and non-sparking. Component parts shall only be replaced with identical repair parts.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The appliance shall be disconnected from its power source during maintenance.
- Ensure the unit is far away from fire, inflammable, or explosive objects.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture.

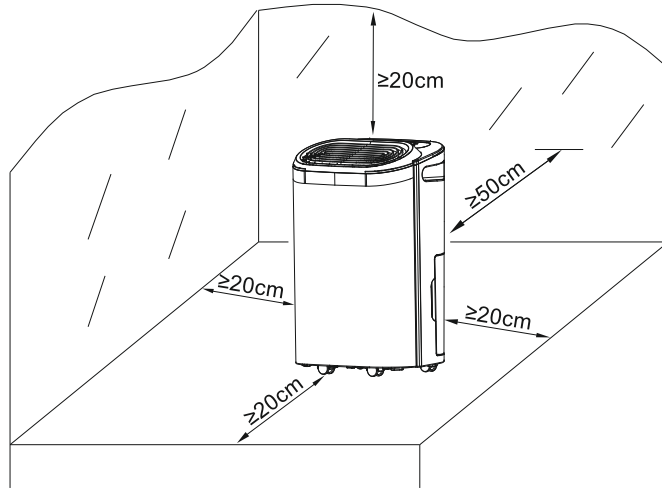
# Safety Instructions

- The appliance shall be stored in a room without sources of flame or extreme heat (for example: open flames, an operating gas appliance or an operating electric heater).
- The appliance shall be stored so as to prevent mechanical damage from occurring.
- Do not dismantle or burn, even after use.
- Pipe-work shall be protected from physical damage and shall not be installed in an unventilated space, if that space is smaller than 8 m<sup>2</sup>.
- Compliance with national gas regulations shall be observed.
- Keep any required ventilation openings clear of obstruction.
- The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.

## **Warning**

- Failure to abide by this warning could result in an explosion, death, injury and property damage.
- 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 authorizes their competence to handle refrigerants safely in accordance with an industry, recognized assessment specification.
- 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.

## Prior to Operation



- Place the dehumidifier in an upright position on a stable, flat surface.
- Ensure the dehumidifier is at a safe distance of at least 50cm away from any wall or furniture.
- Supply power should be in correspondence with the value on the nameplate, power outlet needs to be grounded.
- Ensure the tank is correctly fitted, if the tank is full or not in place, the tank full light comes on and the dehumidifier will stop working.
- Turn on the power and run the machine as per instructions below.

## Continuous Drainage

---

In general, water will be collected by tank, if you want continuous drainage, please do steps as follows (refer to figure 3)

- a. Remove the water tank.
- b. Insert a drainage pipe with 14mm inner diameter through the drainage outlet.
- c. Place the water tank back to the unit.

Please always make sure the pipe is going downhill, and that it is not blocked or kinked.



# Operation Instructions

## Switch On / Switch Off The Unit [ Power button ]

---



Connect to the power supply and press the power button once to turn on the unit, the unit runs by default mode on manual continuous dehumidifying with high fan speed, the on/off indicator will be on.

💬 Press the power button to turn off the unit, it will stop working, fan will work for some seconds to blow out the hot air inside the unit.

## Auto Switch on / off Timer Function [ Timer button ]

---



At working mode, press the timer button to select your preferred timer hour from 00~24hrs for automatic switch off.

At standby mode, press the timer button to select your preferred timer hour from 00~24hrs for automatic switch on.

💬 Auto timer off setting will be canceled if you press the timer button for 2 times in 3 seconds.

💬 Auto timer off setting will be canceled if you switch off the unit and switch it on again.

💬 Auto timer on setting will be canceled if you switch on the unit manually.

## Humidity Setting [ Up and Down buttons ]

---



Press the up/down buttons to select your preferred humidity from CO-30%-35%-40%-45%-50%-55%-60%-65%-70%-75%-80%-CO. CO means continuous dehumidifying regardless of ambient humidity.



# Operation Instructions

## Safety Childlock Function [ Fan Speed button-2 seconds ]

---

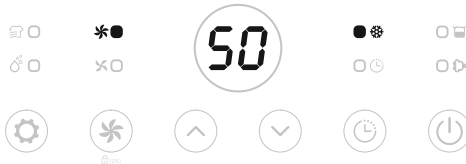


Press the Fan speed button for 2s to lock all buttons with a beeping sound, the same operation can unlock it.

**💬** Safety childlock function can be set at standby mode and working mode but cannot be activated when the water tank is full.

## Low Temperature Defrost Indicator

---



When the ambient temperature is too low, the dehumidifier will enter into the defrost mode, the unit runs with high fan speed without dehumidifying.

## Auto Shut off with Water Tank Full Indicator

---



The unit will enter into the standby mode when the water tank or when it is not installed properly. After emptying the tank, or installing the water tank properly the unit will go on to the previous mode.

**💬** Except for the power button, all other buttons are inoperational.

# Operation Instructions

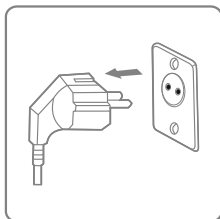
## **Memory Function:**

---

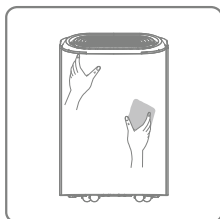
- a. When unplugged directly or power cut, and then reconnected to the power supply, the dehumidifier will run with the mode prior to the shutdown. The timer setting will be kept.
- b. Press the power button to switch off the dehumidifier, and then press the power button to switch it back on. The dehumidifier will run with the mode prior to the shutdown. The timer setting will be canceled.
- c. Switch off the dehumidifier and unplug the power cord, then reconnect the power supply and switch on the dehumidifier. It will run at the factory preset mode the first time you received the dehumidifier.

## Cleaning

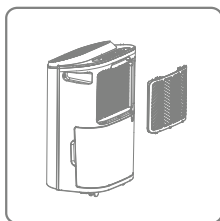
When used regularly, the filter may become clogged with dust and particles. Therefore the filter should be cleaned at least every two weeks. Follow these steps:



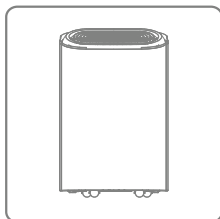
1. Switch the device off and remove the plug from the socket before cleaning.



2. Clean the housing with a soft, dry cloth. If the device is extremely dirty, use a mild cleaning agent. Wipe the dehumidifier with a slightly damp cloth. Never spray the device with water.



3. Remove the filter, clean the filter with a vacuum cleaner or soapy water no hotter than 40°C.



4. Rinse and dry the filter completely before installing back to the device.

## Storage

**If the dehumidifier will not be used for a long period of time, take the following steps:**

1. Remove the plug from the socket and empty the tank, make the tank and the dehumidifier dry completely, this may take a couple of days.
2. Clean the air filter.
3. Check the dehumidifier for perfect condition to ensure a safe use of it after a long period of storage.
4. Pack the device with the suitable packaging.
5. Store the dehumidifier in a dust-free and out of direct sunlight location, preferably covered with a sheet of plastic.

## Display Error Codes

Please contact the authorized repair center if any of the error codes below appears.

Display Code	E1	E2
Error	Temperature sensor error	Humidity sensor error
Display	Flash every 30 seconds	Flash every 30 seconds
What is happening	Device still dehumidifies but is in defrost mode only.	Device still dehumidifies but is in continuous dehumidifying mode only.

# Trouble Shooting

Check the following before contacting technical support .

PROBLEM	POSSIBLE CAUSE	SOLUTION
The device does not work	The power is not connected	Insert the plug into the wall outlet
	The water tank is full	Empty the tank
	The tank has not been replaced correctly	Replace the tank
Water removal capacity is too low	Runtime is too short	Be patient and wait a little bit longer.
	Ambient temperature or humidity is too low	It is normal that the device does not dehumidify in these conditions
The device works, but reduces the relative humidity insufficiently	The room is too big	We recommend using a dehumidifier with a greater capacity
	There is too much ventilation	Reduce ventilation(e.g. close windows and shut doors)
	The air filter is clogged	Clean the air filter
	Set humidity is higher than the ambient humidity	Set the humidity lower than the ambient humidity
Dehumidifier is blowing out warm air	The dried air is passed over heating coils before it is blown into the room as part of the dehumidifying process	This is normal, a dehumidifier is not an air cooler
The display is not showing the humidity set point	The display shows the room relative humidity not the set point	Press the humidity control button once to see the target relative humidity
Water on floor	There is residual water in tank, and the device is lurched too much by moving	Be careful when moving the tank
The dehumidifier is noisy	The air filter is blocked or the device is on an uneven surface	Clean the filter or put the device on a flat surface

# Safety Precautions On Servicing

Warning: The appliance should be stored in a well-ventilated room. The area of the room should be equal to the room area required for maintenance.

——Warning: Appliances should be stored in rooms where there is no continuous burning ire (such as ignited gas appliances) and ignition sources (such as electric heaters at work)

——All operators or refrigeration circuit maintenance personnel should obtain a valid certificate issued by an industry-approved assessment agency to determine their qualification for safe disposal of refrigerants as required by the industry-approved assessment specification.

——The maintenance and repair of the equipment can only be carried out according to the method recommended by the equipment manufacturer. If other professionals are required to assist in the maintenance and repair of the equipment, they should be supervised by personnel qualified to use flammable refrigerants.

## A.1. Inspection of the site

Prior to servicing with flammable refrigerants, a safety inspection must be performed to ensure that the risk of fire is minimized. When servicing the refrigeration system, the following precautions should be observed before handling the system.

## A.2. Operating procedure

Work should be performed under controlled procedures to ensure that the risk caused by combustible gases or vapors during operations is lowest

## A.3. General working area

All maintenance personnel and other personnel in the work area should be aware of the nature of the work being performed and should work within a confined space that should be avoided. The work area should be properly segregated to ensure the safety of working conditions in the work area by controlling combustible materials.

## A.4. Check if the refrigerant is present

Pre-operation and during operation should be monitored in the area using an appropriate refrigerant monitor to ensure that the technicians are aware of the presence of potentially flammable gases and that all leak detection equipment is suitable for flammable refrigerants, such as: no spark, fully enclosed Or intrinsically safe

## A.5. Fire extinguisher placement

When performing heat-processing operations on the refrigeration system or related components, the appropriate fire extinguisher should be located nearby and the refrigerant injection area should be equipped with a dry powder or carbon dioxide fire extinguisher.

## A.6. Prohibition of fire

When working in connection with exposed pipelines that contain or have contained flammable refrigerants, all forms of ignition sources that may cause fire or danger to the station should not be used. All sources of ignition, including smoking, are prohibited. The agent may be released into the surrounding environment. It must be far away from the area where it is installed, repaired, relocated or disposed. Before starting work, the surrounding environment of the equipment must be inspected strictly to ensure that there is no danger of flammability or fire, should set up the mark of "No Smoking".

## A.7. Ventilated area

Ensure that the work area is open or fully ventilated before opening the system or performing hot work operations. Ventilation should be maintained during operation. Ventilation will safely dilute the leaked refrigerant and quickly release it into the atmosphere.

## A.8. Inspection of refrigeration equipment

If you replace electrical components, these electrical components should be installed in accordance with the day-to-day and night-time operating regulations. At all times, the manufacturer's maintenance and repair guides should be followed. If in doubt, consult the manufacturer's technical department.



# Safety Precautions On Servicing

The following inspection items apply to the installation of flammable refrigerant appliances:

- The charge should be determined according to the size of the room containing the refrigerant containing components;
- Ventilation equipment should operate normally and vents should be free from obstructions;
- If an inter-refrigeration refrigeration cycle is used, check the presence of refrigerant in the secondary circuit;
- The logo on the appliance should be clearly visible. Marks and symbols that are indelible;
- Refrigerating lines or electrical components should not be installed in environments that contain possible housing contact elements, unless the electrical components are made of corrosion-resistant materials or suitable corrosion protection measures are taken.

## A.9. Inspection of Electrical Installations

The repair and maintenance of electrical components should include initial safety inspections and component inspection procedures. If there is a defect that compromises safety, the appliance power supply must be de-energized until the defect is properly disposed of. If the defect cannot be completely eliminated in the end, and must continue to operate, then appropriate temporary solutions should be taken, report the situation to the owner of the appliance, and warn all relevant personnel.

The initial security check should include:

- Capacitor discharge should be performed in a safe manner to avoid sparks
- No exposed electrical components and wiring during filling, recycling and cleaning of the system
- Continuity of grounding

## B. Maintenance of sealing elements

B.1 When repairing closed components, disconnect the power supply of the device before opening the sealed cover. If there is power supply during the maintenance process, uninterrupted leak detection should be performed on the most dangerous parts to prevent potential dangerous situations from occurring.

B.2 In the following maintenance of electrical components, special care shall be taken not to cause maintenance methods affecting the degree of protection of the enclosure. Improper maintenance may result in damage to the cables, excessive connection, improper installation of the terminals, damage to the seals, and sealing. Cover installation error and other hazards

Ensure the installation of the equipment is safe and reliable

Ensure that the sealing or sealing material does not lose its effect of preventing the entry of flammable gases due to aging, and the replacement parts should comply with the manufacturer's specifications

Note: The use of silicon-containing sealants may reduce the detection capabilities of leak detection equipment, intrinsically safe components do not have to be isolated before operation

## C. Intrinsically safe component maintenance

If it cannot be ensured that the appliance does not exceed the limits of the allowable voltage and current during use, no permanent inductance or capacitive load must be used in the circuit. The essential Ankh-type element is the only element that can continue to operate within the flammable gas. The test instrument should be set in the correct gear.

If the replacement component can only use components specified by the manufacturer, other components may cause the refrigerant that is leaking in the air to catch fire.

## D. Cable

Check the cable for wear, corrosion, overpressure, vibration, sharp edges or other adverse environmental effects. This inspection should also consider the impact of aging or the continuous vibration of the compressor and fan on the cable manufacturing.

## E. Inspection of flammable refrigerants

Inspection refrigerant leakage should be done in an environment where there is no potential source of ignition and should not be detected using a halogen probe (or any other detector using an open flame)

# Safety Precautions On Servicing

## F. Leak detection method

For systems containing lammable refrigerants, the following methods for detecting leaks are acceptable:

Electronic leak detectors can be used for the detection of flammable refrigerants, but the sensitivity may not be sufficient or may require recalibration (the instrument calibration should be performed in a refrigerant-free environment) to ensure that the leak detector does not become a potential ignition source, and applies to the measured refrigerant, the leak detector should be set to the lowest flammable concentration of the refrigerant (in percent), calibrated with the used refrigerant and adjusted to the appropriate gas concentration test range (max. 25%)

The leak detection fluid is suitable for most refrigerants, but do not use oxygenated solvents to prevent oxygen and refrigerant from reacting and corroding the copper pipeline

If leakage is suspected, all open flames should be removed from the site or extinguished

If a leak occurs where welding is required, all refrigerant should be recovered, or the refrigerant should be completely isolated away from the leak (using shut-off valves). Before welding and during welding, use oxygen-free. Nitrogen (OFN) purities the entire system

## G. Remove and vacuum

When performing maintenance or other operations on the refrigeration circuit, routine procedures should be followed, but the flammability of the refrigerant should also be considered. Follow these procedures:

- Clear refrigerant
- Purge the line with inert gas
- Vacuum
- purge the pipe again with inert gas
- cutting pipelines or welding

Refrigerant should be recycled to a suitable storage tank. The system should be purged with oxygen-free nitrogen to ensure safety. This process may need to be repeated several times. This operation must not be performed with compressed air or oxygen.

In the purging process, the system is filled with oxygen-free nitrogen to reach the working pressure under the vacuum state, and then the oxygen-free nitrogen is discharged to the atmosphere. Finally, the system is evacuated to a vacuum, and the process is repeated until the refrigerant in the system is completely removed. After the last charge of anaerobic nitrogen, the gas is released to atmospheric pressure and the system can then be welded. Such as pipe welding operations, the above operation is very necessary

Make sure there are no ignition sources near the outlet of the vacuum pump and that it is well ventilated.

## H. Charge the refrigerant program

As a supplement to regular procedures, add the following requirements:

- Ensure that when using the refrigerant charging equipment, no inter-contamination between different refrigerants will occur, and the piping for charging the refrigerant should be as short as possible to reduce the residual amount of refrigerant therein
- Tanks should be kept vertically upward
- Ensure that the cooling system has been grounded before filling the refrigerant
- Label the system after filling (or when it has not been completed)
- Must pay attention not to overcharge

The pressure test was performed with oxygen-free nitrogen before recharging the system. After the filling was completed, a leak test was performed before the test operation. A leak test should be conducted when leaving the area

# Safety Precautions On Servicing

## I. Retired

Before proceeding with this procedure, technicians should be fully familiar with the equipment and all its features and recommend the practice of safe recovery of refrigerants. To recycle the recovered refrigerant, analyze the refrigerant and oil samples before performing the work. Before testing, ensure that you have the necessary power supply.

a> Familiar with the equipment and operation

b> Disconnect the power

c> Before proceeding with this procedure, ensure that:

- If necessary, mechanical operating equipment should facilitate the operation of refrigerant storage tanks

- All personal protective equipment is effective and can be used correctly

- The entire recycling process should be conducted under the guidance of qualified personnel

Recycling equipment and storage tanks should meet the appropriate standards

d> If possible, vacuum the cooling system

e> If the vacuum state is not reached, extraction should be performed from multiple places to extract the refrigerant in each part of the system

f> Ensure that the volume of the tank is sufficient before beginning recovery

g> Start and operate the recycling equipment according to the manufacturer's operating instructions

h> Do not talk about tanks being overfilled. (Liquid injection volume does not exceed 80% of the tank volume)

i> The maximum working pressure of the tank must not be exceeded even for a short period of time

j> After the tank filling is completed and the working process is completed, ensure that the tank and equipment are quickly removed and all shutoff valves on the equipment are closed

k > The recovered refrigerant must not be injected into another refrigeration system until it has been purified and tested

## J. Recycling

The refrigerant in the system needs to be removed during maintenance or scrap. It is recommended that the refrigerant be completely removed.

When loading the refrigerant into the tank, use only a dedicated refrigerant tank. It is necessary to ensure that the capacity of the tank is compatible with the amount of refrigeration injection in the entire system. All are tanks intended to be used for refrigerant recovery and are identified with this refrigerant (ie refrigerant recovery dedicated tanks). Tanks should be fitted with pressure relief and shut-off valves and in good condition. If possible, empty storage tanks should be evacuated and kept at room temperature before use.

The recovery equipment should maintain a good working condition, and the equipment operation instructions should be provided for easy reference. The equipment should be suitable for the recovery of flammable refrigerants. In addition, there must be qualified weighing instruments that can be used normally. The hose should be connected using a leak-free, releasable joint and keep it in good condition. Before using the recycling equipment, check whether it is in a good condition, whether it is well maintained, and all the electrical components are sealed to prevent the fire from leaking once the refrigerant leaks. If in doubt, consult the manufacturer.

Recovered refrigerant should be contained in the used storage tank, attached with shipping instructions and returned to the chiller manufacturer. Do not mix the refrigerant in the recovery equipment, especially the storage tank.

If you remove the compressor or remove the compressor oil, make sure that the compressor is evacuated to a suitable level to ensure that there is no residual flammable refrigerant in the lubricant. Evacuation is performed before the compressor returns to the supplier. Only use electric heating to heat the compressor housing to speed up this process. When the oil is discharged from the system, safety should be ensured.

## **NOTICE ABOUT RECYCLING**



Your product is designed and manufactured with high quality materials and components which can be recycled and reused.

This symbol means that electrical and electronic equipment, at their end-of-life,

should be disposed of separately from your household waste. Please dispose of this equipment at your local community waste collection/ recycling centre.

In the European Union there are separate collection systems for used electrical and electronic products.

Please help us to conserve the environment we live in!

## **DECLARATION OF CONFORMITY**

Herewith, we state that this product, complies with the requirements of below directives:

EMC-Directive: 14 / 30 / EU

Low Voltage Directive: 14/ 35 / EU

ErP Directive 09 / 125 / EC

CE Marking: 93 / 68 / EEC

RoHS Directive: 11 / 65 / EU & Delegating Directive (EU) 15 / 863

The detailed declaration of conformity can be found at

[www.fandu.gr](http://www.fandu.gr)



### **Importer:**

Kalliopi Karyda & Co, LP

87A, 17<sup>th</sup> Noemvriou str, P.C. 55534

Thessaloniki – Greece

T: +302316006600 | F: +302316006650