PROLINE ADH12L Compressor Dehumidifier Instruction Manual

PROLINE ADH12L Compressor Dehumidifier Instruction Manual

Please read all instructions carefully before operating the appliance and keep this manual for future reference.

WARNINGS
This appliance is intended for domestic household use only and should not be used for any other purpose or in any other application, such as for non-domestic use or in a commercial environment.

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.

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. For the details concerning the method and frequency of cleaning, please see section “CLEANING AND MAINTENANCE ” on pages EN-11-EN-12.

For disposal of the appliance:

To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle the appliance responsibly to promote the sustainable reuse of material resources, the refrigerants and the flammable insulation blowing gases. The disposal should only be done through public collection points; contact the waste treatment center nearest your home for more details on the correct procedures for disposal.

For installation, servicing:

The appliance should be placed on a horizontal floor and keep the ventilation freely. Don’t try to replace or repair any components by yourself, ask the service agency for help if necessary.

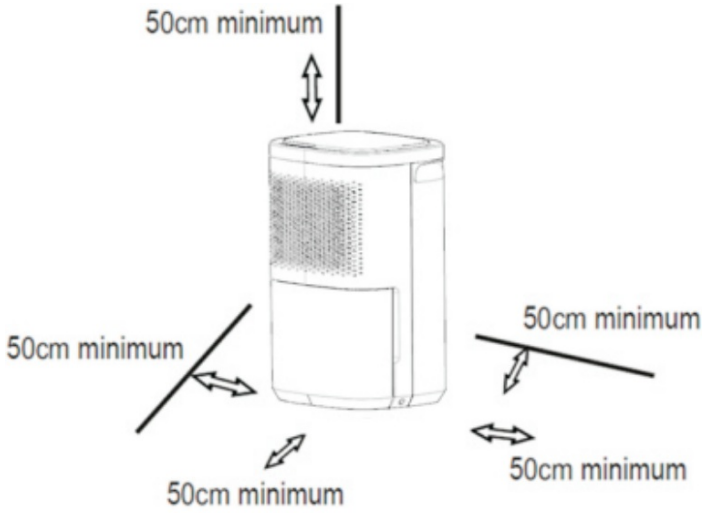
For handling:

Always handle the appliance to avoid any damage. This product contains non-fluorinated greenhouse gas (hermetically sealed) which is dangerous for the environment and contributes to global warming if released to the atmosphere.

Refrigerant type: R290

Global warming potential (GWP): 3 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than refrigerant with higher GWP, flaked to the atmosphere. This product contains a refrigerant fluid with a GWP equal to 3. This means that if 1kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warmingwould be 3 times higher than 1 kg of (02, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

Allow at least 50 cm of space on the top and at the sides of the i appliance for proper air circulation.



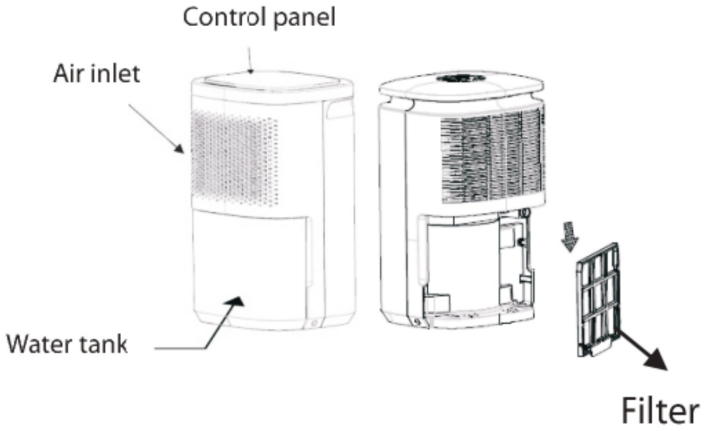
Contents

IMPORTANT SAFETY INSTRUCTIONS

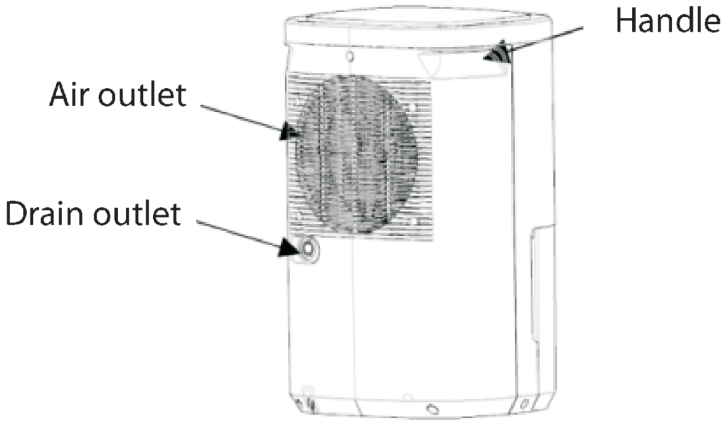
- The dehumidifier is for indoor use only.
- Do not operate or store the dehumidifier in direct sunlight.
- Install your dehumidifier on a stable, level surface. Make sure the surface is strong enough to support the weight of the dehumidifier with a full water tank.
- Do not sit or stand on the dehumidifier.
- Turn off and disconnect the appliance from the mains socket when not in use and before cleaning.
  Do not place any object on the appliance.
- Do not drink or use the water collected in the water tank.
- Do not operate the appliance near flammable gas or combustibles, such as gasoline, benzene, thinner, etc.
- Do not remove the water tank during operation.
- Do not place aerosols or other hazardous materials in the vicinity. Also do not place inflammable materials such as petrol or thinner nearby. These may explode and cause fire.
- Do not place the appliance near a heat source. This may cause the plastic parts inside to melt and catch fire.
- Operate the appliance only on level, stable surfaces.
- Do not place any water container such as a vase on the appliance. Water spillage may cause insulation failure and electrical
  shock or fire.
- Do not stand or lean against the appliance. This may cause it to fall over, resulting in personal injury.
- Do not obstruct air intake or outlet with clothing or anything else. Obstruction of the airflow will cause overheating, malfunction or fire.
- Always empty the water tank before storing the appliance away.

OVERVIEW

Front View



Back View



OPERATION

- The appliance is suitable for use in ambient temperature of 5°C to 32°C.
- Make sure the water tank is correctly fitted.
- Do not connect the appliance to a multiple socket outlet.

NOTE: Always be careful when moving the appliance, especially as water gets higher in the tank; the higher the water gets in the tank, the easier it is for the appliance to fall over when being moved. It is recommended to empty the tank before moving the appliance.

Control Panel

Buttons:

- Power on/off &/

- Relative humidity percentage level setting
- Dehumidifying mode setting
- Fan speed setting
- Timer on / Timer off functions
- Child lock function
- Air purification function
- Sleep function

Indicator lights:

- Hr Timer on/ Timer of
- % Relative humidity percentage level display
- Anti frost
- Tank full or not in place
- Low fan speed
- High fan speed

Dehumidifying

- Normal
- Continuous
- Strong
- Laundry dryer

Display: To show the relative humidity percentage level, the delayed start or delayed stop time.

Power On and Off

1. Plug the appliance into the mains socket.
2. Press  to turn on the appliance.

- The red indicator light on the button will illuminate.
- The display will show the ambient humidity level.

3. To turn off the appliance, press again.
    - The red indicator light on the button will go out and there is no display.

Setting the Dehumidifying Mode

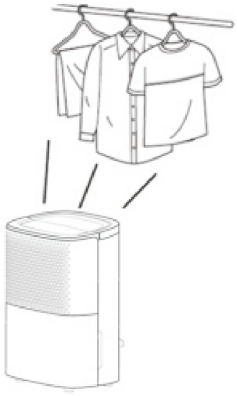
Repeatedly press to select the desired dehumidifying mode.

- The corresponding indicator light will flash about 5 seconds and then stop flashing, indicating that the selected dehumidifying mode is confirmed.
    - Normal
    - Continuous
    - Strong
    - Laundry dry

If selecting the laundry dryer mode, the indicator light will illuminate. The fan speed is fixed and cannot be adjusted. The humidity level will be automatically controlled according to the ambient humidity.

<u>Tips for drying wet cloths:</u>

- Allow a 30-50 cm gap between the air outlet and any clothing.
- To allow good airflow, line the wet clothes up and leave space between each garment.
- Hang wet thick clothing directly in front of the air outlet. The optimal drying performance may not be obtained for thick and heavy clothing.



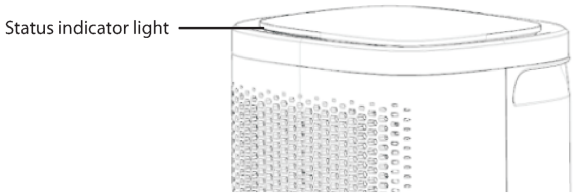
Setting the Humidity Level

In normal dehumidifying mode, repeatedly press to set the required humidity level. The humidity level can be set within a range of 30% to 80%.

- For drier air, set the humidity level for a lower percentage value.
- For damper air, set the humidity level for a higher percent value

Each time you press the humidity level will be increased by 5%. After you have set the desired humidity level, the display will briefly show the set humidity level and then return to actual ambient humidity level.

Check the color of the statut indicator light:



Ambient humidity level	Status indicator light
< 50%	Blue
Between 50% and 70%	Green
>70%	Red

Setting the Fan Speed

In normal dehumidifying and air purification modes, repeatedly press to select the desired fan speed.
The corresponding indicator light will illuminate.

Low fan speed

High fan speed

Setting the Timer

To program the delayed start function:

1. When the appliance is in the standby state, press .
    - The indicator light O and“00” will flash on the display.
2. While “00”is flashing, repeatedly press or press & hold to set the desired hours.
    - The delayed start time will be changed by 1-hour increments up to 24 hours.
3. After about 5 seconds the set time will be confirmed.
4. When the set time has elapsed, the appliance will start working.

To program the delayed stop function:

1. When the appliance is working, press .

- The indicator light O ” and“00” will flash on the display.

2. While“00”is displaying, repeatedly press to set the desired hours.
    - The delayed stop time will be changed by 1-hour increments up to 24 hours.
3. After about 5 seconds the set time will be confirmed.
4. When the set time has elapsed, the appliance will stop working.

To modify or cancel the timer:

- If you wish to modify the set delayed start or stop time, press once and then while the hour is flashing, repeatedly press until the desired time is selected.
- If you wish to cancel the timer, repeatedly press or press& hold until the display shows “00″ After about 5 seconds, the indicator light o will go out.

Child Lock

1. To activate the child lock function, press and hold for about 3 seconds and the indicator light on this button will illuminate. All buttons will be disabled.
2. To deactivate this function, press and hold ~ for about 3 seconds and the indicator light on this button will go out.

Air Purification

1. Press to activate the air purification function and the indicator light on this button will illuminate.
    - You can set the fan speed and timer. When activating this function, the appliance will exit from the dehumidifying mode.
2. To deactivate this function, press and the indicator light on this button will go out.

Sleep Function

1. Press to activate the sleep function.
    - The indicator light on this button will illuminate but the other illuminated indicator lights will go out. There will be no display.
    - The indicator light will remain illuminated if water tank is full.
    - Press any button to wake up the display and indicator lights. After about 5 seconds, they will enter a sleep state again.
2. To deactivate this function, press and the indicator light on this button will go out.
3. - The humidity level will be displayed and indicator lights will illuminate.

Defrosting Function

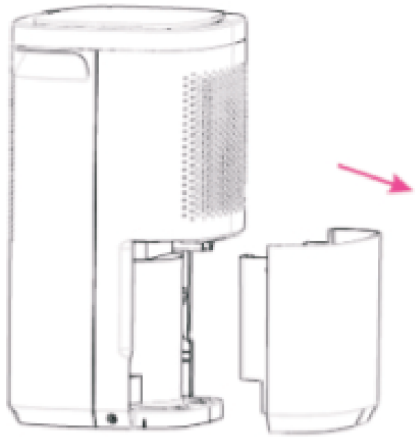
The appliance will defrost automatically when the ambient temperature falls below about 18°C.
The defrosting device will start up and operate for a period of 5 minutes every 25 minutes.

During defrosting, the dehumidifying and air purification functions may intermit.

- Do not switch off and unplug the appliance from the mains socket when the appliance is defrosting.

REMOVING COLLECTED WATER

Emptying the water tank:

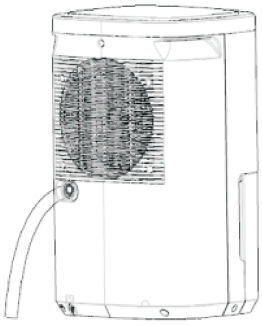


When the water tank is full, the indicator light Owill illuminate. =
The status indicator light will flash red whilst you will hear beeps. ‘

1. Slowly pull out the water tank. ~
    - Hold the appliance firmly and pull out the tank by the handles = on both sides of the tank, being careful not to spill any water.
2. Pour out the water.
3. Push the water tank gently all the way in. –
    - Failing to push the tank securely may cause the appliance to stop operating.
4. When the tank is put back, the appliance will start operating. The indicator light will go out.
    - The status indicator light will restore to the previous colour and the beeping will stop.

NOTE: Never drink the water or use it to water plant.

Continuous drainage:
If the appliance is to be operated for long periods but you are unable 3 to empty the tank, it is recommended to use the continuous drain facility.



1. Remove the rubber plug.
2. Fasten the supplied hose to the drain outlet.
    - Make sure that the hose is not higher than the outlet, otherwise water will remain in the tank. Also check that the hose is not kinked.

NOTE: When the continuous drain facility is not being used, remove the hose from the outlet and attach the rubber plug back to the drain outlet.

CLEANING AND MAINTENANCE

- Turn off and unplug the appliance from the mains socket before performing any cleaning or maintenance operation.
- Never immerse the appliance in water.
- Clean the outside of the appliance with a slightly damp cloth. Dry thoroughly.
- Clean the water tank under running water after empting it.
- Do not use any chemical or abrasive cleaning agent.

Cleaning the filter
Regularly clean the filter.

1. Remove the water tank and pull the filter out of the appliance.
2. Clean the filter in warm soapy water. Rinse and dry it thoroughly before replacing it.
3. Fit the filter back in place.
4. Attach the water tank back to the appliance.

Storage
If the appliance is not used for long periods, after turning off and unplugging the appliance from the mains socket, empty the water tank.
Clean the outside of the appliance. Clean and replace the water tank. Cover the appliance to protect it from dust. Store the appliance upright a dry, well-ventilated place.

TROUBLESHOOTING

Before calling for service, check the following items yourself.

Problem	What to check
The appliance does not operate.	• Check that the appliance is plugged into the mains socket. • Check if the water tank is full. • Check that the water tank is correctly fitted. • Check if the appliance is not turned on.
Dehumidifying capacity (moisture removal) is low.	• Check that all doors or windows are closed or not o pened too often. • Check that there is no kerosene heater or other dev ice giving off water vapour in the room.
The appliance is noisy.	• Check that the filter is not clogged. • Check that the appliance is not tilted. • Check that the floor surface where the appliance • Check that the floor surface where the appliance is placed is stable and level.
Water is leaked or spilled.	• Check that the rubber plug is inserted into the drain outlet when using the tank to collect water. • Check that the hose is connected properly to the dr ain outlet when using the continuous external draini ng facility.

SPECIFICATIONS

Power Supply	220-240V~ 50Hz
Dehumidifying Capacity	
(Under the following test conditions: The ambient temperature DB =30°C, the relativity humidity RH=80%)	12L/ Day
(Under the following test conditions: The ambient temperature DB= 27°C, the relativity humidity RH=60%)	6L/ Day
Rated Input Power	210W (27°C 60%)
Max. Input Power	250W (32°C 90%)
Rated Input Current	1.26A (27°C 60%)
Max. Input Current	1.45A(32°C 90%)
Water Tank Capacity	2.2L
Sound Pressure Level	45dB (A)
Refrigerant/Charge	R290/45¢g
Net Weight	9.5kg
Discharge Side Pressure	1.2MPa
Discharge Side Pressure	2.5MPa

 Read the instructions.

 **Warning:** Risk of fire/Flammable materials!

 Operator’s manual; operating instructions

 Service indicator; read technical manual

DISPOSAL

 As a responsible company we care about the environment. As such we urge you to follow the correct disposal procedure for the appliance and packaging materials. This will help conserve natural resources and ensure that it is recycled in a manner that protects health and the environment.

You must dispose of this appliance and its packaging according to local laws and regulations.

Because this appliance contains electronic components, the appliance and its accessories must be disposed of separately from household waste when the appliance reaches its end of life.

Contact your local authority to learn about disposal and recycling. The appliance should be taken to your local collection point for recycling. Some collection points accept appliance free of charge.

We apologise for any inconvenience caused by minor inconsistencies in these instructions, which may occur as a result of product improvement and development

Service Operations

Symbols

 Caution, risk of fire

WARNING

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 or an operating electric heater.

Do not pierce or burn.

Be aware that refrigerants may not contain an odour.

Appliance shall be installed, operated and stored in a room with a floor area larger than 4 m?2.

Installation (Space)

- that the installation of pipe-work shall be kept to a minimum;
- that pipe-work shall be protected from physical damage and shall not be installed in an unventilated space;
- that compliance with national gas regulations shall be observed;
- that mechanical connections shall be accessible for maintenance purposes;
- Maximum refrigerant charge amount (M): 45 g
- Dispose of refrigerant based on local regulations, properly processed;
- Minimum floor area of the room: 4 m*
- Keep ventilation openings clear of obstruction;

An unventilated area where the appliance using flammable refrigerants is installed shall be so constructed that should any refrigerant leak, it will not stagnate so as to create a fire or explosion hazard. This shall include:

WARNINGS

- the appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation;
- the appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater).
- The appliance shall be stored so as to prevent mechanical damage from occurring.

Information on servicing

Information about the credentials of qualified service personnel as follows.

- 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.
- 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.

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

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

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.

Checking for presence of refrigerant
The area shall 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.

Presence of 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 CO: fire extinguisher adjacent to the charging area.

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.

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.

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 shall 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.

Checks to electrical devices
Repair and maintenance to electrical components shall 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 shall be used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include:

- that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
- that no live electrical components and wiring are exposed while charging, recovering or purging the system;
- that there is continuity of earth bonding.

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.

Ensure that apparatus is mounted securely.

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 shall 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.

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.

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 ageing or continual vibration from sources such as compressors or fans.

Detection of flammable refrigerants
Under no circumstances shall 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) shall not be used.

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 shall 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 shall be set at a percentage of the lower flammability limit (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 pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished.

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall 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) shall then be purged through the system both before and during the brazing process.

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. 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 shall be recovered into the correct recovery cylinders. The system shall be “flushed” with octafluoro naphthalene (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 shall 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 pipe-work are to take place.

Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

Charging procedures

In addition to conventional charging procedures, the following requirements shall be followed.

- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall 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 shall be taken not to overfill the refrigeration system.

Prior to recharging the system, it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

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 shall 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.

a) Become familiar with the equipment and its operation.

b) Isolate system electrically.

PROLINE

Documents / Resources

	PROLINE ADH12L Compressor Dehumidifier [pdf] Instruction Manual ADH12L Compressor Dehumidifier, ADH12L, Compressor Dehumidifier, Dehumidifier