

ARK Services WA



General Operation of your New Reverse Cycle Ducted System

*Includes General Operation Information only,
Not information pertaining to the Airconditioning Unit itself.*

CONTENTS

What to expect from your Reverse Cycle Ducted System	3
Troubleshooting, This is not Irregular, Airflow	4
Check Points Prior to Requesting a Service Callout	5
General At Home Maintenance	6
Pointers for Operation Efficiency	7
Service Schedule Advice	8
Service Record Template	9

For All Service Enquiries:

ARK Services WA
PO Box 7314,
SECRET HARBOUR WA 6174

Ph# 1300 275 247
Adam# 0437 280 048
Email: info@arkserviceswa.com.au
Website: www.arkserviceswa.com.au

WHAT TO EXPECT FROM YOUR REVERSE CYCLE DUCTED SYSTEM

ARK Air believes, when investing in Airconditioning, you have the right to know its performance expectations:

Hot Weather

*Manufacturers Capacity Ratings & Heatload Calculations are based on an outside maximum temperature of @ 40°C. When the temperature is higher than this, the **cooling** performance of your airconditioner will fall away the **hotter** it gets, and room temperatures will **increase** accordingly.*

Cold Weather

*Manufacturers Capacity Ratings & Heatload Calculations are based on an outside minimum temperature of @ 5°C. When the temperature is lower than this, the **heating** performance of your airconditioner will fall away the **colder** it gets, and room temperatures will **decrease** accordingly.*

Occasionally, the weather conditions mentioned above DO occur in WA, so when they do – please be aware there may be nothing wrong with your air conditioning unit itself.

Heating Performance

Please remember that hot air rises – so room temperatures may vary at different levels of the room, so some parts of the room may be warmer than others. The same applies when on cooling mode but to a lesser extent.

To Maximise Efficiency

- **On Hot Days:** Start your airconditioner earlier in the day, before your heatload increases, so the airconditioner can get a head start.
- **On Cold Days:** Start the airconditioner whilst it is still warm outside (above 12-15°C). This will let the airconditioner deliver maximum capacity before performance falls away.
- **Oversize the Unit:** This can assist greatly, but will require a higher capital cost. This can greatly reduce running costs, as the System will not have to run at maximum capacity.

Return Air

Your ducted system is usually designed with one (1) Return Air Grille only, please note:

- *The area around the return air grille will generally always be drafty (as air returns to it), and in winter it will be much cooler than the rooms. This is why we commonly select hallways in which to locate it.*
- *You will have to leave any room's entry door ajar to allow the conditioned air to come back to the Return Air Grille. You cannot close the door as performance will be affected – however if you require internal doors to be closed while the airconditioner is running you are able to have Door Grilles fitted.*

Sizing of your Airconditioning Unit

When recommending a unit, a heatload calculation has been completed on the area to determine the size of the unit required. We also consider the following when customising your design:

- *Curtains will be partly drawn closed in both sunny summer days and at night in winter.*
- *Ceiling insulation has been installed directly above your ceiling*
- *External Doors and windows will be left closed.*

Zones

The way you Zone your home should reflect the way you live - When customising your Quote – we will always ask you how you plan to use your home and Zone it accordingly. We then size the Unit required to cool or heat your home when you have the maximum number of Zones you advise us will be turned on simultaneously – the more zones you wish to use at once - the bigger the unit capacity required to run them.....

Outdoor Unit Noise Levels / Outdoor Unit Location

Local councils have strict regulations on acceptable boundary noise levels, so to abide by these we suggest:

- *Locating the Outdoor Unit @ 3 metres from any boundary. This usually means locating it near your outdoor living areas, carports or the "Dead Side" of your home. The Technician can suggest the optimum location specific to your install upon Site Inspection.*
- *Construct an acceptable Noise Buffer or Acoustic Barrier around your Outdoor Unit / Condenser.*

Noisy Airconditioners may disturb you or your neighbours - we can recommend an idealistic location to reduce the effects of noise produced by the Condenser, however - where you decide to locate your outdoor unit is ultimately up to you. Please be aware that if you decide against our recommended Outdoor Unit location, any future costs associated with moving your Outdoor Unit / Condenser, or constructing a "noise buffer or acoustic barrier" will be yours, we will not accept responsibility.

Remember – The better the quality of Airconditioner - the quieter it will be.

TROUBLESHOOTING

CAUTION!

In Summer when operating on Cooling Mode, water will flow from the Drain from your Indoor Unit to an External point. **If water leakage occurs in your ceiling** from the Indoor Unit, the water catchment tray beneath your Indoor Unit may be overflowing or the Drain may be blocked – **Immediately cease operation and contact ARK Air.**

Please Note: In Winter Water will drain from your Outdoor Unit when on Heating Mode – This IS Normal.

The amount of Water that will drain away from your unit is determined by relative humidity and the running time of your Airconditioner.

As with any other electrical appliance, if you see or smell smoke coming from the Airconditioner – Immediately turn off at the mains and contact ARK.

THIS IS NOT IRREGULAR

Odours from the Indoor Unit

Odours may occur on the indoor unit after a long period of time. Ensure you regularly clean the Return Air filter to combat this incidence.

Water or Steam from Outdoor Condensing Unit

During the defrost cycle, the reversing valve is energised & ice on the outdoor heat exchanger is melted, sometimes creating water and steam or a hissing sound – this is a normal part of the defrost process.

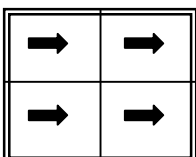
PLEASE NOTE

Unless you are shutting down the Airconditioner for an Extended Period of time, we recommend you always keep the main switch ON – as the sump heater maintains oil temperature when the compressor is stopped - For much the same reasons as you would always warm up your car before you go for a drive – for mechanical efficiency.

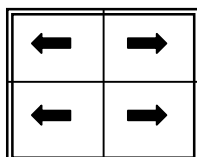
AIRFLOW

Fully Directional Outlet Grilles are designed to give maximum adjustment to airflow. Each of the four cores is adjustable by lifting and turning to direct air from one direction to another. ARK Air only uses these Outlet Grilles unless otherwise instructed. To see some of the Grilles available go to the Photo Gallery.

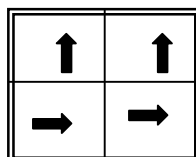
Some Examples of Airflow Directions below:



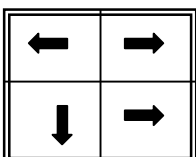
ONE WAY



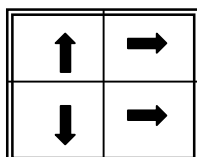
TWO WAY



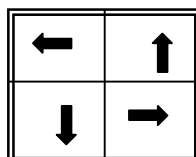
TWO WAY



THREE WAY

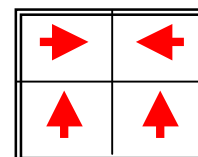
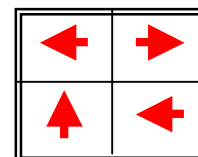


THREE WAY



FOUR WAY

DO NOT DO BELOW:



CHECK POINTS PRIOR TO REQUESTING SERVICE CALLOUT

If the desired cooling or heating effect is not being achieved, please check the following points before requesting repair or service:

If your Airconditioner is not functioning or powering up:

- Is the power switched ON?
- Has the power fuse failed?
- Has the circuit breaker tripped?

If your Airconditioner is Not cooling or heating properly:

- Is the temperature set too high for the cooling or too low for the heating operation?
- Has the controller set on the correct operating mode? (Cooling or Heating)
- Is there an obstruction near the Outdoor Unit?
- Is there an obstruction near the Return Air Grille or Outlets
- Is the Return Air Filter free from clogging by dust, dirt etc?
- Are the external doors and windows completely closed?
- Are there too many zones turned on?
- Are you expecting your System to cool a very hot home too quickly?

If the "LIGHT" starts flashing on your Control Panel:

Check the above again, turn off the operation switch or circuit breaker, wait about 5 minutes, then restart.

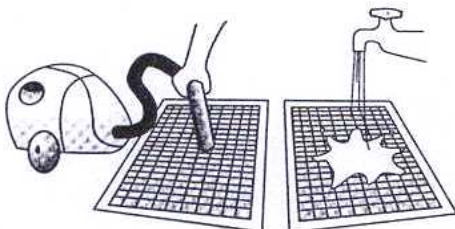
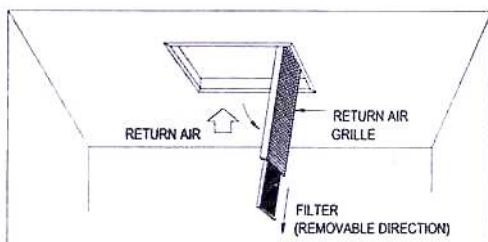
If the "FILTER CLEAN" warning is displayed on your Control Panel:

This indicates it is time to clean filter.

- Remove the washable filter from the return air grille and wash with a hose outside.
- Shake off excess water then re install filter.
- Press the reset button and clear the symbol.

To ensure the best indoor air quality, washable filters should be replaced every @ two years. Contact ARK Air to purchase replacement / new filters.

TYPICAL RETURN AIR GRILLE
WITH REMOVABLE FILTER
(SHOWN IN OPEN POSITION)



If the problem persists or operation is still unsatisfactory after checking all of the above, please contact ARK with the following Information:

- The Date the system was installed to determine whether it is a Warranty Issue or a Chargeable Service Callout.
- The Make / Model details of your Airconditioning System.
- The Fault occurring or the "Fault Code" being displayed on your Airconditioning Controller.

ARK Services WA

Ph# 1300 275 247

Adam# 0437 280 048

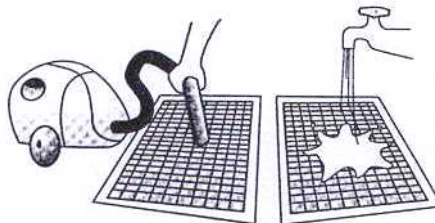
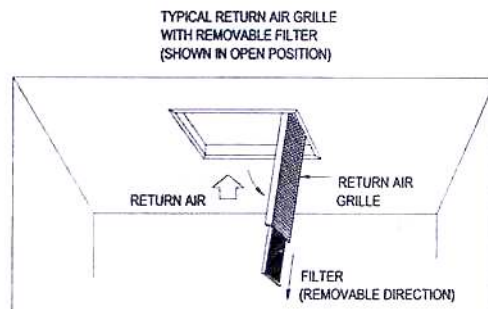
E-mail: info@arkserviceswa.com.au

GENERAL AT HOME MAINTENANCE

1) **Cleaning the Return Air Filter**

It is vital to the efficiency of your Reverse Cycle Ducted System that this is done regularly – LIGHT USAGE: @ every 2-3 months / HEAVY USAGE: Monthly.

- Remove the washable filter from the return air grille and you may either vacuum or we recommend that you wash it with a hose outside.
- Shake off excess water then re install filter.
- Close the grille so you hear it click in properly – if it is not closed properly it can create a rattling sound when the Airconditioner is in use.



2) **Cleaning the Outdoor Condensing Unit**

- Remove any leaves, pet hair or general debris from around the Outdoor Unit.
- Clean the Outdoor Condensing Unit Casing using a soft cloth, or a cloth dampened by a neutral detergent solution or warm soapy water.
- DO NOT use any form of paint thinner, other chemical products, or cleaning / polishing powders.
- A good quality car polish can then be applied to the painted surfaces after they have been cleaned to increase the paint's durability.

3) **Shutting down the Airconditioner for an Extended Period of time** **(For example the non-use of a Holiday Home for a prolonged period)**

- Switch OFF the power at the main power board.
- Clean the Return Air Filter.
- Clean the Outdoor Condensing Unit to remove dust / debris i.e. leaves, waste, paper (see above (2)).
- Spray Outdoor Unit with Rust Preventative.
- Outdoor Unit may be sheltered with a Tarpaulin or similar cover for protection.

4) **Preventative Maintenance / Scheduled Servicing**

Preventative maintenance or scheduled servicing by qualified technicians will reduce the risk of system failure and maintain the efficiency of the overall installation.

Airconditioners subjected to heavy use, a bi-annual service is recommended, whilst units subjected to lighter usage should be serviced annually. Some Commercial Airconditioners may possibly require quarterly servicing. Please refer to our General Technical information page on our website – and if desired complete the Service Schedule Advice on Page 8 of this manual.

POINTERS FOR OPERATIONAL EFFICIENCY

Thank you for purchasing your quality airconditioning system from ARK Air. As you familiarise yourself with your new system, the following pointers will ensure that your system is operating at its ideal capacity – both efficiently and economically - allowing you to enjoy the all year round comfort of a Reverse Cycle Ducted System.

- 1) **ZONES:** When operating a Zoned airconditioning system, remember the system has only a certain capacity; therefore the idea is to utilise only the areas you are in at the time. With this in mind it is sensible to get into the routine of closing the doors that lead to a non air conditioned area, thereby reducing the total area being subjected to airconditioning. This then will enhance the effectiveness of the machine.

ZONE OPERATION:

- Down is on for the zone switches. (240 Volt light switch type plate)
 - Refer to the Zone master operating manual for the electronic touch pad type zones.
 - Select which area you wish to condition and switch on the appropriate switch.
 - There is no need to ever turn all zones off – in this case just turn the power off.
 - You may operate two or more zones at once, depending on the capacity of your unit, design and heat load. For example, under maximum heat load (a hot day) it is better to have fewer zones on than under a low heat load (at night) when an extra zone may be turned on.
 - The zones can take up to 2 minutes to open or close.
- 2) **RETURN AIR GRILLE:** The Return Air Grille is a larger grille normally located in a central position in the building, generally a hallway. It is important to encourage the airflow towards the Return Air Grille as its function is to draw the total air capacity of the system through it - and therefore it requires unrestricted airflow. Depending upon the building you may need to open or close doors around this area to keep the air flowing to this grille. Always leave a room's door ajar at least when that room is supplied air conditioning. This is to avoid room pressurisation.
 - 3) **RETURN AIR FILTER:** The Return Air Grille contains an air filter that needs to be cleaned regularly in accordance with usage and other possible air quality factors. To do this, simply open the grille and slide out the filter as displayed in the picture on the previous page. We believe is best to hose the filter clean, however, some people prefer to vacuum the filter. Regular cleaning of the filter will improve the system efficiency.
 - 4) **OUTDOOR CONDENSING UNIT:** It is imperative that the Outdoor Unit or Condenser is clean and free from impediment - cleanliness around the unit, for example sweeping away any build up of leaves or general debris is generally all that is required. It is critical not to hinder the airflow coming from the condenser, other equipment or general garden paraphernalia should never be stacked on or leant against the condenser. Similarly if a garden is developing around the condenser, this can be an advantage as some of the sound from the condensing unit will be absorbed, although a robust bush can block the air flow so consideration should be given to this, it is also imperative to keep the condensing unit accessible for servicing purposes.

SERVICE SCHEDULE ADVICE

Please see below a Servicing Advice Return Slip, outlining maintenance options pertaining to your installation.

Please advise us which option you would prefer and return it for scheduling to:

ARK Services WA – PO Box 7314, Secret Harbour, WA 6174.

Name: _____ Ref No: _____

Address: _____

Contact Details: _____

(Please circle appropriate)

- A** Please schedule an Annual Service for our Airconditioner.
- B** Please schedule 2 Services per year for our Airconditioner.
- C** I will contact ARK when our Airconditioner requires servicing.

Date: _____ Signature: _____

