



PENRITH AIR SUPPLY PTY LTD

Heating & Cooling Specialists

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Contractors Licence No.28700

Ducted Systems Operating Instructions



GENERAL INSTRUCTIONS

These instructions have been prepared as a guide to enable you to obtain the utmost benefit from your Air Conditioning System, and to ensure that you enjoy many years of comfort.

Personal Instructions

Before your Air Conditioning System is finally placed under your care, the location of the controls and their correct operation will be explained to you. Also the air filter location, its removal and care. Any further special items, which have been individually designed for your particular Air Conditioning System, will be demonstrated and their location explained

Zone System

Your Air Conditioning System has been designed to enable One Zone/Multiple Zones of your home to be conditioned at any one time.

Points to Consider

The interconnecting areas between zones of your total home Air Conditioning System, usually the corridor or passages, acts as a “buffer” zone through which air circulated from the conditioned rooms is “returned” via the return air grille to the system for re-conditioning. The thermostat records the temperature of this “return” air and automatically calls for it to be cooled or heated according to the setting of the controls. Efficient air conditioning depends on free circulation of the conditioned air throughout the particular zone and corridor area. Close all windows and doors leading to outside. CLOSE doors to ALL rooms and areas that are not be conditioned. Check your home for any external draughts as these can affect the economy of your system.

During the summer time, when your Air Conditioning System is operating on COOLING, the corridor area could be at 2.0°C warmer than the conditioned rooms. Thus, to achieve a temperature of 24°C in the conditioned rooms it would be necessary to set the thermostat, which is located in the corridor, to a temperature of 26°C.

On the other hand, during the winter, when HEATING is in operation, the corridor could be 2.0°C colder than the conditioned rooms. In this instance the rooms would be heated to 21°C if the thermostat is set at 19°C.

The temperature difference between the corridor area and the conditioned rooms may vary, in many instances, from those given above. It depends on individual SYSTEM design, the are of the corridors and many other factors.

Assist your total home Air Conditioning System to control comfort within your residence. Do not wait for excessive heat or cold to build up before bringing the System into operation. The SYSTEM is automatic which enables you to leave it on whilst you are out for part of the day.

If the system fails to operate satisfactorily, then check the following: -

1. Thermostat and switches set correctly – refer to paragraph – “TO OPERATE YOUR HOME AIRCONDITIONING SYSTEM”
2. Return Air Filter Clean
3. Zone control switch/s set to correct zone
4. Outside doors and windows closed and doors to unconditioned zones also closed.

**GENERAL
INSTRUCTIONS**

(Continued)

Should it be necessary to register a Service Call, please quote the information requested by our service personnel. You will find this information contained in your 5 year Gold Warranty Certificate. It is most important that this documentation is kept in a safe place.

Humidity

The higher the HUMIDITY, the more effort the SYSTEM will divert towards removing the excess moisture from the air within your residence. Under high HUMIDITY conditions, the temperature inside your residence may not drop as quickly as when the outdoor HUMIDITY is comparatively low.

When such extreme conditions of temperature and humidity do occur, DO NOT RESET the temperature control (1). Lowering the temperature setting will NOT make the SYSTEM discharge colder air.

As the SYSTEM removes the excess moisture from the residence it will maintain comfortable conditions by lowering the HUMIDITY to an acceptable level.

**TO OPERATE
YOUR HOME
AIR CONDITIONING
SYSTEM –
SUMMERTIME**

Set the thermostat temperature control to the “DESIRED TEMPERATURE” (suggested temperature between 24°C and 26°C).

NOTE: - SHOULD YOU SET THE TEMPERATURE LOWER THAN 24°C IN HIGH HUMIDITY CONDITIONS WATER CAN CONDENSATE AT THE CEILING OUTLETS POSSIBLY CAUSING WATER STAINS ON THE CEILING. THIS IS NOT COVERED UNDER WARRANTY.

- (a) Select “COOL” mode of operation on the thermostat.
- (b) Select “ON” or “CONTINUOUS” for the fan operation.
- (c) Set Zone switches to the Zone or Zones to be conditioned.

The home Air Conditioning System will now operate on COOLING, and will continue to do so until the air-cools down to the temperature set by the thermostat.

When the control temperature has been reached, COOLING will stop, but the fan will continue to circulate conditioned air, if set to the continuous position.

Note: Should the temperature rise above the thermostat setting, COOLING will automatically commence and continue until the control temperature has been reached

The fan button allows you to switch between “Auto” and “Continuous” operation. With the switch in the auto position, both the indoor fan and outdoor compressor will stop as determined by the thermostat setting.

When switch is set to “Continuous” the outdoor compressor will stop when the control temperature has been reached, but the indoor fan will continue to circulate conditioned air.

***TO OPERATE
YOUR HOME
AIR CONDITIONING
SYSTEM –
WINTER TIME***

It is possible to operate fan only, when the switch is in continuous position, and the unit is switched off. This enables you to circulate and filter the air in your home.

- (a) Set the thermostat temperature control to the “DESIRED TEMPERATURE” (suggested temp between 19°C - 21°C).
- (b) Select “HEAT” mode of operation on the thermostat.
- (c) Select “AUTO” for the fan operation.
- (d) Set Zone one or zones to be conditioned.

The Air Conditioning System will now operate on HEATING, and will continue to HEAT until the air passing the thermostat rises to the temperature set by the thermostat control. When the control temperature has been reached, BOTH HEATING and FAN will stop operating, and will remain out of operation until the temperature at the thermostat commences to fall. The HEAT and FAN will automatically re-commence the HEATING process. The FAN remains out of operation to avoid circulating the air that is not being heated, otherwise such air may be sensed as cool air and cause discomfort.

***WINTER
DEFROST CYCLE***

In winter months when the outside temperature drops below 7°C, the unit may go onto a defrost cycle.

During defrost, the system will stop heating for up to seven (7) minutes (in fact it will blow cold air during that period).

The need for defrost is reduced when the system is allowed to cycle off as it should. To minimise the need for defrost follow the following operating procedures: -

Do's

- Set your thermostat correctly. For economical and comfortable conditions, we suggest 19°C - 21°C
- Close doors from un-heated rooms
- Turn your system on before your home becomes too cold or hot. Use set-back instead of turning off when it's very cold or hot.
- Let system complete defrosts cycle.
- Only turn on as many rooms as the system was designed to handle.

Do Nots

- Don't set your thermostat too high. This won't heat your space any quicker. It's not like turning up a flame. By setting your thermostat too high you don't allow your system to cycle off and increasing the likelihood of frost forming.
- Don't leave doors open from un-heated rooms. This will result in the thermostat being influenced by cold air from un-heated rooms, causing the system not to cycle off enough – same problem as thermostat set too high.
- Don't wait until your home gets too hot before turning the cooling on. If your home becomes too hot and the outdoor temperature is very high, the system will struggle to reduce the temperature to reach set point.

When you know you're expecting a cold night or morning, set your thermostat back to 16°C instead of switching it off. This will minimise the running time (operating cost) without allowing your home to get too cold. This is how your system has been designed to work.
- Don't turn the system off if it's defrosting (If you feel a cold draft). This will only make the problem worse, reduce efficiency and increase running costs.
- Don't turn on all or too many rooms. The system won't heat any spaces properly system won't cycle off and more defrosting will be necessary.

***START/STOP &
SET BACK
OPERATION.***

When the air conditioning is turned on, there is a period of time when the system operates to bring the active zones to the desired temperature. In moderate conditions this time span will be shorter than in extremes of summer and winter.

You may only want to operate the air conditioning at certain times of the day or night. This is quite satisfactory but remember that, during summer and winter peak conditions some comfort will be sacrificed during warm-up or cool-down period.

To achieve greater comfort in peak conditions it is recommended that, when the house is not occupied the system be programmed to maintain a set-back (moderate temperature) so that the air conditioning system can quickly bring the home to a comfort level when required.

We suggest

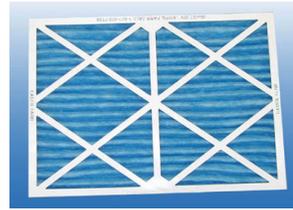
Summer set-back temperature is to be set between 28°C to 30°C.

Winter set-back temperature to be set between 14°C to 16°C

AIR CONDITIONING FILTERS



Washable Filters



Replaceable Filters

FILTER CLEANING

We recommend: -

- a) Monthly – run a rubber or soft nozzle type vacuum cleaner across the face of the return air grille (when the unit is switched off) this removes loose dust and lint off the grille.
- b) Every two months (monthly if your system is being used a lot of the time or in an office situation where it is used every day) check the actual filter.

Washable Filters (Standard Type)

If you have a washable filter and it needs to be cleaned every 6-8 weeks follow this procedure: -

- Remove the filter from the back of the grille and take outside.
- Hose through the back of the filter with fine spray jet from a garden hose.
- When clean, shake off excess water and allow to dry completely before refitting to grille for use.
- When filter wears thin or patchy, have it replaced.

Replaceable Filters

These filters need to be replaced when they become dirty (typically between six and eighteen months, depending on usage) however your filters useable life can be significantly increased by gently cleaning the surface of the filter medium with a vacuum cleaner using a brush fitting. Don't wash this type of filter.

***FAILURE TO FOLLOW THESE PROCEDURES
MAY CAUSE THE RETURN AIR DUCT TO COLLAPSE
AND INCUR WATER DAMAGE
NOT COVERED UNDER WARRANTY***

***NEVER OPERATE AIR CONDITIONING
WITHOUT FILTER IN PLACE***

IMPORTANT NOTICE



Most air conditioning manufactures build into their systems “Safety Switches”.

This is to eliminate the possibility of expensive repair costs to your air conditioning systems due to external reasons such as power supply distribution. Safety switch shut down also extends to the clients general maintenance to their air conditioning systems, even within the five-year part and labour period. Unit shut down can be caused by a number of reasons here are some examples:

- Power surges in your street, power spike, power drop outs.
- Internal filters not being cleaned regularly thus reducing airflow across the fan coil unit.
- Dense planting of shrubs too close to the outdoor unit thus not allowing sufficient air flow to the condenser.
- Household material/items too close to the outdoor unit thus not allowing sufficient airflow to the condenser. (Eg. Wheelie bins,)
- Excessive dust, dirt or paint particles in the air drawn into the fan thus causing airflow obstruction across the condenser coil.

If our service technician deems repairs the system where caused by any of the above finding that your unit has shut down, these were not be covered under our warranty “Terms and Conditions”. Payment to the services mechanic on the day in full will be required.

DRAINS

The fan coil unit located in the roof will discharge water through a main condensate drain from the unit, this drain is run into your gutter. In keeping with good design principles, we have installed a safety drip tray underneath the fan coil unit. The outlet of this safety tray is to run through your eaves, in a noticeable place, SO **IF YOU DO SEE WATER COMING OUT FROM THIS DRAIN, TURN OFF THE AIR CONDITIONING AND NOTIFY US IMMEDIATELY** to have the problem rectified. Please note that regular maintenance avoids this problem and we accept no responsibility for the blocked drains.

Please also be advised that external elements such as wasps, mice etc. can cause drains to block, **again keeping a regular eye on the overflow pipe can help reduce any expensive repairs.**



AVOID UNNECESSARY SERVICE CALLS

Should the SYSTEM fail to operate (or not work as well as you would expect), check the following before placing a service call: -

- 1) Thermostat and switches set correctly – refer to “TO OPERATE YOUR HOME AIR CONDITIONING SYSTEM”
- 2) Fuses intact (or circuit breaker on) on electrical switchboard.
- 3) Power failure – check house lights or power point
- 4) If the system has had a power failure and the power has been turned back on, you will need to wait for five (5) minutes before the unit’s internal safety mechanism will allow the unit to turn on.
- 5) Return air filter is clean.
- 6) The outdoor unit is running and air is circulating (check zone switches are turned on).
- 7) The outdoor condenser coil is not blocked.
- 8) Windows and doors to the outside are closed and doors from unconditioned spaces are closed.
- 9) Comfort zone sensors or controls are clean and getting good air circulation.
- 10) Check number of zones operating (eg. Day and night zones are not to be on all at once)



WARNING

Whenever the SYSTEM is switched “OFF” do not switch “ON” again for two minutes.

Only allow qualified, Authorised Service Technicians to service or maintain the equipment.

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