



WHAT YOU MUST KNOW BEFORE INSTALLING YOUR AIRCONDITIONER.

Easy steps to install the right airconditioning system for your home.

Australia has one of the harshest climates in the world from heat waves to bush fires, droughts, cyclones hail and freezing cold winters. But did you know that air conditioning is one of the most efficient ways you could cool or heat your home?

Air conditioning is essential in Australia - because heatwaves are our deadliest natural hazard. Over 4.6 million Australians use at least one air conditioning unit. Just over one quarter of Australian households (26%) do not use any air conditioning for cooling. This ranges from 48% of Tasmania to 4% of households in the Northern Territory not using air conditioning. This book is your beginner's guide to Air conditioning in Australia to help you make an informed choice about what Airconditioner you need - if any airconditioning at all.

Air conditioners and your energy bill

Air conditioning use is a necessary expenditure for many businesses and it can significantly impact your energy bill. Canstar Blue reports a typical split system air conditioner costs between \$0.25 and \$0.95 per hour to run, so cutting your daily use of air conditioning from six to three hours could save you up to \$163 this summer. Similarly, increasing your air conditioner temperature can also save on running costs. A typical 8kW air conditioner costs \$0.66/hour to run at 21°C, however it only costs \$0.46 to run at 25°C - those savings add up!

It also pays to watch your bills and ensure you're using your air conditioning unit as efficiently as possible. Good insulation, eliminating draughts and keeping your air conditioner at a sensible temperature will help keep costs under control.

New and efficient inverter compressors can save you up to \$4500 per year on annual running costs compared to an older conventional fixed speed compressor (based on a typical 14kw system). Upgrading your system would well be worth the effort and money.

If you want help reducing your energy costs by upgrading to an energy efficient inverter air conditioner, give our team a call and we can look at your system and show you how much you can save on air conditioning running cost that would pay for itself.

The cost of airconditioning



COOLING

The average reverse cycle airconditioner costs around \$0.25 to \$0.95 per hour to run for cooling purposes depending on the size of the room .

~69 cents per hour



HEATING

The average reverse cycle airconditioner costs around \$0.13 to \$0.36 per hour to run for heating purposes.

~25 cents per hour



AIRCON VS OTHER APPLIANCES

What appliances cost more or less to run than an airconditioner unit

MORE

LESS

CROWN AIR



Before installing an air conditioner, consider this!

Most homes lack the basics to protect them from outdoor heat and harsh weather conditions, and many of these basics don't have any running costs like air conditioners do. But most homeowners don't even know what these basics are.

Some things are easily rectified to reduce heat in the home, while others are a lot harder, and that's why it is important when building your home to consider these options and install as your home is being built.

Heat always enters the home through the roof walls and windows. Below are a few important factors we have learned over the years that will help with heat protection. Some of these steps can actually reduce the temperature in your by up to 8 degrees!

1. **Whirlybirds** – these are cheap to install and cost nothing to run and can remove a massive amount of heat that gets stored in your roof, hence keep your home cooler in summer and also warmer in winter. There is also a solar option where solar power is used to power a fan to remove heat from the roof.
2. **Insulation** – this is a must for your home and is very important, doesn't cost a cent to run, and keeps the heat out in summer and the cold in winter.
3. **Roof Sarking** – roof sarking is basically a silver sheeting that sits underneath the roof tiles or colourbond sheets that protect the home from heat and water leaks. For roofs this is a must have! With years of experience working in roofs, we've seen snakes, spiders and everything in between, in our opinion roofs with sarking are always cooler than the ones without.
4. **Window Tinting** – tinting can prevent a massive amount of heat from entering your home just as it does in your car. It also helps with privacy and again cost nothing to run.
5. **Roofs Eaves** – these are very important and provide shade for your home. A lot of new homes are being built without eaves, but if you have the option we recommend installing them to help shade the sides of your home.
6. **Floor Tiles** – can create a cool effect in your home they are also very durable and help spread cool air from the air conditioner.
7. **Materials** – consider using the right materials when building your home. We're not experts in building but some recommendations are solid brick, Hebel, foam concrete blocks, concrete slab floors. For more information speak to your builder or materials supplier on best materials to keep your home heat protected.
8. **Trees** – an easy way to provide great shade, you can always plant small trees or if you're looking to buy a home, try to choose one with plenty of shade.
9. **Blinds** – blinds are very important to the home for helping to keep heat out while also giving the house more character.
10. **Sun Pattern** – get to know the sun pattern in your location. In Australia the sun travels from east to west on the northern side so the northern side of the house will always cop the most sun. In summer the sun stays very high whereas in winter the sun is a lot lower. That's just something to consider if your building or renovating your home.

Buying the right size air conditioner:

Getting the right size Air conditioner is very important. If you get an Air conditioner that's too big it will cost you in extra power bills, and if you buy one that's too small then the Air conditioner may be overwhelmed, overworked and may not be able to keep up with demand on the really hot days.

Some of the factors that may effect your sizing of an air conditioner include:

1. Power Consumption
2. Size of the area needed to be cooled
3. Heat load
4. Intended use of the area
5. Whether any insulation or other measures have been put in place to help control the temperature.

Size chart

Room size in sq.m	Kilowatt
14	1.3kw
15	1.5kw
20	1.75kw
33	2.34kw
39	2.6kw
46	2.9kw
60	4.1kw
84	4.4kw
103	5.2kw
109	5.4kw
133	6.4kw
154	7.3kw
182	8.35kw

Choosing the right type of air conditioner for your size and budget.

Wall hung, ducted, multi-head, floor mount, ceiling mount, cassette, VRV, are all different types of air conditioning systems that you could potentially install in your home, and while choosing the right one may seem a tough ask the trick is to keep it simple.

Most homes would likely be installing either a wall hung split system or ducted.

The others are usually only considered when we have reduced roof space wall space and outside space.

Wall hung split system

This is your typical Split system air conditioning and is one of the most popular options in Australia and around the world. They consist of two units: one installed on a wall inside the house, and one on the outside. Because the compressor/condenser is installed outside, the split system air conditioning is a lot quieter. Additionally, they usually come with extra features such as Wi-Fi connectivity, self-clean mode and other features. This is definitely the more cheaper option.

Prices start from \$1K.



Ducted Air conditioning

Ducted Airconditioning is the easiest and most efficient way to control the temperature throughout the whole home, with a concealed fan coil unit installed in the roof cavity and all the ducting being distributed throughout the home, on the outside we would have one condenser machine which is normally very quiet.

Some contractors will size the system to a zone of the house and not to the size of the whole house. This is done to keep costs down as it requires a smaller system. But with the advancement of technology there is a system now where the air conditioner is in full sync with the zones and temperature sensors are placed in each room so that each room can be individually temperature controlled while the air conditioner runs at ¼ of its full capacity, so a 20kw system can run at 5kw if only one or two zones are on saving you a bucket load of power.

But you still have the option to run the whole house.

Prices start from \$5k.



Multihead system

Multihead system is when you have multiple indoors units connected to a single outdoor condenser unit, this is very convenient for people living in apartments and townhouses where outdoor space is restricted.

Prices start from \$3k.

Floor mount or ceiling mounted split system

Floor mount and ceiling mounted options are usually used when there is limited space on the walls and in the ceiling cavity.

This is a very convenient option for some commercial offices.

Prices start from \$3K.

VRV

A VRV System is a Multi Split Air Conditioning unit that uses innovative technology developed by Daikin over the last thirty years known as “Variable Refrigerant Flow Control” to maintain a consistent temperature level in commercial buildings, smaller office spaces and residential houses.

VRV Systems offer many benefits to the temperature moderation of a commercial space. These include Energy savings, flexibility of control, flexibility of layout and an adaptable design to suit a particular space. Each zone, or area, can be individually controlled with a remote-control setting allowing for different areas of a commercial space or domestic rooms to be individually set to a predetermined temperature to maximise comfort.

Prices start from 20k.



Choosing the right installer/dealer

Most Air conditioning systems require a licensed Refrigeration technician to be able to work on the refrigerant lines and electrician to connect power to the meter board, and choosing the right installer is very important - probably just as important as buying the right air conditioner - because so many problems can happen with Air conditioning installation from refrigerant leaks to air leaks condensation in then wrong places, works not carried out to Australian standards especially when working on the meter board and more.

Always make sure your installer is fully licensed insured and experienced. Having an installer that is endorsed by the manufacture is always a good idea as you know their workmanship will be up to standard. Lots of people walk into the nearest retail or hardware store buy what's on the shelf have their friend or neighbour who used to work as a sparky or plumber to try and install their machine but all they end up with is a air conditioner that doesn't work and the manufacturer won't cover it under warranty because it wasn't installed by a licensed technician.

Installer check list

- Installer is licensed.
- Installer is insured.
- Has the knowledge and previous experience in the work that is about to be undertaken.
- Is endorsed as a dealer by the manufacturer.
- Installer is giving you warranty on the workmanship and complies with the manufacturer's terms of warranty.
- electrical certificate has been provided as to make sure the work is up to the Australian standards.

