



# The Complete Guide To Choosing Your Home Air Conditioner

The Simple, Painless Guide to Buying a  
Split-System Home Air Conditioner

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# Introduction: Choosing an Air Conditioner System



If you're reading this, you probably know that buying an air conditioner can get... complicated. At first, it sounds simple: you just need a system that will keep you and your family comfortable all year round. But air conditioners demand the most energy of any household appliance — on average, [40% of your annual energy use](#), when used for both heating and cooling.

Since our already-high electricity rates keep getting higher, you don't like the idea of a new air conditioner sucking away even more of your paycheck.

Many people might just accept that a new air conditioner will increase their energy bills, but you've heard that there's another option — one that will both keep your family comfortable *and* lower your energy bill.

That's true.

But only if you choose the right air conditioner for your home and family.

For instance, many people aren't even aware that certain energy-efficient air conditioners will lower their heating & cooling bill by up to 46%.

They simply assume that their electricity bill will stay the same (or even rise), so they don't compare various energy-saving options before they buy.

Then they end up with cheap, inefficient systems that don't save them anything — especially if the low quality means multiple repair costs.

It is important that the air-conditioning system selected is right for the area it is trying to heat or cool. The wrong size will end up costing you money.



So if you choose the wrong air conditioner for your house, you could end up spending much more money than you need to – not just on the initial purchase, but for years to come.

Fortunately, the flip side is that you can save – not just now, but for years to come – by choosing the right air conditioner for your home. Thousands of Aussies are indeed saving hundreds per year (and thousands over the life of their systems) by installing energy-efficient air conditioners.

But without a comprehensive guide, choosing the right air conditioner system for you can get overwhelming.

The more you look into it, the more unfamiliar phrases and new questions pop up:

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What's an EER?

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Is it important?

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What does a rating of 3.67 (or 4.76, or 2.9) mean?

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How do ducted air conditioner systems work?

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How about split systems?

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Which type should I get?

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Do I need heating as well as cooling?

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Do I really need all those other features?

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How much could a new air conditioner save on my electricity bill?

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Is it enough to offset the air conditioner's purchase price?

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Is the most expensive air conditioner system always the best?

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However, hours (days?) of Googling all these and talking to air conditioning installer reps can just lead to information overload – especially if you're not sure which answers you really need.

That's why we wrote this guide.

It takes the confusion and overwhelm out of choosing an air conditioner by giving straightforward, thoroughly researched answers to home air conditioning buyer's 8 most important questions.

These 8 questions and answers will give you all the information you need to make your best air conditioner purchasing decision. You'll be able to:

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Understand the important air conditioner options & terms

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Confidently choose your air conditioner type

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Ask the right questions of prospective installers (and analyze their answers)

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Decide between installation quotes

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Know which features you need (and which you don't)

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And much more.

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There's even a bonus – check out the final section on page 17 for simple post-installation tips that maximise your air conditioner savings.

So everything you need to make an intelligent, informed decision about your new air conditioner is right here.



# Do I Need a New Air Conditioner or Not?

Depending on your current air conditioner and its condition, you may not need a new one at all. Sometimes, all an air conditioner needs is a repair.

Other times, repairs won't save you anything; they'll only delay the inevitable (and cost you an extra repair visit on top of it). Here's how to tell whether you need a repair visit or a new air conditioner:

## 1. Is your current air conditioner 15+ years old?

### **Yes: New Air Conditioner**

The most efficient 2003 air conditioner wouldn't even be allowed on the market today, and for good reason.

While 15+ year old systems typically use 6,000 watts/hr of electricity to cool an average-sized house, typical modern air conditioners can cool the same house with a mere 1,710 watts/hr.

As R-22 gas is no longer being produced or imported this will affect most older air conditioning systems. Moreover, an air conditioners' lifespan is about 15-20 years, and as they age they grow less and less efficient.

So even if your old air conditioner is still operating, it's already costing you more per month.

### **No: Proceed to Question 2**

If your current air conditioner is under 15 years old, it might be able to work just fine for your home.

However, if you're having multiple air conditioning problems or high cooling

bills, it's time to double-check whether your air conditioner needs repairs, maintenance, or replacement.

## 2. Has it received regular service visits?

### **Yes, and has no problems: Keep It**

If you're happy with your air conditioner's current performance, there's no need to read any further – enjoy your cool home.

### **Yes, but still has problems: New Air Conditioner**

If it's still having issues even though your local air conditioner technicians have examined your unit and done all necessary maintenance, it might be time for a new air conditioner.

Common problems include:

Undesired air temperature (hot instead of cold, or cold instead of hot)

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Odours

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Excessive noise or strange sounds

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Poor circulation (sometimes this can be fixed with a simple filter change or clean)

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Wear and tear on components



### **No: Have It Serviced & Proceed to Question 3**

Regular professional maintenance is imperative for air conditioner efficiency, so have your local air conditioner maintenance company do a check-up. They'll identify and resolve any simple issues.

### **3. Has your electricity bill risen unexpectedly?**

#### **Yes: New Air Conditioner (Possibly)**

If your electricity bill is rising with no other explanation, it could be your air conditioner's fault. Have it professionally checked and repaired if necessary; if your air conditioner is still losing efficiency after that, it's time for a new one.

#### **No: Repair**

If something else is off with your air conditioner (dust, odours, noises, etc.) but it still runs efficiently, see if your maintenance professional can fix the issue before paying for a new one.

### **4. Has its warranty run out?**

#### **Yes: New Air Conditioner**

If your air conditioner's warranty is expired, replacements and repairs will be difficult, time-consuming, and expensive.

#### **No: Repair**

If your air conditioner's warranty is still covered, have it checked and repaired before thinking of replacement.

### **5. Has it required multiple repairs in the past 2 years?**

#### **Yes: New Air Conditioner**

Unfortunately, if your aircon is regularly maintained but keeps acting up every few months, that probably won't stop any time soon. The inconvenience of repeated air conditioner issues and the expense of continual repairs make a higher-quality aircon a wise choice.

#### **No: Repair**

No air conditioner is perfect – dealing with an issue once every few years doesn't justify a new purchase unless you answered "yes" to one or more of the other questions.

If you're wondering why new air conditioners are so improved from older ones, it's because the Australian government introduced Minimum Energy Performance Standards (MEPS) for aircons in 2001 and has raised them several times since. During that time, manufacturers have drastically improved their air conditioner models' efficiency and environmental impact:

1. Unlike its predecessors, current refrigerator coolants don't harm the ozone layer
2. Inverter-driven motors are 50% more efficient than the previous motor type
3. Automatic & WiFi-connected systems put control in your hands (literally), reducing cost without compromising comfort
4. New materials and designs have maximised air conditioner efficiency

So if you're considering a new air conditioner, now's a better time than ever before.





# Guide to Air Conditioner Types

Single-split? Multi-split? Ducted?

Most people aren't too familiar with air conditioning jargon, so here's a quick guide to the 4 main home aircon types:

Portable air conditioners are best for renters or temporary situations. Since they must draw in warm air to replace the hot air they draw out through the duct, they're only half as

efficient as the other two types.

So if you need to cool major portions of a house, the two main options are a **split-system air conditioner** (either several split systems or a multi-head unit) vs. a **ducted system air conditioner**.

Air Conditioner Type	What It Is	Best for	Purchase Price
Portable 	Single unit w/ a venting duct attached to a window. Can be plugged directly into a socket & moved around the home.	1 room < 20 square metres. Rooms that can't have split systems (i.e., rented rooms)	\$300-\$1300
Single Split system 	Indoor head unit + outdoor compressor unit on ground	1 room or open plan area < 60 square metres	\$1000-\$5500
Multi-Split System 	Multiple indoor head unit + single outdoor compressor unit on ground	2-3 adjacent rooms	\$2000-\$8000
Ducted 	Evaporator fan coil unit in roof with ducting and vents throughout with external compressor motor connected.	The entirety of a large home (zoned systems allow individual vents to be turned off as desired)	\$5000-\$15,000+



# How to Choose: Ducted vs. Split-System Air Conditioner

This may be one of the easiest choices you make about your new air conditioner system. Ducted air conditioners are best for the entirety of large homes, where significant amounts of space must be air-conditioned for most of the day. They may be necessary if you have a large home and really need to cool all of it – but even in that case, installing several split-systems is often far more efficient.

Since most of our homes are moderately sized & most families don't need cooling in every single room, it's more economically feasible to install a split-system air conditioner in several highly-used rooms.

Here's why:



<b>Cost</b>	<b>Split System</b>	<b>Ducted System</b>
Initial Purchase	\$1,000-\$5,500	\$5,000-\$15,000
Installation	Single day, only needs 1 licensed technician (less expensive)	Multi-day, professional installation team needed (more expensive)
Running Cost	\$0.25-\$0.40/hour	\$1.45-\$2.12/hour
Avg. Cost/90-Day Season (4-8 hr/day)	\$325	\$1,620
Can be fully powered by solar PV system	Yes	No

(Statistics from [Canstar Blue](#). Running costs can vary due to factors such as system size, climate, & efficiency.)

It's not just cost either – most people will also find a split-system house more comfortable than a ducted one.





# Gas is no longer the best option?



You might be surprised to learn that gas is no longer the cheapest option for heating your home.

Changes in the gas market mean that the majority of our gas resources are now exported overseas, making it much more expensive for us to buy for use in residential homes.

In fact, [analysis by the Melbourne Energy Institute and Renew](#), has shown that up to one million homes across Eastern Australia (covering ACT, NSW, QLD, VIC, SA), can start saving hundreds of dollars on their heating bills tomorrow, if they switch off their gas heater and turn on their reverse cycle air conditioner instead.

Such savings were also found in a recent report by Renew, which explored the economic benefits of switching a whole range of gas appliances to electricity including hot water, heating and cooling and cooking. The extent of the savings

depended on the number of gas appliances in your home and your location across the country. Please see the [Renew report for more details.](#)

## Environmental Benefits

Gas also used to be seen as a cleaner source of energy (compared to burning coal). But, with diminishing gas supplies it is now increasingly extracted from coal seams and shale layers. Hydraulic fracturing or ‘fracking’ is a method used to extract hard to access fossil fuels. This gas extraction method can have significant environmental and agricultural impacts.

Using electrically powered heating options, such as reverse cycle air conditioning, means you can heat your home with renewable power. Whatever source your renewable power comes from, it’s a better choice for the environment.



# How to Choose: Split-System Air Conditioner Size



This question's a little more complicated. You don't want to pay extra for a bigger-than-necessary air conditioner, but neither do you want an overworked air conditioner that's still too small for your family's needs.

Fortunately, you aren't in charge of figuring out this particular question. A qualified air conditioner professional should always give you a home-visit assessment before you make any air conditioner size decisions.

The assessor will analyze your house, use of rooms, and cooling needs before giving you an air conditioner size recommendation.

However, you should be ready to converse with the assessor and understand the reasons behind their recommendation.

[This rough guide from Choice Magazine](#) allows you to make an approximate assessment so that you and the technician can be on the same page when discussing your new air conditioner's size:

<b>Room size</b>	<b>Capacity</b>
Up to 20 square metres	2-2.5kW
20-40 square metres	2.5-5kW
40-60 square metres	4-6kW
60+ square metres	6-9kW



You can also get a good idea of the correct size by using Fair Air's online [air conditioner calculator](#).

During the home visit, make sure that the assessor takes into account:

**Room Use** (i.e. if no one spends much time in your back hall, you probably don't need it cooled)

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**Room Size** (length, width & height)

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**Room Orientation & Sunlight Exposure**

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**Local Summer Temperatures**

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**Local Winter temperatures** (for a reverse system)

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**Number of Windows**

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**Window Size & Orientation**

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**Wall & Ceiling Insulation**

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And our best advice:

### **Insulation Assessment Before air conditioner Size Assessment!**

No one wants to pay for an air conditioner that spends unnecessary money trying to heat or cool a drafty house.

And you certainly don't want to pay for installing & running a larger air conditioner than you need just because cool air is leaking out easily fixed cracks, poor insulation, or unsealed draughts.

So before you invite the air conditioner assessor over, invite an insulation & weather-proofing professional over first. They'll be able to identify and fix any issues that allow conditioned air to seep out.

Only then will the air conditioner assessor be able to give you an accurate picture of the most budget-friendly air conditioner for your home.

Want to arrange a home visit with a professional, trustworthy air conditioning technician? Just request a no-strings, no-pressure quote [here](#).



# How to Choose: Other Split-System Air Conditioner Features

Now that you've got a good idea of your air conditioner type and size, it's time to look at all the bells and whistles that come along with different systems:

## Energy Efficiency Ratings

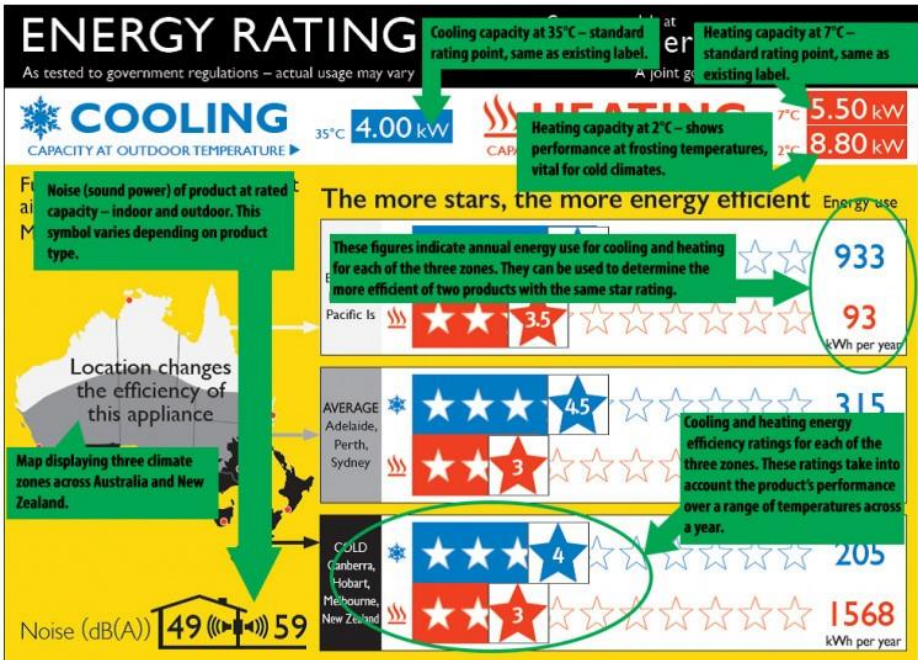
This is by far the most important aspect of your new air conditioner; the more efficient it is, the lower your electricity bill and the more you save.

All split-system air conditioners are required to have an Energy Efficiency Rating sticker that looks like this:

The two most important pieces of information are the star rating and the Energy Efficiency Rating (EER.)

Both rate an air conditioner's efficiency. Look for 5+ stars and an EER of 4 or above.

Note that an energy-efficient air conditioner may have a higher purchase price than a low-efficiency model. However, lower energy bills will make the energy-efficient air conditioner pay for itself, then save hundreds over the





lifetime of your new system. (If you want to see how much, check out the [official government energy cost calculator](#).)

So it's still the more budget-friendly option.

This is all the information you really need from the label. But if you're interested in decoding the rest, check out [this official government guide](#).

## Noise Level

These aren't the obnoxious, roaring air conditioners of yesteryear.

Today, up-to-date indoor units purr at a whisper-like level of 19-53 dB.

So even at their loudest, they're still quieter than the 60db we use in ordinary conversation.

Meanwhile, outdoor units operate at 42-69 dB – the range of a refrigerator, light traffic, or a normal discussion.

This makes modern air conditioner units

some 20 times quieter than 20-30 year old units, so most people won't need to worry about picking the quietest air conditioner.

## Automatic Timer

Most current air conditioners come with automatic timers. You'll be able to program room temperatures that complement your family's work, sleeping, and activity schedules. This will keep your home cool and welcoming when people are there, and save on electricity when everyone's out.

If you have solar panels, you can also time your air conditioner to run during the day for maximum savings. This use of cheap solar energy will leave you with lower electricity bills and a cool home when you come back in the evening.

Many modern options are also wi-fi connected, which enables you to raise and lower individual room temperatures





any time & anywhere via your mobile phone. While not strictly necessary, this convenient control appeals to many.

### Room Sensors

Smart homes? Meet smart air conditioners.

Room sensors alert your air conditioner when people are in or out of a room. Your air conditioner will then act accordingly, reserving energy for empty rooms and providing it to occupied rooms.

This option isn't necessary by any means, but could be useful if your family tends to move in and out of various rooms without any particular pattern.

### Dehumidifier

If you live in a year-round dry area, you probably don't need one.

But if your area experiences high humidity or seasonal rains, a dehumidifier is a must – not only to relieve you from that sticky humid feeling, but also to keep your air conditioner and home air pure of any mold or fungus growth.

### Demand Response Technology

Air conditioners with Demand Response Mode Technology (DRMT) allow your electricity distributor to switch your aircon to economy mode during periods of high grid demand – for instance, extremely hot days and evenings.

Your family's comfort level remains the same; most of the time, you won't even notice whether the air conditioner is switched to economy mode or not.

In addition, some communities financially reward participants of the program, since they reduce peak grid demands and the need for more infrastructure.

Check a split-system air conditioner's energy rating label to see if it's capable of DRMT. You'll see 3 modes on it:

Mode 1: the appliance is capable of being turned off and on

Mode 2: the appliance is capable of being turned down by 50%

Mode 3: the appliance is capable of being turned down by 25%

We recommend air conditioners capable of operating in all 3 demand response modes.

Demand Response (AS4755)		
Mode 1	<input checked="" type="checkbox"/>	Mode 2 <input type="checkbox"/>
		Mode 3 <input type="checkbox"/>





# How to Choose: Locations for my Split-System Air Conditioner

A good air conditioning installer will provide a placement plan for both the indoor and the outdoor components of your new air conditioner.

When discussing this plan with the installer, look for these placements in particular:

## Indoor

On high walls or ceilings (since cool air sinks)

Over sitting and sleeping areas

In hottest & most used rooms (i.e., the kitchen)

Near center of room

Easily accessible

Not above electrical fittings (which pose a fire hazard)

Not close to dust or particle sources (which clog filters)

## Outdoor

Usually the outdoor component will be on the ground outside the air conditioned room. Check for placement:

On firm concrete base or securely bracketed to wall (so the component won't vibrate)

As close as possible to indoor component

Enough space on both sides for regular airflow

Easily accessible

Shaded from direct sunlight (use an awning if needed)

Not near any corrosive substances

Again, a well-qualified installer will ensure proper air conditioner placement.



# Our Heater Recommendations

## For Rooms and Whole-House Heating: Reverse Cycle Split-System Air Conditioner

Even though they're called air conditioners, these systems are an excellent heating choice in Australia for several reasons (including the fact that nearly 50% of homes already have them!)



### Running Cost & Efficiency

This is where reverse-cycle air conditioners truly shine.

First, all types of resistive heaters can never be more than 100% efficient, since they rely on turning electricity directly into heat.

In contrast, reverse-cycle air conditioners use heat pumps. These don't have to create heat; they simply move existing heat from one place to another. Since moving heat is much less energy-intensive than creating it, many reverse-cycle air conditioners have 600% efficiency.

In other words: for each unit of electricity they use, these aircons provide up to 6 times as much heat as other heater types.

Heater Type	Running Cost/500 hours
<i>Small gas (1.5kW)</i>	\$212.50
<i>Portable Electric Heater (2.4kW)</i>	\$312.50
<i>Small reverse cycle air conditioner (3.5kW)</i>	\$113.83

Source: Choice Magazine

### Convenience and Comfort

Many people considering a reverse-cycle split system ask whether it provides the warmth as a ducted or hydronic heating system. They worry that the air movement in a reverse-cycle system might have a slight cooling effect on the hot air, thus making the split system run at a higher setting for the same comfort level.

While all convective heaters have a very subtle cooling effect, many reverse-cycle heater manufacturers have improved their product design to minimise it.

For instance, many air conditioners come with more (and wider) air outlets that circulate air at slower speeds. Many also direct air flow over the walls, floor, and/or ceiling (instead of blowing air directly onto occupants). This allows air to move further across the room at a slower pace, which will effectively warm (or, in summer, cool) your room at a low setting.



# BONUS: 6 Energy-Saving air conditioner Strategies

Whether you're the proud owner of a brand-new air conditioner or just wondering how to lower your electricity bill, practice these habits to get the most cooling at the lowest price:

## 1. **Set Your Temperature Wisely**

Set your thermostat to cool to 23-26 degrees in summer. In winter, only heat the house up to 18-20 degrees.

Every degree lower or higher can add 10% to your running costs. You'll hardly notice a couple degrees warmer or cooler, but your electricity bill will.

## 2. **Use Fans**

Sometimes, a fan's all you need for some welcome cooling air.

Other times, you can use it along with your air conditioner to help circulate the conditioned air. This lets you set the thermostat to a higher temperature while enjoying the same comfort (see #1.)

## 3. **Shade Outdoor Unit**

Either have your outdoor air conditioner component installed in shade, or protect it from direct sunlight with an awning.

## 4. **Maintain Regularly**

Use the maintenance schedule contained in your air conditioner's manual. This will head off many energy-sapping or expensive-to-fix issues before they even begin.

## 5. **Clean the Filter**

Clogged filters make your air conditioner work much harder to produce the same effect; for optimum energy use, clean them regularly.

## 6. **Only Heat or Cool Occupied Areas**

If no one's in a room, there's little reason to condition it. Room sensors (see page 14) automatically lower conditioning in unoccupied rooms, but you can also program your air conditioner to only heat often-used areas.

Alternatively, you can set a timer for your aircon to turn off after a period of time or get in the habit of turning it off when you leave.

## 7. **Keep Doors & Windows Closed**

Tell your fellow inhabitants to keep all doors and windows closed as much as possible. Using thick curtains in sun-exposed rooms is also a great way to keep temperatures lower.

If you have an open plan home, you might consider using a door curtain in hallways when you want to keep in warm or cool air.

While this guide answered the big 8 questions about home air conditioners, we know that you'll probably think of many more as you consider this major decision.

Our team of experienced heating and cooling technicians is here to answer any questions you have about choosing and using an air conditioner: just get in touch with us at 0421 645 937 or email [chris@articoair.com.au](mailto:chris@articoair.com.au) friendly, unbiased professional guidance.

If you're ready to get a free, no-pressure quote from a thoroughly vetted energy-efficient air conditioner installer, [click here](#).

And finally, thank you for reading our **Complete Guide to Choosing Your Home Air Conditioner**. We hope you found it helpful in your journey towards a comfortable home with lower electricity bills.

## ArticoAir

Artico Air Pty Limited (ABN 29 417 850 238) is a leader in the area of installation and repair and maintenance of cooling and heating systems.

## Get in touch today

Contact one of our energy advisors on **0421 645 937** or [chris@articoair.com.au](mailto:chris@articoair.com.au).

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