



Air Conditioner Buying Guide Quick Reference Handout

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Air conditioners help control the temperature and humidity in your home, but it's important to get the right type.

1. What is an air conditioner?

An air conditioner is a small appliance that provides cool air in the home by removing warm air and replacing it with cooler air. They work in different ways depending on the type.

2. Types of air conditioners

There are three main types of air conditioners: portable air conditioners, window air conditioners, and mini split air conditioners, also referred to as wall air conditioners.

- **Portable air conditioners**

This is a floor standing appliance that vents through a window using an included kit to either evaporate condensation back into the air or pool water for drainage. They fit in a standard window: you can cut the kit or use a material like plywood if it's larger or smaller than the window, respectively.

Advantages of a portable air conditioner

You can move them from room-to-room – they are the easiest to move around as needed.

Can be used in rooms without windows – while it will require additional accessories, you could theoretically install a portable AC in a room without a window, using a sliding door or drop ceiling, for example, for venting.

Stores away easily in the off-season – many come on castors so it's easy to remove the vent hose and wheel it away into a closet or garage for off-season storage.

Easy to set up – they require minimal installation and can be up and running in 15-30 minutes.

Good for temporary installation – for renters where a window AC might not be permitted, a portable AC is a viable solution.

Disadvantages of a portable air conditioner

They take up a lot of space – they sit on the floor and use up valuable floor space.



They aren't as effective for cooling larger spaces – these are best for smaller rooms, though it depends on the BTUs.

They can be expensive – because of the portability and added features, portable ACs can sometimes be expensive.

They can be loud – they are arguably the loudest of the three main types of air conditioners.

- **Window air conditioners**

These install into a standard-sized window opening and exhaust hot air outside while bringing cool air in.

Advantages of a window air conditioner

They are more discreet – they don't take up any space in the room.

Can be quieter – they are usually quieter than portable AC units.

They are more affordable – these are among the most affordable types of AC units you can buy.

Disadvantages of a window air conditioner

Not as easy to remove - they aren't as easy to uninstall.

They need to fit the window – you will need to measure to make sure it properly fits the window.

Not for renters – most rentals will not permit window AC installation.

- **Mini split air conditioners**

These consist of two units: a long unit inside the home that evaporates air and a larger piece that sits outside and functions as a compressor or condenser. They provide both cooling and heating.

Advantages with a mini split air conditioner

They are efficient – they run efficiently, cool or heat a space quickly, and are ideal for larger spaces.

They run quietly – despite the large size, these are among the quietest of options.

They heat, too – in addition to cooling, you also get heating.

Disadvantages with a mini split air conditioner

They are more expensive – these are the most expensive types of air conditioners you can buy, due to their efficiency, dual functionality, and permanent installation.

They require professional installation – you'll need the assistance of a professional to run conduit through the wall from the inside unit to the one on the outside.

Takes up significant space – they fit on the wall and are quite large, so you might not want them for



smaller rooms or rooms with low ceilings.

Not easy to move around or uninstall – once installed, these units typically remain there permanently. But they can be used all year.

3. Choosing the right size air conditioner

Regardless of the type, it's important to consider the right physical size of an air conditioner based on a few factors.

Ceiling height – higher ceilings mean there's more room for air to circulate so you might need a bigger unit.

Room size – bigger rooms require more cooling, including higher BTUs. If you have the space to accommodate it, you can go with a bigger type or model of air conditioner.

Number of people – humans generate body heat so take this into consideration if you have a large family or the AC is in a room with a lot of activity.

4. What are BTUs in an air conditioner?

BTUs (British Thermal Units) measure how much heat an air conditioner can remove from the air, relative to the room's size.

ASHRAE vs. DOE's SACC measurements

ASHRAE figures provide the total number of BTUs that an air conditioner outputs while the SACC (Seasonally Adjusted Cooling Capacity) figure provided by the Department of Energy (DOE) also takes into account the heat the unit itself generates. This results in a lower number but also provides a more accurate representation of how many BTUs you will need to efficiently cool a room based on its size.

5. What to look for in an air conditioner

BTUs and size of room – look at not only the BTU number but, if available, the DOE SACC number and measure this against the size of your room.

Where do you plan on putting the air conditioner? – consider where the window is, where the power plug in, and whether this position will be able to cool multiple rooms or just one.

Noise level – this is especially important if the AC will be in a room like a nursery, home office, or bedroom.

Storage considerations – if you want to put it away in the off season, you need to factor in where it will go.

How much space do you want to cool? – for an entire house, it might be wise to either get multiple window AC units, or a larger mini split.

Cost – It's important to remain within your budget while also finding something that will meet your needs.

Environmental friendliness - look for an Energy Star label or evidence that it runs efficiently.



Ease of installation and maintenance – each one has different requirements in terms of installation and maintenance that should be considered.

Convenience and smart features – the latest and more premium models have features like built-in Wi-Fi and app control, timers, automatic functions, and more.

6. Installation of an air conditioner

How to install a window air conditioner – you'll need a screwdriver, drill, measuring tape, and weather stripping.

How to install a portable air conditioner – you may be able to install without tools, or a screwdriver and drill, and might require filler for the window, or to cut the window kit to fit.

How to install a mini split air conditioner – refer to a professional for installation.

7. Should you get an AC with dehumidification for your home?

There are advantages in considering these dual-function machines.

They remove humidity and moisture from the air – this helps maintain a comfortable temperature and prevents musty odours, peeling paint, dust mites, and mold.

Perfect for apartment dwellers – if the AC hasn't kicked in before the weather gets hot and humid, this will help.

Consider a separate dehumidifier – you can also purchase a dehumidifier separately and have the two small appliances work hand in hand.

8. Will you need accessories for an air conditioner?

Air conditioners don't typically require accessories, but you can look at things like covers for a window AC, side panel replacements, and a mounting bracket for the outdoor portion of a mini split AC. But most will come with everything you need.