



Reverse cycle air-conditioning

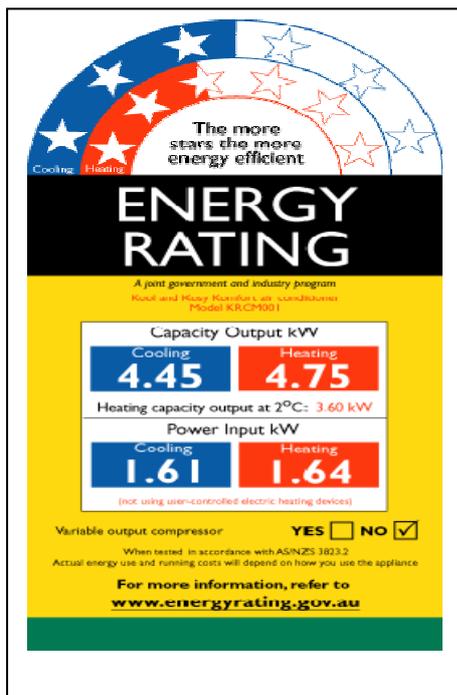
The most popular choice for heating and cooling in caravan parks are reverse cycle air conditioners. Before you purchase an air conditioner, you need to know the size of the area you wish to cool. An air conditioner that is too small for the area will not be effective. An air conditioner that is too large will cost you more to buy and run, and can also suffer more wear and tear because the thermostat repeatedly switches itself on and off to reach the desired temperature.

Features to look for when buying air conditioners

Energy rating labels appear on many electrical appliances, and feature star ratings detailing comparative energy efficiency on a scale of one to six. The more stars, the more energy-efficient an appliance is, and the more money you will save in running costs.

For similarly sized units, one of high efficiency (3-6 Star) can be up to \$220 a year cheaper to run. For larger units energy efficiency can be measured by the unit's *co-efficient of performance (COP)*. COP measures the amount of heat the unit can produce for each unit of electricity it consumes. The higher the COP, the lower the running cost will be. For example, a unit of COP 3.0 can be up to \$220 per year cheaper to run than one of COP 2.5.

When choosing a reverse cycle air conditioner that is not Star rated, look for a COP of at least 2.5.



Inverter technology

Inverter technology is available with most brands of reverse cycle air conditioners.

This technology enables the compressor to operate at variable speeds depending on the output required and can potentially reduce running costs, particularly over longer operating periods. Inverter air conditioners also tend to have faster heat up times and maintain more comfortable internal temperatures.



Air conditioners in cold climates

Heat output of some units declines when outside temperatures drop below 5°C. Look for models which guarantee performance in cold conditions.

Some models may not function as effectively in temperatures below 5°C, although some have an auxiliary heater or de-icing capacity to assist in cold weather.

Auxiliary heaters run on peak electricity, and can increase running costs if used excessively. If you live in colder areas of Victoria, it is critical to check with your supplier before purchasing, about the minimum temperature your system will operate under before purchasing.

The most economical space heaters in terms of running costs are either:

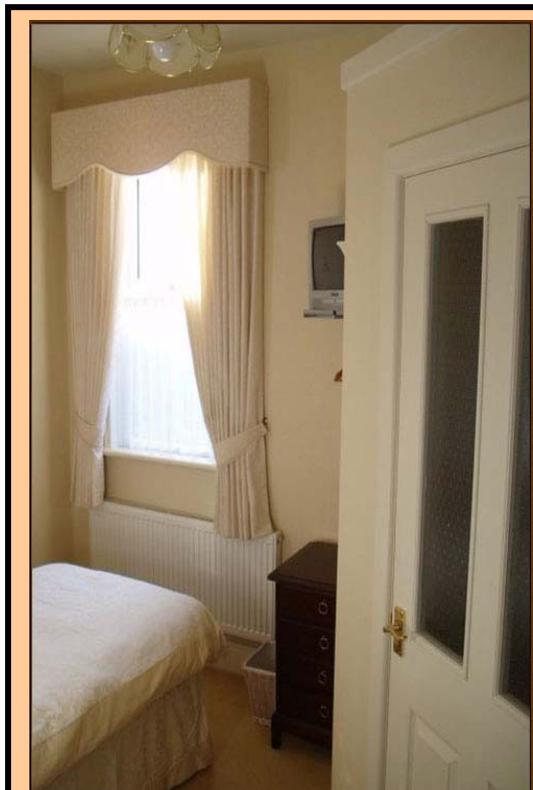
- High efficiency (5-6 stars) natural gas heaters;
- High efficiency (5-6 stars) reverse cycle air conditioners; or
- Off peak electric storage fan heaters.
- Some 5 or 6 star rated gas heaters and air conditioners are up to 50% cheaper to run.



Energy saving tip when using an air conditioner

- Ceiling fans are very economical to keep air moving and keep the building more comfortable
- Install the air conditioner (or outdoor unit of a split system) on the shady side of the building (or shade the air conditioner itself); make sure the air flow around it isn't obstructed
- If the air conditioner has them, adjust louvers towards the ceiling when cooling, and towards the floor when heating (as cool air falls, and hot air rises)
- Keeping your building cool in summer by making sure it is well insulated and by shading north, west and east facing windows; where practical, external shading or blinds work better than internal blinds
- Good design and insulation - ceiling and pedestal fans, blinds and lighter coloured curtains are all energy efficient ways you can cool a building

- Keeping your building warm in winter by making sure it is well insulated, and that shading or blinds on north and west facing windows are open during the day to let in winter sun. Use thick curtains, especially on large windows, and close them as soon as the sun goes down. Exclude draughts by closing gaps under doors and around windows (but make sure that you still have adequate ventilation). Try and prevent heat escaping to upper floors by closing doors, and install fans to send the heat back down again.
- Limit the flow of heat through your roof, walls, windows and gaps - Insulate ceilings, walls and floors. As much as 35% of heat loss is through uninsulated ceiling; uninsulated walls account for a further 15% to 25% and uninsulated floors lose between 10 and 20% of heat
- Run or set the heater fan on its highest setting for best efficiency and heat distribution. Fans cost around 1-2 cents an hour to run
- Maintenance – well maintained equipment operates better and costs less to run. Maintain your heater. Keep reflectors shiny and dust free, and clean air filters regularly. Service all heaters according to the manufacture's instructions



Pelmets and window coverings are an effective way to retain heat in cabins

Useful Information

Australian Consumer Association
(Choice) www.choice.com.au
Energy Star - www.energystar.com.au
Energy Rating
www.energyrating.gov.au
Sustainability Victoria
www.sustainabilityvic.gov.au
Australian Greenhouse Office
www.greenhouse.gov.au
Australian Gas Association
www.gas.asn.au
Moreland Energy Foundation
www.mefl.com.au/
Department of Environment and Water
Resources www.environment.gov.au