

YOU CAN REUSE YOUR AIR CONDITIONER'S BLEED WATER ON THE GARDEN

Evaporative coolers use water as a cooling medium by way of evaporation.

This means that as water is being evaporated, there are left over mineral deposits dissolved in the water.

During normal or prolonged use these minerals build up in the reservoir of the evaporative cooler.

The build-up of these mineral deposits turn the water hard and this hard water can do irreparable damage to an evaporative cooler if it is not managed correctly.

The method used to manage this is which this used water is 'bleeding off'.

Bleed off is usually done manually through a small bleed off tray located in the cooler or can be done via automatic dump valves.

The correct setting of this bleed rate will ultimately determine the life of the evaporative cooler.

In instances where town water is not hard with mineral deposits the bleed rate should be set at the manufacturer's minimum bleed off rate of approximately 10 litres per hour.

This would be seen as a fast drip where the bleed off line is visible.

Where town water has a higher level of "hardness" a higher bleed rate may be required.

Most bleed off lines normally run to a vent pipe located on the roof or to the roof gutter.

This bleed off water line can be run from the evaporative cooler to the front or back lawn or to a garden bed where it can be reused while the cooler is in operation.

Fitting taps or water dispersion devices to this bleed off line is not recommended and could possibly cause damage to the evap cooler.

This bleed water is considered to be greywater it should not be stored or captured, but run directly to the garden at the point it is required.

USE ELECTRIC FANS

Electric fans are a great way to stay comfortable over the hotter months without using water.

The installation of electric ceiling fans are also a cheap and efficient way to circulate air in a room.



Using ceiling fans in conjunction with your evaporative air conditioning will markedly reduce the temperature in the home.

Likewise, if your system has the option to, you can run just the fan on your evaporative air conditioner, without running the water pump.

DIFFERENT KINDS OF PADS FOR AIR CON UNITS

Wood fibre pads have a lower efficiency rating than cellulose bonded paper media.

Wood fibre pads are typically discarded and replaced annually, usually at the beginning of the cooling season.

Residential, commercial, industrial and agricultural application of wood fibre cooler pads has diminished over that past 20 years due to the growing need for longer pad life and a desire for lower seasonal maintenance and high efficiency evaporative cooling.

Cellulose bonded paper pads, if properly maintained should last multiple seasons.

CONSIDER SYSTEM DESIGN WHEN REPLACING AIR CON

Ensure when replacing or installing a new cooler that you take into consideration changes or additions to an existing dwelling.

Sometimes installing like-for-like is not always the most efficient practice for replacement.

A *heat load calculation* by a qualified professional should be carried out prior to new installations or replacements.

Council would like to acknowledge Grosvenor Engineering Group for some of the technical information contained in this fact sheet.

EVAPORATIVE AIR CON – FACT SHEET

EVAPORATIVE AIR CONDITIONERS CAN BE USED ON LEVEL 5

Evaporative air conditioners can be used on Level 5 water restrictions, but must be operated as efficiently as possible.

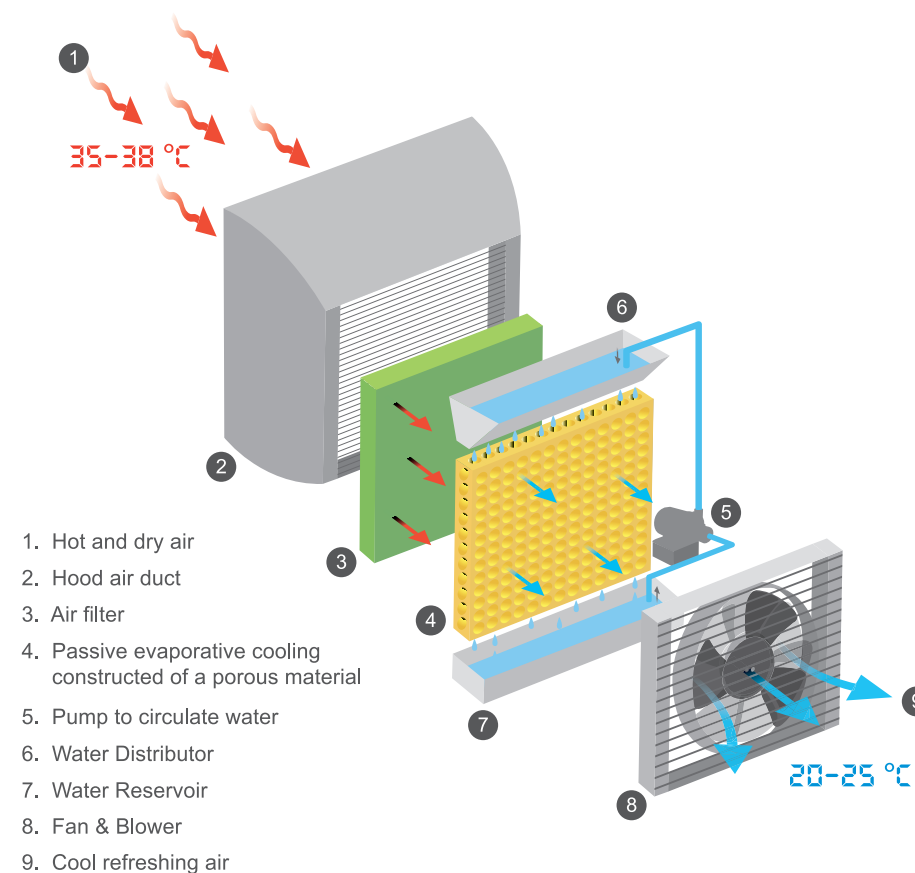
REVERSE CYCLE, REFRIGERATED OR EVAPORATIVE – WHAT'S THE DIFFERENCE?

Evaporative coolers pass warm air through a wet filter, which cools the air as the water evaporates. This cool air is then distributed throughout the building.

Refrigerated or reverse cycle air conditioners do not use water.

Evaporative air conditioners, especially those not being used efficiently, can use between 10 to 30 litres an hour depending on the size of the unit and the level of humidity.

Evaporative Cooling



TOP TIPS FOR RUNNING EVAPORATIVE AIR CONDITIONERS

Here are some tips to operating your evaporative air conditioner as efficiently as possible:

- **Get your system checked** and maintained regularly by a qualified professional
- **Open doors and windows** in rooms being cooled and make sure the opening is large enough for air to flow freely outside – insufficient air flow will reduce the cooling effectiveness and put back-pressure on the fan
- **Use the timer** to control use of system only when it's required, don't run the system all day and all night
- **Adjust for humidity** by turning off the water and running the fan only on days of high humidity – this can be very effective on still, humid evenings when the outside air is cooling down
- **Don't recirculate your bleed off** water back through the system, but you can divert it to your garden
- **Cover your system over winter** as ducted cooling outlets can be a big source of heat loss over winter, increasing your heating costs.

Windows must always be open for effective cooling and venting of warm humid air.

IF THE AIR CANNOT FLOW, THERE IS NO COOLING BENEFIT.

You cannot blow air into a bottle!

Best use of your ducted air cooler

- Hot and dry outside: use cooling function with windows in most rooms partly open
- Warm and humid outside: use fan only with windows well open
- Cooler or more comfortable outside than in – simply open windows it's fresh and free!

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MAKE SURE YOU GET PROFESSIONAL AIR CON MAINTENANCE

It's a good idea to have your evaporative air conditioner regularly maintained by a qualified professional.

As with all mechanical systems, maintenance is the key to ensure correct system operation and efficiency.

Start-up and shut down services every year are critical in order to maintain the correct water distribution systems.

Water leaks and poor pad condition can contribute to substantial water losses which in turn can lead to costly repair scenarios to both your cooler and roof/ceiling.

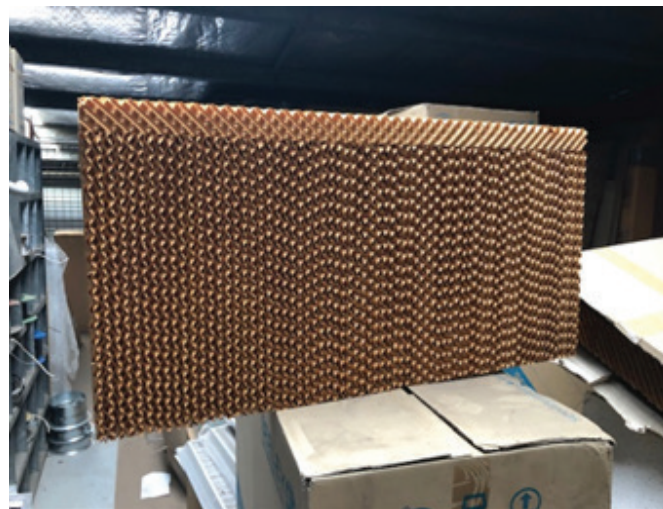
Evaporative air conditioning maintenance tradespeople will have to use a hose to flush, clean and clear the system and get it running at peak efficiency. This is a case of using a little water to save a lot, and Council supports these tradespeople conducting this work.

There are a number of problems that can occur if you don't get your evaporative air conditioner serviced regularly.

EVIDENCE OF LACK OF MAINTENANCE AND POOR PAD CONDITION:



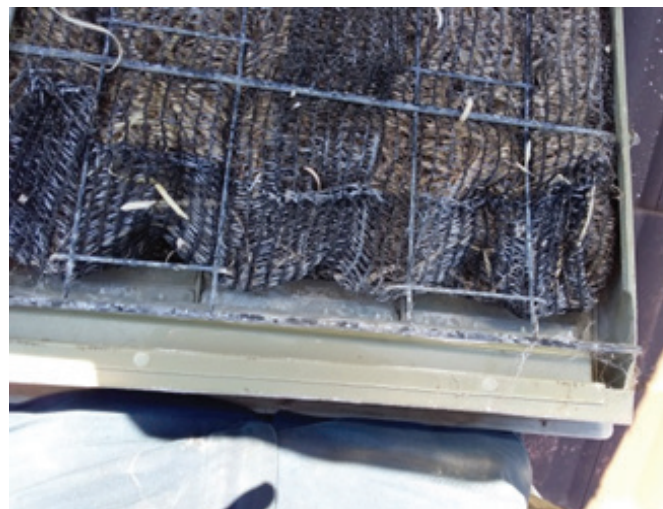
Calcium build up shows where water has been leaking from this cooler.



Unused cellulose bonded paper style pads with no calcium build-up.



Unused wood fibre pads with no calcium build-up.



Wood fibre pads that have sagged in the frames causing water to by-pass and leak from



Poor maintenance shows water leaking from inlet valve.



Water leaks on dropper causing corrosion.



Lack of maintenance shows calcium build-up in sump of cooler.



Evidence of water leaks with calcium stains showing on the tiles.



Evaporative cooler showing no maintenance.

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