FACT SHEET
EVAPORATIVE AIR CONDITIONING

This information outlines efficiency of air conditioning units and water saving techniques.

Water usage and Efficiency

The average person uses 4 kilolitres of scheme water per year in evaporative air conditioners, accounting for 4% of overall use.

Water use in evaporative systems is mainly controlled by user behaviour, with the duration of use being the most significant factor. Maintenance and configuration also influence efficiency.

There are some potential opportunities to reduce water use in evaporative air conditioners through a combination of education and promotion of water efficient evaporative air conditioning systems.

Saving water while staying Cool

Following these simple steps can help reduce the amount of water used by your evaporative air conditioning system:

- turn to 'fan only' at night or during high humidity periods;
- familiarise yourself with the optimal tap settings;
- install flow controllers to reduce water wastage in systems; and
- check for leaks, maintain flow control and clean the filter pads.

Why water runs out of an evaporative air conditioner?

Evaporative air conditioning being a natural method of cooling with water, by way of evaporation means that as water is being evaporated, the left over mineral deposits that are dissolved in the water remain and over hours of use build up in the reservoir of the unit. The build-up of these mineral deposits turns the water hard and this hard water can do irreparable damage to an evaporative air conditioner if it is not managed correctly. The method of which this used water is managed is by way of a bleed off or a regular dump style drain.

Bleed-off

All evaporative air conditioners need some water bleed-off to prevent a build-up of mineral deposits in the system. The correct setting of the bleed rate will ultimately govern the life of the unit. With normal town water that is not hard with mineral deposits, the bleed rate should be at a minimum of approximately 10 litres per hour, this would be seen as a fast drip and would be seen running out the overflow pipe or may be heard in the gutter or down pipe, increased water hardness may require a higher bleed rate. It would be quite common to see a small amount of water consistently running out of an evaporative air conditioner with a bleed off water management system.

Dump style drain

Some evaporative air conditioners will use a dump style drain valve to control maintenance water drainage. This type of water management system will drain by way of a quick dump of all of the water in the evaporative air conditioner reservoir.

The use of a dump / drain valve can significantly reduce the amount of maintenance water used over that of a bleed type system. It is vitally important that the dump / drain cycle times are set correctly by your installer relative to the water conditions in an area and they should not be altered. Additionally the system will drain the reservoir contents after the unit shuts down to ensure no water is left in the evaporative air conditioner that may become stale. As a guide, for units operating in areas of good water quality (<100ppm TDS* or reasonably soft water) dump cycles would be about every 8 hours and then again on shut down.

Water overflow

If there is a continual flow of water that is greater than the bleed or the dump drain as mentioned above then the water levels may need to be reset by the installer of a service technician.

Remember, all evaporative air conditioners require annual service and maintenance.

The water maintenance system is part of general servicing. This bleed off can be used in ecofriendly ways like watering plants or gardens. This water is not to be dumped onto the road this is not permitted at any property as it can cause road decay.

Further information

Please contact the City's Environmental Health Services.