

# How does an Evaporative Air Cooler work?

## COOL ~ EFFICIENT ~ NATURAL

Evaporative air cooling is the natural way of cooling, similar to a breeze flowing across a lake. This breeze lowers the temperature and has a relaxing cooling effect on people.

An evaporative air cooler cools the air by means of the evaporation of water. When water evaporates into the air, the result is a mixture of air and water molecules. This chemical change requires heat, thus energy or latent heat is taken from the air molecules - dropping the actual temperature of the air.

The recommended maximum humidity level is 60% or less, to allow a noticeable temperature decrease\* and helps people to feel more comfortable. The temperature decrease\* will be larger in dryer climates because the lower the humidity, the more evaporation occurs.

When used for cooling, the evaporative air cooler should not be used in enclosed spaces. It must be kept level and there must be water in the water tank. The room should have doors and windows opened to allow free air flow. An evaporative air cooler works best when placed near an open window. Fresh air is drawn into the cooler, circulates in the room and exits via the door. The maximum cooling effect is felt when a person is in the flow of air coming out of the evaporative air cooler.

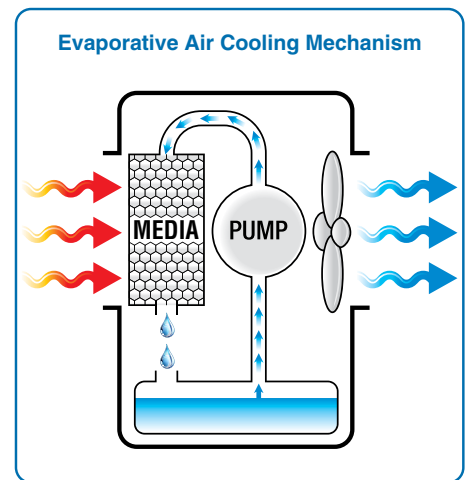
Evaporative air coolers can also be used to humidify dry air during the cool weather months. To be used for humidification, the windows and doors should be closed. This allows the humidified air to accumulate.

An evaporative air cooler is not an air conditioner as it does not use a compressor and refrigerant gas. One should not expect an evaporative air cooler to work as effectively as refrigerated air conditioning. However, the advantages of the evaporative air cooler over refrigerated air conditioning are:

- Low purchase cost
- Low electricity usage
- Environment friendly (No refrigerant gas)
- Maximum portability

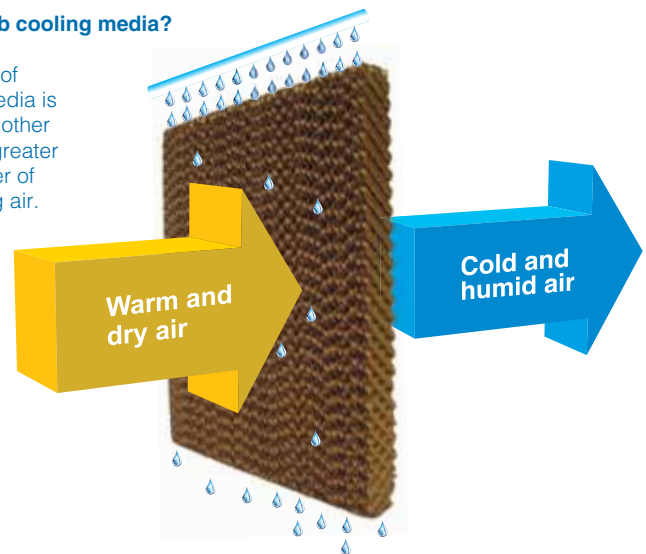
 **Energy Efficient**  
**No Compressor**

**SAVE UP TO**  
**80%**  
**ON ENERGY COSTS\***  
COMPARED TO AIR CONDITIONERS



## Why we use honeycomb cooling media?

- The Cooling efficiency of honeycomb cooling media is much higher than any other cooling media due to greater surface area for transfer of humidity to the passing air.



\*Energy Cost = ( (Wattage x No. of hrs/day x No. of days/year) / 1000 ) x per unit cost (kWh)

For Example : Energy Cost for Split 6000 BTU Air Conditioner = ( 600 Watts x 16 hrs/day x 30 Days ) / 1000 x 5 US\$ (Cost per unit) = 1440 US\$  
Energy Cost for Evaporative Air Cooler = ( 100 Watts x 16 hrs/day x 30 Days ) / 1000 x 5 US\$ (Cost per unit) = 240 US\$

Calculation shown above is with reference figures, please be sure to calculate your energy savings based on actuals.

\* Under tested conditions, actual performance depends on unit and ambient condition.