

# **EVAPORATIVE COOLING:** FRESHER - QUIETER - CHEAPER

#### WHAT ARE EVAPORATIVE COOLERS?

Evaporative Coolers are devices that cool air through the simple evaporation of water, they are well suited to climates where the air is hot and the humidity is low. Fresh outdoor air is drawn across water filled pads in the unit (the unit is Placed on the roof of your home) and distributed via ducting (in the roof cavity of your home) to outlets in each room. The beauty of evaporative coolers are that there is no need to keep your doors or windows closed to stay cool ... Evaporative air-conditioning air allows you to keep doors and windows open.!



# **HOW DO EVAPORATIVE COOLERS WORK?**

The cooling process works on the principle of evaporation of moisture. The fan of the cooler draws outside air through pads soaked with water. The evaporation of the water lowers the temperature of the air passing through the wet pads of the cooler. This cooled air is blown through an opening into the building. The movement of the cooled air is directed by the homeowner by means of ducts to appropriate areas around the home and exhausted from opened windows, or doors.

#### DO I NEED TO KEEP MY DOORS AND WINDOWS OPEN WHEN AN EVAPORATIVE COOLER IS ON?

Only Evaporative Coolers allow doors and windows to remain open whenever the unit is operating. They do not recycle stale air; they continuously replace air every few minutes. (They are ideal for those who prefer FRESH rather than RECYCLED air).

An evaporative cooler "pushes" the hot air out of the house. Therefore you have to have some sort of venting system in place. This is usually accomplished by opening windows or doors. There needs to be enough venting so that the cooler is able to move air into the house. If there is not enough venting, the house fills with air and causing a back pressure on the cooler which it cannot overcome and results in less air flow. The house air pressure needs to remain just a bit "over pressured" to prevent hot air from blowing into the house, through the venting. Defeating the cooler, by allowing hot air into the house, which the cooler was supposed to be pushing out, of the house.

# HOW MANY DOORS AND WINDOWS DO I NEED TO HAVE OPEN?

This is dependant on the size of room being cooled and the size of the Cooler. Generally, windows will need to be open in each room being cooled. The Owners Manual will have a guide to the size of open area required for each model, in m², and also give suggestions on how to provide this.

# I AM CONCERNED ABOUR SECURITY WITH HAVING THE DOORS AND WINDOWS OPEN WHAT SHOULD I DO?

Ask our Ducted Evaporative Cooling Specialists about the option to install security vents which will enable the air to be exhausted into the roof space when your windows are closed. It is best to look at other means of security though such as security foors and windows to allow you to run your Evaporative cooler at it's optimum.

# ARE EVAPORATIVE COOLERS ECONOMICAL AND CHEAP TO RUN?

Evaporative cooling systems are economical in terms of **energy usage**. During the energy crunches of the last two decades, evaporative cooler use was promoted as one means to control household utility bills. Breezair evaporative coolers are the first and the only evaporative cooling system with inverter technology. One of the elite brands on the market is Breezair, Breezair has an advanced management system that minimises power and water consumption. Their hourly running cost states that it cools your home from as little as 3¢ per hour, they have also developed a Water Minimiser' which monitors water quality to reduce consumption, minimise waste and eliminate unnecessary dumping of water.

# DO EVAPORATIVE COOLERS USE MUCH WATER?

Whilst evaporative coolers can generally be run on fan only, evaporative coolers are designed to cool by using water. The greater the evaporation (water utilisation), the greater the cooling ability. The best evaporative coolers, generally only dump the water – when the water is not useable. Coolair & Braemar have a auto dump, and the Breezair – has a more advance special probe to make checks on the health of the water- and will dump the water after a set period or non use of if the water is not healthy.

# WHAT ABOUT WATER RESTRICTIONS ON EVAPORATIVE COOLING?

As evaporative cooling is only a seasonal occurrence - there has been no formal restrictions on the non use of evaporative coolers in besides EPA standards.

#### ARE EVAPORATIVE COOLERS NOISY?

Earlier on we mentioned Breezair, now one thing that you will notice about Breezair Evaporative is how quietly it operates – it's incredibly quiet! Australian designed and built! Breezair has manufactured a Hush Power motor and a centrifugal fan which is a global revolution in air conditioning engineering "nothing cools as quiet". Old fashioned axial fan systems are noisy because they spin like helicopter blades this created air turbulence thus increases noise levels, less airflow and therefore reduces cooling. Even when Breezair is running at peak output there's barely a sound inside or outside your home so not only will you love the way it quietly cools your neighbours will too.

# HOW MUCH COOLING CAN I GET THROUGH MY EVAPORATIVE COOLER?

The degree of cooling available from any type of air conditioning is dependent on the outside weather conditions. Evaporative coolers work best on hot, dry days this is when you require the most relief. 26 degrees Celsius indoor design temperature is typical for Evaporative Cooling, this cannot be guaranteed as the Evaporative cooler's performance is determined by the prevailing outdoor Temperature/weather conditions.

#### WHAT ARE SOME OF THE BENEFITS OF HAVING AN EVAPORATIVE COOLER?

- Continually circulates a fresh supply of Natural Fresh Filtered air
- Economical
- Cool air through the simple evaporation of water
- Operating costs are much lower than other cooling systems
- Prevent unwanted airborne dust and pollen from entering your home
- Gentler to the eyes, nose and skin without drying effects that occur with other heating and cooling systems.
- Minimal seasonal maintenance
- Carbon emission gases lower than refrigerated
- · Ideal for Kids, asthma suffers, elderly non drying fresh air

# HOW LONG DOES INTSALLATION TAKE?

Installation of an evaporative cooler takes anywhere between 3-5 hrs.

# HOW DO I KNOW WHAT SIZE AND BRAND SUITS ME?

Depending on the size and the area you wish to cool this will determine the size of the unit you will need.

A sales representative will help you select the brand that suits you and your budget.. Our heating and cooling Specialists can help you to choose the cooler features and benefits to suit your lifestyle.

# HOW OFTEN DO I NEED TO SERVICE MY EVAPORATIVE COOLER?

This would depend on the manufacturers requirements please read the manual. You should look at servicing your Evaporative Cooler every 2-3 years. During servicing they generally wash clean filter pads and the drain valve. During these maintenance inspections all parts should be inspected for wear or damage. Belt tension and water level in the reservoir should be checked. Since cooling efficiency is determined by how much water is evaporated, it is important to see that the pads receive a uniform wetting and be thoroughly wet at all times to provide the most cooling. Dry spots will greatly decrease cooling cooler maintenance procedures.

#### **HOW MUCH DO EVAPORATIVE COOLERS COST?**

To install ducted evaporative air-conditioning is a major purchase, which typically costs from \$3,000 to \$6,000 (depending on size, location, controls and other factors). Hence it is worth making sure that your money is spent as wisely as possible.

# WHAT IS THE DIFFERENCE BETWEEN AN AXIAL FAN AND A CENTRIFUGAL FAN?

Centrifugal Fan is a drum shaped fan and it is generally Quieter.

Less affected by problems in the installation (e.g., extra bends to fit around a hot water service.) Less affected by manufacturing variations from one unit to another.

However they generally cost slightly more than Axial Fans.

Axial fan is a propeller shaped fan. It is generally Cheaper. Sometimes lower in profile.

However it is often noisier (especially for the neighbors).





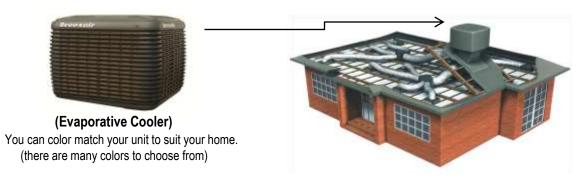
# CAN I RUN EVAPORATIVE COOLING THROUGH THE SAME DUCTWORK AS DUCTED HEATING?

No, the differing technology and air volumes between ducted heating and evaporative cooling don't allow the units to share the same ductwork.

### WHY SHOULD I CHOOSE EVAPORATIVE COOLING INSTEAD OF DUCTED REFRIGERATED?

Typically it is less expensive to install evaporative cooling to run and maintain that's why most people choose Evaporative cooling. It provides 100% fresh air rather than recycled air. Air cooled by water means it won't dry out the air or irritate your eyes or throat. Windows/doors can be left open, allowing you to enjoy outdoor living.

# WHAT WOULD AN EVAPORATIVE COOLER LOOK LIKE ON THE ROOF OF MY HOME?



# VARIOUS NAMES YOU MAY HAVE HEARD OF AND THEIR PURPOSE:

Water Distribution System: Keeps your unit continuously running at its peak

· No clogging no dry spots on the filter pads



Chill pads: Exceptionally fast moisture absorption

> · Better airflow · High water flow

Dust trap properties



Pump: The heart of saturation

Circulates high water flow through the chill pads

Lasts 3 times longer than conventional pumps



Water Drainage Pump: Automatic water drainage

Weather Seal:

Dropper:

Smart Management System:

· Prevents algae growth

• No seasonal maintenance required!

· Auto weather seal automatically closes off the air conditioning ducts when not in use.

No more winter chills!



Manages whole system

Manages fan speed

Water Cycling

Climate control

Operating programs



• this is where the Evaporative cooler sits on .

No Rust. No Leaks

No scratch or peel

· Made from top grade polymer





