

Evaporative Swamp Cooler Buying Guide

AIR MARKETING GROUP LLC

What is an Evaporative Swamp Cooler?

An Evaporative Swamp cooler is an alternative to standard refrigerated air conditioning that is low in cost. An evaporative swamp cooler uses the natural process of water evaporation with a simple fan to provide about 20 F of temperature reduction.

How does an Evaporative Swamp Cooler Work?

An evaporative swamp cooler is ideally used in an area where the climate is dry and hot. It essential is the same as getting out of the pool on a warm summer day and having a breeze come by. Even though it is hot out you still feel cool due to the evaporation of the water on your skin combined with the air flowing over it. For the best utilization of an evaporative swamp cooler, unlike standard air conditioning, you need an open well ventilated area to distribute the cool air through the space.

The heat of an evaporative cooling system is the pad where the water evaporates and the air passing through the pad is cooled. Evaporative cooling pads, like Kuul pads, are manufactured of fluted cellulose sheets that are glued together. This material is chemically impregnated with special compounds to prevent rot and ensure a long service life. A special water distribution system spreads water over the surface of the pad, ensuring a uniform supply of water to keep the entire air contact surface thoroughly wetted. Fans create a negative pressure, causing air to be drawn through the pads. Evaporation results from contact between air and water. A control

Evaporation results from contact between air and water. A control system operates the water pump and the fan distributes the cool air. The relative humidity is lowest in the afternoon when the temperature is at its highest. And the lower the humidity, the better the evaporative cooling effect. In other words, the cooling effect is best when you need it the most.

Top Five Reasons to Purchase an Evaporative Swamp Cooler.

1. Cost Savings - The cost of operation a swamp cooler is significantly lower than operating a standard refrigeration type air conditioner. It saves about 25% in overall operation cost.

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- **2. Ease of Installation -** Unlike standard central air conditioning systems that need ductwork and refrigerant lines to be put in by a licensed contractor, an Evaporative Swamp Cooler just needs to be hooked up to a water connection and plugged in which is much more cost effective than hiring a professional.
- **3. Air Quality -** Due to the requirement for a high volume of ventilation you have an extremely high rate of turnover of the air in the space.
- **4. Humidification -** By providing moisture to the air it makes arid and dry places much more bearable for people.
- **5. Range of Applications -** Evaporative Swamp Coolers can be used anywhere from homes and offices to industrial and commercial type spaces.

How to Choose the Right Evaporative Swamp Cooler For You?

- **1. Airflow** The most important thing is to make sure you have a high enough airflow in order to provide the proper cooling for your space. A good rule of thumb is to take the cubic footage (length x width x height) of your space and divide by 2. This will give you an estimate on how much CFM (the amount of air moved by the fan installed in the unit) you should look for from the Evaporative Swamp Cooler you are going to purchase.
- **2. Tank Size -** Tank size is important because the larger the tank the longer it takes before you have to refill the unit with water. Usually the larger the unit the larger the tank but there is some variation and it is something to consider when you are purchasing an Evaporative Swamp Cooler.
- **3. Tank vs. Hose Water Supply -** Some units have a direct connection to a water source rather than a tank. These units are more convenient because you never have to refill them because you have a continuous water supply, but they are usually more costly. If ease is your main concern an Evaporative Swamp Cooler with a direct hose connection is probably worth the cost in the long run.
- **4. Electrical Requirements -** Most units are 115 volt, but the larger units most commonly come in 208/1.

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Will It Save Me Money?

Evaporative cooling is up to 50 percent cheaper to install and considerably cheaper to run than refrigerated cooling. Typically, the cost for water and electricity for a 36" unit for eight hours of operation is less than one dollar. Smaller units will operate for longer periods for the same amount of money. That's approximately three times cheaper than traditional air conditioning.

Benefits to Using an Evaporative Swamp Cooler.

- **1.** Increases worker productivity by making the environment more comfortable.
- **2.** Aids in the enjoyment of meetings or events where air conditioning is unavailable or ineffective.
- **3.** A temporary, portable back-up when the standard cooling system is inoperable.
- **4.** Cools machinery or product that may be damaged or ruined if allowed to overheat.

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