

Dangers of HEAT

In the past 10 years, more people have died in the United States from heat related illnesses than from hurricanes, tornadoes, lightning and fires combined. The numbers are staggering. In Europe, over 20,000 people died from the heat during the summer of 2003.

Prevention, knowledge and preparedness are the keys to prevent disaster from happening.

Army medical studies have revealed that 20% of all people exposed to 90 °F or more suffer from some sort of heat related injury. Not all heat related illnesses are incapacitating but all of them cause some sort of reduction in performance.

Heat Stroke

Heat Stroke occurs when the body fails to regulate its own temperature and body temperature continues to rise, often to 105 °F or higher. A person with heat stroke may stop sweating. Symptoms include confusion delirium or unconsciousness.

Heat stroke can develop without exertion when a person is exposed to a hot environment. Exertional heat stroke may develop when a person is working or exercising in a hot environment. The body may sweat profusely but it still produces more heat than it can lose. Both types of heat stroke cause severe dehydration and can cause body organs to stop functioning. Emergency medical treatment is needed to prevent death.

Heat Exhaustion

Heat Exhaustion occurs when the body cannot sweat enough to cool itself. It generally develops when a person is working or exercising in hot weather. Symptoms of heat exhaustion include fatigue weakness headache dizziness or nausea.

Heat exhaustion can sometimes lead to heat stroke, which requires emergency medical treatment.

Heat Tetany

Heat Tetany is usually a result of short periods of stress in intense heat environments. Under these stressful conditions a person can hyperventilate. It can lead to respiratory problems, numbness and tingling or muscle spasms. Treatment includes cooling the person down and slowing the breathing pattern.

There are numerous other heat related injuries including: **Heat Rash, Heat Cramps, Heat Syncope (fainting) and Heat Edema (swelling).**

Misty Mate Misters can help prevent heat related illnesses and help in the recovery process. Independent laboratories have proven a 30 °F temperature drop when using Misty Mate at 15% humidity with warm tap water. Above 70% humidity just add ice for a refreshingly cool sensation.

Exclusive MicroMist Technology

Using mist to keep cool is a technological advance of evaporative cooling. Misting was developed to create cooling in outdoor environments rather than indoor ones.

Misting works by forcing pressurized water through specially designed nozzles that produce an Ultra Fine Mist. The water droplets that these nozzles create are so small (about one-half the diameter of a strand of hair), they instantly flash evaporate. The evaporation can reduce the surrounding air as much as 30° F (15° C) in just seconds. This dome of cool refreshing air insulates you from the harsh effects of the hot sun making any outdoor activity more safe and enjoyable.

Our engineers describe it something like this: "Evaporative cooling uses the science of thermal dynamics; that is, the fact that water requires energy to evaporate (about 600 calories of heat per gram of water). When the mist evaporates, this exchange of energy results in lowering the ambient temperature."

Most of our customers are not really interested in the science, they just care about the results. That's what Misty Mate® products deliver.

The optimum conditions for evaporative cooling are when the humidity is below 80%. Recognizing that humidity levels often reaches beyond 80% our design team created a line of products that can perform effectively in very humid conditions. These products take advantage of conductive cooling which is the cooling of the exposed surface of the skin. Our Misty Mate® Pump™ personal, portable-cooling systems can be filled with ice and water to produce an icy cold mist ideal for this purpose. When it's really sticky outside that icy mist feels great!

For over a decade, Misty Mate® has been leading the industry with the engineering, design, and manufacture of patented products that utilize this technology. Our products have been designed with years of consumer research. That means we've been listening to you, our loyal customers. Misty Mate® now manufactures a complete line of high quality, yet affordable products to keep you cool anytime you seek relief from the heat . . . at work, at home and at play.

The Misty Mate Pump is the ideal personal cooling solution!



Try our 24 oz Misty Mate for a cool sensation... makes the temperature feel up to 30 degrees cooler! Easy to use and lightweight, just fill it with water (use ice water for super-cooling), pump it 10-20 times, and you'll be cool for hours! Has an attached, adjustable nylon strap so you can wear it as a fanny pack, slung on your shoulder, or attached to your pack or bike.

During a power outage due to a natural disaster or other causes, loss of fans and air-conditioning makes life miserable and can be dangerous, especially during stifling, sizzling summer heat when it becomes harder to breathe. Take your personal cooling system with you wherever you go for reliable comfort.

Fill with water from any water source and pump it up! Built-in pump pressurizes the system. No Batteries, no motors! Weighing less than 3 lbs it is Perfect for sporting events, concerts, trips to amusement parks, workouts, even just laying around watching TV! Use it at work if your boss is too cheap to supply air conditioning! Great for fishermen, hikers, construction workers, and gardeners (your plants will like the superfine mist, too)... Misty-Mate keeps you cool even when the sun is beating down! May be especially beneficial to MS patients, those who've suffered a heat stroke in the past, or anyone who finds that the heat bothers them. Assorted colors: Black, Blue, Green.

The Most Popular Dual Cooling Model

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The *MightyKool* "Ice" Model M300 Portable Air Conditioner/Evaporative Cooler Combination [[Specifications](#) - [Testimonials](#)]

-----[Prices](#)-----

Use 12-Volts  or 110-Volts  with an *Optional AC/DC Convertor*

[How do the Ice Coolers Work?](#)

This Self-Contained Portable Air Conditioning System does not require Venting when using Ice & comes completely assembled with the Ice Chest. The Brushless Double Ball Bearing Motors operate on 12-Volts or 110-Volts using an *Optional AC/DC Convertor*.

Use Ice to produce Air Conditioned Comfort in Humid or Dry Climates.

You may use Water only or Water & Reusable Ice Packs when the Heat is not too Severe in either Dry or Humid Climates.

"S.H.of Myrtle Beach, SC ordered his 2nd MightyKool M300 in March of 2006 as he uses them in 7 passenger Commander aircraft He operates them on a "jump start" battery so he does not have to tie into the 24/28 volt power system of the aircraft. They disconnected the compressor belt of the built in aircraft air conditioning system as it did not cool the aircraft anyway & puts strain on an engine so now they cool the cabins with a Model M300."

PARKED VEHICLE IN COLORADO:

"Just wanted to let you know I was finally able to use the swampy (M300) yesterday and it was a great success. I did as you suggested and made big bowls of ice. Getting back into a comfortable car was worth all the money in the world to me. Thanks again for all of your help and patience. B.D." Guffey, CO. (This person has a medical condition where it is vital to have the car cool when coming back from shopping).

"Hi there, just wanted to say I received my M200 today. I am using it primarily indoors in a room where there is air conditioning, but because a computer is running all day long, it gets too warm. I didn't want to use a portable



AC unit because it would cost a lot more than running a 40 watt appliance. The evaporative cooling works great, even though I live in Alabama, since the humidity inside is generally around 40 to 45%. I have owned an evaporative cooler before, and after feeling the air from the M200, it is questionable whether the other cooler ever worked at all. I measured 78 degree air going in and coming out at 66 degrees. I put my ice packs in their and I was amazed that the air dropped another or 8 or 9 degrees. Thank you for such a fine product. It is small, attractive, and really does make my computer room much more comfortable. I am really going to enjoy this cooler." S.S. Oxford, AL. March 2006

The *MightyKool* Model M300 provides air conditioned comfort without opening windows or venting the heat outside when using ice. This is a Versatile Self-Contained, Fully Assembled, Cooling System integrated into the lid of an *Igloo ice chest. The M300 operates on most any power that you choose; 12-Volts, 110-Volts or Solar. In otherwords keep cool while while Camping, Boating, Traveling or in your Bedroom or Work area at Home. You can add enough ice to the ice container of the M300 to have air conditioned comfort for as long as four to five hours. If you are using water only the M300 will operate for 30 to 40 hours without refilling. It does not damage anything if it runs out of water.

*Igloo is the Trademark of Igloo Products Corp. We provide a Igloo Quality Product with each Model M300.



Using powerful Brushless Double Ball Bearing Motors the M300 merely sips power while streaming cool crisp air when & where you need it. This Cooling System has the capacity to produce over 220 cubic feet per minute (cfm) at a velocity of 3,000 feet per minute with a noise level of 59 dBA on high speed. The dBA is slightly higher than our other Swampy models because the motors are operating freely at a higher more efficient R.P.M.

Use on 12-Volts and you will have cool crisp air streaming at you for 25 to 30 hours without recharging a typical 105 amp hour Deep Cycle Battery you may choose to purchase. Of course if you are using it while running your engine you need not be bothered about the amperage draw as it uses no more energy than your vehicle tail light bulbs. This combination Air Conditioner - Evaporative Cooler contains the *MightyKool* Evaporative Cooling System (ECS). The Air Contitioner portion uses the heat exchange core made famous by our *Swampy* "Ice" Models. The *MightyKool* ECS has proven to be more efficient than the typical

evaporative cooler in humid climates because of the design of the Evaporative System itself. Therefore, when the heat is not too severe you may use water only or water cooled by reusable "blue" ice. If you wish you may click on [Testimonials](#) regarding the standard *MightyKool* in Humid Areas.

This Model will also operate efficiently on your Solar System, using only 41 watts (less than 3.5 amps) on 12-volts! The M300 incorporates the Custom Evaporative Pad System our standard *MightyKool* Model MW1 is so famous for pioneering. The *MightyKool* M300 on high speed moves about the same amount of air flow as our very popular *Swampy* Model S154 does on Medium Speed at a fraction of the energy use. Plus the air is moving in Three Directions at the same time, or you may concentrate the air in any of the three directions by closing one or more of the four cool air outlet vents!

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MG3 White	<i>MightyKool</i> MG3	I=8 x 18 x 12 ½ C=20.3 x 45.7 x 31.75	10 lb 4.5 kg	Ice Chest Any Size	2.3 27.6 watts	2.8 33.6 watts	3.4 40.8 watts
Model	Model Types Color Coded	Dimensions w/d/h Inches - Centimeters	Dry Weight	Water Capacity	Amps@ 12v Low	Amps@ 12v Med.	Amps@ 12v High

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Using the M300 in California

I headed down to San Jose for the Champ Car race. I put 40 lbs of block ice in my M300 and 20lbs of crushed ice. It was 95 when I left and ran into 105 on the trip. I had ice for 3 1/2 hours and very cold air. I think I may have found the best way to use my M300. The block ice melted and the crushed ice melted together, floated on top, keeping the water cold. The air was so cold coming out I never turned the swampy off the first setting. By the time the ice melted I was in 85 degree weather and still very comfortable.

I have a small Toyota motorhome with a curtain between me and the M(otor)H(ome) part. I point 2 nozzles toward me, one at a slant toward the windshield and one at a slant toward the curtain. It seems to create a swirling effect to keep me cool. Thanks for such a great product Jim H.

A Testimonial on MightyKool (MW1) in Humid Conditions:

I received the order and we used the Mighty Kool (MW1) three nights on our trip. It was very humid and hot out so I'm not sure they had the best chance to work. From what they did do, they worked well enough to keep us comfortable in very uncomfortable situations. I think they could have put out much cooler air but then again the humidity was at 100% the entire time. It was very easy to pack the Mighty Kool to the camp and set it up with the battery and ran very well. I can not believe that the small units put out so much air. The fans on them work great! I just wish the humidity was not so high. On a scale from 1 to 10, I would have to give it an 8, maybe an 8.5. I will definitely be back or if I know anyone who could use your services, I will not hesitate in recommending your company. Again thank you for everything!!! Very Sincerely, Rebecca L. from Indiana.

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We personally answer your [e-mail questions](#) typically within a few hours during business hours.

Orders may also be placed at 480-897-1233 or on our [Secure Order Form](#)

[\[To Place an Order on our Secure Server Click Here\]](#)

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Swampy Cooling Systems - Mesa, Arizona USA

Serving the World with 12 Volt Portable Coolers since 1989

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12-volt Portable Air Conditioning! Using *Ice Water* not *Refrigerants*!

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Unfortunately there is no such thing as a portable Refrigerated Air Conditioner that operates on 12-volts because it is not possible to turn a Compressor of Adequate Size with a Battery.



Swampy developed 12-Volt Air Conditioning using a Pump that Thrusts hundreds of Gallons of Ice Water Per Hour through a *Specialized Copper Heat Exchanger similar to the one on the left that is installed in each of our Ice Models below.

The Hot Ambient air flows through our Icy Cold Copper Grill then exits rapidly through the adjustable Air Louvers! The Secret to 12-Volt Air Conditioning is ice water, not the ice!

*The Specialized *Swampy* Heat Exchanger was Engineered to use the Optimum amount of Ice Per Hour to produce Maximum Cooling. Using too little ice will not produce cold enough air and using too much ice is a Waste of Ice.

MightyKool Systems Left [M200](#) Right [M300](#)



Our 12-Volt Portable Cooling Systems provide Cold Air Conditioned Comfort & will operate properly in any Humid Environment. Your health may depend on your willingness to invest in ice and a Adequate Cooling System.



[Click on Pictures for Info on Individual Models](#)

Below: IceStrMystr [Model IM30](#) (left) *IceMystr* [Model IM20](#) (center) *Icester* [Model AC12](#) (right)



[[Specifications](#) - [F. A.Q. about using Ice](#)]

The *AC12* System incorporates an Air Conditioner. The *IM20*, *IM30*, *M200* & *M300* are Dual Systems that

[\[Vehicles - Boats - Campers - Aircraft\]](#)

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Click on the question(s) that interest you about cooling with "Ice":

- A. [How do the "Ice" Cooling Systems work?](#)
- B. [How about a Simple Cheap System of Blowing air into or across Ice?](#)
- C. [Why not use some kind of electronic cooling system instead of Ice?](#)
- D. [Do the Ice Models use a compressor or refrigerants?](#)
- E. [Can you close the windows or do you leave them open like with Evaporative Cooling?](#)
- F. [What is included and not included?](#)
- G. [What is the difference between the three models?](#)
- H. [How much ice do the "Ice Water" Models use?](#)
- I. [What temperatures could be expected by cooling the water?](#)
- J. [How hard are they to install?](#)

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A: Modern technology uses Ice to cool a liquid, which in turn is circulated through a Chiller (Heat Exchanger). Hot ambient air is passed through the Heat Exchanger to produce cold comfortable air-conditioned air, plus remove humidity! Some such systems are large enough to cool several city blocks in a place like Phoenix, Arizona in the summer heat. And still others are small enough like our "Ice Water" Models to be portable and easily moved from place to place to cool you and your friends.

The 12-Volt "Ice Water" Models work similar to any other 8,000 BTU Air Conditioner except you do not vent the heat or drain the water outside. The heat is transferred into the water by drawing the ambient air through the Chiller (Heat Exchanger) plus removes humidity at the same time. These Models are capable of cooling efficiently enough that they should use around 20 pounds (9 kilograms) of ice per hour during the heat of the day & 12 pounds per hour during the night. Keep the heat outside and enjoy the cooled air inside without drilling holes or opening windows.

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B: If you think a \$39.95 Ancient Idea of Blowing Air into a 'Box of Ice' that Increases Humidity might Solve your Cooling Problems [Click here](#)

How about a Free Air Conditioner? Place ice in a container, then take a fan and blow into or across the ice just like your Great Grandfather did. Now you have a Free Air Conditioner to solve all your cooling problems without having to spend a dime! However, if you have already tried this "new" Ancient System & still "Feel the Heat" read

on for serious answers to your cooling needs!

Merchants marketing this ancient 100 year old Ancient System make claims, with glowing "testimonials" of how blowing a fan over ice cools cars, boats cabins, campers, etc. If it sounds too good to be true, then maybe it is "too good to be t---". It is simple for you to test this Ancient Idea for Free as explained in the paragraph above and then you decide!

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C. It would take approximately 80 amps @ 12-volts to equal the 8,000 BTU air-conditioned cooling power of the 12-volt "Ice Water" Models using an 12-volt to 110-volt Inverter. Needless to say there is no present day battery or charging system that would keep up with that kind of power drain.

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D. There are no compressors, evaporators or hoses that may leak refrigerant or harm the environment. Also there are no expensive parts that need replacing from time to time. The biggest negative is you must furnish Ice to provide Ice Water for Air Conditioning Comfort. However you may typically be assured that you will take care of your cooling problems with one of our 12-Volt Versatile "Ice Water" Models!

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E. Use the "Ice Water" Models just like an air conditioner when using ice, therefore the windows & doors stay closed. That is different than Evaporative Cooling systems where you must provide ventilation so that you do not create a swampy condition by increasing humidity.

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F. The Swampy IM20 & MightyKool M200 & M300 come complete in one package ready to cool. The Swampy AC12 & IM30 are furnished with all components except the Ice Chest. The AC12 & IM30 come with 4 feet of hose, 6 foot of power line and the pump wired and ready for cooling. You merely place the pump in your ice chest and secure the AC12 & IM30 in the area you need to Air Condition.

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G. All the "Ice Water" Models cool by using Ice to cool the water or Reusable Freeze Packs may be used if you do not prefer colder air conditioned air that also removes humidity. The water is forced from the ice container and circulated through a special Heat Exchanger contained in the Air Conditioning portion, just like a refrigerated A/C forces refrigerant through the Evaporator (Heat Exchanger). The AC12 Icester is the only model that has a Heat Exchanger and no evaporative system.

The IM20, IM30, M200 & M300 have an evaporative cooling system like our other Swampy models. The air is cooled by evaporation in these "Ice Water" Models to aid the Heat Exchanger produce even colder air. Once the ice has melted these models will cool by evaporation, however ventilation is needed to prevent humidity build up.

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H. Our 12-Volt "Ice Water" Models cool so efficiently that they are capable of using about 15 to 20 pounds (6.8 to 9 kilograms) of block or cubed ice per hour. Most "Ice & Water" stores freeze their own blocks of ice and are smaller & more solid than the blocks you buy at convenience or grocery stores, which are generally formed from the chips left over from crushed ice processing.

A 48 quart Ice Chest filled with block ice will last around 4 to 5 hours. The largest Ice Chest you can normally purchase is 150 quart. A 48 quart size may be purchased in most places like Target, Walmart, etc. for \$15.00 to \$20.00. Any Ice Model will not cool effectively unless they use about 20 pounds of ice per hour during a hot day and will use about 12 pounds of ice during nighttime.

Some people freeze their own block ice in plastic containers, however the ice must be removed from the plastic so it can contact the water to provide air conditioning or if left in the containers they react like Reusable Plastic Ice Packs (see I below).

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I. In 100 degree (38 C) heat the "Ice Water" Models produce 65 F. (19 C.) (+-) of Air Conditioned comfort using cubed or block ice. Reusable Freeze Packs will be about 78 F. (25 C) in the 100 F. (38 C) heat. In general cubed ice is used up quicker than block ice of equal weight. The length of time the reusable Freeze Packs perform depends on the quantity that are used.

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J. There is virtually no installation required with any of the "Ice Water" Models. In preparing the AC12 or IM30 a narrow slot is cut in the ice chest for the hoses so you can shut the lid of the ice chest. If you are using it in a vehicle secure the ice chest in the rear of your vehicle or some other out of the way area. Then place the "Ice Water" Model in the area you need air conditioning like between the driver and the passenger, secure it and plug it into the cigarette lighter.

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Specifications

All Models manufactured from rugged non-corrosive ABS Plastic

Model	Model Types Color Coded	Dimensions w/d/h Inches - Centimeters	Dry Weight	Water Capacity	Amps@ 12v Low	Amps@ 12v Med.	Amps@ 12v High
<p>Air Conditioning Model AC 12 uses Ice only Dual System Models Provide; Air Conditioning using Ice or Evaporative Cooling using Water</p>							
AC12 Black	Icester AC12	I=6 ¾ x 11¾ x 11 C=17 x 30 x 28.0	13 lb 6.12 kg	Ice Chest Any Size	4.2 50.4 watts	7.6 91.2 watts	13.9 166.8 watts
IM30 Black	IceStrMystr IM30	I=6 ¾ x 12 ½ x 18 ¾ C=17 x 31.75 x 48.0	14.0 lb 6.4 kg	Ice Chest Any Size	5.2 62.4 watts	8.9 107 watts	14.5 174 watts
M200 White	MightyKool M200	I=9½ x 17 x 17 C=24.1 x 43.2 x 43.2	14 lb 6.4 kg	2½ gallons 11.01 liters	2.3 27.6 watts	2.8 33.6 watts	3.4 40.8 watts

M300	<i>MightyKool</i>	I=18 x 18½ x 25½	18 lb	12 gallons	2.3	2.8	3.4
White	M300	C=45.7 x 47 x 64.8	8.2 kg	52.9 liters	27.6 watts	33.6 watts	40.8 watts

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