



MY WATER GENERATOR.COM



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WELCOME TO MY WATER GENERATOR.COM

NECESSITY IS THE MOTHER OF INVENTION



My name is Taun Richards. In the world of Lepidoptry I am known as the Butterfly~Whisperer. My atmospheric water generators are my personal contribution to making the world a better place. Allow me to explain how they work.



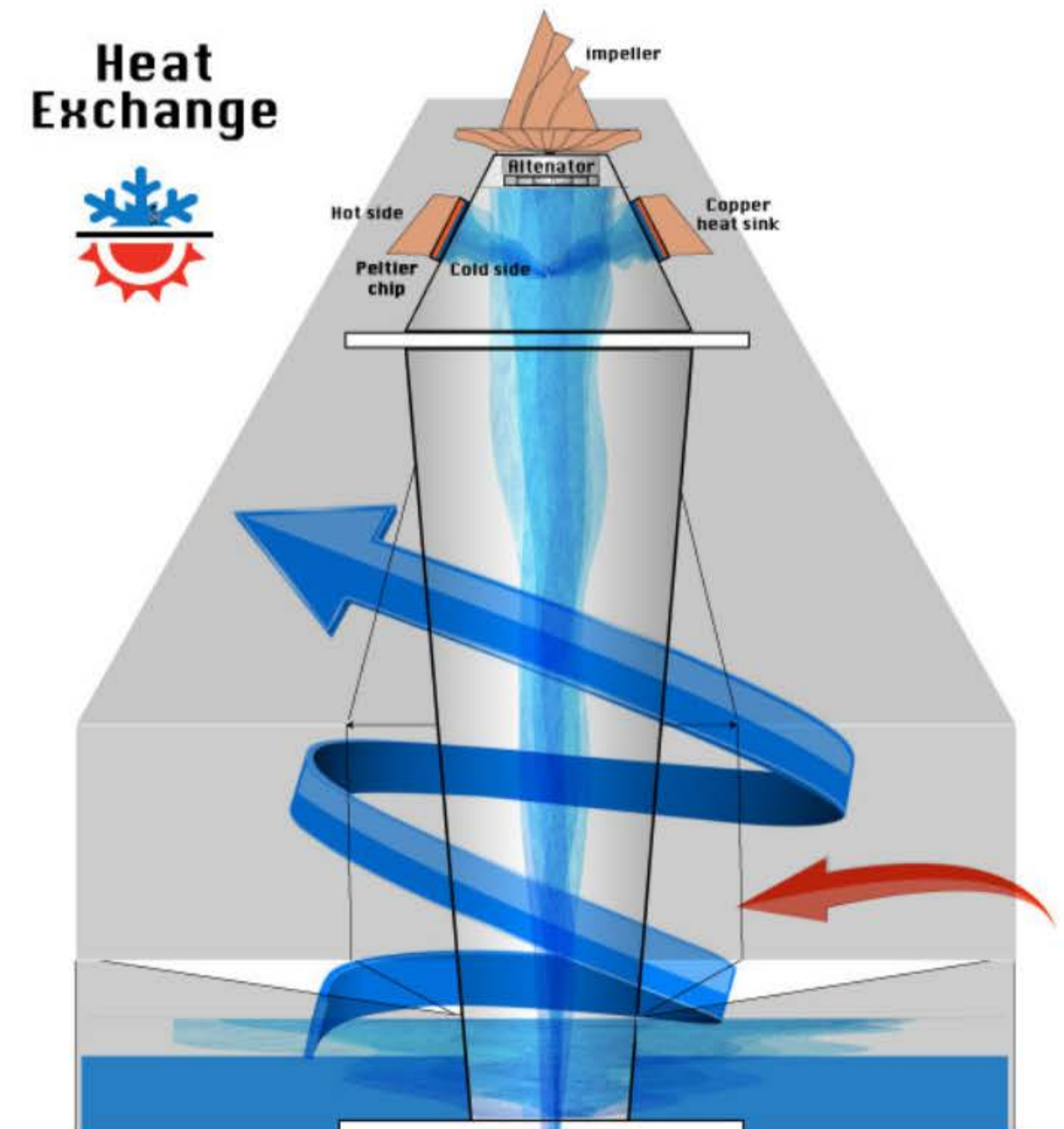
Air behaves like a sponge; the warmer the air temperature, the more water the sponge can hold. The colder the air temperature, the less water the sponge can hold. To wring out the sponge, I must subject warm air, to a cold environment.

The by product of a temperature exchange, is water, in the form of condensation. An atmospheric water generator is a machine that is dedicated to extracting water moisture from the air.

My water generator leverages the natural principals of radiation, conduction, and convection, to extract water from the air, using the least amount of energy possible.

Extracting water from the air is like squeezing a sponge. There is hardly any resistance to overcome, so I do not need to use a lot of energy to accomplish the task. The entire system runs on 12 volts DC.

Leveraging the natural principals of radiation, conduction, and convection.

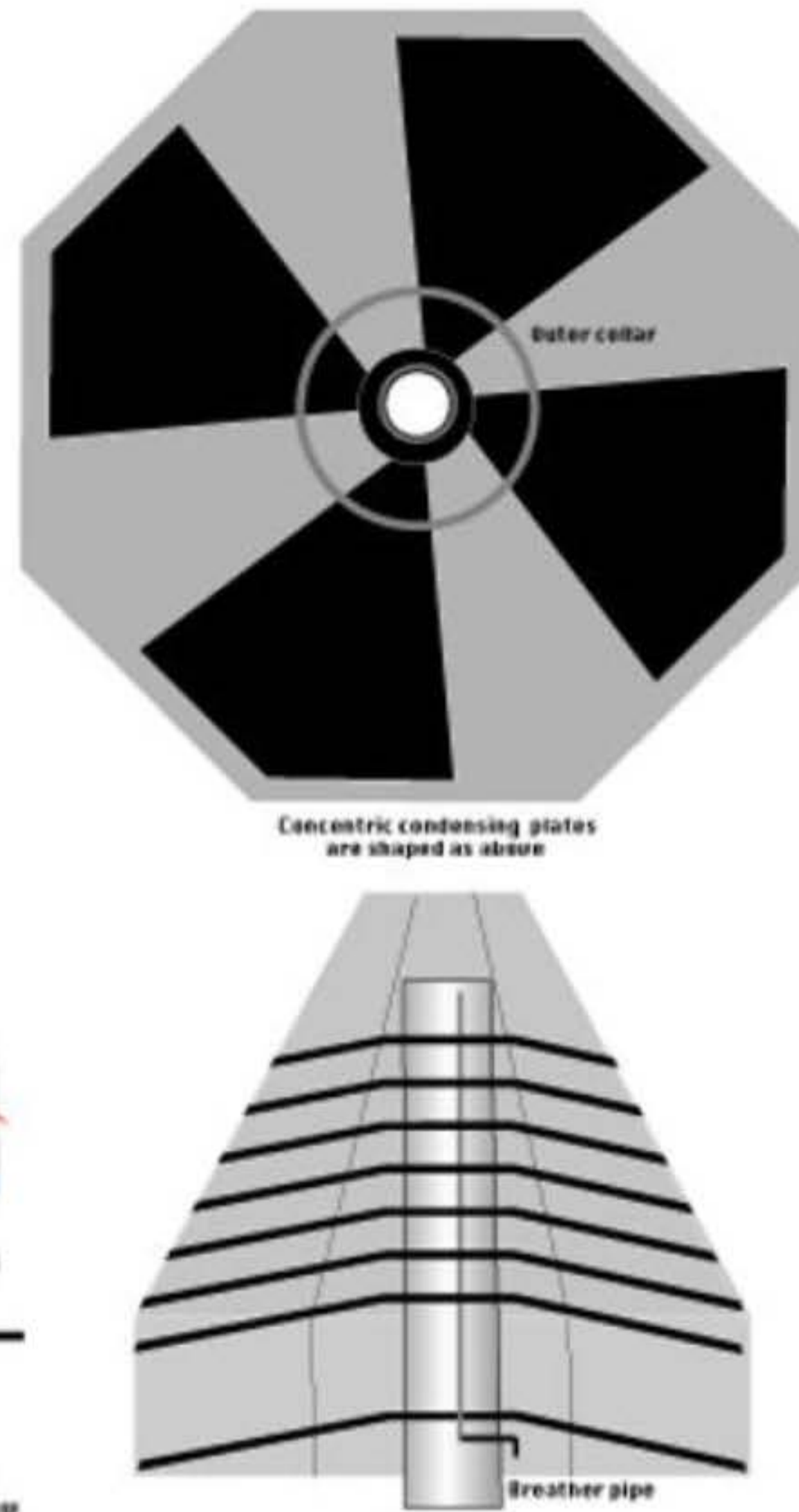
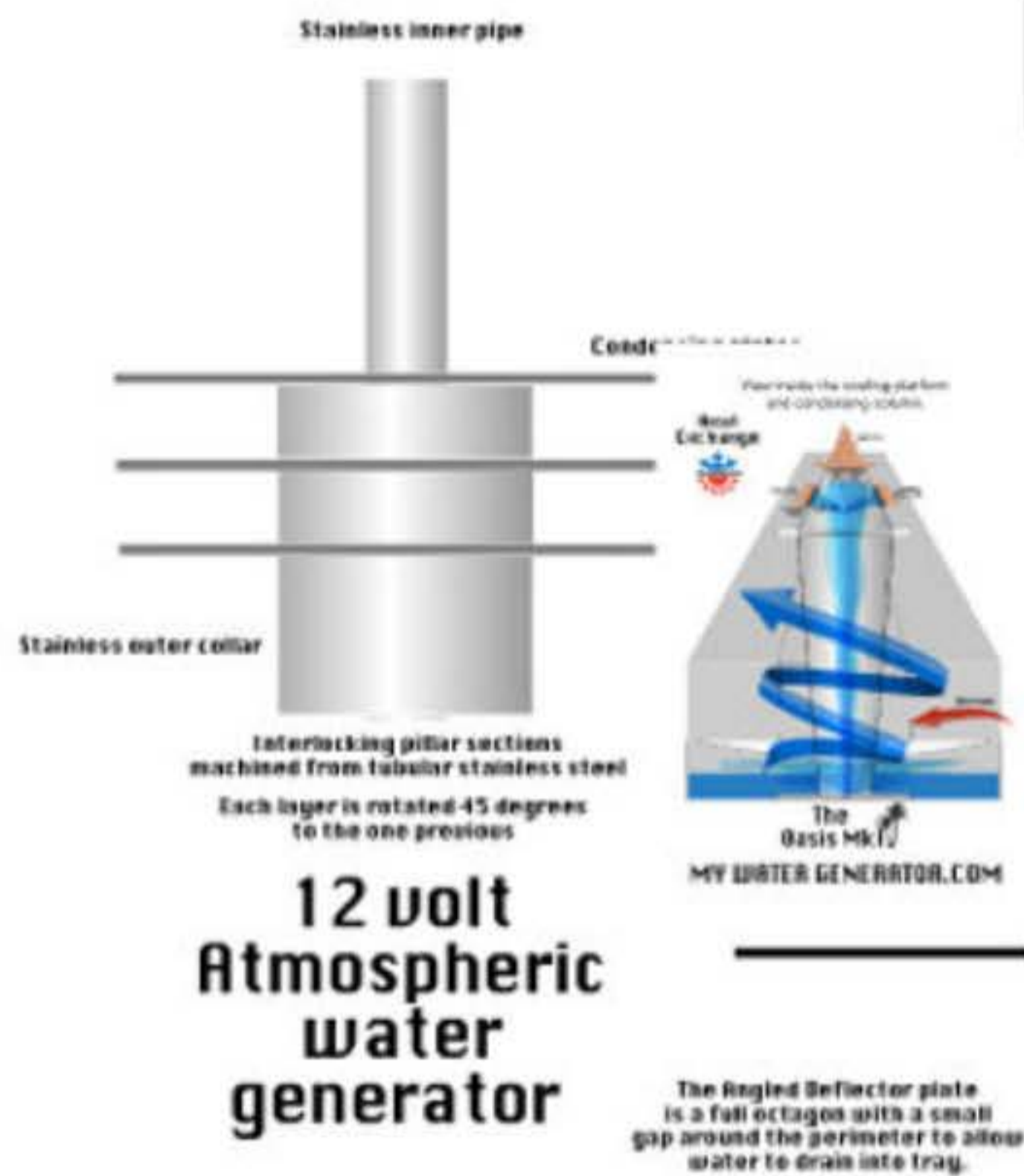


It's like having a tap that never stops running



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THE PELTIER EFFECT

When a voltage is applied across joined conductors, and heat is removed at one junction, a cooling effect occurs. This is known as the Peltier effect. By leveraging the Peltier effect, it is possible to produce extremely low temperatures, down to -60°C , using only 12 volts of D.C. current.

A solid state refrigeration system has no moving parts, which means the generators are ultra reliable and they use very little power. The units produce a rapid cooling effect the moment they are switched on, and the temperature inside can be thermostatically controlled.

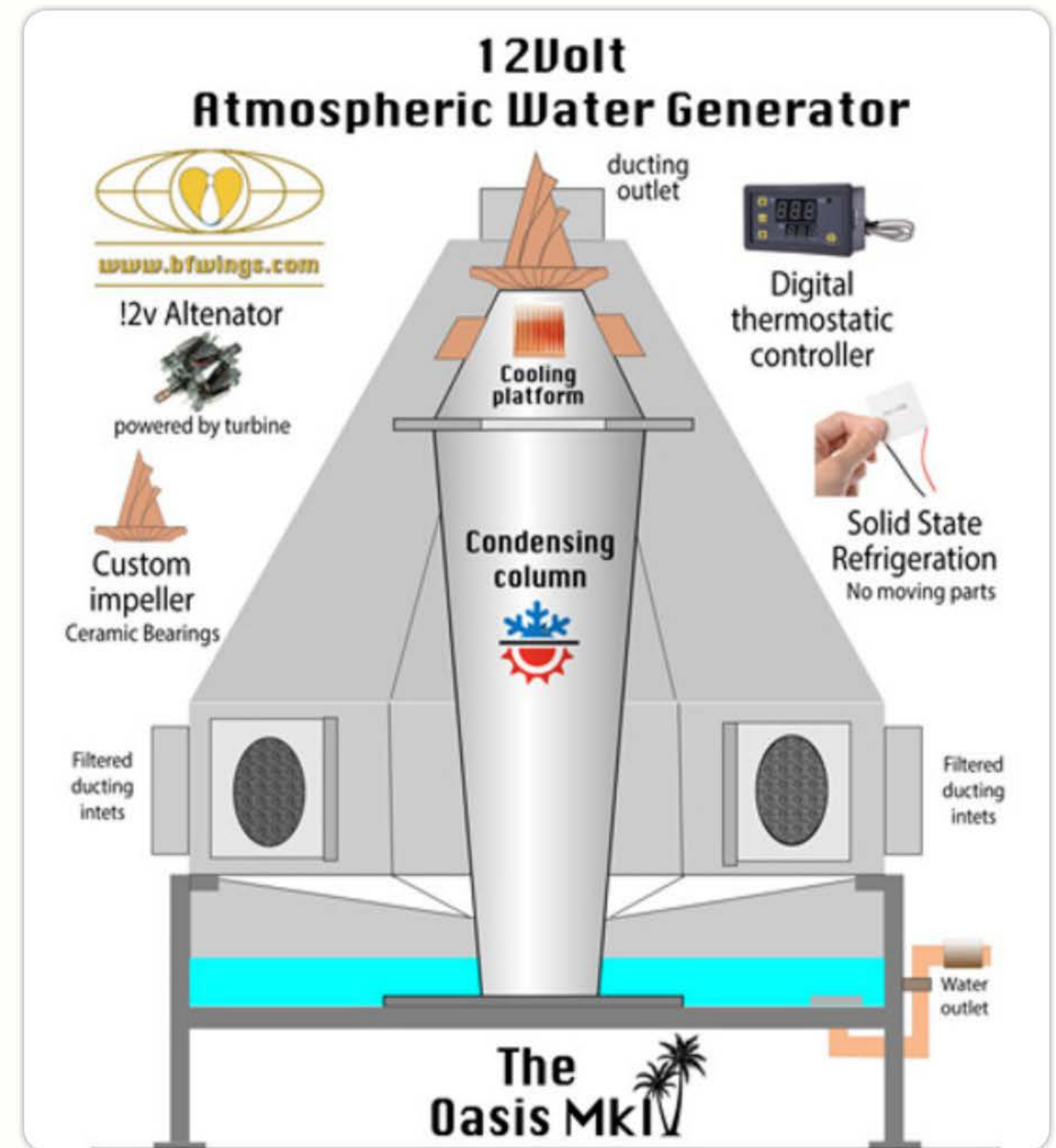
At -40°C water freezes spontaneously. A Peltier module can achieve lower temperatures than this, and sustain these temperatures using only 12 volts of D.C. current.

THE EXTRACTION PROCESS

For an atmospheric water generator to be effective, the temperature inside the condensing chamber must be much lower than the temperature of the air outside. This is relatively easy to achieve when the generator is switched off, but when hot air is being constantly processed, the temperature differential has to be sustained.

As hot air comes in at the bottom, this is where the cold temperature is needed the most. So, how do I get cold, dense air, down to the bottom? The answer is to use the condensing column as a pipe. The air inside the column is not affected by the rotational forces inside the condensing chamber, which means the cold air can fall under its own weight.

The hydrogen bond that holds water molecules together is responsible for many of its properties, including its ability to resist temperature change. This is why the condensing column is standing in a pool of freezing cold water. Water resists temperature changes, metals are very efficient thermal conductors. It's a marriage made in heaven.



A CLEAN HYDROGEN ECONOMY

Oil refining is a capital-intensive business. Planning, designing, permitting and building a new medium-sized refinery is a 5-7 year process with costs ranging from \$7-10 billion, not including land acquisition.

We don't need any of it.



Sucking oil out of the ground takes a huge amount of energy. Once the oil is out of the ground, it has to be transported to refineries and slowly heated to 125°C. When the crude oil has been refined, it has to be distributed to individual forecourts. Why go to all this trouble, and create so much pollution, when all you have to do is turn on a tap?



Germany now has the first hydrogen-powered passenger rail service. The trains operate with low noise and the only emissions are steam and condensed water.

Five of these trains debuted in August 2022 with nine more being added to replace the ageing diesel powered rolling stock.

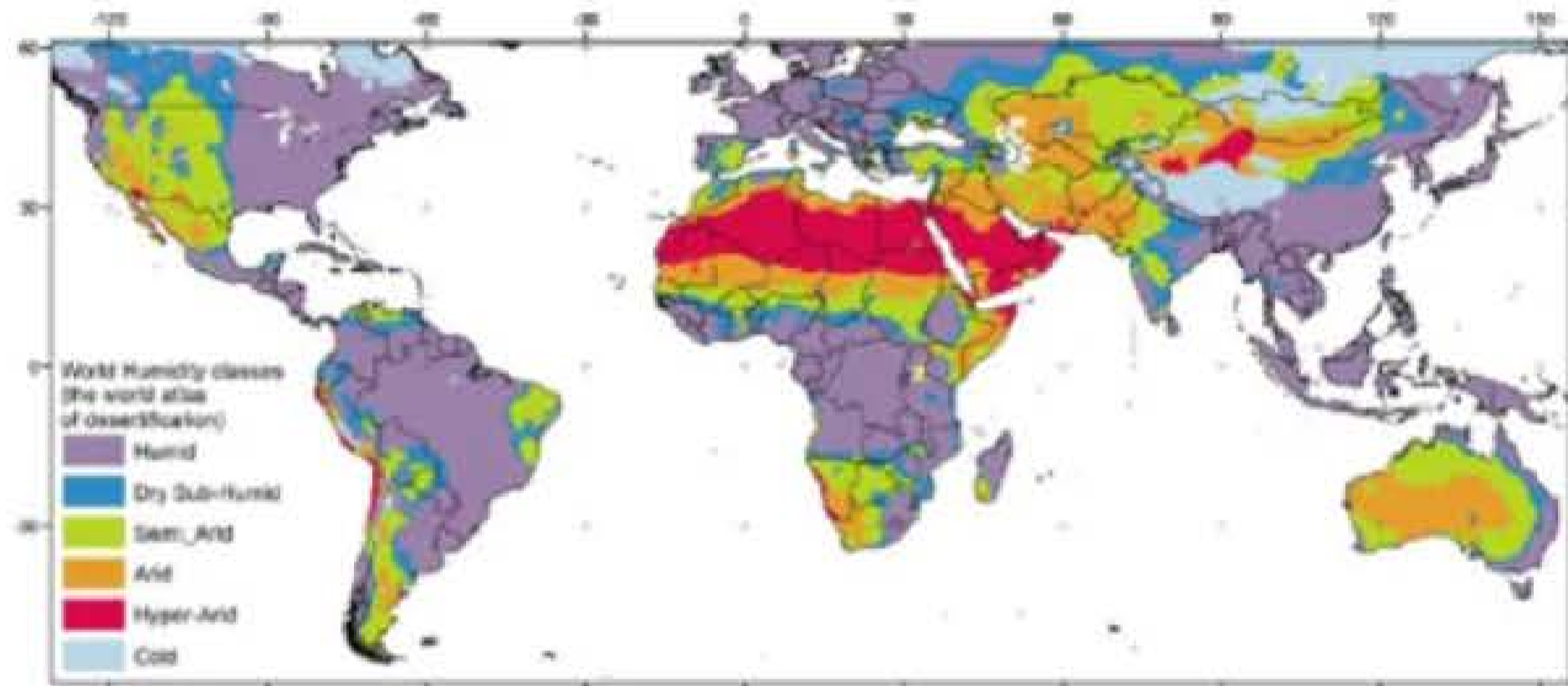
RELATIVE DENSITY & HUMIDITY

Hot air rises, cold air sinks. This is one of the immutable laws of thermodynamics.

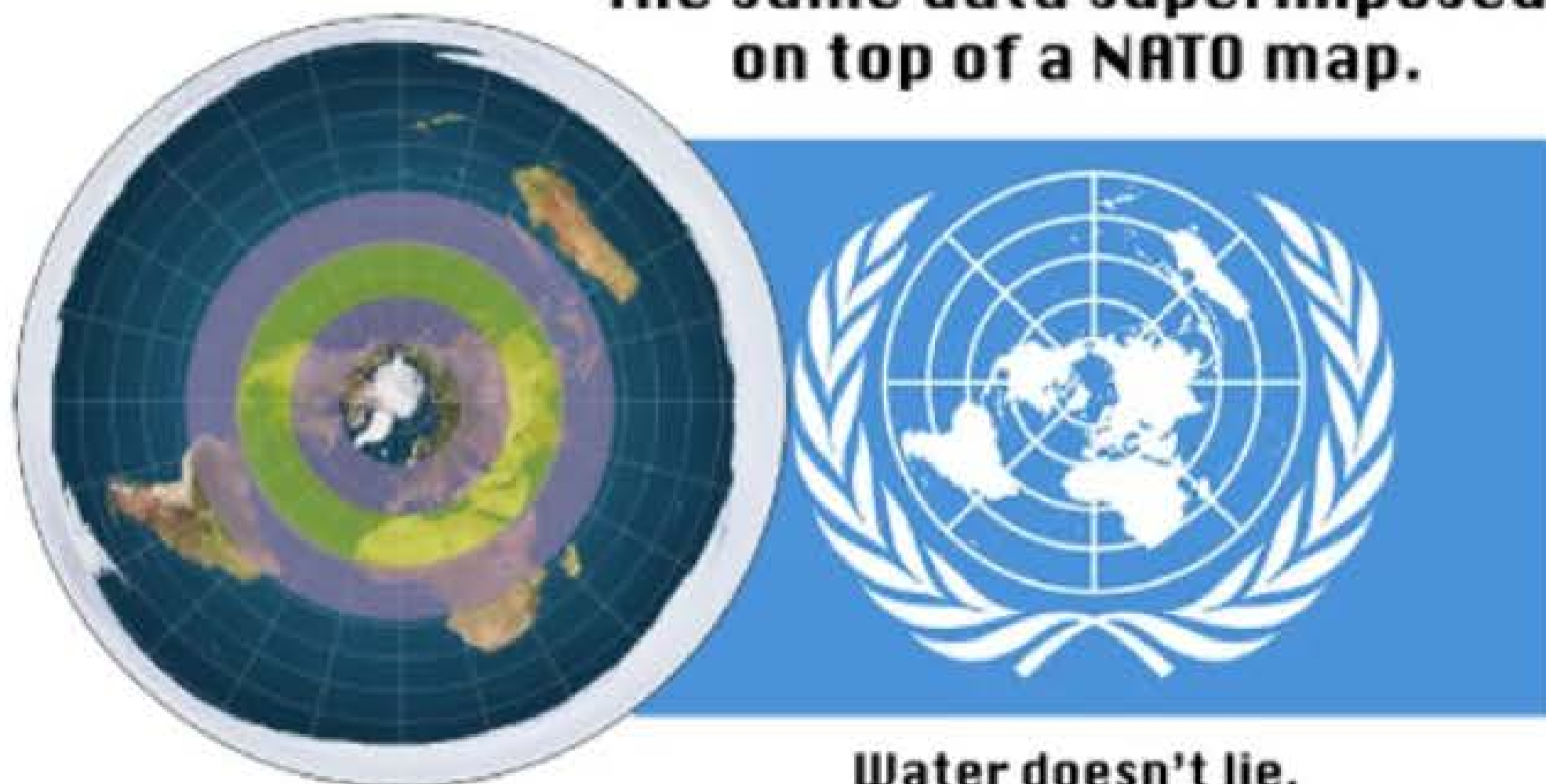
Lower temperatures leads to higher density, and higher temperatures leads to lower density. This is because warmer molecules of air move faster, creating an expansion effect that decreases air density. The density of one medium, relative to another, determines its position within a column.



Atmospheric data shown to the general public



The same data superimposed on top of a NATO map.



Water doesn't lie.
We can use the nature of water,
to confirm the true nature of our reality.

Relative humidity describes how full the sponge is, at any given temperature.

At 20°C and (60%RH), 1m³ of air contains 12 grams of water. 1 litre of water weighs 1000 grams. To extract one litre of water, I have to process a minimum of 83m³ of air. A typical ducting fan can push 1220m³ of air per hour. Based on the above temperature, relative humidity, and air flow rate, the maximum yield possible would be 168 litres per day.

At 30°C and (100% RH), 1m³ of air contains 30 grams of water. To extract 1 litre of water, I have to process a minimum of 33m³ of air. At these values, the same air flow rate would yield a maximum of 720 litres per day.

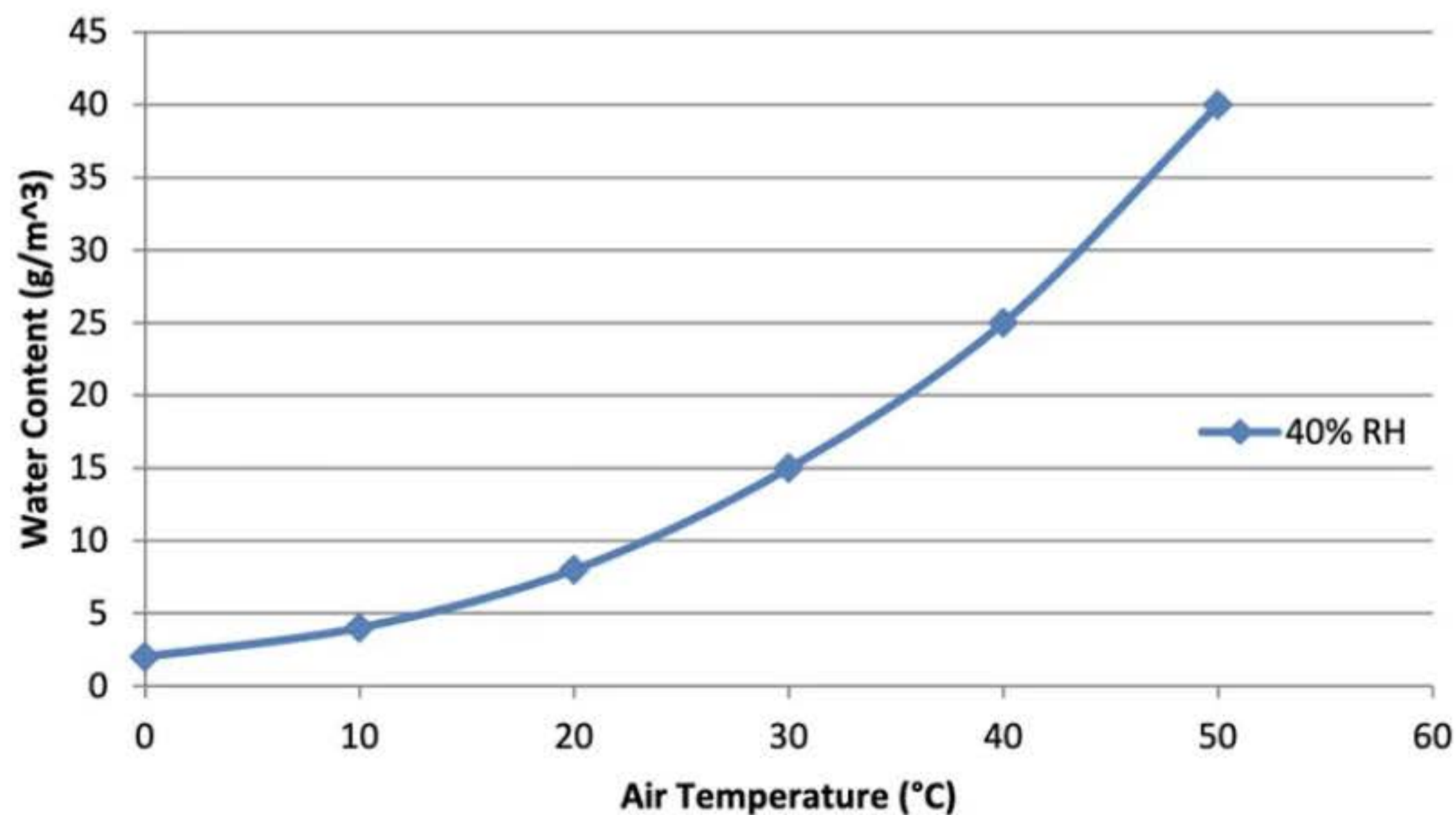
PUMPING IRON

Drilling a hole into the ground to extract water is extremely costly, and very energy intensive. A borehole has to be drilled, and when completed, all the machinery to extract water has to be purchased and installed. The up front cost can be as much as €45,000. The running costs are incredibly high because the suction pump has to overcome a huge amount of resistance.

Extracting water from the air is like squeezing a sponge. There is hardly any resistance at all, so I do not need to use a lot of energy to accomplish the task.



Water Content against Temperature for constant Relative Humidity



Cities such as Kuala Lumpur, Jakarta, and Singapore have very high humidities year-round because of their proximity to the equator, and also they are surrounded by water. Kuala Lumpur, Malaysia, sees an average RH ranging from 74% to 86%. The average humidity in Jakarta can be up to 90%.

My water generator harnesses natural principles and uses them to achieve specific tasks. The generator is extremely energy efficient because the natural principles do not need a form of energy to power them, Why should I use energy, when I don't have to?

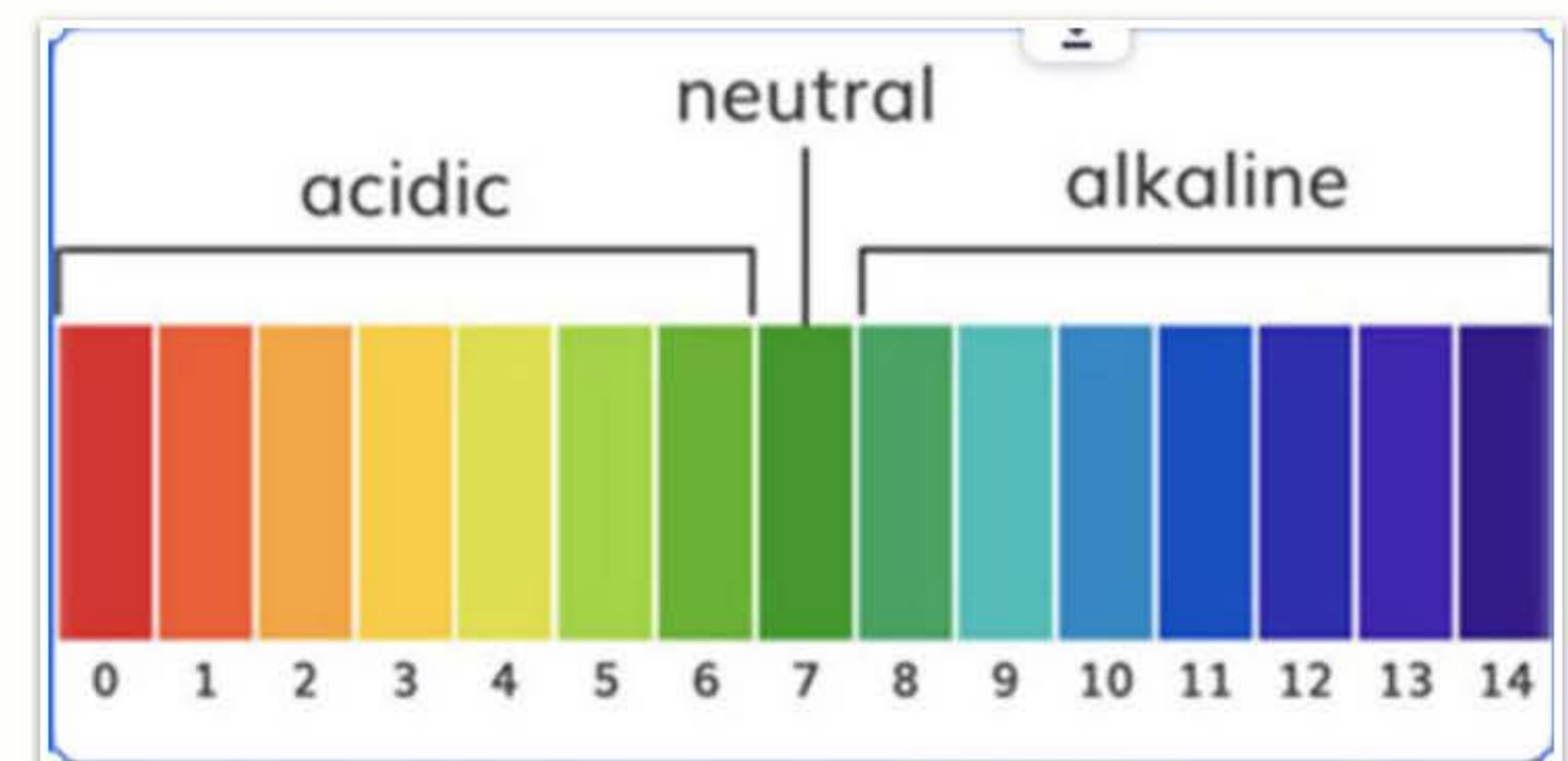
THE HIDDEN COST OF HARD WATER



An oasis in the desert proves that life can thrive, as long as there is water. The solution to stopping desertification, is to stop pumping water out of the ground. When water levels return to normal, life will return, and when it does, it will create its own micro-climate.

Ground water can contain a large volume of dissolved minerals which will make the water very alkaline. Fruit growers are required to regularly replace their equipment because of calcium build up in their filters, pumps and lines. This could be avoided if they used an atmospheric water generator as their primary source of water.

When hard water is boiled, the calcium deposits build up on heating elements inside kettles and boilers, dishwashers and washing machines, reducing their efficiency over time. The dissolved minerals also stick to plastic, glass, ceramics and metals.



BREATHING UNDERWATER

When water is taken out of the air, it can be instantly replenished. When water is taken out of the ground, it can take many decades for rainwater to filter down through sedimentary layers.

Our rivers are all running dry, because we have only been taking water out of the ground. We are extracting water at a faster rate than the natural process can keep pace with. The system is reversible, but we must switch to another source of water to give time for the water level to return to normal.

The process of evaporation is unceasing. For as long as the sun continues to shine, the atmosphere will always be an 'ocean' full of water. An atmospheric water generator creates the perfect conditions to encourage water to come out of suspension.



Above our heads
exists an ocean
of water

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STRUCTURED WATER

Purity is standards based, not judgement based. The moment any minerals become dissolved in water, the water ceases to be pure water. Consumers have no way of knowing the quality of dissolved minerals in the water they are drinking.

In its purest form, water has absolutely no mineral content whatsoever. Distillation removes the need to test for contaminants because it can remove them all.

Plants absorb H₂O from the soil and convert it into H₃O₂. This is the type of water that the cells in the body actually need, and the only type of water that they can actually utilise. Water from fruits and vegetables contains all the minerals you will ever need, in their purest, and most available form.

Plants use solar energy to convert H₂O into H₃O₂ and while our bodies can also convert water into H₃O₂, it takes energy to convert anything. Why expend energy converting water into H₃O₂ when the plants have already done it?

WHAT IS THE PUREST WATER ON THE PLANET



AQUAPONICS - HYDROPONICS



Aquaponics is a cooperation between plants and fish. Hydroponics is a way of growing plants without soil. In both cases the plants derive all the nutrients they need from the water the plants are growing in.

In the case of Aquaponics, the waste that the fish excrete is converted into nutrients that nourish the plant. In turn, the plants consume the nutrients which helps to purify the water. The relationship is entirely symbiotic.

Many enclosures for this type of farming are made of glass. The problem with glass is that it is an efficient thermal barrier which does not allow heat to escape. If there were no roof vents, the temperature inside the enclosure would quickly become unbearable. Growers have to leave the vents open most of the day so that heat can escape. An atmospheric water generator can extract the water from the air before it escapes, so it can be reused. The generator can also cool the interior if required.

Evaporation of standing water is a real problem that affects many reservoirs. Floating barges could be growing food on the surface of the water. This would have a number of beneficial effects. Firstly it would reduce evaporation considerably, secondly it would keep the water clean, and thirdly, it would feed the local population.

EFFECTIVE STRATEGIES FOR REMOVING SPECIFIC CONTAMINANTS FROM WATER

Toxins found in tap water



THE U.S. environmental protection agency has identified over 700 pollutants regularly occurring in drinking water.

CHLORINE

At room temperature, chlorine gas weighs less than air and will naturally evaporate off without boiling.

FLOURIDE:

Distillation, Reverse Osmosis, or activated Alumina.

NITRATES

Distillation, reverse osmosis, or by using ion exchange resins

HEAVY METALS

Distillation, ion exchange, reverse osmosis, and activated carbon filtration.

PESTICIDES

Ozone can also destroy pesticides, and toxic organic compounds in the water without leaving any toxic residues.

Atmospheric water does not contain any of the toxins found in ground/mains water. The inlet filters on my water generator are fine enough to stop even the tiniest particulates from getting inside. If desired, the water that comes out of the generator can be processed through a filtration system to guarantee purity.

HEATING/COOLING

THERMOELECTRIC COOLING USES THE 'Peltier Effect' TO CREATE A HEAT 'FLUX' AT THE JUNCTION OF TWO DIFFERENT TYPES OF MATERIALS. A Peltier cooler, IS A SOLID-STATE UNIT WITH NO MOVING PARTS.



The sun powers both the heating and cooling when this system is in operation.

SOLAR WATER DISTILLATION

A solar water distiller can turn contaminated water, into pure drinking water, using only the energy from the sun. The output from the distillation still can be collected locally, or it can be piped to another location. The distillation process is completely automatic and requires little maintenance.

A parabolic reflector can be used to heat the front face of the stainless steel column. The heat will transfer passively to the copper coil, but, if an opening is made in the metal, a Fresnel lens can be fitted into the opening. This will focus sunlight directly onto the copper tank and coil, which will ensure the unit is producing distilled water all day long.

Distilled water has a pH of 7 which means it is soft water. A simple circulatory system will produce unlimited amounts of hot and cold distilled water, which can be used for any purpose.

THERMAL DYSTOPIA

Concrete has a high thermal mass, which means it can absorb a lot of heat, and retain the energy of it. Steel reinforcing rods run from top to bottom, and from side to side. The rods conduct heat deep into the core of the building. When you marry concrete and steel together, you create a very efficient thermal hot/cold sink.

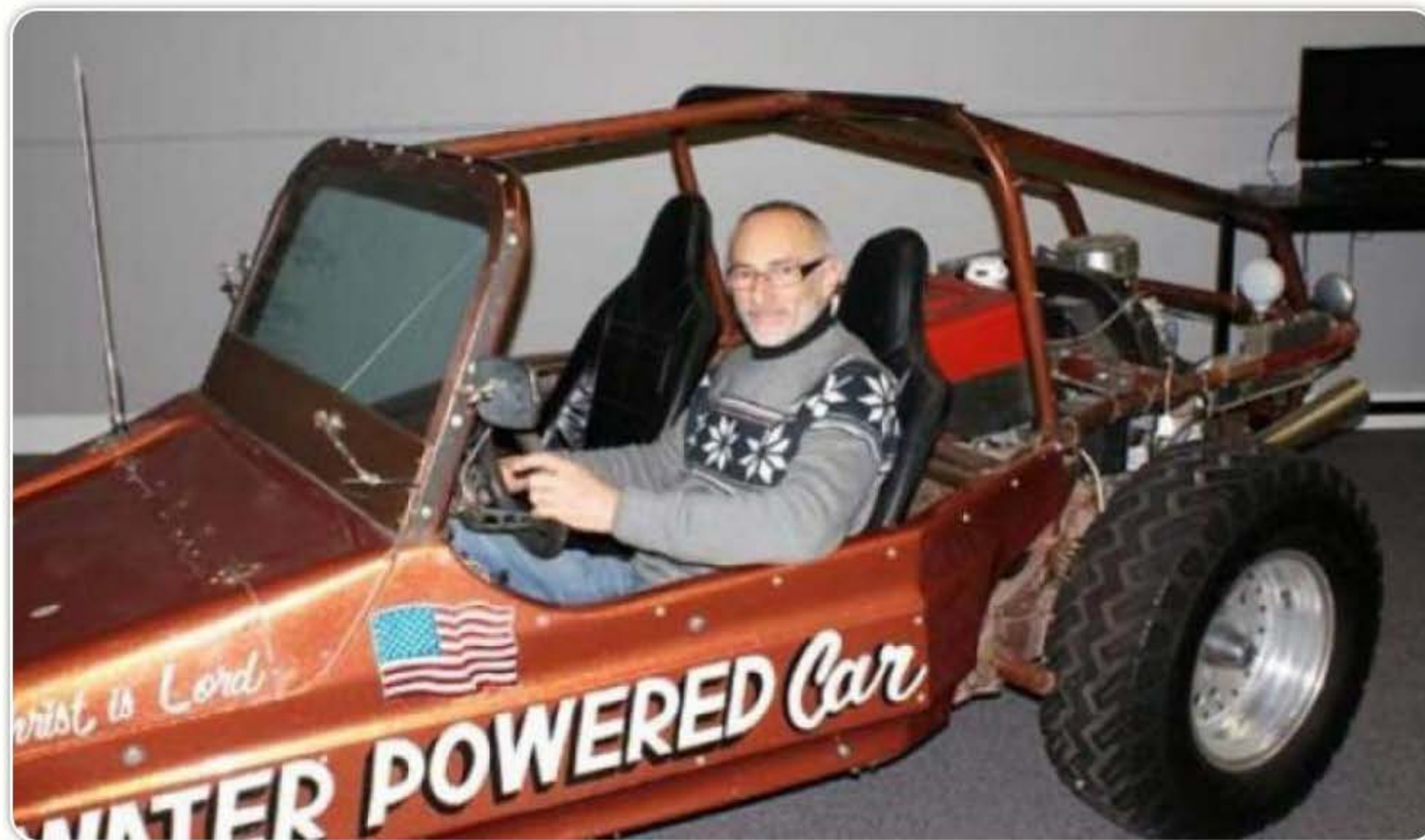
Glass is a very efficient thermal insulator. When two sheets of glass are separated by a partial vacuum, it makes it very difficult for heat to escape. When concrete, steel, and glass, are used together, each building will have to consume a huge amount of energy trying to keep the internal spaces cool in summer, and hot in winter.

Air conditioners can cool interiors, but, everything that uses electricity, generates heat. If we are generating heat and pumping it into the environment, then we cannot claim to be cooling anything down.



EXTRACTING HYDROGEN GAS FROM ALUMINIUM SCRAP

An easily produced composite of gallium and aluminum creates aluminum nanoparticles that react rapidly with water at room temperature to yield large amounts of hydrogen gas. Because the process is based on a reaction, it does not require an energy source to power it. This makes it the most cost efficient way of producing hydrogen gas to date. All you need is Gallium, Water, and Aluminium.



A man called Stanley Meyers invented a car that ran on water. He was poisoned to death by people he thought were investors. Bringing hydrogen technology to a world that is addicted to Abiotic oil is a dangerous game to play. Stan maybe gone, but his work is not forgotten.

My water generator is my personal contribution to making the world a better place.

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It's like having a tap that never stops running

When you have experienced life without water, you learn to appreciate the value of every single drop.

The scientific principals of radiation, conduction and convection, are all utilised in the design of my water generator, the end result, is water. When a student drinks the water, they will embody all the knowledge that went into the designing of it.

I am promoting a new school curriculum aimed at teaching children the truth about how the natural system really works. Download the school curriculum [here](#).



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