



MiTech

AIR WATER GENERATORS

AN INTRODUCTION

Model P50 – up to 50 litres per day



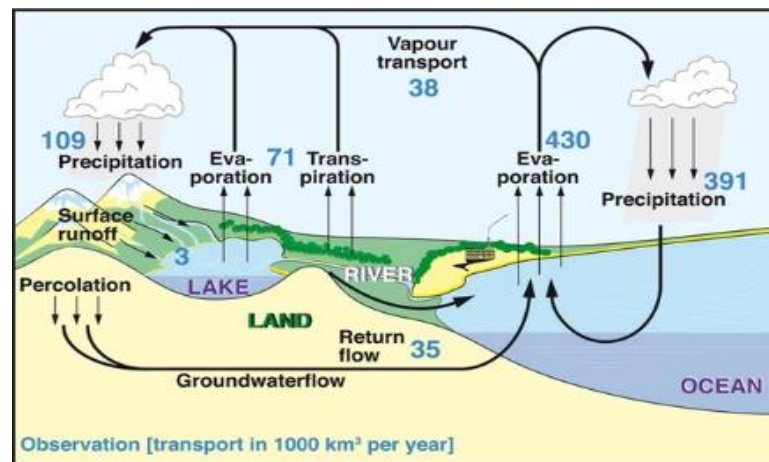
Atmospheric Water Generators represent an incredible technological breakthrough in finding an alternative and sustainable means to providing potable water; a water which offers many benefits to human health aside that is, from it being essential to life.

An Air Water Generator is a machine which is able to induct and process air in a manner which extracts the water available in the air, filter out impurities and deliver potable water.

AWG units are humidity and temperature driven; meaning the higher the humidity in the atmosphere the more water the machine will produce. Humidity is part of the earth's hydrological cycle created by the evaporation of water from the vastness of the oceans and surface water resources and released again through rainfall.

There are approximately 12 quadrillion litres of water in the atmosphere at any given time. The average humidity in the home or office is 50%. Sufficient water can be extracted from air with humidity levels as low as 30%.

The Hydrological Cycle



How do AWG's work?

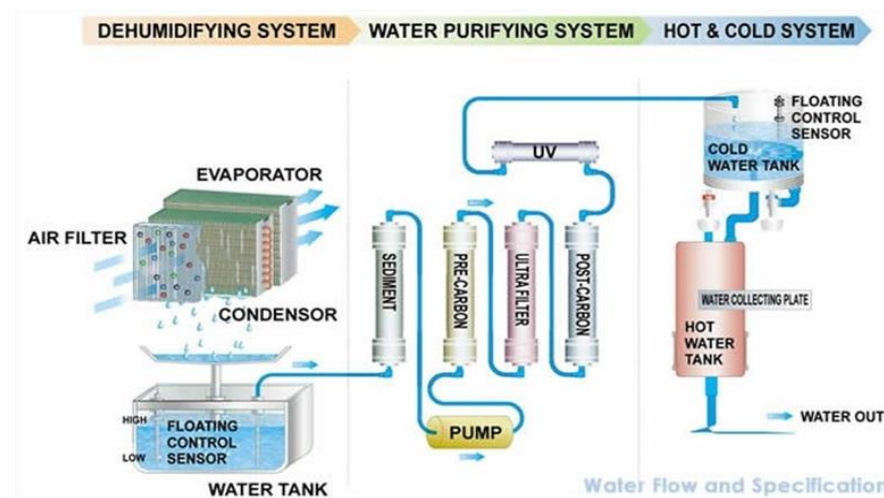
It is important to be aware that the Atmospheric Water Generator is a **humidity and temperature** driven machine. This means the machine totally depends on the level of humidity in the air and the ambient temperature to produce water.

Ideally, the humidity level should be at least 50% or above to achieve the machine's optimum performance. However In places and at times when there is a lower humidity level, (above 25%) the machine will still produce water but not as quickly, nor as much.

In the house environment, a higher level of humidity tends to be around the kitchen area, near an open window or in more spacious rooms. AWG units also performs well in an air-conditioned rooms, but it is recommended to open the window at night to ventilate the room with fresh air.

Because the Atmospheric Water Generator works by converting the humidity in the air to water, this unit also acts as an effective dehumidifier. In areas with high humidity, it not only acts as a good water generator, but also a perfect dehumidifier to keep your environment healthy for habitation.

To ensure high quality of drinking water, The AWG uses multiples of filtration technologies to screen out airborne impurities and contaminants. Including an ULTRA VIOLET LIGHT to destroy bacteria. The result is a **pure 'sweet' water** with an average pH **value of 7,6 (neutral acidity/alkalinity)**.



Health Benefits

Through the numerous filtration processes, the Atmospheric Water Generator produces the purest, high quality drinking water available today. The water produced is not only pure and free of any water contaminants, but also beneficial to your health.

Water from Atmospheric Water Generator provides the following overall benefits to the consumer:

- Clean and pure water; processed through multiples of filtration systems - RO, and UV treatment ultimately eliminating hazards caused by viruses, bacteria, pesticides and heavy metal contaminants.
- The rich oxygenated water improves the metabolism of your body.
- Tastes sweeter and better.
- Rich tiny H₂O molecular groups easily penetrate body cells, assisting improve the overall human body metabolism.
- At lower cost, you will get an excellent drinking water that is of great benefit to your body.
- It's thermos-electric engine runs on less power than conventional compressors.

Advantages of using UV: (Ultra Violet Light Sterilisation)

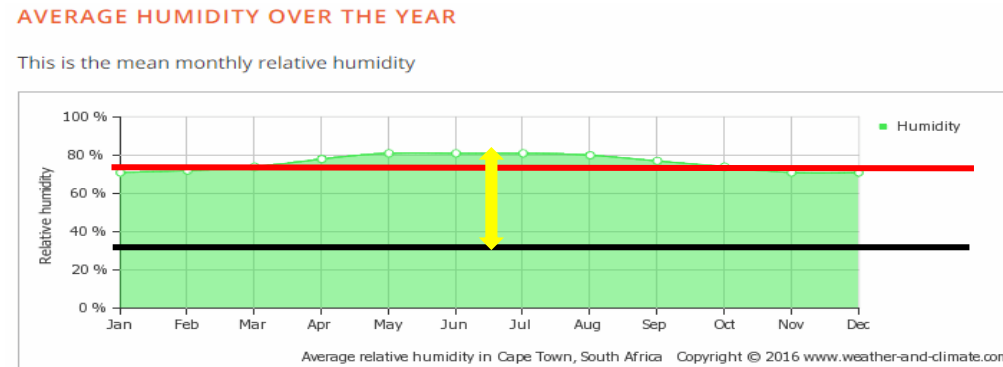
- Eliminates known toxic or significant nontoxic bye products introduced
- Removes some organic contaminants
- Leaves no smell or taste in the treated water
- Requires very little contact time (seconds versus minutes for chemical disinfection)
- Improves the taste of water because it is contaminant free
- Microorganisms are destroyed
- Pathogenic microorganisms are killed or rendered inactive.
- Does not affect mineralisation in the water

How to select the 'right' machine for your circumstance!

The most important consideration in purchasing an AWG is where the machine is to be located and to first establish the climatic conditions in which the machines is to be used. As has been previously indicated HUMIDITY and TEMPERATURE are the key factors to water from air production efficiency. (see chart below)

This information is readily available from your nearest weather station or internet resource (on-line).

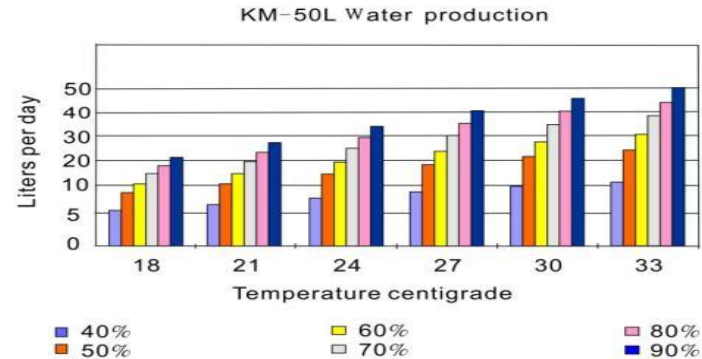
Annual Climatic Charts indicating Average (Monthly) Temperatures and Humidity levels for most areas are available. (For example) CAPE TOWN,



The features for CAPE TOWN shows that (i) there always exists a minimum average of 75% humidity for the area (-----) and, (ii) that between May and August (4 months of the year) the humidity averages 80%.

The minimum humidity for water production is 35% - and therefore, CAPE TOWN is clearly an IDEAL place where the benefits of GOOD WATER FROM AWG PRODUCTION can be expected throughout the year with excellent condition existing for the months of May to August.

However TEMPERATURE is another essential feature for water production. As a general rule 28°C is a good median temperature for observing water production opportunity at the differential levels of Humidity – the lower the temperature the lower the production potential of water; and vice-a-versa. The following Chart demonstrates the relationship to Humidity and Temperature as a rate of water production per 24 hours for a machine designed to produce at optimum conditions 50 Litres of water per day.



For example; in the above chart where the average humidity is 60% (yellow bar) and at a temperature of 24 ° Celsius the anticipated water production from a 50 litres machine is 20 litres per day. WHEREAS if the temperature rises to 33° Celsius the anticipated water production rises to 30 litres of water at the same humidity level.

Note: Using the chart above, the optimum water production for a 50 litre per day machine is therefore, 90% humidity (Dark Blue Bar) at 33° degrees C.; namely 50 litres output per day.

Once the above information is understood, the next important step is to calculate and consider the amount of Potable water required per day for which the acquisition of an AWG is considered necessary. Bearing in mind that the water has been filtered and prepared for safe drinking it is impractical and not viable for use to ‘flush the loo, or ‘fill the bath-tub’. It is for human hygienic and safe use and therefore, the calculation includes uses such as drinking water (teas and other beverages and mixed drinks included), cooking, personal hygiene routines such as brushing your teeth, cleaning wounds and ‘the such like’; where the use of **unsafe** water is not an option.

Knowing the required and sufficient water needed it is now possible to consider AWG machines that will MINIMALLY meet the daily need. As a precaution it is recommended that an additional volume of ‘to be stored’ water production per day be added to cater for unforeseen events of the future, such as, failures in electrical supply to operate the machine, service down time, etc. It should be noted that AWGs generally need little human intervention once set into operation; stopping and starting the production process automatically.

However the following should be noted: AWG machines filtered water tanks hold less water than their full production potential. Once this tank is full the machine will automatically cut out and remain so until at least 15% of this water is used; whereupon the machine will automatically start production again. This an energy saving feature. Most machines have a holding water tank of between 40% and 50% of their total capacity

to produce per day in optimum conditions. Therefore if optimum production is required it is a practical objective to drain water when not needed and to store it in a cool dark place or refrigerator.

Following the guidelines above, a 50 Litres AWG machine should be more than adequate for most households and small business enterprises. It is important to note that AWG machines do not manufacture, on a daily basis, their full potential. Therefore there may be days or periods, such as winter, where, because of the fluctuations in humidity and temperature, water production will be lower. Provision should be made for these intermittent periods.

The MiTech P50 AWG Machines has the added benefit of being able to be used as a filtration and purification system for an alternative water source other than which it generates out of the air. Behind a side panel on the machine is a 'filler-port' where municipal or rain water can be added to the main holding tank preparatory to machine filtration. It is suggested that dirty water such as may be collected from dams and polluted river sources **should be avoided** so as to not deteriorate the filtration elements in the machine. Each filter system has the ability to process about 10 000 litres of water before the need for replacement.

As a general rule water produced by the AWG will equate to a cost (electricity and filter replacement) of 80% cheaper than 5 litre units of bottled water purchased in retail stores. Properly maintained and cared for the AWG machine will operate for an extended lifespan of many years.

Installing your machine:

The machine is designed to be an automated 'plug and play' system; which means that once unpacked and plugged into the mains the start switch at the back of the machine will start the processes controlled by an automatic Programmed Logic Controller within the machine that will control all operations necessary to ensure that machines function to best performance in the prevailing conditions of temperature and humidity.

- (i) Note;- before plugging your machine into the mains drain any residual water from the main tank via an outlet nozzle at the back of the machine located at the base of the machine cabinet.
- (ii) Once the nozzles cap has been secured then connection of the machine can be carried out and once 'switched on' the machine should be left to run for at least 18 – 24 hours to start the processes of generating water from the air.
- (iii) The front instrument panel will show the current temperature and humidity level as well as the content of the water storage tank.
- (iv) Should an error symbol be displayed in the instrument panel refer to the instruction booklet provided and follow the procedures given. Alternatively the machine can be restarted. NB: it is important that the machine is placed on an even surface and ideally near an open air space leading to the intake air filter grill on the left hand side of the machine.

(v) The machine will stop producing water once the main holding tank is full.

PLEASE TAKE THE TIME TO READ THE INSTRUCTION MANUAL CAREFULLY AND THOROUGHLY.

General operation tips:

Once the machine shows that the holding tank is full you can now discharge the water into a suitable storage container which can be kept in a cool dark place until needed. The machine will continue with its production of water. NOTE – water can be extracted from the machine at any time during its production cycle – there is no need to wait until the main tank is full. Enjoy a glass of pure chilled water at any time.

Should an error message appear on the display screen FIRST refer to the instruction book. The machine may just need to be re-set by switching it off and on. The booklet will tell you when to call for support service.

Your air water generator has an exceptionally long life-span but like all equipment it does require that it is managed and cared for in a proper manner.

On the side of the machine (left) there exists a small doorway to a filler port. During time of low humidity or temperature you can add tap water to the machine which will process this water through its filtration and decontamination cycle providing safe and hygienic water.

Lastly the filter systems which are located behind the front lower door will need to be replaced approximately every 10 000 litres of water treated. This will vary between filters dependent upon the contaminants prevalent in your area. On the front display panel there is an indicator which will light up and advise when a particular filter is in need of replacement. Filters are available from your service agent listed at the end of this document.

May you have many years of outstanding service from your machine and a healthier lifestyle from the pristine water it produces.



SERVICE AGENTS : SOUTH AFRICA

In the event that you may need assistance with the function or performance of your machine the following assistance from a qualified maintenance engineer is available to you.



CALL CENTRE: 011 794 2228 / 0861 44 44 81

OR

EMAIL: info@ssure.co.za