



**DRINKING WATER GENERATORS**  
BY CONDENSATION OF WATER VAPOUR IN THE AIR



Tested by:

Instituto Nacional de Técnica Aeroespacial





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## Company Profile



AQUAER GENERATORS S.L. was born in 2004 in order to manufacture and commercialize drinking water generators based on the patented system `Aquaer´ looking for the best solution to the lack of water in desert climates, producing water using exclusively the humidity in air and being independent from any traditional source of water.

Aquaer Generators S.L was born as a subsidiary company of a major specialist in the industry of the Spanish refrigeration being: Asesoramiento Frigorífico SL (with more than 40 years of experience in the industry) offering through the new created company the most complete and efficient solution to the lack of water, the package includes feasibility study, water supply, refrigeration and electricity designed specifically for each customer.

Aquaer Generators S.L. offers definitive solutions to individual or family needs as well as communal needs (golf courses, villages, tourist complexes, refugee camps so, civil and military use).

We guarantee the quality of our products, doing multiple controls in our production line, as they are designed and calibrated specially for each customer to deliver the very best performance and always ensuring always the water production what they were designed for.

Nowadays we have different project lines i.e. (1) Hotel complexes & golf courses (Europe). (2) Water Supply in communal areas (through humanitarian International help) in the Namib Desert (Africa).

We need to mention here our presence in International Forums such as the SIWI (Stockholm International Water Institute) World Water Week 2006.

## Introduction

Our aim is to provide DRINKING WATER where no other sources of water are available, whether salty or otherwise. We do not require any water to produce drinkable water as we condense the absolute humidity of air with the aid of a refrigeration plant.

The system we patented can be designed for all kinds of consumers, from supplying whole villages to satisfying the water requirements of a single family.

The AQUAER GENERATOR even functions in desert-like climates.

Needless to say, subject to the source of energy utilized, the AQUAER GENERATORS are environmentally friendly and do not cause any pollution.



# General Information



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Despite the appearance of air being dry, there is a considerable amount of water in the air, namely in the form of vapour.

For example, the air at 30°C and 60% humidity contains more than 16 grams of water per Kgr. of air.

If the air temperature is lowered below its dew point, which is the temperature at which condensation starts, we will obtain water similar to rain water.

In our case the air will be cooled down to 0°C by means of a refrigerating plant, specially designed to that purpose.

It will be a matter of moving more or less air to obtain the required volume of water. With the Aquaer system we can obtain water in desert areas, where it is not possible to obtain it in another way.

All the Aquaer Generators will be able to work in desert areas, without any effect on the environment and without pollution.

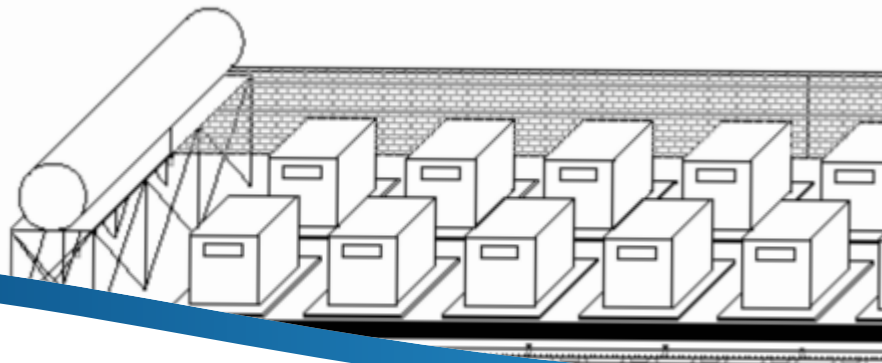
## Generators characters

## Models

Production	DIMENSIONS	POWER CONSUMPTION	POWER (*2) SUPPLY
<i>Cottidiana</i> 250 litres/24h.	h: 1.950 mm a: 950 mm b: 1.200 mm	3 KW	380V (Voltaje) 500 ppm (frequency)
<i>Pluvia</i> 500 litres/24h.	h: 1.950 mm a: 1.900 mm b: 1.250 mm	6 KW	
<i>Vitae</i> 1.000 litres/24h.	h: 3.000 mm a: 2.200 mm b: 2.200 mm	12 KW	
<i>Scctas</i> 1.000 litres/24h.	h: 3.000 mm a: 4.400 mm b: 2.200 mm	25 KW	
<i>+5000 litres/24h.</i>	<i>On request</i>	<i>On request</i>	<i>On request</i>

(\*1): The estimates of production are under worst meteorological circumstances, for this surely the production it will be greater.

(\*2): Opcional equiment extra: Photovoltaic system. | eolic system. | Gas system | Tetragenerators (cogenerations+Aquaer)



Average conditions Annual maxims	Day power consumption	Night power consumption	Average daily power consumption
+30°C y 15%HR Desert climate (Installed power 12 Kw)	475 Kwh./m3	108 Kwh./m3	292 Kwh./m3
+25°C y 60%HR Subtropical Climate (Installed power 5 Kw)	190 Kwh./m3	40 Kwh./m3	115 Kwh./m3

## Generator feactures

Although the system of AQUAER GENERATORS is new on the market, and has been patented, prototypes have been in operation since 1997 and are producing water ever since.

The AQUAER GENERATOR system makes it possible to enjoy water where otherwise it would not be possible to survive.

The system is environmentally friendly and, subject to the energy source utilized, does not cause any pollution.

The GENERATORS are easily transportable as they have been designed to fit into containers.

Low maintenance cost is another advantage of the AQUAER GENERATOR as it runs by itself.

Neither incrustations nor oxidation takes place with the result that special technical support is not required: only periodic cleaning of the air filters needs to be done, and this is an easy exercise.

We have installed an anti-bacteria ultraviolet light for the safety of the user.

Concerning possible smoke in the air, this is separated and expelled by the AQUAER GENERATOR as the dew point is different to the waters' one.

Supplying high quality water and reducing thereby illnesses derived from consumption of unsuitable water.

We guarantee the supply independently of pluviometer levels, weather conditions and water reserve levels.





# Applications



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This system can be adapted for all kinds of plants, from the big consumptions of populations up as well as the small consumptions, inclusive the ones to cover the needs of the home.

- Generators for domestic use: flats, house, etc...
- Generators for commercial, restaurant, communities, hotels
- Generators for industry, towns, hospitals, carbonateds drink, Nutritional.
- Military Camps and Refugee camps, Supply of water for human consumption in extreme situations and barren zones.

# Prices

The cost per litre of water obtained depends on the price of the Kw/h.

"If a Kw/hour costs 0.06 € the cost is 0,0173€ per litre of water"

In Namibia the Municipality of Walvis Bay charges (28 Amp) 30,28 Cents per KW/h. This would amount to N\$ 0.01 cents per litre of water.

# Chemical Water analysis

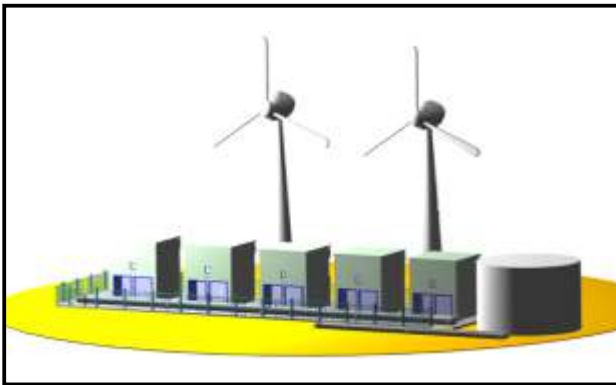
## LABORATORY: QUALITY CONTROL

An analysis of a water sample from the AQUAER GENERATOR compared

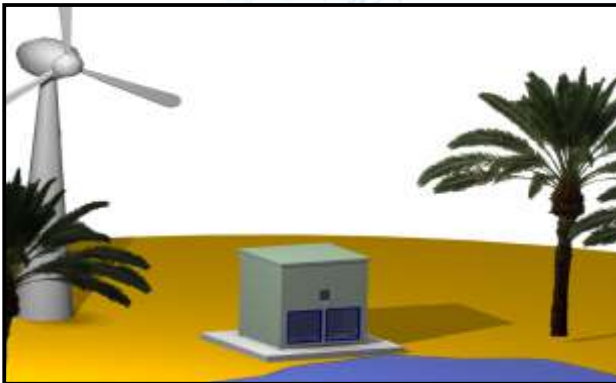
	Aquaer Water Generator	Walvis Bay Chemical Water Analysis	DWA NABIMIA Standard		SABS South Africa Standard		International Standard Regarding water quality		
			Class A	Class B	(Guide)	MAX	WHO (Guide)	EU (Guide)	EU MAX
Conductivity	29,2	117	150	300	100	200		400	
PH	7,50	8	6-9	5.5-9.5	6.6-9	9.5	6.5-8.5	6.5-8.5	6.5-8.5
Chloride, mg Cl/Lt	3,5	149	250	600	250	1000	250	250	250
Hardness, mg Ca/Lt	3,8	348B	300	650	500	1000			
Iron ppm	0,06	0.02A	0.1	1	0.1	1		400	
Copper ppm	0,01	0.05A	0.5	1	0.5	1	6.5-8.5	6.5-8.5	6.5-8.5
Nitrates ppm	0,06	3.4A	10	20	6	10	250	250	250



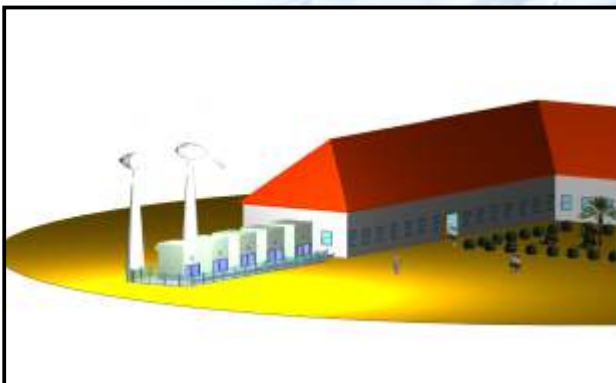
# Examples & images gallery



Elephants Reserve Oshivelo (Namibia)



Oasis | Generator of life



Kasfeld Orphanage (Namibia)



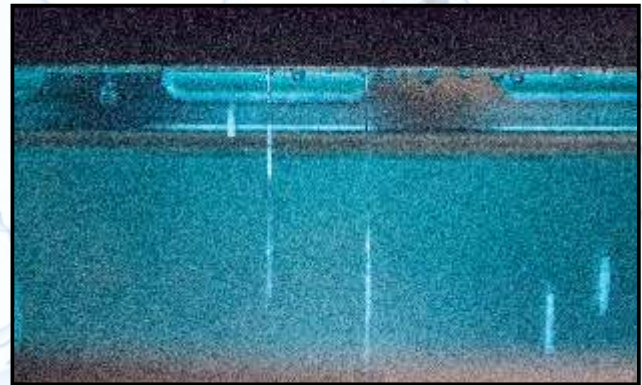




# Images gallery



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# *Aquaer* GENERATORS



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