



Atmospheric Water



Water : Life Source

Water is sacred and **essential to Life.**

Despite being recognised as a **fundamental right** by United Nations, access to drinking water is not guaranteed, which has severe consequences on some communities : famine, bad irrigation of crops and soil, impact on wildlife and flora, health risks...

What we offer : a water source

PURE, INFINITE and
AUTONOMOUS

Blue gold

Stress hydrique : un quart de l'humanité concerné

1/3 of the world's population still remains with no access to safe drinking water facilities (2017)

- Report WHO and UNICEF -

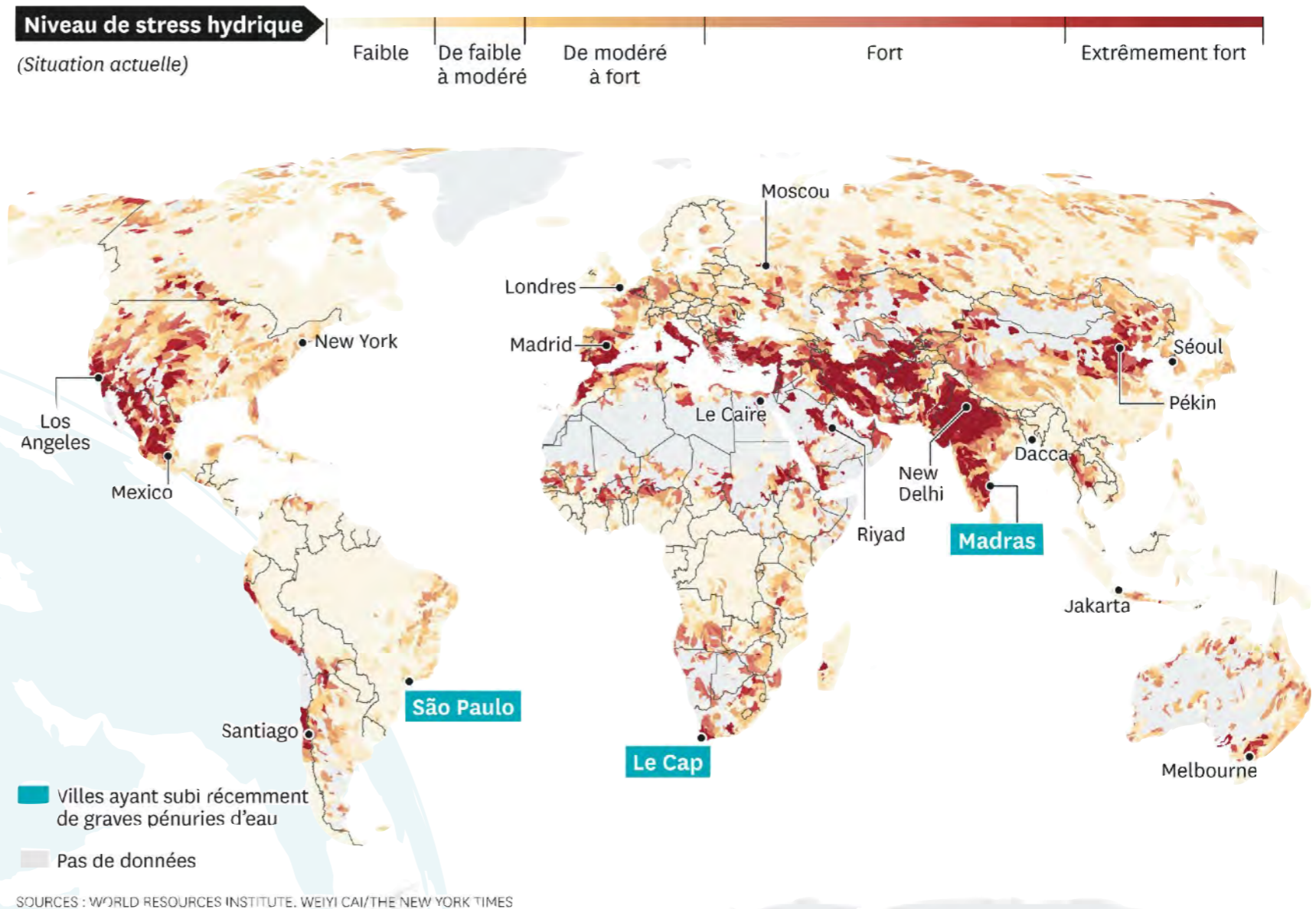
5 people in the world die every minute due to the lack of access to safe drinking water

- National Geographic -

Because of **water shortages** happening everywhere in the world, water has become like "**blue gold**".

Arid countries are hit the hardest : *"too many overuse groundwater wells instead of letting them replenish and save water for the driest periods."*

Based on data from the World Meteorological Organisation (WMO), 2019 was **the second warmest year since 2016.**



A resource at risk

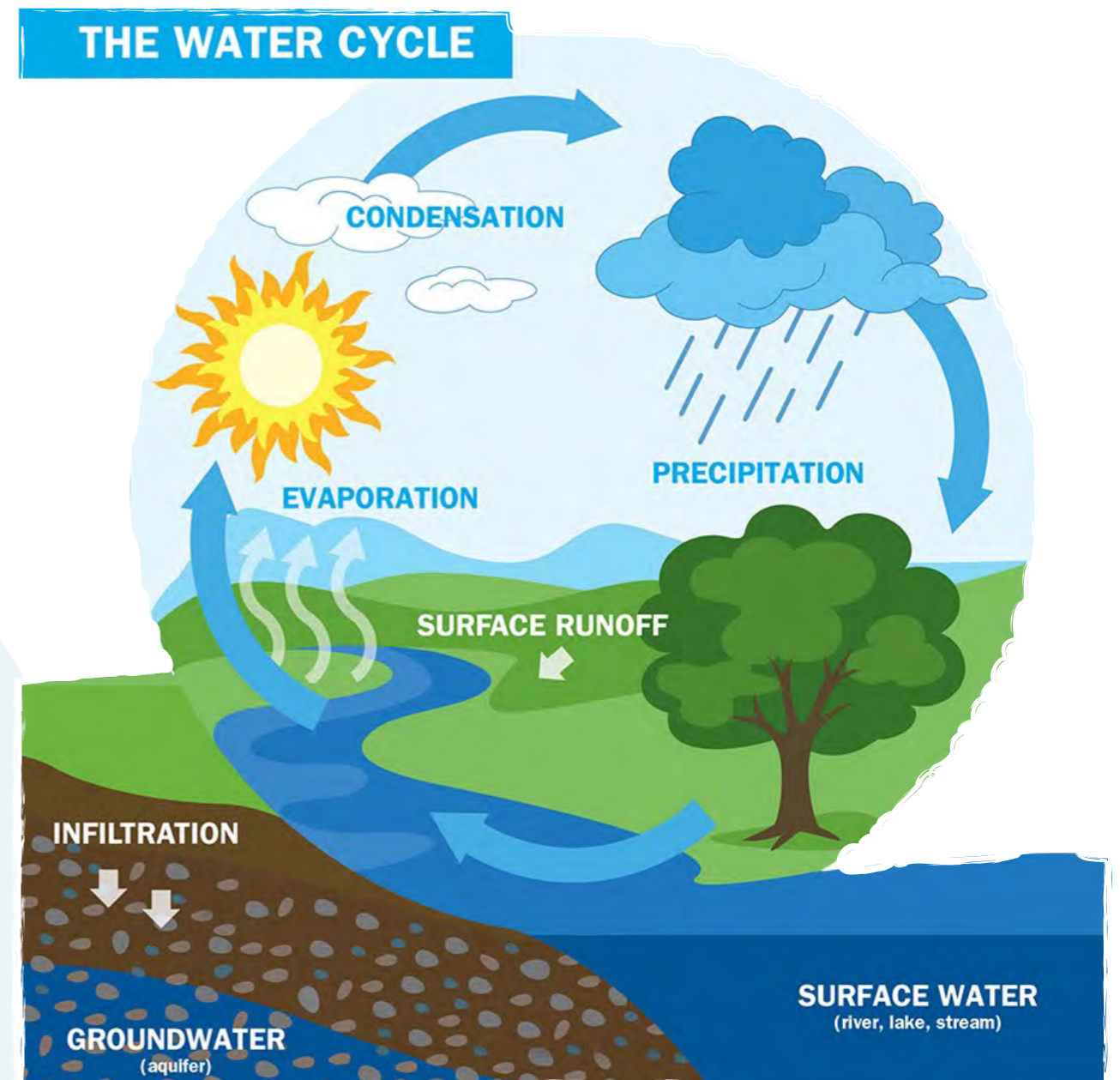
Main fresh water sources are being **over-exploited** by the various dams, wells, water withdrawals and pumping stations that have dramatic repercussions :

- * **Aggression** on soils
- * Sanitary treatments leaving **chemical residues**
- * **Accumulation of salt waste (brine)** due to the desalination, impacting wildlife and flora.

Average daily consumption of water per person :

Between **100** and **350** liters a day in affluent regions

Between **70** liters and **no water at all** in the poorest regions, resulting in health threats, famine and sometimes armed conflicts.



Water vapor

Atmospheric water consists in **converting humidity in the air into water in a natural way, thanks to condensation.**

This is a natural phenomenon seen ever day with fogging over a window or morning dew.

Atmosphere contains dry air ($5 \cdot 10^{15}$ tons) and water vapor ($18 \cdot 10^{12}$ tons). This water vapor comes from evaporation from oceans and streams or from evapotranspiration from plants. The quantity of vapor contained in moist air is called **absolute humidity** (grams of water vapor per air cubic meter).

Air temperature (°C)	Absolute humidity (g/m ³ air)
30	30,08
20	17,15
10	9,36



Our solution

It is the **only patented system of its kind in the world** and its power comes from its **energy compression capacities**. Energy compression is obtained through the extreme **optimisation** of the system's functional parts (condenser, cooling generator, regulator...), whose parameters are automated.

Energy consumption varies between **100 and 30 Watts** per litre (compared to 400 to 800 Watts for existing systems) ... a **significant difference** compared to current standards.

Capacities in freshwater production start at **3000 litres** per day and can go up to **unlimited volumes** when adding extra components.

The quantity of water produced depends on the volume of treated air, temperature and air **hygrometry**. Depending on the temperature and hygrometry, our system can recover **5 to 30 grams of water per m³ of air**.



Advantages

Surrounding air is absorbed and cooled down just under dew point temperature, using humidity to **produce water**. Water is then collected and **ready to be used and consumed**. Romans already used this technology, we simply improved it.

Economical and ecological advantages of our solution :



Air is inexhaustible, renewable and omnipresent



It is 100% sustainable, does not contaminate and does not damage natural resources



It produces pure natural drinking water, with a low chemical load



It is autonomous, compact and water is consumable in the same place it is produced.



It is economically and easily compatible with other chemical treatments and mineral supplements



Usage

Its **low energy consumption** allows our system to potentially be implemented anywhere because :

- It produces **water autonomy** (factories, housing, hospital, schools, stations, jails, businesses, islands, hotels, isolated areas...);
- It allows **strategic water reserves** to maintain healthy levels (dams, wells, water tanks...), as these are essential in case of exceptional circumstances (fires, drought...)



- It enables **water supply** of makeshift camps, refugee or disaster-stricken camps **in just a few hours;**

It is a **modern, alternative and economical method** that **respects the environment.**

It can be used in **all temperate or tropical regions** in the world, under "normal" temperature and humidity conditions.

This new technology allows **Accessibility, Autonomy and Abundance**

On your right you may find **an example of daily water production (in litres) based on a Aquatéthys unit (50m³/h), subject to temperature and humidity conditions.**

The Shell

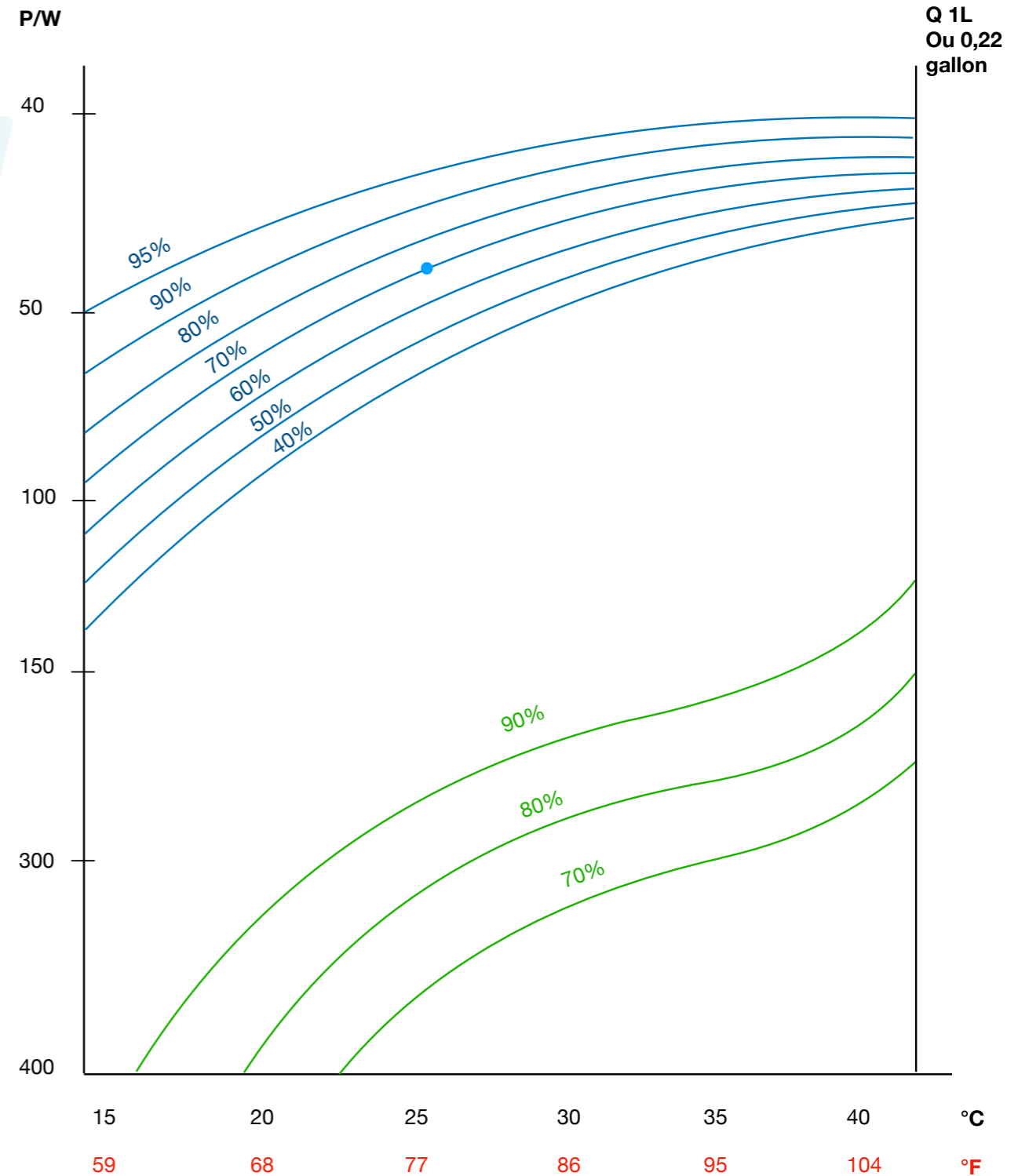
We have selected "one trip" **containers** (20 or 40 feet) which are in good conditions and don't have too many bumps. These will be **easy to paint with your own colours** and we have contacted a marine paint

producer for convenience. The containers will enable our units to be **mobile, easily transportable and allows for quick delivery around the world.**

Therefore, our autonomous solution reduces **high budget investments** in production infrastructures, warehousing or transport.



Production d'eau atmosphérique en fonction de la température et de l'hydrométrie ambiante



Production eau atmosphérique

Production eau atmosphérique procédé classique


Point de référence 25°C / 70% d'humidité




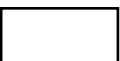
Tableau des productions et des capacités de production pour

Table of production and production capacity for

Humidity % Temperature (°C or °F)	30	40	50	60	70	80	90
40°C / 104°F							
35°C / 95°F							
30°C / 86°F							
25°C / 77°F	3200 L	4000					
20°C / 68°F	2400	3200	4000				
15°C / 59°F	1800	2400	3200	3200			
10°C / 50°F		1800	2000	2100	3000	3100	

 La production a une consommation comprise entre 50 et 100 W du litre et peut être supérieure à la capacité initiale de la machine (5 à 8000 liter/jour)
The production consumption is from 50 to 100W per liter and can be higher than the initial capacity of the machine (5 to 8000 liter/day – 1100 to 1760 Galon)

 La production a une consommation comprise entre 100 et 180 w du litre
The production has a consumption between 100 and 180 w per liter (per 0.22 gallon)

 La production initiale d'eau n'est plus assurée, la consommation reste comprise entre 150 et 300W /litre
The initial production of water is no longer ensured, consumption remains between 150 and 300W per liter (per 0.22 Galon)

Les débits d'air et les débits de gaz frigorigène étant progressifs, la régulation qui équipe nos machines peut s'adapter à la demande du client suivant son utilisation et suivant son implantation, nous avons plusieurs axes et plusieurs leviers selon les impératifs du client selon qu'il privilégie la production d'eau ou la consommation.

The air and refrigerant gas flow rates being progressive, the regulation which equips our machines can be adapted to the customer's request according to its use and according to its implementation, we have several axes and several levers according to the customer's requirements depending on whether he prefers water production or consumption.

Practical information

Services

When using this production unit for consumption, **the safety of the produced drinking water is guaranteed at all times**, even above performance standards related to sanitary requirements. For production needs beyond 50m³/day (50,000 litres), an on-site research study is necessary. Our technology is designed and meant to work **based on the available energy network**. Our system Plug & Play enables production to start within **less than 30 minutes after installation**. Thanks to the **low energy consumption** of our method, other eco-friendly alternatives can be installed (solar panels, windmills, thermal power, petroleum, gas...) and render **water production 100% autonomous**.



Maintenance et télémaintenance

The whole of the system is **watched and controlled remotely**. Subscription to a complete remote surveillance and maintenance is necessary, as it ensures **control of the water production**, implementation of guarantees, updating of the softwares and alarm triggers (ie. filter changing requirements etc.).

Tailor-made project

Our research and development team strives to continuously improve our technology's performance.

Our customised studies **depend on local parameters** that may vary greatly from one part of the world to another : location, weather, hygrometry, land adaptation, usage, volume etc. **This is why a questionnaire was especially designed to optimise each specification and deliver the best solution.**

Contact

Please feel free to contact us if you need further information



AQUATETHYS BY FLUIDES CONCEPT

Henning Borgersen



Tel: + 45 26 89 88 88



info@henco.solutions

www.henco.solutions



Fluides Concept - 7 Route d'Escoussans – 33760 TARGON – France

The information given in this document are not contractual, Aquatéthys by Fluides Concept reserves the right to delete or change them, as part of a continual improvement of its technology.





Our range



By 2030, more than 470 million people **will be affected by significant water shortages.** This situation will lead to health threats, famine and sometimes even armed conflicts over water resources control.

Model Solar***	Tiger	3	5	10
Water production / day	Gallon per day Litre par jour	920 gal/days 3500 litres days	1380gal/day 5200 litres/day	2760 gal/day 10440 litres/day
Air filter	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel
Water filtration system	Cartouche patented and UV lamp	Cartouche patented and UV lamp	Cartouche patented and UV lamp	Cartouche patented and UV lamp
Dimensions W x D x H	Inches Centimètres	236 x 95 x 102 inch 606 x 244 x 259 cm	236 x 95 x 102 inch 606 x 244 x 259 cm	236 x 95 x 102 inch 606 x 244 x 259 cm
Net Weight	kg	6100	6400	7650
Power Supply *	V-Ph-Hz	400-3-50	400-3-50	400-3-50
Consommation	BTUs Watt	/	/	/
Refrigerant	R513a	R513a	R513a	R513a
Condenser coil	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins
Evaporateur coil	Food quality	Food quality	Food quality	Food quality
Evaporateur Fan	Cfm m3h	15800 9300	25500 15000	50970 30000

Tiger: Solar energy

AQUATÉTHYS, our very high-efficiency atmospheric water generator, can be easily installed anywhere in the world. The water is obtained by **the optimisation of the condensation phenomenon which can be found in nature** thanks to a generator whose parameters are controlled by an automated management system that is **remotely adjustable**.

Our generators produce **pure and natural drinkable water** with a low chemical content. They are **autonomous, compact and the water can be consumed - directly on the production site**.

Our water production is **adapted to the needs of our customers**, the qualitative and quantitative constraints are not the same for industry, sanitary establishments **1** or even a town.

Elephant: Electric energy



Model Electric***	Elephant	3	5	10
Water production /day	Gallon per day Litre par jour	920 gal/days 3500 litres days	1380gal/day 5200 litres/day	2760 gal/day 10440 litres/day
Air filter	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel
Water filtration system	Cartouche patented and UV lamp	Cartouche patented and UV lamp	Cartouche patented and UV lamp	Cartouche patented and UV lamp
Dimensions W x D x H	Inches Centimètres	236 x 95 x 102 inch 606 x 244 x 259 cm	236 x 95 x 102 inch 606 x 244 x 259 cm	236 x 95 x 102 inch 606 x 244 x 259 cm
Net Weight	kg	5700	6100	6700
Power Supply *	V-Ph-Hz	400-3-50	400-3-50	400-3-50
Consommation	BTUs Watt	6.9 BTUs 7290 W	10.26 BTUs 10830 W	20.6 BTUs 21750W
Refrigerant	R513a	R513a	R513a	R513a
Condenser coil	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins
Evaporateur coil	Food quality	Food quality	Food quality	Food quality
Evaporateur Fan	Cfm m3h	15800 9300	25500 15000	50970 30000



Our generators have a distinctive philosophy and operating mode compared to our competitors. We offer multi-energy generators that run on **solar, gas, fuel oil, electricity or hot water**, which allows us to be located in areas where there are no or few energy sources. The power supply solutions for our generators allow us to **operate with mixed or hybrid energy sources**.

Model Gas ***	Buffalo	3	5	10
Water production / day	Gallon per day Litre par jour	920 gal/days 3500 litres days	1380gal/day 5200 litres/day	2760 gal/day 10440 litres/day
Air filter	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel
Water filtration system	Cartouche patented and UV lamp	Cartouche patented and UV lamp	Cartouche patented and UV lamp	Cartouche patented and UV lamp
Dimensions W x D x H	Inches Centimètres	236 x 95 x 102 inch 606 x 244 x 259 cm	236 x 95 x 102 inch 606 x 244 x 259 cm	236 x 95 x 102 inch 606 x 244 x 259 cm
Net Weight	kg	5900	6300	7400
Power Supply *	V-Ph-Hz	400-3-50	400-3-50	400-3-50
Consommation **	BTUs Watt	4.3 BTUs 4600W	7.15 BTUs 7650 W	8.1 BTUs 8400W
Consommation Gas	Nm3/h	0.73	1.2	2.2
Refrigerant	R513a	R513a	R513a	R513a
Condenser coil	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins	Copper tube - Aluminium Fins
Evaporateur coil	Food quality	Food quality	Food quality	Food quality
Evaporateur Fan	Cfm m3h	15800 9300	25500 15000	50970 30000

Buffalo: Gas energy

Castor: Fuel Oil energy

Model Fuel ***	Castor	3
Water production day	Gallon per day Litre par jour	920 gal/days 3500 litres days
Air filter	Electrostatic Anti-bactériel	Electrostatic Anti-bactériel
Water filtration system	Cartouche patented and UV lamp	Cartouche patented and UV lamp
Dimensions W x D x H	Inches centimètres	236 x 95 x 102 inch 606 x 244 x 259 cm
Net Weight	kg	5900
Power Supply *	V-Ph-Hz	400-3-50
Consommation	Litre/h	0.8
Consommation	BTUs Watt	/
Refrigerant	R513a	R513a
Condenser coil	Copper tube Aluminium Fins	Copper tube Aluminium Fins
Evaporateur coil	Food quality	Food quality
Evaporateur Fan	Cfm m3h	15800 9300



Our atmospheric water generators **AQUATÉTHYS** are presented in the shape of technical containers, integrating all the components that enable them to **produce water in a totally autonomous way** (UV water treatment, air and water filters, remineralising cartridges, air filtration and purification, a booster for supplying a water point or supplying the user's hydraulic network, etc.).

Our water production is flexible: up to 50,000 litres a day. Our generators are assembled like simple building bricks. Beyond those production capacities, we work differently and **tailor the most appropriate solution to our customer's specifications.**

Technical notes

*Optional voltages: 208-230V/3Ph/60Hz
380-460V/3Ph/60Hz

**As an option, we offer an autonomous power supply of our generators with, depending on the location of the AWG of the solar voltaic or a conventional generator.

The low consumption of our productions allows us to have an autonomy 4 or 5 times higher than that of our main competitors.

***We do not give technical specifications for solar panels, these vary according to the location and the choice of supplier.

¹We are the only manufacturer to integrate (as an option) the production of a disinfectant based on active chlorine in the form of HOCl hypochlorous acid. This disinfectant has a neutral PH, it is a natural disinfectant, it is approved by ACS and NSF 61. This technology is respectful of man and the environment.

The manufacturer reserves the right to modify the technical specifications.

Water production is calculated using the ANSI/ AHAM (American National Standards Institute/ Association of Home Appliance Manufacturers) industry standard for dehumidification of 80F/27°C & 60%RH.

