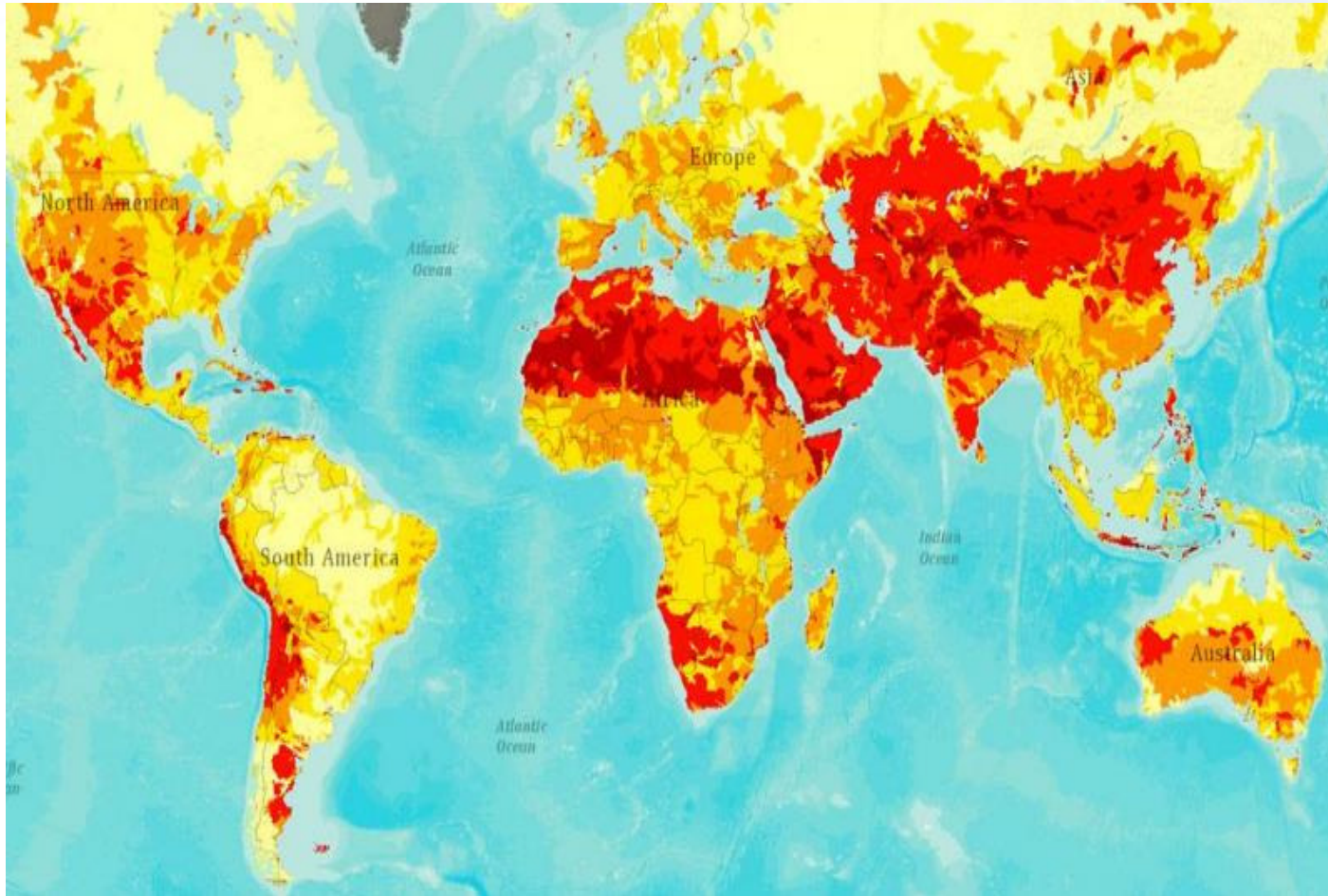


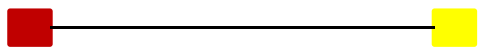


# WATER FOR LIFE

# Water Crisis



Water  
scarcity



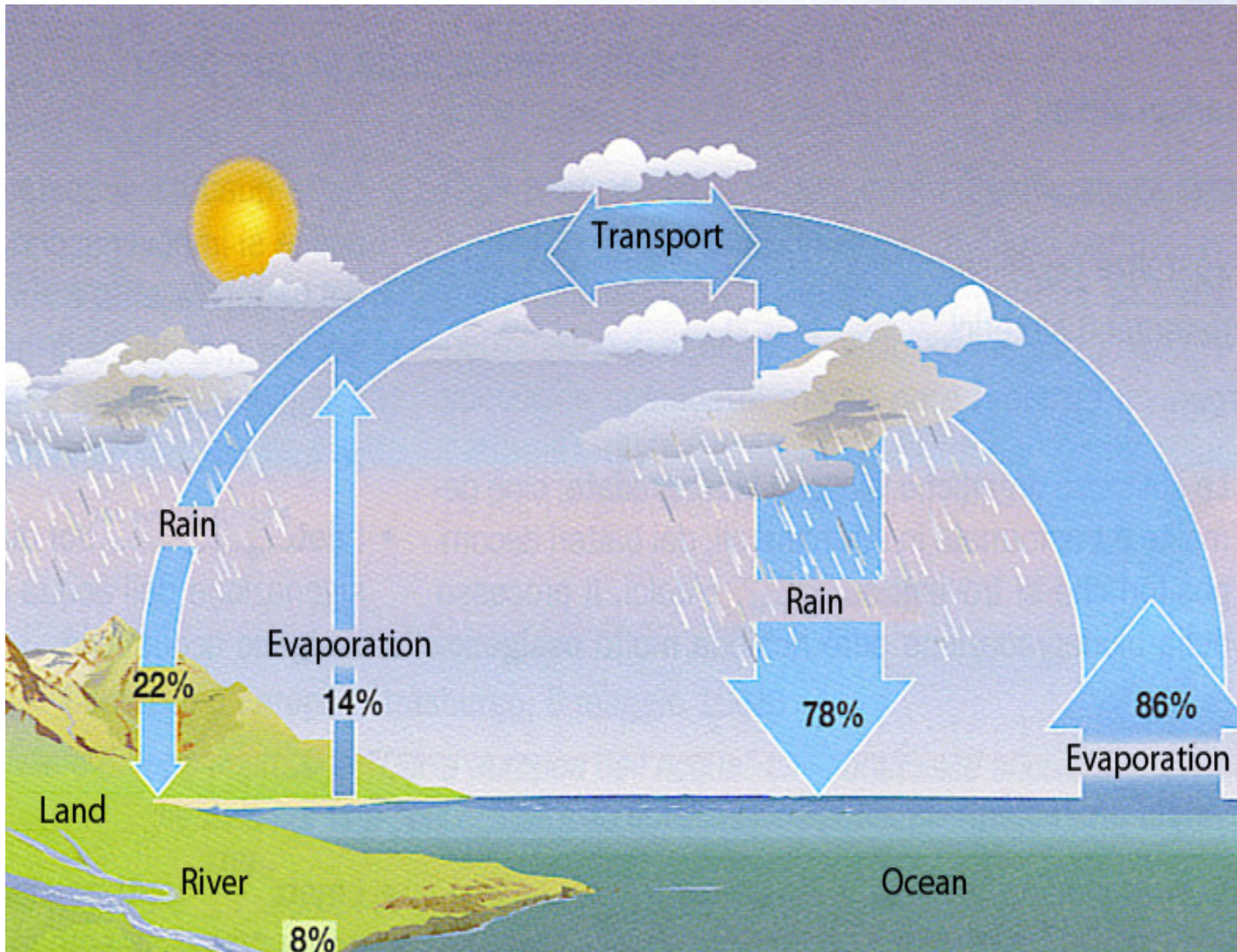
Little or not water  
scarcity

**85%** of the world population lives in the driest half of the planet

**3,4 million** people die each year from lack of water and related illnesses

**880 million** people worldwide **do not have access to healthy drinking water**

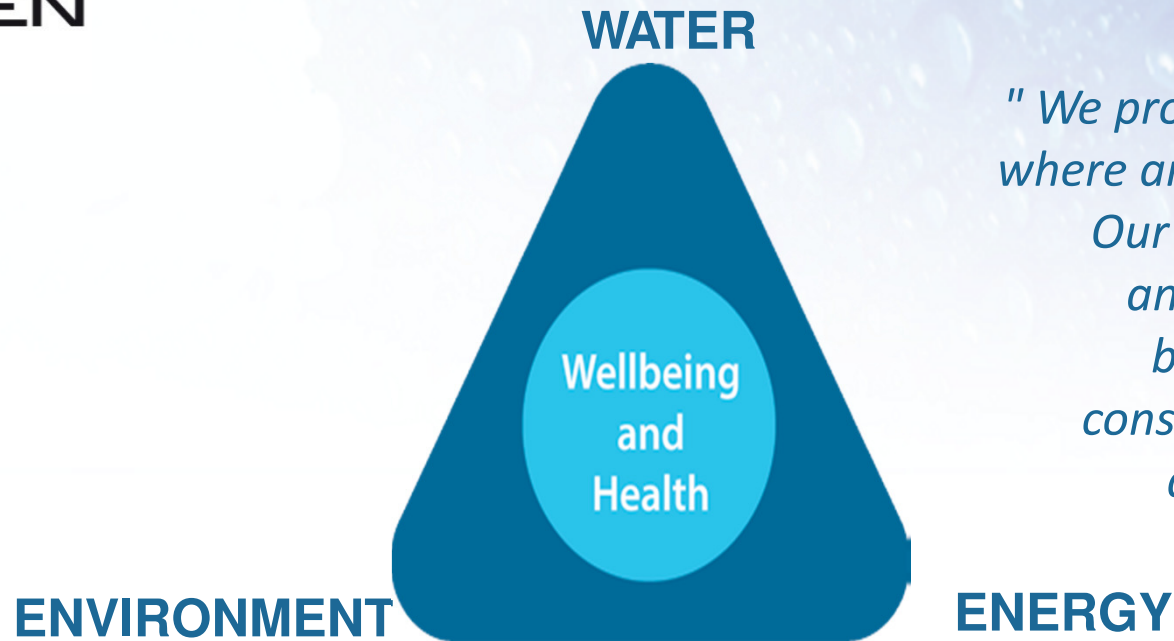
# Water Cycle



- The vapour is an inexhaustible source, with a fast and immediate recycling.
- The 22% of vapour falls on the earth, giving excess water in some areas and leaving scarcity in several populated areas

**SOLGREEN solve the problem with its own technology AIR TO WATER, producing water from air, quickly and where it's needed**

# Water for Life



*" We produce clean, healthy water where and when it is needed most. Our systems are in perfect and optimised balance between low energy consumption, water for life and environmental friendliness."*

Solgreen systems are engineered and designed to:

- produce the highest quality water for well-being and health,
- consuming energy on the most efficient basis possible, while having little or no negative impact on the environment.

We are also working on waste management initiatives that:

- would allow us to operate systems with little or no energy cost,
- with the potential to capture carbon credits and create an additional source of revenue.

# Products

## SAWA SYSTEM TECHNOLOGY

The SAWA systems are built on a standard industrial modular basis.

The range is available in the modular models capable of producing 250, 500, 1000, 1500, 2500, 5000 or 10000 litres of water per day (at 30°C ,70% R.H.).

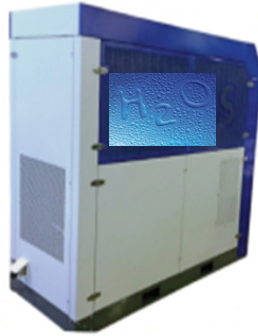
The SAWA, in the HWAC configuration, produces also:

1. Drinking Water
2. Heat Water (50°C)
3. Primary fresh air (24°C, 40% R.H.)
4. Cold Water (7°C)

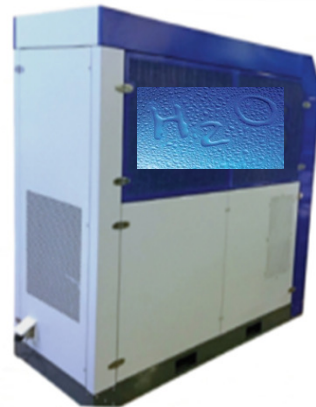
The SAWA has an operating temperature and humidity of 5°C, 90% R.H. / 50°C, 10% R.H.



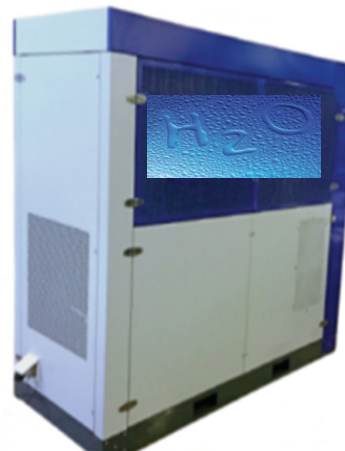
# SAWA – Unit Range, private application



250 litres/day



500 litres/day

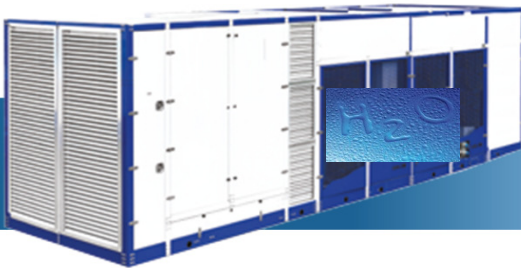


1000 litres/day

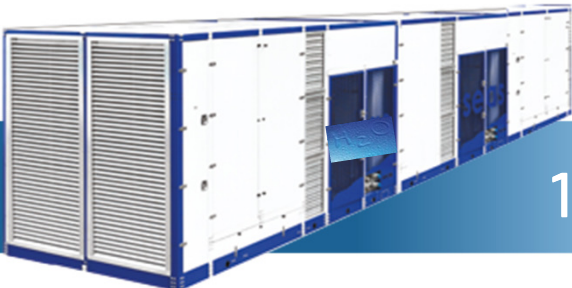
# SAWA – Unit Range, building and industrial



2500  
litres/day



5000  
litres/day



10000 litres/day



# Technology

## How much water is there in the air?

Our patented technology system allows to produce the **35%** more of water than any existing AIR TO WATER system.

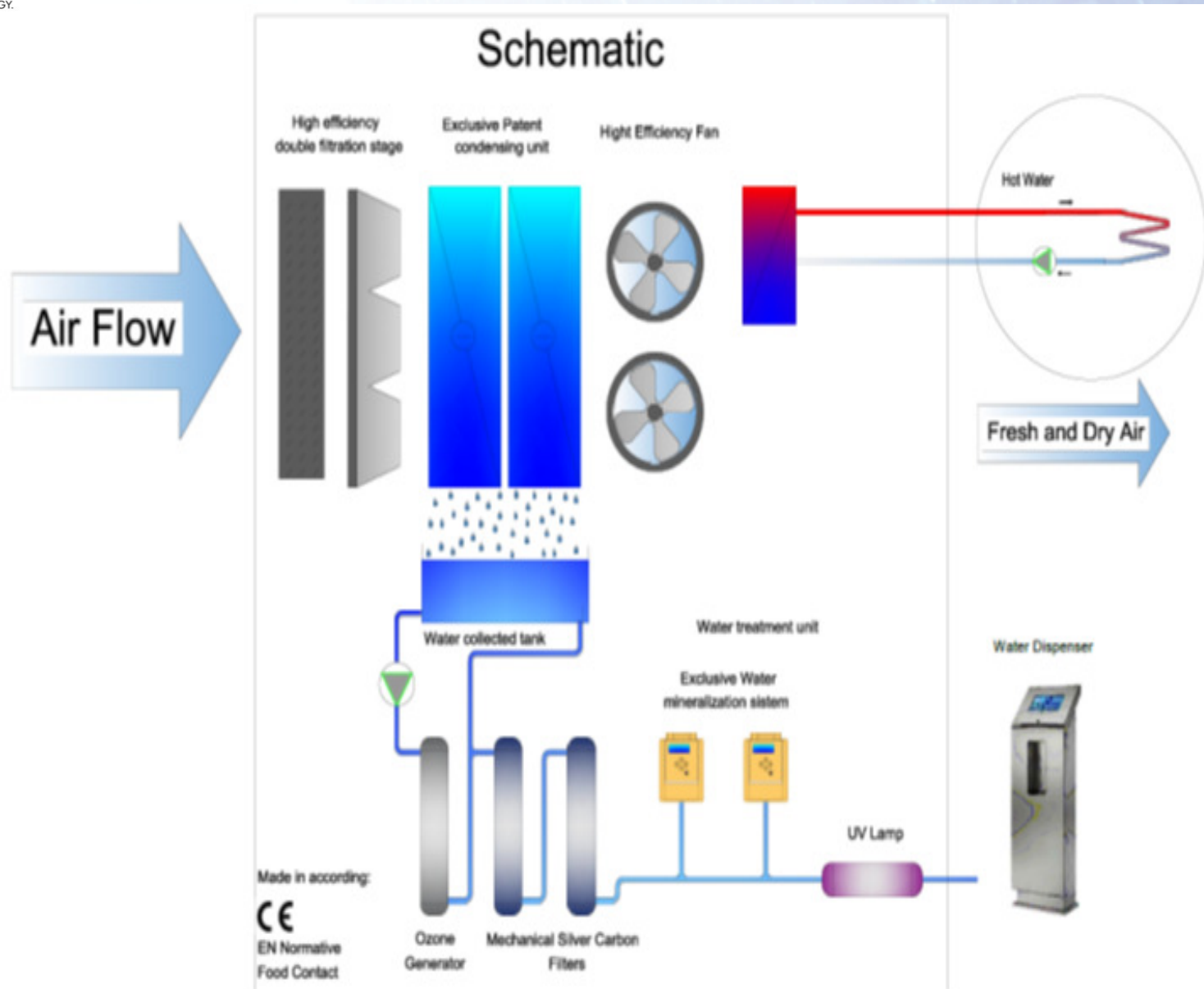
At 30°C ,70% humidity, 1m<sup>3</sup> of air contains **21.9g** of vapour.

Patented technology allows to condense more than the **60%** of the vapour without increasing energy consumption.

| Atmospheric Water Vapour Resource                                  |                   |     |     |     |     |     |     |     |     |      |
|--|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| pressure = 1.01325 bar (standard barometric pressure at sea level) |                   |     |     |     |     |     |     |     |     |      |
| Temp, °C   | Relative Humidity |     |     |     |     |     |     |     |     |      |
|  | 10%               | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 7  | 1                 | 2   | 2   | 3   | 4   | 5   | 5   | 6   | 7   | 8    |
| 8  | 1                 | 2   | 2   | 3   | 4   | 5   | 6   | 7   | 7   | 8    |
| 9  | 1                 | 2   | 3   | 4   | 4   | 5   | 6   | 7   | 8   | 9    |
| 10   | 1                 | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 8   | 9    |
| 11   | 1                 | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10   |
| 12   | 1                 | 2   | 3   | 4   | 5   | 6   | 7   | 9   | 10  | 11   |
| 13   | 1                 | 2   | 3   | 5   | 6   | 7   | 8   | 9   | 10  | 11   |
| 14   | 1                 | 2   | 4   | 5   | 6   | 7   | 8   | 10  | 11  | 12   |
| 15   | 1                 | 3   | 4   | 5   | 6   | 8   | 9   | 10  | 12  | 13   |
| 16   | 1                 | 3   | 4   | 5   | 7   | 8   | 10  | 11  | 12  | 14   |
| 17   | 1                 | 3   | 4   | 6   | 7   | 9   | 10  | 12  | 13  | 15   |
| 18   | 2                 | 3   | 5   | 6   | 8   | 9   | 11  | 12  | 14  | 15   |
| 19   | 2                 | 3   | 5   | 7   | 8   | 10  | 11  | 13  | 15  | 16   |
| 20   | 2                 | 3   | 5   | 7   | 9   | 10  | 12  | 14  | 16  | 17   |
| 21   | 2                 | 4   | 6   | 7   | 9   | 11  | 13  | 15  | 17  | 18   |
| 22   | 2                 | 4   | 6   | 8   | 10  | 12  | 14  | 16  | 18  | 20   |
| 23   | 2                 | 4   | 6   | 8   | 10  | 12  | 14  | 17  | 19  | 21   |
| 24   | 2                 | 4   | 7   | 9   | 11  | 13  | 15  | 17  | 20  | 22   |
| 25   | 2                 | 5   | 7   | 9   | 12  | 14  | 16  | 19  | 21  | 23   |
| 26   | 2                 | 5   | 7   | 10  | 12  | 15  | 17  | 20  | 22  | 24   |
| 27   | 3                 | 5   | 8   | 10  | 13  | 16  | 18  | 21  | 23  | 26   |
| 28   | 3                 | 5   | 8   | 11  | 14  | 16  | 19  | 22  | 25  | 27   |
| 29   | 3                 | 6   | 9   | 12  | 14  | 17  | 20  | 23  | 26  | 29   |
| 30   | 3                 | 6   | 9   | 12  | 15  | 18  | 21  | 24  | 27  | 30   |
| 31   | 3                 | 6   | 10  | 13  | 16  | 19  | 22  | 26  | 29  | 32   |
| 32   | 3                 | 7   | 10  | 14  | 17  | 20  | 24  | 27  | 31  | 34   |
| 33   | 4                 | 7   | 11  | 14  | 18  | 21  | 25  | 29  | 32  | 36   |
| 34   | 4                 | 8   | 11  | 15  | 19  | 23  | 26  | 30  | 34  | 38   |
| 36   | 4                 | 8   | 12  | 16  | 20  | 24  | 28  | 32  | 36  | 40   |
| 36   | 4                 | 8   | 13  | 17  | 21  | 25  | 29  | 34  | 38  | 42   |
| 37   | 4                 | 9   | 13  | 18  | 22  | 26  | 31  | 35  | 40  | 44   |
| 38   | 5                 | 9   | 14  | 19  | 23  | 28  | 32  | 37  | 42  | 46   |

@ Standard Condition

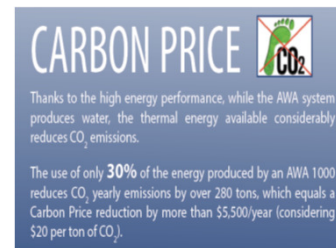
# Typical system



# System Main Advantages

Systems can operate anywhere:

- No need for a “primary source of water” (sea, rivers, lakes, recycled water plants...) to transform available water into drinking one.
- No need for infrastructures.
- No need daily water transport.
- Sawa produce high quality and safety drinking water
- Sawa is user friendly.
- Sawa is a full green machine with CO2 reduction.



Systems supply a large quantity of thermal energy (hot and cold air):

This is the Key and the opportunity for very significant “Energy/Cost savings”

# SAWA



Control System

Exclusive  
Water Treatment  
System



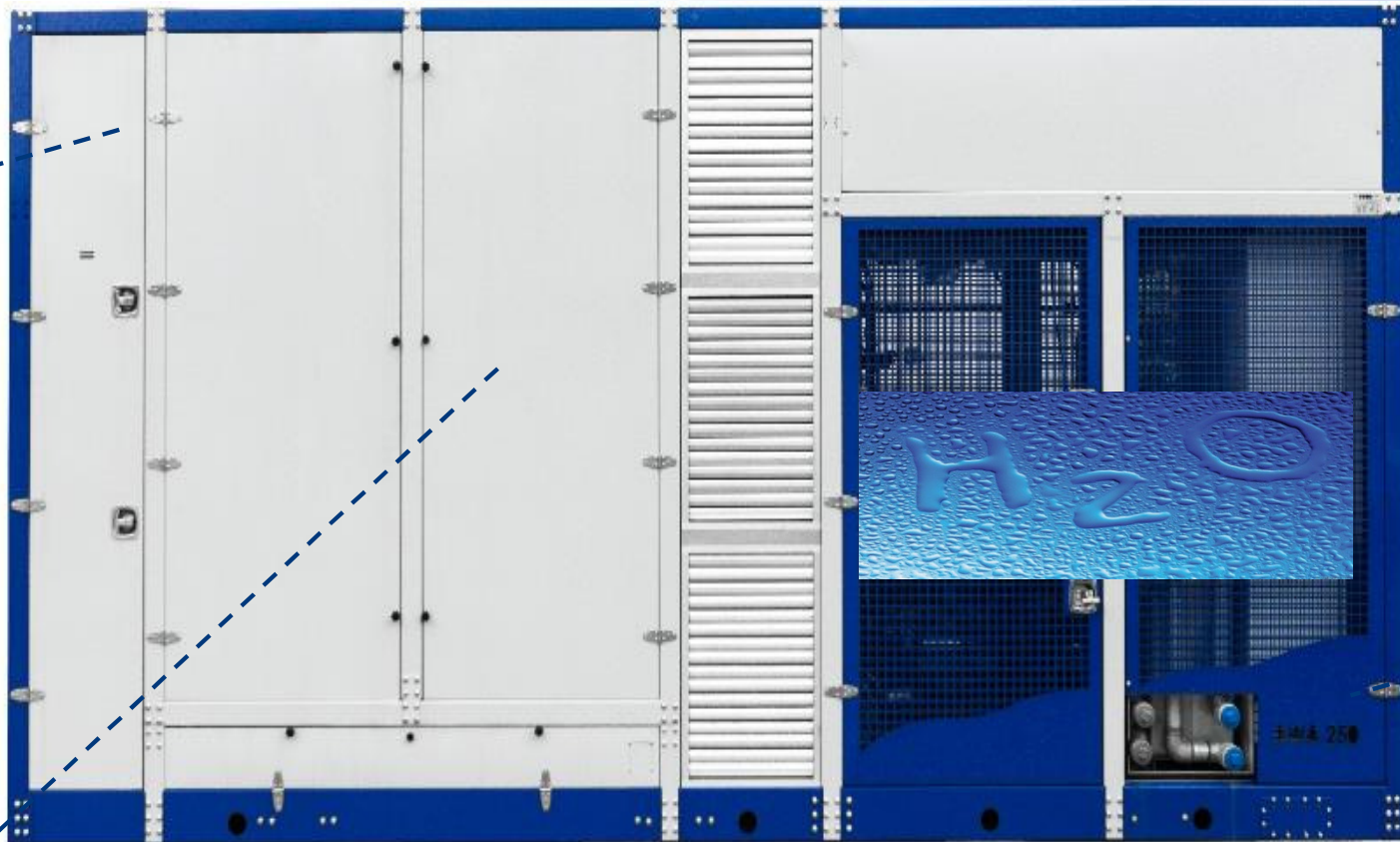
## TECHNOLOGY

- Flexible and modular design
- High-performance components
- Compact frame design
- Solid Foundation
- Satellite / GSM Control
- 5 Patent Application filed for SAWA

# SAWA

Air Filter System  
Class G3/F9 0,4  
micron

Patented Water  
Production  
System



INOX 316L and  
Galvanized Steel  
under the  
normative of  
Food&Beverage

# We produce, at the same cost, 4 energy sources at the same time



1



2

- Production of primary fresh & dry air  
 - 8000 m<sup>3</sup>/h; 24°C; 40% R.H.

3

- External water heating circuit, 50°C  
 - Up to 120 kW, 2000l/h with 40°C of temperature difference

4 7°C Cold Water Circuit from 25 kW to 100 kW (approx. 17m<sup>3</sup> with 5°C of temperature difference)

# Water Treatment System

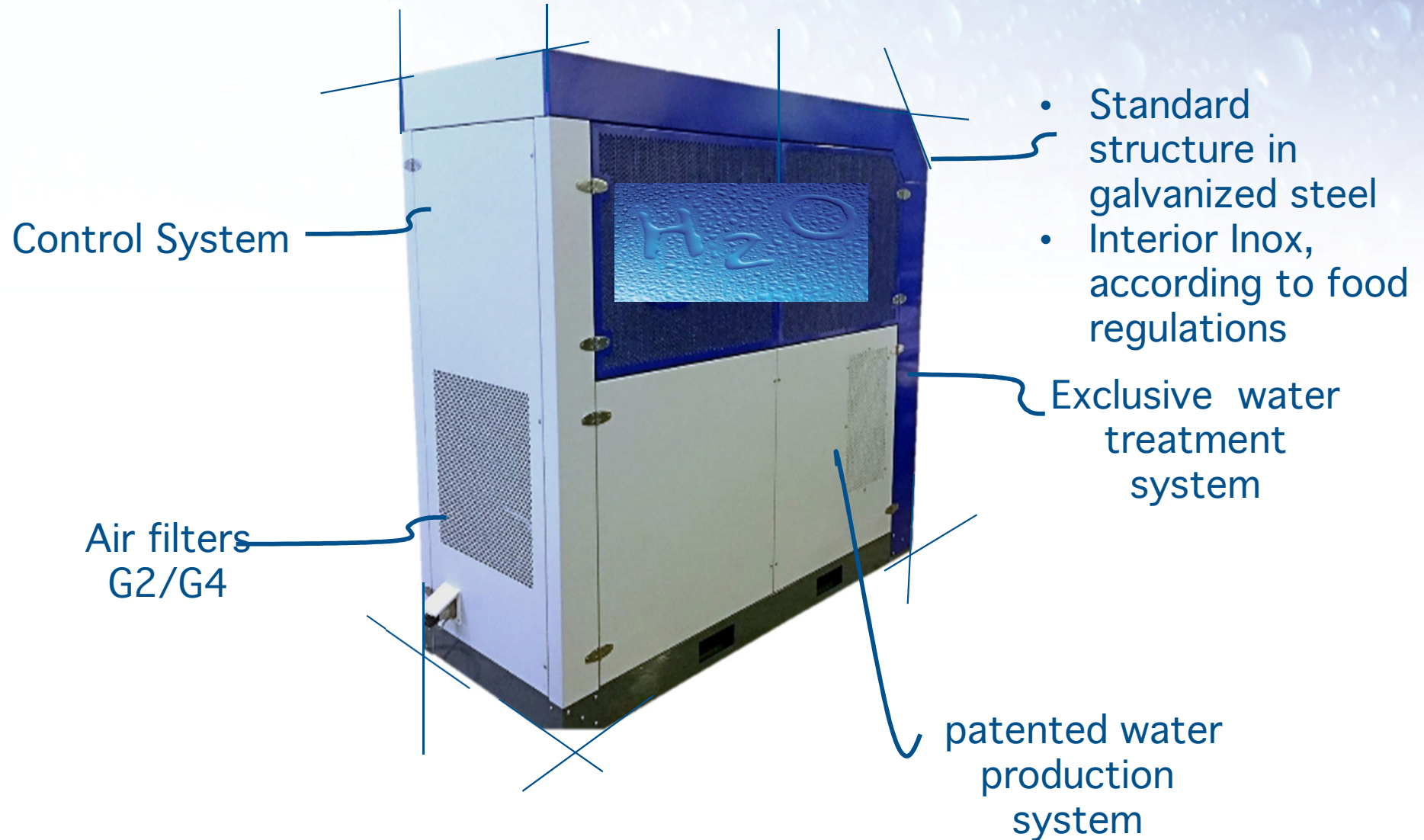
**Exclusive**  
**Water Treatment System**

**WRAS**  
**compliance**

Real Time Water  
 Quality Sensor  
 Control

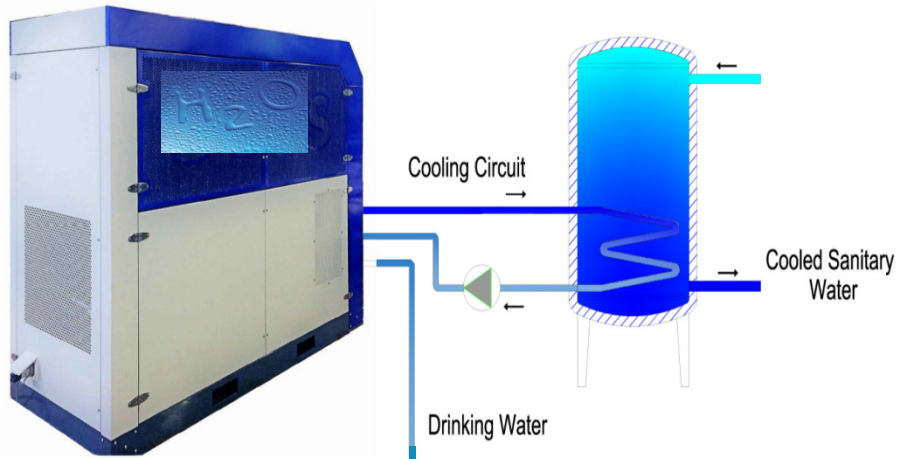


# SAWA 25-50-100-250-500-1000

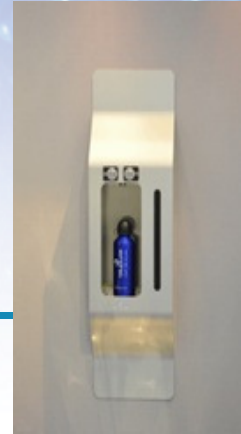
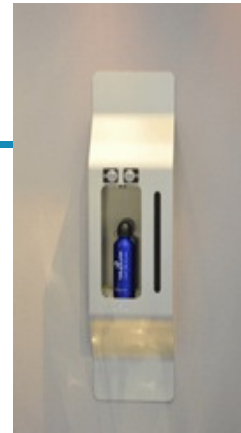




# SAWA 25-50-100 "HOME"



**WATER DISPENSER**



**INTERNAL WALL WATER PANEL**

# Water Treatment Configuration

**Provides different water qualities to perfectly fit different purposes.**

## ❑ BASIC

- ✓ Purified water suitable for irrigation, washing, industrial purposes, zoo technical use, etc.

## ❑ DRINKING

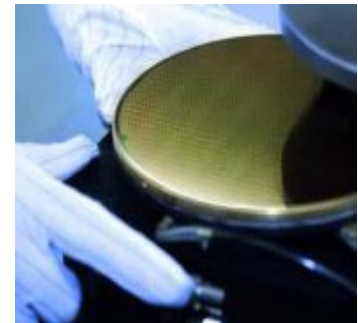
- ✓ Perfectly Pure and Tasty drinking water for Superior Quality human consumption. The custom mineralization could provide special taste and water features.

## ❑ MINERAL FREE

- ✓ Distilled water (2 MΩ of resistivity) suitable for both industrial and particular alimentary uses.

## ❑ MINERAL FREE PLUS

- ✓ High profile and quality distilled water (over 15 MΩ of resistivity). The product is a very high quality tech water suitable for cosmetic, pharmaceutical, electronic industries and also for special food&beverage productions.



# SAWA DRINKING PREMIUM:

*“SAWA DRINKING PREMIUM produces the best quality mineralized drinking water.”*

The requirement of a nutrient, as defined by the World Health Organization and the Food and Agriculture Organization (WHO/FAO), is “the lowest continuing level of nutrient intake that, at a specified efficiency of utilization, will maintain the defined level of nutriture in the individual”.

Calcium, Na, K, Cl, Mg, Fe, Zn, Cu, Cr, I, Co, Mo and Se are unequivocally essential for human health. The relative minerals contribution of water to total dietary intake of selected trace elements and electrolytes is between 1 up to 20%. The micronutrients with the largest proportion of intake from drinking water are calcium and magnesium. For these elements, water may provide up to 20% of the required total daily intake.

In Sawa DRINKING PREMIUM we can find all the substances and elements of a typical best mineral water, such as magnesium, calcium, potassium, sodium, sulphates, carbonates, bicarbonates, chlorides and many other important trace elements.

Chemical and Microbiological Laboratories internationally recognized guarantee the chemical and microbiological compliance of Sawa DRINKING PREMIUM system, and above all the respect of nutritional elements added.

Furthermore, for particular tastes and beverage request, it is also possible to change the mineralization doses to customize the taste. Moreover, probes verify in real time every part of water treatment unit (in compliance with any ISO quality system and in accordance with HACCP\* rules) to ensure the maximum security and quality in bottling system too.

# Quality Water Remote Control Systems

## SENSORS AND PROBES:

SAWA machines can be equipped with a sensor set devoted to monitor the whole system with satellite or GSM technology.

It allows us:

- to monitor in real time chemical and physical parameters such as: pH, Conductibility, Temperature, Water Flow and, additionally, Redox and Turbidity;
- to control, on site and from remote, the whole water treatment functionality;
- to monitor in real time consumables life time;
- to register and archive warning and fatal error data;
- to integrate Sawa sensor control software with manufacturing software.



# SAWA WATER TESTS

# SAWA Series

## *Water Chemical And Biological Tests*

In SAWA final tests a huge number of parameters is taken into account as indicator of the water quality. In the following table the number of such parameters is reported.

| Indicators | Number of analysed parameters |
|------------|-------------------------------|
| Chemicals  | 44                            |
| Biological | 10                            |

All the above parameters are analysed in laboratories certified in compliance with ISO 17025

After the final test, other parameters may be analysed on site in order to guarantee the compliance to the final destination and use of the system.

# EAU - Water Analysis

LABORATORY REPORT

|                        |   |   |                      |
|------------------------|---|---|----------------------|
| Client / Establishment | Name: <b>Seas Falcon Trading LLC.</b>   |   |                      |
|                        | Address and Location: Abu Dhabi U.A.E   |   |                      |
| Report No              | <b>WAOC16-2735.1</b>  | Laboratory Sample ID                          | <b>WAOC16-2735.1</b> |
| Sampling Date / Time   | 20/10/2016  | Date Reported                                 | 31/10/2016           |
| Sampled by             | Wimpey Rep: (CP)  | Receiving Date /Time                          | 20/10/2016           |
| Sample Type            | Drinking Water  | Laboratory Request No                         | <b>WAOC16-2735</b>   |
| Sample Source          | Not Given   | Point of Disposal<br>As stated by the client  | Net Given            |
| Sampling Procedure     | APHA  | On site observation / Test<br>Appearance      | Clear                |
| Sampling Apparatus     | Bottle  | Sample Temperature                            | 35.0 °C              |
| Sampling Location      | Ware House  | On Site Treatment /<br>Preservation of sample | Cool Box <4°C        |
| Test Method            | Standard Methods for the Examination of Water and Waste water, APHA/AWWA/WEF,<br>22nd Ed.2012 |   |                      |

ANALYSIS RESULTS DATE OF ANALYSIS: 20/10/2016 - 30/10/2016

| Physical Parameters                    | Method         | Unit              | Result          | Limits          |
|--|----------------|-------------------|-----------------|-----------------|
| Colour                                 | APHA 2120*     | PCo               | <5              | 15              |
| Turbidity (including suspended solids) | APHA 2130 B*   | NTU               | <1              | 5               |
| Odour                                  | APHA 2150*     | -                 | Unobjectionable | Unobjectionable |
| Taste                                  | APHA 2160*     | -                 | Unobjectionable | Unobjectionable |
| Total Dissolved Solids                 | APHA 2540C     | mg/L              | 132             | 100-1000        |
| Calcium hardness as CaCO <sub>3</sub>  | APHA 3500 Ca B | mg/L              | 94              | 200             |
| Total hardness as CaCO <sub>3</sub>    | APHA 2340 C    | mg/L              | 102             | 300             |
| Langelier saturation index             | Calculation*   | Slightly positive | -1.04           | 0.0-0.5         |
| pH                                     | APHA 4500 H* B | -                 | 7.74            | 6.5-8.0         |
| Residual chlorine                      | HACH 8021      | mg/L              | <0.02           | 0.2             |

| Inorganic Chemicals  | Method              | Unit | Result | Limits  |
|----------------------|---------------------|------|--------|---------|
| Chloride             | APHA 4500 Cl B      | mg/L | 70     | 250.0   |
| Nitrate              | HACH 8039*          | mg/L | 2.1    | -       |
| Total organic carbon | USEPA 3510C/8270 D* | mg/L | <0.1   | 1.0     |
| Ammonia              | HACH 10205*         | mg/L | <0.02  | 0.5     |
| Nitrite              | HACH 8507*          | mg/L | 0.50   | 3.0     |
| Phosphorus           | HACH 8048*          | mg/L | 0.9    | 2.2     |
| Sulphate             | HACH 8051*          | mg/L | <2     | 250.0   |
| Phenols              | HACH 8029*          | µg/L | <0.002 | 0.5     |
| Fluoride             | HACH 8047           | µg/L | 150    | 1,500.0 |
| Boron                | HACH 8015*          | µg/L | <200   | 2,400.0 |
| Cyanide              | HACH 8027*          | µg/L | <10    | 70.0    |
| Magnesium            | APHA 3500 Mg        | mg/L | 1.92   | 30.0    |
| Bromate              | APHA 4110 D*        | µg/L | <5     | 10      |

WAOC16-2375.1

| Trace Elements | Method              | Unit | Result | Limit |
|----------------|---------------------|------|--------|-------|
| Arsenic        | APHA 3111 A/3111 B* | µg/L | <0.01  | 10.0  |
| Chromium       |                     | µg/L | <10    | 50.0  |
| Lead           |                     | µg/L | <10    | 10.0  |
| Mercury        |                     | µg/L | <1     | 6.0   |
| Selenium       |                     | µg/L | <1     | -     |
| Barium         |                     | µg/L | <10    | 700.0 |
| Cadmium        |                     | µg/L | <1     | 3.0   |
| Manganese      |                     | µg/L | <10    | 400.0 |
| Nickel         |                     | µg/L | <10    | 70.0  |
| Tin            |                     | µg/L | <10    | -     |
| Zinc           |                     | µg/L | <0.01  | 5.0   |
| Aluminium      |                     | mg/L | <0.01  | 0.2   |
| Iron           |                     | mg/L | <0.01  | 0.2   |
| Potassium      |                     | mg/L | 3.6    | 12.0  |
| Sodium         |                     | mg/L | 1.51   | 150.0 |
| Copper         |                     | mg/L | <0.01  | 1.0   |

| Pesticides                    | Method              | Unit                | Result | Limit |     |
|-------------------------------|---------------------|---------------------|--------|-------|-----|
| Endrine                       | USEPA 3510C/8270 D* | µg/L                | <0.1   | 0.6   |     |
| Lindane                       |                     | µg/L                | <1     | 2.0   |     |
| Methoxychlor                  |                     | µg/L                | <10    | 20.0  |     |
| 2,4 Dichlorophoxy Acetic Acid |                     | µg/L                | <10    | 30.0  |     |
| 2,4,5 Trichlorophenony        |                     | µg/L                | <5     | 9.0   |     |
| Heptachlor                    |                     | µg/L                | <0.01  | 0.03  |     |
| Aldrin                        |                     | µg/L                | <0.01  | 0.03  |     |
| DDT                           |                     | µg/L                | <1     | 1.0   |     |
| Chlordane                     |                     | µg/L                | <0.1   | 0.2   |     |
| Dieldrin                      |                     | µg/L                | <0.01  | 0.03  |     |
| Heptachlor epoxide            |                     | µg/L                | <0.01  | 0.03  |     |
| Total pesticides (f)          |                     | USEPA 3510C/8270 D* | µg/L   | <0.1  | 0.5 |

| Organic Parameters | Method        | Unit | Result | Limit |
|--------------------|---------------|------|--------|-------|
| Trichloroethene    | USEPA 8260 B* | µg/L | <10    | 20.0  |
| Benzene            |               | µg/L | <10    | 10.0  |
| Chlorobenzene      |               | µg/L | <10    | 300.0 |
| Tetrachloroethane  |               | µg/L | <1     | 3.0   |
| Tetrachloroethane  |               | µg/L | <10    | 40.0  |
| 1,2-Dichloroethane |               | µg/L | <10    | 30.0  |
| Benz Pyrene        |               | µg/L | <0.1   | 0.7   |
| Dichloromethane    |               | µg/L | <10    | 20.0  |
| Bromoform          |               | µg/L | <0.1   | 0.1   |
| Chloroform         |               | µg/L | <0.1   | 0.3   |
| 1,2-Dichloroethene |               | µg/L | <10    | 50.0  |

WAOC16-2375.1

| Organic Parameters   | Method        | Unit | Result | Limit   |
|----------------------|---------------|------|--------|---------|
| Dibromochloromethane | USEPA 8260 B* | µg/L | <0.1   | 0.1     |
| Chlorine             |               | µg/L | <0.02  | -       |
| Toluene              |               | µg/L | <10    | 700.0   |
| Bromodichloromethane |               | µg/L | <0.01  | 0.05    |
| 1,2-Dichlorobenzene  |               | µg/L | <10    | 1,000.0 |
| 1,4-Dichlorobenzene  |               | µg/L | <10    | 300.0   |
| Vinyl Chloride       |               | µg/L | <0.1   | 0.3     |
| THMs                 |               | µg/L | <1.0   | ≤ 1.0   |

| Microbiological Parameter | Method                | Unit       | Result        | Limit |
|---------------------------|-----------------------|------------|---------------|-------|
| Total Coliforms           | APHA 9222B            | CFU/100 ml | Not detected  | Zero  |
| Enterococci               | BS EN-ISO-7899:2:2000 | CFU/100 ml | Not detected  | Zero  |
| Pseudomonas aeruginosa    | CCFRA 2.5.2           | CFU/250 ml | Not detected  | Zero  |
| E coli                    | APHA 9222 B&G         | CFU/100 ml | Not detected  | Zero  |
| Faecal coliform           | APHA 9222 D           | CFU/100 ml | Not detected  | Zero  |
| TBC (Non-pathogenic)      | APHA 9215B            | CFU/ml     | Not detected* | 100   |

\*Limit of Detection = <1

| Radio activity# | Method        | Unit | Result | Limit   |
|-----------------|---------------|------|--------|---------|
| Gross Alpha     | F&B-RA-AD-004 | Bq/L | 0.03   | 0.5 max |
| Gross Beta      | F&B-RA-AD-004 | Bq/L | 0.17   | 1.0 max |

Analysis conducted by: RR/SJ/SC Test method deviation : None

Signed for and on behalf of Wimpey Laboratories

**BREATH M I**  
Assistant Laboratory Manager

Test results relate only to the samples tested.  
This report shall not be reproduced except in full, without the written approval of the Laboratory.  
\* Not Accredited

-End of text-

# Swiss - Water Analysis

Laboratorio cantonale



Via Mirasole 22  
6500 Bellinzona

telefono 091 814 61 11  
fax 091 814 61 19  
e-mail dsr-ic@ti.ch

## Rapporto di prova n° 16LA06233 del 17.10.2016



16LA06233

Laboratorio cantonale  
6500 Bellinzona

SEAS Société de l'Eau Aérienne Suisse SA  
Via Industria 13/A  
6826 Riva San Vitale

Descrizione campione: Acqua alla captazione

Data prelievo: 05.10.2016  
Data accettazione: 05.10.2016

Punto di prelievo: Uscita rubinetto Awa 250 -

Data inizio analisi: 05.10.2016  
Data fine analisi: 12.10.2016

Fornitore: SEAS, Riva S. Vitale

Temperatura prelievo: t. ambiente °C  
Prelievo eseguito da: Cliente /

| N° Ordine | Tariffa         | Condizioni               | Netto        | IVA esclusa | Seguirà fattura |
|-----------|-----------------|--------------------------|--------------|-------------|-----------------|
| 16-002938 | Vedi tariffario | Vedi Condizioni generali | fr. 1.881.00 |             |                 |

### Analisi

| Descrizione   | Metodo       | Risultato | Unità di misura       |
|---|--------------|-----------|-----------------------|
| Escherichia coli  | SOP-LAB147   | 0         | UFC/100ml             |
| Enterococchi  | SOP-LAB146   | 0         | UFC/100ml             |
| Germi aerobi mesofili   | SOP-LAB002   | 27        | UFC/ml                |
| Conducibilità elettrica a 20°C                                | EN ISO 27888 | 334       | µS/cm                 |
| Valore pH (in laboratorio)                                    | SOP-LAB051   | 8.27      |                       |
| Consumo acido a pH 8.2  | SOP-LAB051   | 0.03      | mmol/L                |
| Consumo acido a pH 4.3  | SOP-LAB051   | 1.54      | mmol/L                |
| Idrogenocarbonato (HCO <sub>3</sub> <sup>-</sup> , calcolato) | SOP-LAB051   | 87        | mg/l                  |
| Durezza temporanea  | SOP-LAB051   | 0.77      | mmol/L                |
| Durezza totale  | SOP-LAB051   | 1.05      | mmol/L                |
| Durezza permanente  | SOP-LAB051   | 0.28      | mmol/L                |
| pH <sub>s</sub> (pH <sub>eq</sub> )                           | MSDA 641.3   | 7.96      |                       |
| Indice di saturazione   | MSDA 641.3   | 0.31      |                       |
| Anidride carbonica all'equilibrio (CO <sub>2</sub> eq.)       | MSDA 641.3   | 1.5       | mg CO <sub>2</sub> /L |

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## Rapporto di prova n° 16LA06233 del 17.10.2016

| Descrizione  | Metodo     | Risultato           | Unità di misura         |
|--|------------|---------------------|-------------------------|
| Anidride carbonica libera (CO <sub>2</sub> libera)   | MSDA 641.3 | 0.5                 | mg CO <sub>2</sub> /L   |
| Anidride carbonica aggressiva (CO <sub>2</sub> agr.) | MSDA 641.3 | 0.0                 | mg CO <sub>2</sub> /L   |
| Caratterizzazione                                    | MSDA 239.1 | Incrementale, dolce |                         |
| Consumo in permanganato di potassio                  | MSDA 644.1 | 0.8                 | mg KMnO <sub>4</sub> /L |
| Carbonio organico disciolto (DOC)                    | SOP-LAB121 | 0.3                 | mg C/L                  |
| Calcio   | SOP-LAB051 | 37.7                | mg Ca+2/L               |
| Magnesio   | SOP-LAB051 | 2.6                 | mg Mg+2/L               |
| Sodio  | SOP-LAB083 | 28.1                | mg Na+L                 |
| Potassio   | SOP-LAB083 | 4.8                 | mg K+L                  |
| Ammonio  | SOP-LAB083 | < 0.05              | mg NH <sub>4</sub> +L   |
| Fluoruro   | SOP-LAB083 | < 0.05              | mg F-/L                 |
| Cloruro  | SOP-LAB083 | 59.0                | mg Cl-/L                |
| Nitrato  | SOP-LAB083 | < 0.01              | mg NO <sub>3</sub> -L   |
| Bromuro  | SOP-LAB083 | < 0.05              | mg Br-/L                |
| Nitrato  | SOP-LAB083 | 5.0                 | mg NO <sub>3</sub> -L   |
| Orto-fosfato (espresso come P)                       | MSDA 628.1 | < 0.01              | mg P/L                  |
| Solfato  | SOP-LAB083 | 8.3                 | mg SO <sub>4</sub> -2/L |
| Alluminio  | SOP-LAB152 | < 4.00              | µg/L                    |
| Antimonio  | SOP-LAB152 | < 0.20              | µg/L                    |
| Argento  | SOP-LAB152 | 0.22                | µg/L                    |
| Arsenico   | SOP-LAB152 | < 0.10              | µg/L                    |
| Bario  | SOP-LAB152 | 5.19                | µg/L                    |
| Boro   | SOP-LAB152 | 8.53                | µg/L                    |
| Cadmio   | SOP-LAB152 | < 0.10              | µg/L                    |
| Cromo  | SOP-LAB152 | 0.12                | µg/L                    |

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## Rapporto di prova n° 16LA06233 del 17.10.2016

| Descrizione            | Metodo            | Risultato | Unità di misura |
|------------------------|-------------------|-----------|-----------------|
| Ferro                  | SOP-LAB152        | 40.11     | µg/L            |
| Manganese              | SOP-LAB152        | 0.78      | µg/L            |
| Mercurio               | SOP-LAB152        | < 0.20    | µg/L            |
| Nichelio               | SOP-LAB152        | 1.29      | µg/L            |
| Piombo                 | SOP-LAB152        | 0.34      | µg/L            |
| Rame                   | SOP-LAB152        | 4.57      | µg/L            |
| Selenio                | SOP-LAB152        | < 0.10    | µg/L            |
| Uranio                 | SOP-LAB152        | < 0.10    | µg/L            |
| Zinco                  | SOP-LAB152        | 13.76     | µg/L            |
| Naftalene              | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Acenafteone            | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Fluorene               | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Fenantrene             | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Antracene              | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Fluorantene            | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Pirene                 | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Benzo(a)antracene      | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Crisene                | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Benzo(b)fluorantene    | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Benzo(k)fluorantene    | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Benzo(a)pirene         | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Dibenzo(a,h)antracene  | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Benzo(ghi)perilene     | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Indeno(1,2,3-cd)pirene | ISO 17993:2002(E) | < 0.01    | µg/L            |
| Somma PAH (vedi nota)  | ISO 17993:2002(E) | < 0.01    | µg/L            |

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# Swiss - Water Analysis

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## Rapporto di prova n° 16LA06233 del 17.10.2016

| Descrizione                                  | Metodo     | Risultato | Unità di misura |
|--|------------|-----------|-----------------|
| Diclorometano                                | SOP-LAB135 | < 0.05    | µg/L            |
| cis-1,2-dicloroetilene                       | SOP-LAB135 | < 0.05    | µg/L            |
| Metil-tert-butili etere (MTBE)               | SOP-LAB135 | < 0.05    | µg/L            |
| Etil-tert-butili etere (ETBE)                | SOP-LAB135 | < 0.05    | µg/L            |
| Cloroformio                                  | SOP-LAB135 | 0.25      | µg/L            |
| 1,1,1-tricloroetano                          | SOP-LAB135 | < 0.05    | µg/L            |
| Tetracloruro di carbonio                     | SOP-LAB135 | < 0.05    | µg/L            |
| Benzolo                                      | SOP-LAB135 | < 0.05    | µg/L            |
| 1,2-dicloroetano                             | SOP-LAB135 | < 0.05    | µg/L            |
| Tricloroetilene                              | SOP-LAB135 | < 0.05    | µg/L            |
| Bromodichlorometano                          | SOP-LAB135 | 0.07      | µg/L            |
| Toluolo                                      | SOP-LAB135 | 0.30      | µg/L            |
| Percloroetilene                              | SOP-LAB135 | < 0.05    | µg/L            |
| Dibromoclorometano                           | SOP-LAB135 | 0.07      | µg/L            |
| Etilbenzolo                                  | SOP-LAB135 | < 0.05    | µg/L            |
| m + p-xilene                                 | SOP-LAB135 | < 0.05    | µg/L            |
| o-xilene                                     | SOP-LAB135 | < 0.05    | µg/L            |
| Bromofornio                                  | SOP-LAB135 | 0.26      | µg/L            |
| 1,2,4-Trimetilbenzolo                        | SOP-LAB135 | < 0.05    | µg/L            |
| Totale idrocarburi aromatici solubili (BTEX) | SOP-LAB135 | 0.30      | µg/L            |
| Totale idrocarburi alogenati volatili        | SOP-LAB135 | 0.65      | µg/L            |
| Desisopropilazina                            | SOP-LAB134 | < 0.002   | µg/L            |
| 2,6-Diclorobenzamida                         | SOP-LAB134 | < 0.002   | µg/L            |
| Metamitron                                   | SOP-LAB134 | < 0.002   | µg/L            |
| Desetilazina                                 | SOP-LAB134 | < 0.002   | µg/L            |

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31730

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## Rapporto di prova n° 16LA06233 del 17.10.2016

| Descrizione           | Metodo     | Risultato | Unità di misura |
|-----------------------|------------|-----------|-----------------|
| Metossuron            | SOP-LAB134 | < 0.002   | µg/L            |
| Esazione              | SOP-LAB134 | < 0.002   | µg/L            |
| Bromacil              | SOP-LAB134 | < 0.002   | µg/L            |
| Simazina              | SOP-LAB134 | < 0.002   | µg/L            |
| Ametrina              | SOP-LAB134 | < 0.002   | µg/L            |
| Cianazina             | SOP-LAB134 | < 0.002   | µg/L            |
| Desetil-terbutilazina | SOP-LAB134 | < 0.002   | µg/L            |
| Metribuzina           | SOP-LAB134 | < 0.002   | µg/L            |
| Metabenzuron          | SOP-LAB134 | < 0.002   | µg/L            |
| Prometrina            | SOP-LAB134 | < 0.002   | µg/L            |
| Clortoluron           | SOP-LAB134 | < 0.002   | µg/L            |
| Terbutrina            | SOP-LAB134 | < 0.002   | µg/L            |
| Atrazina              | SOP-LAB134 | < 0.002   | µg/L            |
| Monolinurone          | SOP-LAB134 | < 0.002   | µg/L            |
| Irgarolo              | SOP-LAB134 | < 0.002   | µg/L            |
| Isoproturon           | SOP-LAB134 | < 0.002   | µg/L            |
| Diuron                | SOP-LAB134 | < 0.002   | µg/L            |
| Metobromurone         | SOP-LAB134 | < 0.002   | µg/L            |
| Metazachloro          | SOP-LAB134 | < 0.002   | µg/L            |
| Sebutilazina          | SOP-LAB134 | < 0.002   | µg/L            |
| Propazina             | SOP-LAB134 | < 0.002   | µg/L            |
| Terbutilazina         | SOP-LAB134 | < 0.002   | µg/L            |
| Linurone              | SOP-LAB134 | < 0.002   | µg/L            |
| Metolachloro          | SOP-LAB134 | < 0.002   | µg/L            |
| Alador                | SOP-LAB134 | < 0.002   | µg/L            |

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## Rapporto di prova n° 16LA06233 del 17.10.2016

| Descrizione     | Metodo     | Risultato | Unità di misura |
|-----------------|------------|-----------|-----------------|
| Totale erbicidi | SOP-LAB134 | < 0.002   | µg/L            |

### Giudizio:

Limitatamente ai parametri investigati, il campione analizzato soddisfa i requisiti fissati per l'acqua potabile dall'Ordinanza del DFI concernente l'acqua potabile, l'acqua sorgiva e l'acqua minerale del 23 novembre 2005 (Stato 1° gennaio 2014) e quelli dell'Ordinanza del DFI sui requisiti igienici (ORI) del 23.11.2005 (Stato 1° gennaio 2014).

### Note:

pH di equilibrio (pH<sub>e</sub>), indice di saturazione (IS) ed anidride carbonica aggressiva sono riferiti alla temperatura dell'acqua misurata in laboratorio.

Laboratorio cantonale

Responsabile di reparto

  
Ing. M. De Rossa

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31730



# Applications

# SAWA - VILLA

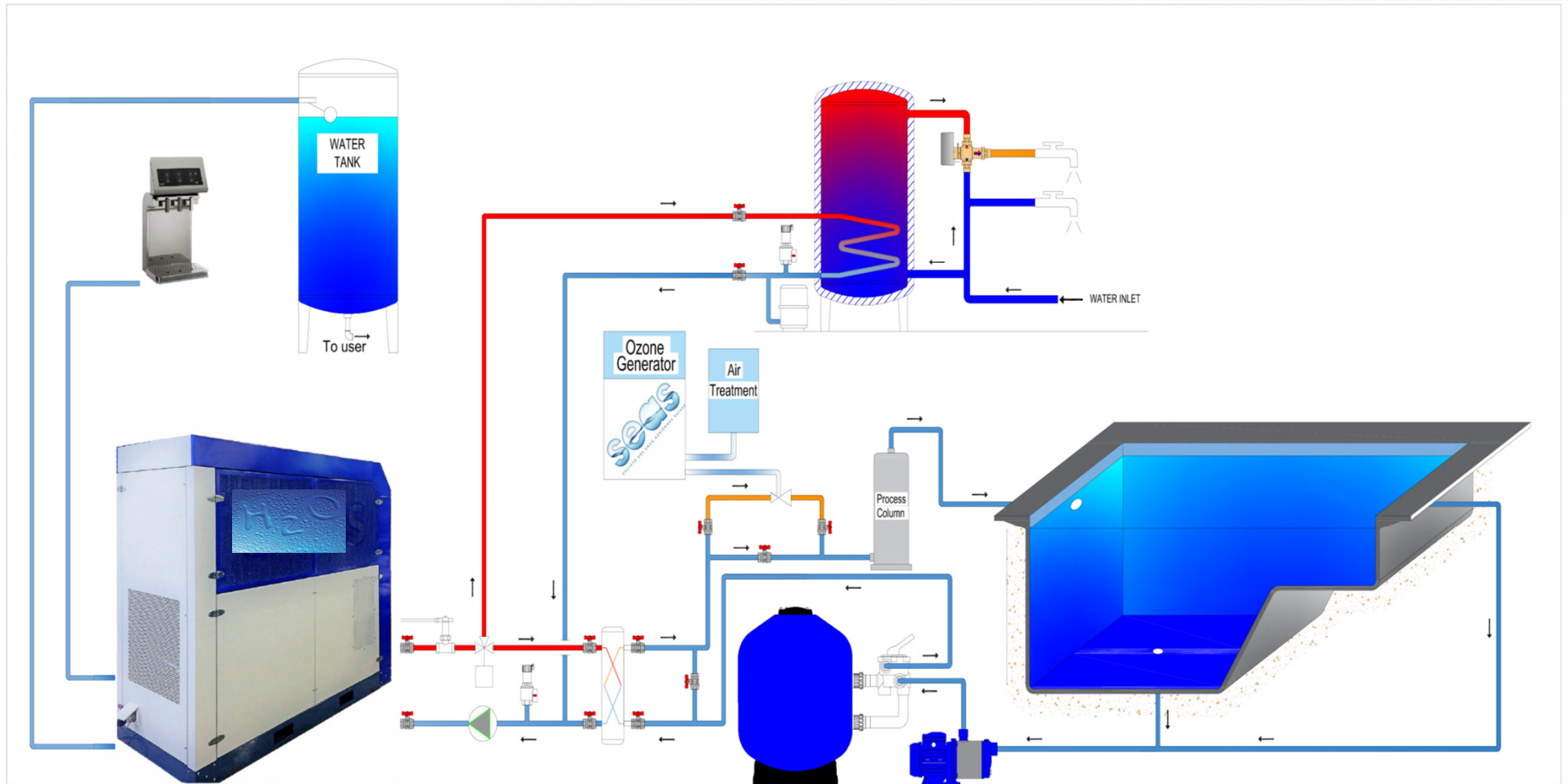
## Côte d'Azure, Eze - France

The system produces from 80 to 200 litres/day of drinking water, from air. The water produced will be use to drink as well as for showers and pools. With the same energy consumption, the system contributes to heat the water for sanitary use, ensuring more comfort.

Combined to Sawa 25, an ozone disinfection system for the pool, which will ensure the quality of the water making it hygienically pure.



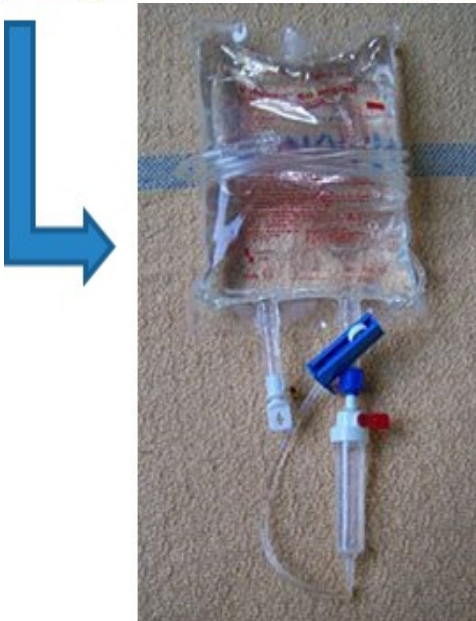
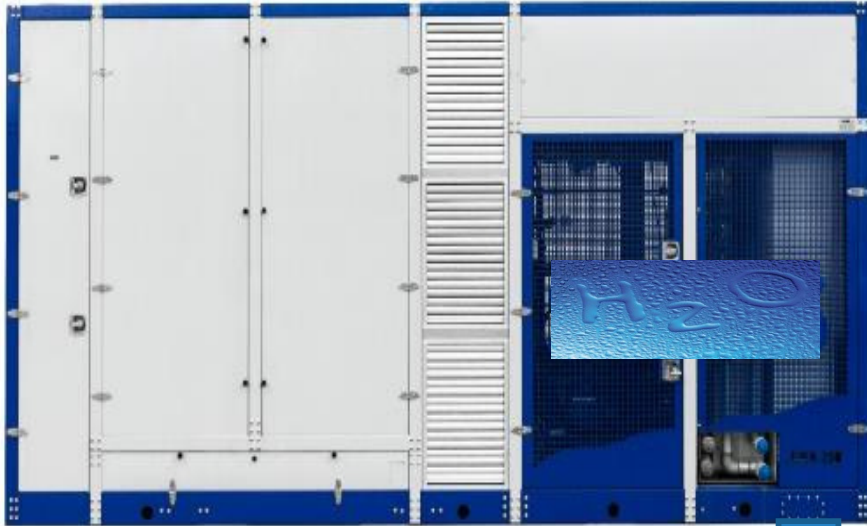
# SAWA - Villa



# Sawa System Strengths *for Isotonic Water Applications*

- Constant water quality in Air To Water production;
- Drastic reduction of the cost for chemicals needed to purify the water, in comparison to tap water supply, for existing purified water treatment;
- Sawa water has higher quality than any other supplied water, even if compared to tap water treated with RO plants, for the intrinsic quality of ATW technology;
- Easy pipelines connections from the Sawa system to existing pharmaceutical plants;
- Possibility to connect Sawa Integrated System to existing air conditioning plants to obtain significant energy savings in hospital or sanitary spaces;
- Possibility to connect Sawa Integrated System to existing equipment to obtain significant energy savings in water heating;

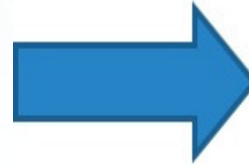
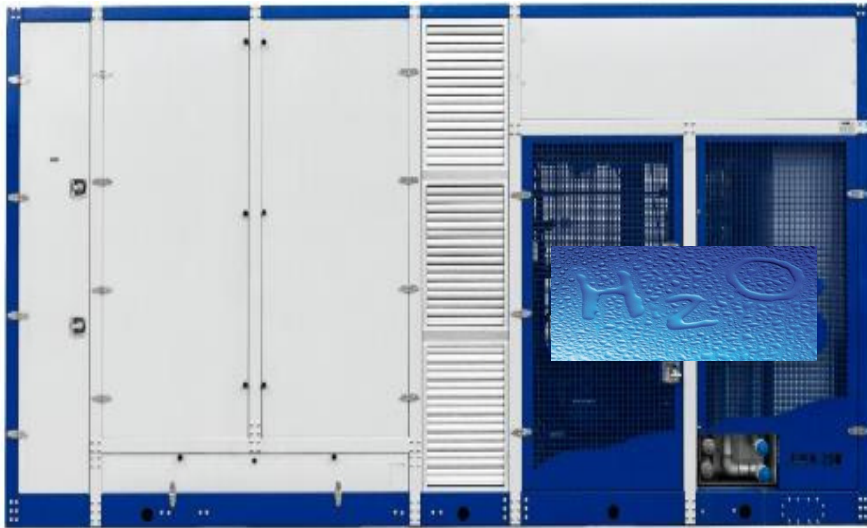
# Isotonic Applications and Sterilization



## Modula System Strengths for *Ophthalmic and Inhalation Applications*

- Availability of a mobile system for the production of purified water;
- Constant water quality in Air To Water production;
- Easy pipelines connections from Sawa system to existing pharmaceutical plants and Cleaning Room;
- Drastic reduction of the cost for chemicals needed to purify the water, in comparison to tap water supply, for existing purified water treatment;
- Remote control of sensors and probes during production process;
- Possibility to connect Sawa Integrated System to existing air conditioning plants to obtain significant energy savings in hospital or sanitary spaces;
- Possibility to connect Sawa Integrated System to existing equipment to obtain significant energy savings in water heating;

# Ophthalmic, Inhalation and Pharma Applications





# HOTEL



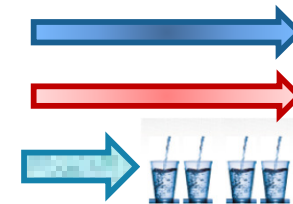
# Hotel application

In 2015 integration between Sawa 250 and the existing hotel heating system (LPG Boiler), in order to provide heating for sanitary water and high quality drinking water for direct consumption, or for bottling.

- Location: Mexico, Villahermosa
- Hotel size: 154 double rooms
- Water consumption: 308 bottles of ½ litres a day (7 pesos/litre)
- Drinking water consumption: 1000 litres/day (1.4 pesos/litre)
- Sanitary hot water consumption: average 4300 litres/day
- 1 LPG litre cost: 7.47 pesos
- 1 electric kWh average cost: 0.8243 pesos



Integrated system  
Water + heating +  
fresh air



Sawa, with the heating energy coming from the water production process, was estimated to wholly supply the sanitary water heating with no further energy consumption.

Moreover we studied an application for the fresh air coming from the Sawa machine

# SAWA – Plus

- By using the systems for the large-scale use, the water production is more and more than billion of cubic meter of water a year
- Ensure a best quality water and best sanitary control for population
- With a fast return of investment
- With fast and easy installation and improvement
- With a big CO<sub>2</sub> saving (no water transportation, no packaging needed)
- Achieve the target for a big reduction of plastic waste
- With a big energy saving
- Possible easy and fast local assembling machine

# Thanks for your attention

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## Italian and European Technology