AWA Building Integration Machine

AIR TO WATER with GREEN ENERGY SAVING Solution

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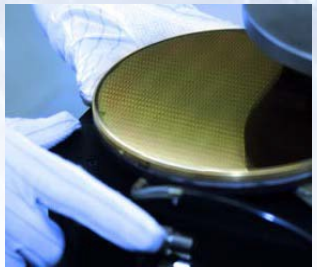
SEAS Eco-Sustainable Solutions

Production of high quality water from air

BASIC:
Water for irrigation, washings, cattle rearing, industrial application, etc.

DRINKING:
High quality drinking water from air, mineralized, comparable to the best bottled water worldwide.



MINERAL FREE – FREE PLUS:
Demineralized water from 2MΩ to 15 MΩ suitable for industrial application as food, pharmaceutical, cosmetics, etc.

++ Green Energy Saving ++

With SEAS technology, AWA MODULA and AWA BIM systems, it is also possible obtain, at the same time, at zero cost:

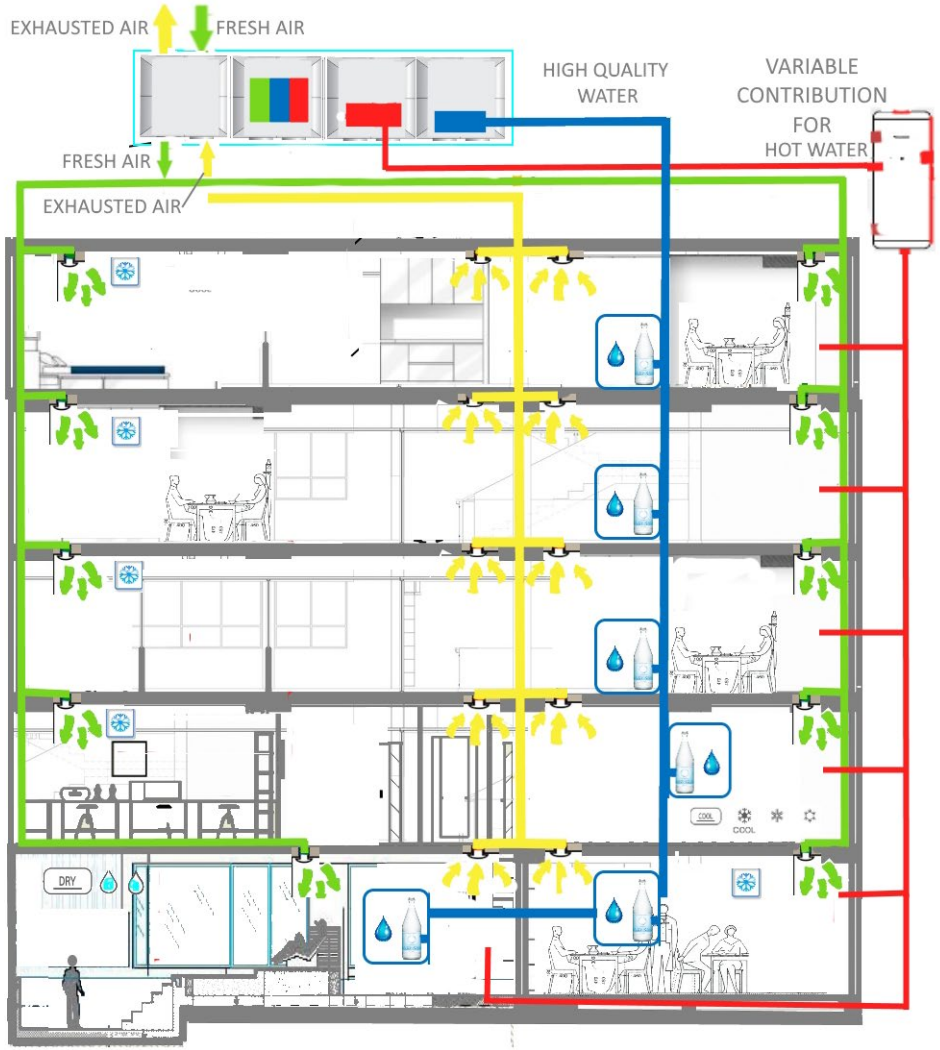
- **With AWA Modula from 50 to 10,000 lt/gg a 30°C/70% humidity:**
  - + Heat recovery as a contribution to heating the sanitary water
  - + Fresh and dry air recovery as primary source for conditioning

- **With AWA BIM from 500 to 2,000 lt/gg a 30°C/70% humidity:**
  - + Controlled Mechanical Ventilation
  - + Heat recovery as a contribution to heating the sanitary water

SEAS' economic saving allows a ROI < 2 years → with profits for min. 10 years.

AWA BIM

Building Integration Machine



AWA BIM

Integrated system for **WATER from AIR** production and active **Thermal Energy RECOVERY** for ventilation systems

BIM is a system intended for easy integration in buildings as: residential, industrial, gyms, pools, factories, etc.

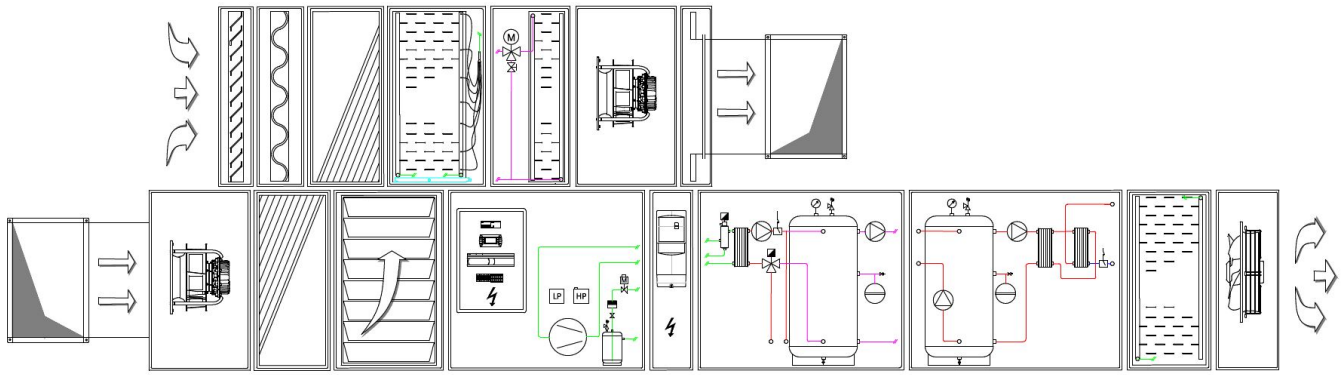
BIM provides at the same time and at low cost:

- **C**ontrolled **M**echanical **V**entilation;
- Variable contribution for domestic water heating
- High quality water from air production;
- Purification and mineralization of the produced water and / or water coming from other sources of supplying;
- Zero PET bottle use.

The system effectiveness permits to repay the investment in a very short time and permits an important saving/gain for over 10 years!

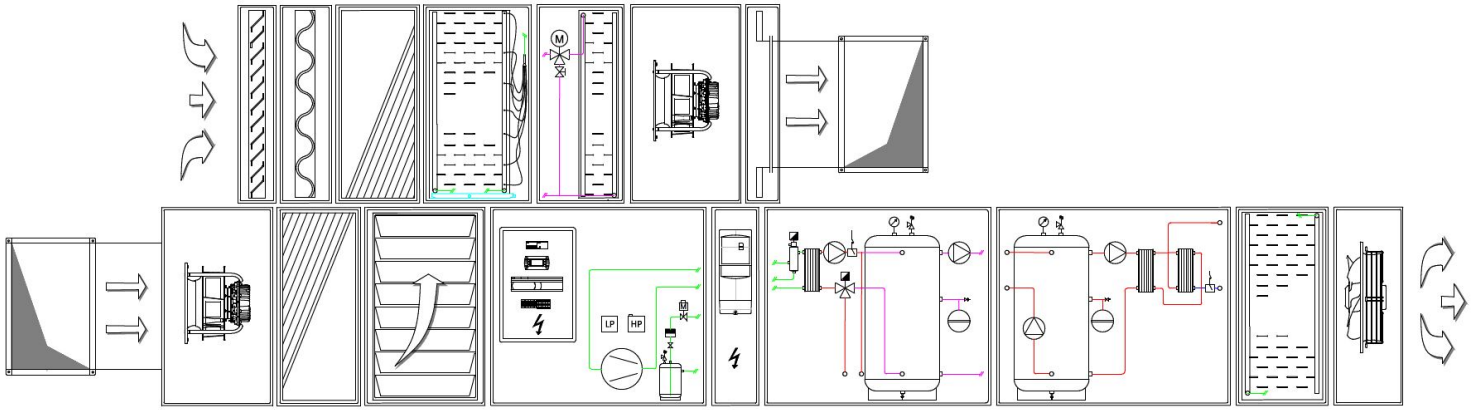
AWA BIM WHM

TECHNOLOGICAL FUNCTIONS	**AWA BIM** is a multi-technological system which achieve **an important energy saving**. At the same time, AWA BIM can provide a contribution to heating sanitary water and to produce drinking water whit high quality from air.
EASY INTEGRATION IN EXISTING PLANTS	Thanks to: low electrical consumption, easy adaptation to existing systems, and components which can be selected in compliance to needs, **AWA BIM can be integrated into any existing system.**
MAXIMUM ENERGY EFFICIENCY SAVINGS OF 35% ON ENERGY COSTS	**AWA BIM is designed in order to obtain the maximum energy efficency, which is reached by means of:** compressors, with high EER and EC fans, controlled by inverters; heat exchangers characterized by low pressure drops, **proprietary software**, auto-adaptive on the basis of local climatic parameters, which permits optimized remote control management.
THERMAL ENERGY RECOVERY FOR WATER HEATING	AWA BIM contributes in the hot and humid months to heat domestic water with a **cost reduction from 10% to 70%**, depending on the location area and external climatic conditions.



AWA BIM WHM

ENERGY RECOVERY AND SAVING UP TO 90% REGARDING AIR CHANGE, AIR EXPULSION AND AIR TREATMENT	Triple thermal recovery system: static & thermal (active): **<<Static – Thermodynamic – SEAS Tech>>** Maximum air treatment efficiency with minimum electrical power required
VMC	By means of heat recovery and cooling bypass <<SEAS Tech>>, performed by SEAS microprocessor system, equipped with constant control of dew point and room temperature, **AWA BIM can achieve 20% reduction in air treatment energy costs.**
CUSTOM OPTIONS	**AWA BIM** can be custom with **dedicated solution** requested by the customer as: air filter for antiviral applications for hospitals and special applications; interfaces with external technologies: heat pump, heating, air conditioning and other functions to be defined and designed from time to time based on **customer's need.**



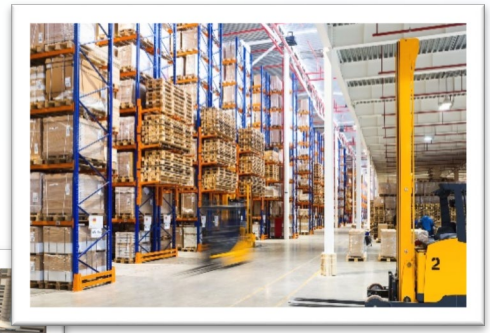
AWA BIM WHM

WATER FROM AIR PRODUCTON	**High quality water intended for different purposes: drinking, industrial or agriculture.** Reduction of industrial costs for osmotized water production– **zero** use and zero environmental dispersion **of PET products which means reduction of environmental pollution**.
WATER TREATMENT	**Possibility to mix the water produced from air with existing sources as: drinking water coming from municipal aqueduct and water purification and treatment management tailored on the basis of installation and local distribution specific requirements.**

AWA BIM Application Sectors

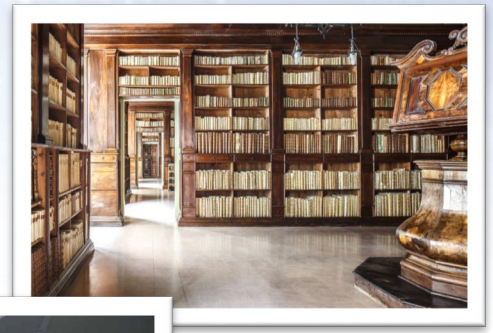
which require controlled temperature and humidity

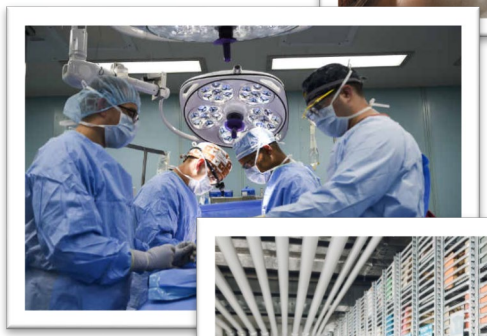
INDUSTRY

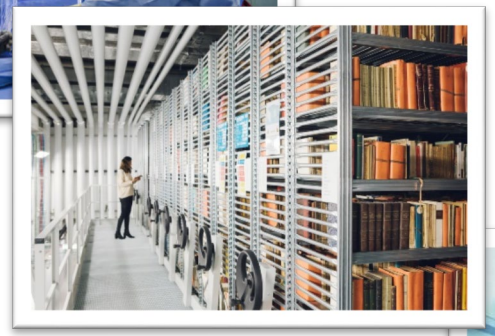


- Cosmetics
- Pharmaceutics
- Clean Rooms
- Food
- Packing
- Warehouses
- Electronics

BUILDING







- Hospitals
- Surgery Rooms
- Libraries
- Museums
- Archives

AWA BIM Application Sectors

which require controlled temperature and humidity

TERTIARY

- Restaurants
- Fast Food
- Breweries
- Industrial Laundries

HOSPITALITY

- Hotels
- Theaters
- Multiplex

LARGE SURFACES

- Gyms
- Swimming pools
- Sport structures

AWA BIM Technical Data sheet

Technical Data AWA BIM WHV - Water from Air - Primary Air - Heat Recovery

Integrated system for production of water from air and thermical recovery

	u.m.	500/2.5	1000/5.0	1500/10.0	2000/15.0
AIR FLOW					
Nominal supply air flow	mc/h	**2,500**	**5,000**	**10,000**	**16,000**
Max useful static pressure	Pa	400	400	400	400
Nominal expelled air flow	mc/h	**2,500**	**5,000**	**10,000**	**16,000**
Max useful static pressure	Pa	400	400	400	400
Minimum air flow	mc/h	1,600	3,400	6,500	11,000
Max air flow	mc/h	3,500	7,200	13,800	22,500
CONTRIBUTION TO HEATING*					
Total thermic power	kWt	**23,0**	**55,0**	**92,0**	**138,0**
Max supply temperature	°C	50°C	50°C	50°C	50°C
Heat recovery efficency	%	**50 - 90%**	**50 - 90%**	**50 - 90%**	**50 - 90%**
PRODUCTION OF WATER FROM AIR					
Nominal produc. of WATER from AIR with 30°C - 70% HR	lt/day	**500**	**1,000**	**1,500**	**2,000**
Electrical supply V/Ph/Hz	400/3/50 - 220-400/3/60				
Max electric power needed	kW	6,5	15,0	26,0	37,0
Start	type	direct / soft start / inverter according to compressor model			
Compressors / cooling circuits	n°	1 / 1 - 2 / 2			
tipo / gas		semi-hermetic - scroll - R134a - R513a - R134ze			
Partialization	n°	30% - 75% - 100% or inverter			
FANS	type	axial EC / plug fan EC / centrifugal			
Sound power level	dB (A)	according to provision and composition			
Front dimensions	l x h	1010 x 900	1315 x 1010	1930 x 1315	1930 x 1930
lenght dimensions	p	according to provision and composition			

*heat contribution is a technical data in function of the local in temperature and humidity

Operating limits: minimum outdoor air temperature -20°C / maximum outdoor air temperature 52°C