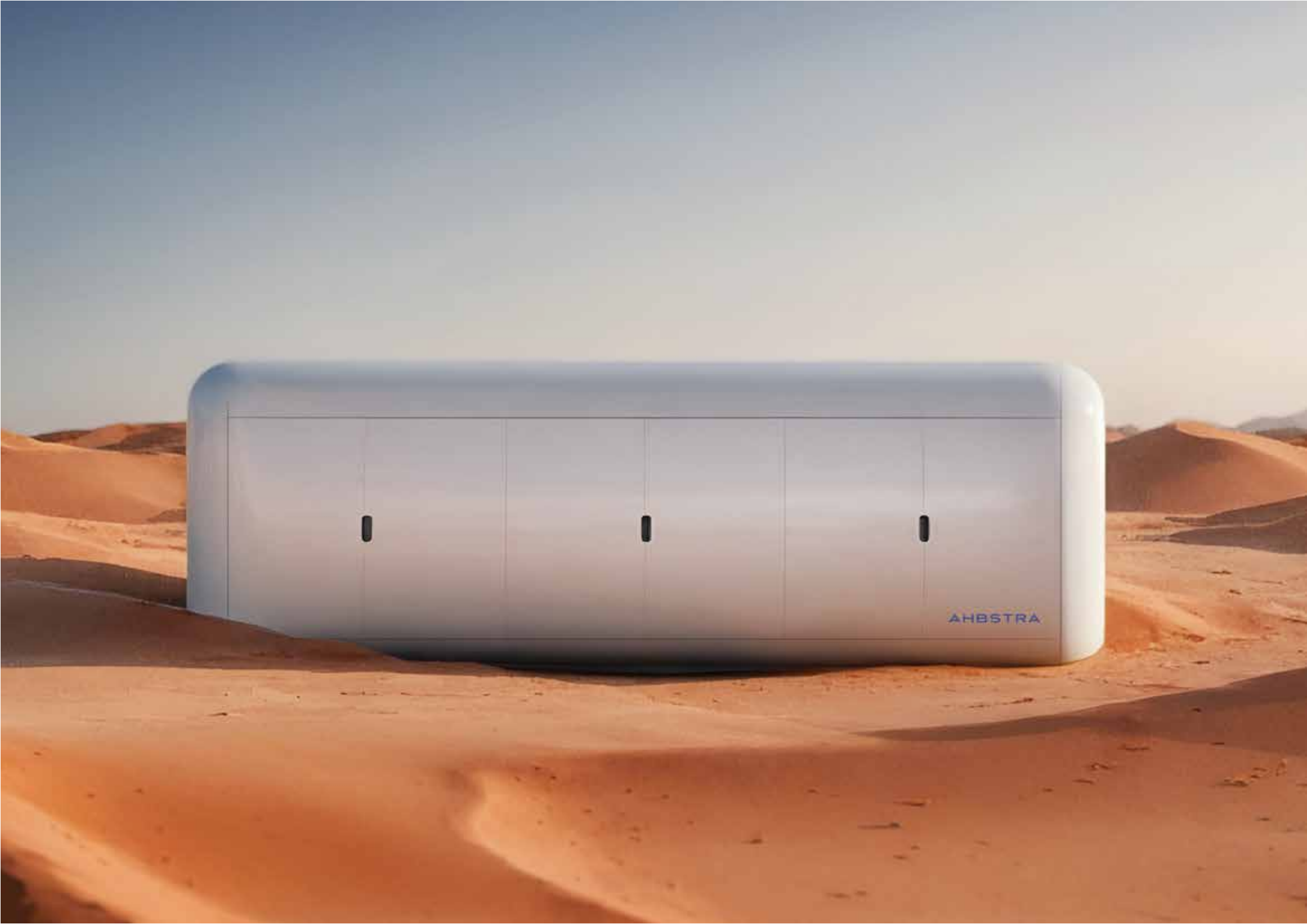
AHBSTRA™

Sustainable water security for independent living now and in the future.


AHBSTRA

Clean water.
Anywhere. Anytime.

Ahbstra is redefining what it means to have true water security.

Using nano-material technology, our groundbreaking atmospheric water generators extract the highest quality, clean drinking water from the air to support modern, self-sufficient living in even the world's most arid climates.

Designed for homes, developments, and communities alike, Ahbstra's patented technology provides autonomy without aesthetic or lifestyle compromise.

Ahbstra is a prescient solution for a global problem

Access to clean water is, and always will be, a necessity.
But municipal supply is unreliable, groundwater is depleting, and trucked water is unsustainable.

Ahbstra provides a better way: independent, reliable access to clean water.

Anywhere. Anytime.

A changing world:

Regions are seeing declining rainfall and aquifers running dry.

Unreliable alternatives:

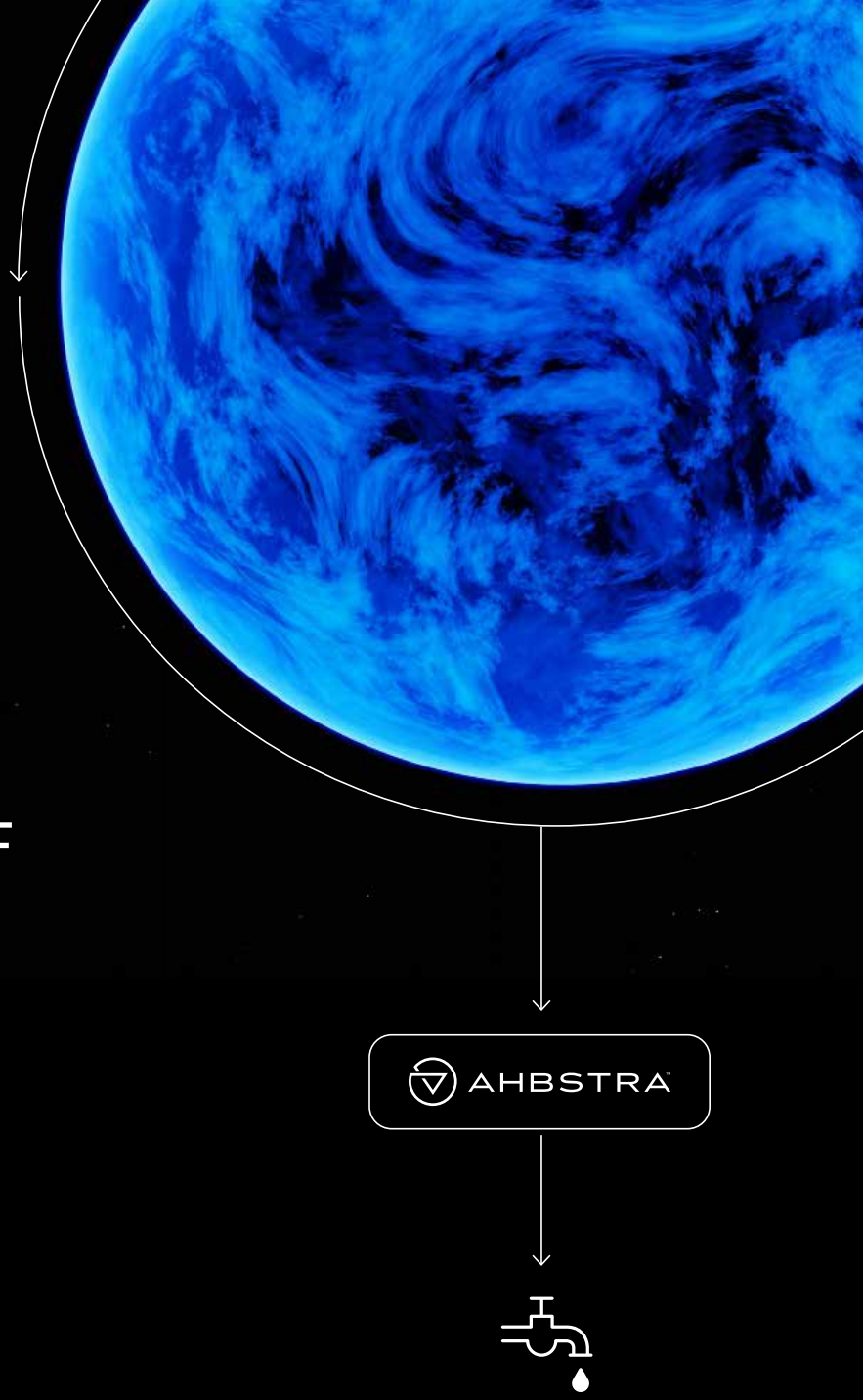
Homes rely on incosistent, sub-optimal sources at inflated costs.

Increasing shortages:

Summer deficits are reaching 30-40%, leaving residents without options.

Ahbstra eliminates these risks by delivering a self-sufficient, clean water solution.
Unlike conventional AWGs, it works in the world's harshest climates, consumes less power, and ultimately eliminates reliance on failing water infrastructure or costly water alternatives .

Revolutionising water independence



Ahbstra has pioneered the capture of moisture from the air, engineering a first-of-its-kind commercial application of MOF (metal organic framework) technology.

This means that water is guaranteed regardless of location, humidity or temperature.

For the first time ever.

Introducing the Ahbstra Ark

Total off-grid functionality, eliminating dependence on municipal water systems.

Built to perform, in the world’s most demanding climates, from arid deserts to Mediterranean coastlines.

The Ahbstra Ark delivers complete water autonomy with the lowest environmental footprint.

500 Litres per day of clean, potable water.

Daily water output:
Up to 500 litres

Temperature versatility:
-10°C to +50°C

Air Filtration:
Standard G4 pleated panel filters

Acoustic:
Sound Power Level (LW(A) = 87dB

Energy consumption:
84Wh per litre*

Projected cost of water:
$0.034 to $0.08

Water Filtration:
Micron filter with pore size of 5 microns

Dimensions:
L 5.7m x W 2.5m H 2.7m (without casing)

* using a free heat source.
Heat Pump = approx. 350kwh/L

A smarter approach to water autonomy

Breakthrough Efficiency

Our Metal-Organic Framework (MOF) technology extracts water even in low humidity, outperforming conventional AWG systems.

Energy Optimisation

Ahbstra utilises over 50% less energy per litre than standard alternatives.

Seamless performance

Future-proofed engineering,
built for peace of mind.

A solution for every vision

Ahbstra’s technology is adaptable to various needs and industries:

Architects:

Designed for the most arid environments to ensure exceptional architecture isn’t limited by location

Property Developers:

Meet and exceed sustainability standards with technology that elevates your developments.

Villa Owners:

Achieve water security and future-proof your home.

Ahbstra for homeowners

Live Without Compromise: Water Security for the Modern Homeowner.

Independence:
Experience the confidence of
self-reliance, independent of municipal water infrastructure.

Engineered for the future:
Systems designed to integrate seamlessly into any environment with minimal maintenance.

Pioneering innovation:
Cutting-edge technology quietly transforms the atmosphere around you into an unlimited water source,

Ahbstra for developers

Empowering design: Scaleable technology for visionary developments and projects.

Water security you can count on:
Functions in humidity as low as 20%,
ensuring performance even in the driest climates.

Designed for projects of any size:
Innovative modular technology puts your development at the forefront of innovation and independence.

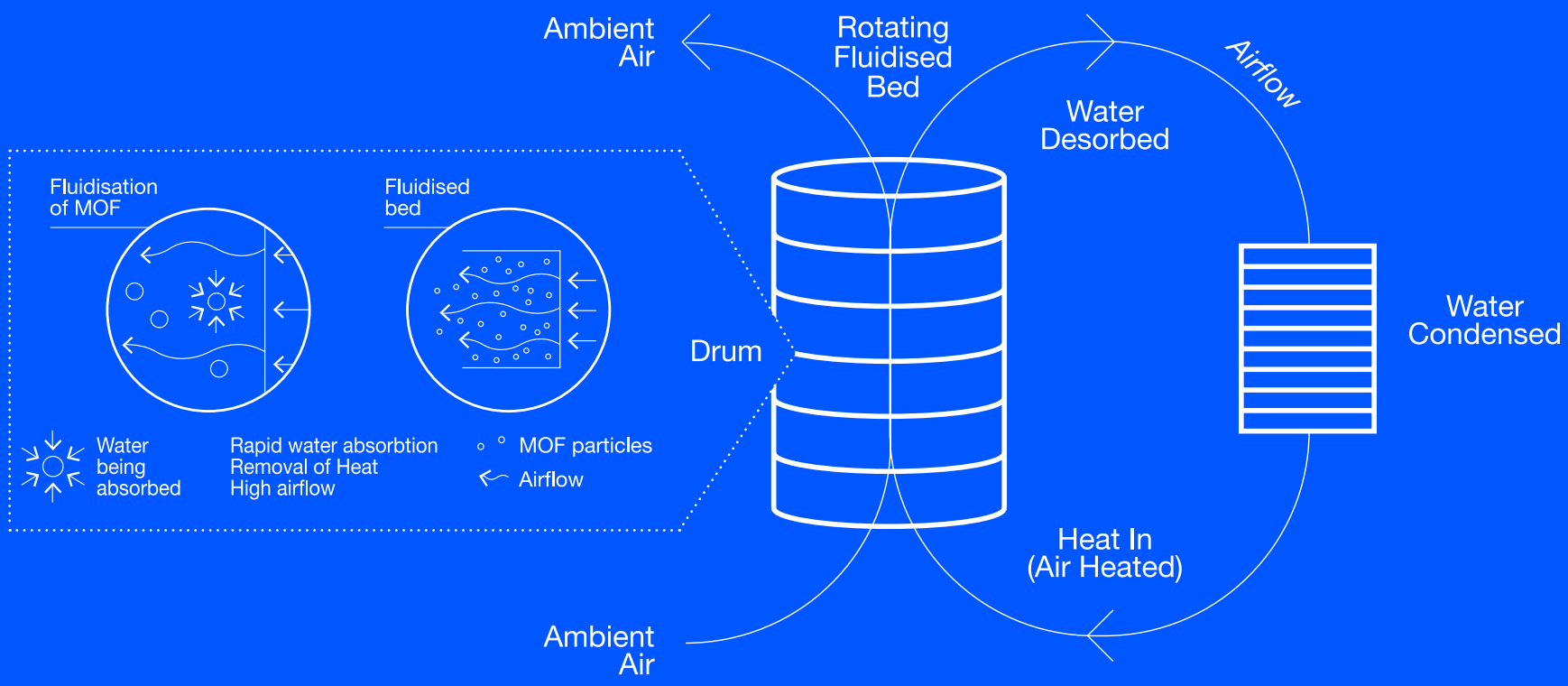
Sustainability:
Elevating projects with systems aligned to green building certifications like LEED & BREEAM.

Future-proof:
Enabling autonomy and resilience in the face of changing climates.

Patented technology at work

Adsorption

Desorption



Ahbstra’s technology partners

Cambridge Consulting

World leaders in technology development.

Ahbstra is proud to work with Cambridge Consultants (CC) in developing a fully operational prototype completed Q4 2024.

A global leader in cutting-edge R&D and strategic innovation, CC collaborates with top-tier clients across industries like artificial intelligence, satellite technology, and sustainability.

CC’s technical team brings over 50 years of expertise in mechanics, fluid dynamics, and thermofluidics, alongside advanced capabilities in laboratory-scale industrial equipment and precision instrumentation.

Supported by specialists in manufacturing, product design, software engineering, and regulatory compliance, they ensure smooth progression from concept to market.

Promethean Particles

Groundbreaking science-led manufacturers.

Promethean Particles is revolutionizing water generation by supplying high-performance MOFs, which efficiently capture molecules like water.

With immense surface areas—one gram covering a football field—MOFs enable breakthroughs in carbon capture, biogas upgrading, and atmospheric water harvesting. With 100,000+ structures, MOFs excel in water adsorption.

Promethean’s continuous-flow reactors overcome cost and scalability barriers, producing MOFs in minutes at lower costs and up to 1,000 tonnes annually.

Their reactors ensure quality, reduce energy use, and enable our machines to transform water access in arid climates.

Ahbstra’s technology wins

Category	Ahbstra (MOF-Based)	Dew point Systems
Optimal Climatic Conditions	20% - 80% / -10°C - 40°C	27°C & 60% RH
Climate Adaptability	Operates in efficiently in desert climates	High RH requirements render machine ineffective in arid zones
Sustainability	Engineered for renewable compatibility including solar, geothermal, and biomass	High energy demands make it unsuitable for solar integration
Filtration	Pure potable water generated simple particle filtration and mineralisation	NSF Filters UV/Air Filtration
Installation	Modular machine design for easy integration	Varied

FAQs

1.How does the Ahbstra generate water?

By capturing moisture from the air using MOF technology, even in arid climates.

2. What is MOF technology?

MOFs are highly porous materials that absorb moisture efficiently, making them ideal for sustainable water capture.

3. How much water can the Ahbstra Ark produce daily?

The WaterBase generates up to 200 litres of fresh drinking water per day.

4.Is it suitable for off-grid locations?

Yes, it is entirely self-contained and compatible with renewable energy sources.

5. What makes this technology sustainable?

It minimizes reliance on municipal sources and single-use plastics, using renewable power for an eco-friendly footprint.

6. How is it installed?

The WaterBase is a plug-and-play unit, easily installed by certified technicians.

7. What climate does it operate in?

Its advanced design ensures it works effectively in dry, hot conditions where water is most needed.

8.When will the Ahbstra Ark be available?

Available for pre-order, with full release scheduled for 2025.

9. What is the energy cost per litre?

The WaterBase consumes only 84Wh per litre, making it one of the most efficient systems on the market.

10. Is maintenance required?

Regular maintenance is recommended and can be arranged through Ahbstra's certified technicians.

11. Is seawater desalination a more cost-effective solution than atmospheric water generation?

While desalination is cost effective at scale, it has environmental drawbacks. Ahbstra's AWGs offer a sustainable, decentralized alternative – ideal for any remote or off-grid areas, requiring no plumbing or coastline access.

We compliment, not replace, existing water infrastructure.

12. Wouldn't drilling a new or deeper well be cheaper than extracting water from the air?

Wells can be costly, regulated, and risk contamination.

Ahbstra's AWGs provide a clean, legal, and eco-friendly alternative – ideal for remote or drought-prone areas with limited groundwater access.

13. What sets the Ahbstra Ark apart from other Atmospheric Water Generators?

The Ahbstra 500 uses a proprietary MOF-based desiccant to produce water even in low-humidity climates.

With up to 500L daily output, it is energy efficient, low-maintenance, and ideal for off-grid living, eco-resort and humanitarian use.

AHBSTRA™

Ensuring sustainable water security for independent living - now and in the future.

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