TECHNICAL PRODUCT SHEET

ATMOCELL

Atmospheric Water Generation System

MIRANDA water technologies

System Overview

Rainmaker's AtmoCell, a 4th-generation Air-to-Water technology, delivers a cutting-edge solution that extracts atmospheric moisture and produces safe, potable water. Engineered for flexibility and rapid deployment, these compact, fully integrated systems are ideal for remote or arid regions lacking reliable water infrastructure. The units require only electricity to operate and are suitable for both off-grid and grid-connected environments.

Building on years of innovation, this latest generation evolves from earlier models that successfully harnessed wind power as a renewable energy source. While the current systems are optimized for grid power, generators or solar panels, their modular architecture still allows for wind integration when applicable.

To ensure the safety and quality of the water produced, Rainmaker's AtmoCell units utilize a comprehensive purification process. The system includes advanced condensation technology, multi-stage filtration, ultraviolet (UV) sterilization, and optional final-stage mineralization. The result is clean drinking water that meets or exceeds both World Health Organization (WHO) and U.S. Environmental Protection Agency (EPA) standards.

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Key Features and Benefits

Off Grid Capable
Compatible with solar and wind power for deployment in remote or undeveloped areas.

Clean Drinking Water
Multi-stage filtration, including carbon and ultraviolet (UV), ensures WHO-compliant potable water.

Modular and Scalable
5,000 liters per day modules can be combined to scale for communities or commercial operations.

Plug and Play
Preassembled and skid-mounted for rapid deployment and operation.

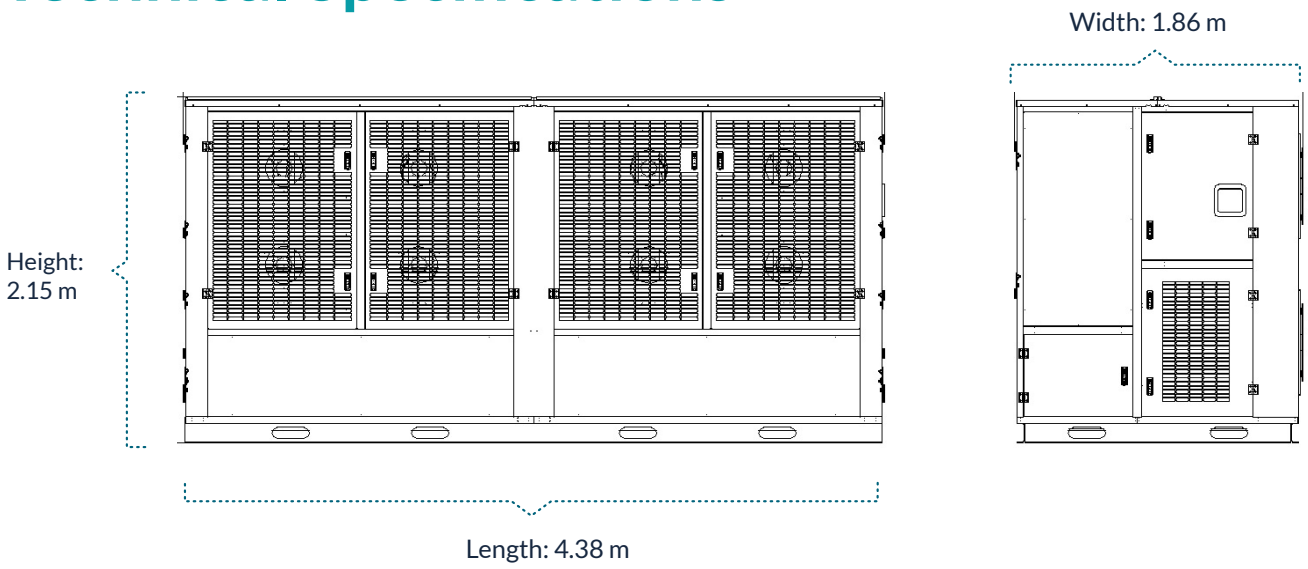
Low Operating Cost
Designed for high efficiency, consuming as little as 0.30 kWh per liter.

No Source Water Required
Generates water entirely from atmospheric humidity, avoiding the need for traditional supplies.

Resilient Design
Corrosion-resistant aluminum frame and marine-grade components ensure long life in harsh environments.

Remote Monitoring
SmartCell system integration enables real-time diagnostics and operational tracking.

Technical Specifications



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PARAMETER	SPECIFICATIONS PER MODULE (METRIC UNITS)
Production Capacity	Up to 5,000 liters per day, depending on ambient temperature and humidity levels.
Scalable	Modular, stackable design enables seamless capacity expansion to meet increasing water demands.
Relative Humidity Range	Optimized for performance in 40%–100% relative humidity environments.
Temperature Range	Operating between 15°C and 50°C.
Water Quality	Consistently exceeds WHO and EPA standards for potable drinking water.
Energy Consumption	0.3–0.5 kWh per liter, depending on environmental conditions.
Power Source	Compatible with grid, generator, or solar power systems.
Power Supply	AC 380–600 V, 50/60 Hz, 3-phase, 46 kW.
Sound Level	<85 dB during normal operation.
Remote Access	Integrated SmartCell platform enables centralized monitoring of multiple systems.
Compressor Type	Emerson Enclosed Vortex™ for high-efficiency air compression.
Refrigerant	R-410A environmentally friendly refrigerant.
Mobility	Available in stationary or optional trailer-mounted configurations for rapid deployment.
Weight	3,500 kg
Maintenance	Engineered for low-maintenance operation and long service intervals.

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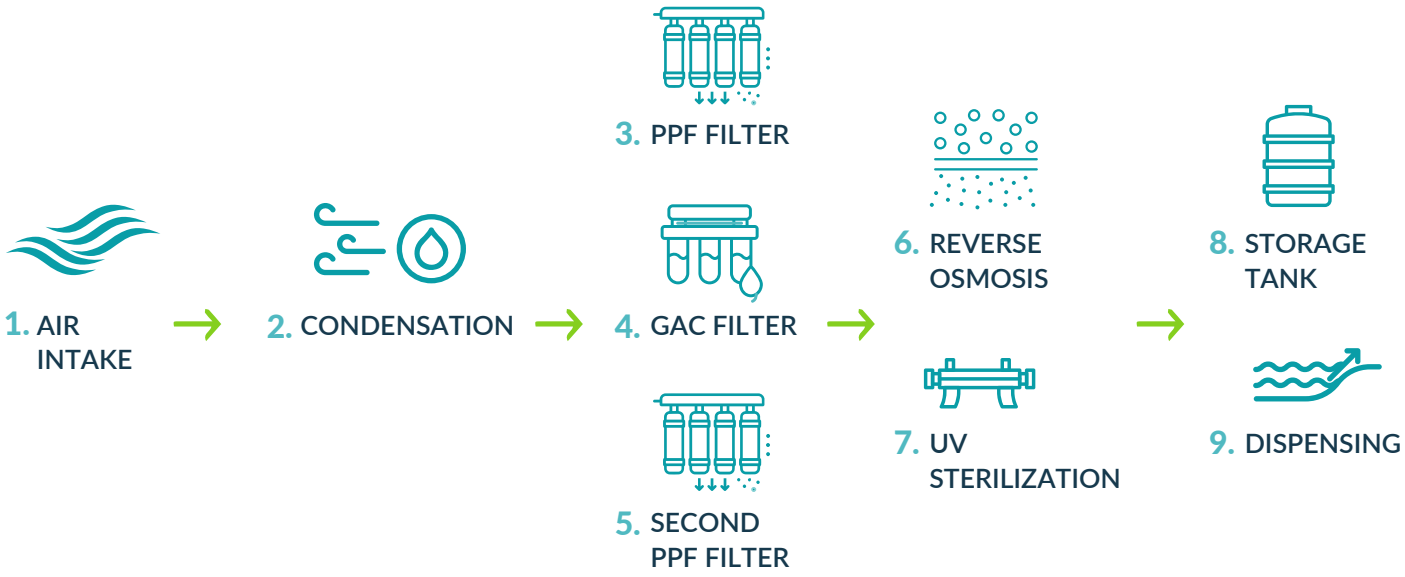
Water Production - Liters per Day

HUMIDITY / TEMP. (°C)	40%	50%	60%	70%	80%	90%
5°C	164	239	307	377	787	1023
15°C	537	877	1125	1610	1754	1930
20°C	766	1426	1593	1976	2252	2478
25°C	799	1805	2275	3207	3817	4199
30°C	1684	2307	3161	4425	5000	5500
35°C	1987	2722	3730	4779	5400	5940
40°C	2086	2858	3916	5018	5670	6124
45°C	2191	3001	4112	5269	5954	6251

ATMOCELL | PROCESS FLOW DIAGRAM



AIR CAPTURE > CONDENSATION SYSTEM > FILTRATION SYSTEM > PURIFICATION SYSTEM > DISTRIBUTION

SMARTCELL CONTROL SYSTEM

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STAGE	DESCRIPTION
1 Air Intake	Ambient air passes through particulate and HEPA (High-Efficiency Particulate Air) filters.
2 Condensation	Humid air passes over chilled coils, condensing water vapor.
3 PPF Filter (Polypropylene Filter – Stage 1)	Captures larger particles such as sediment, rust, and dirt.
4 GAC Filter (Granular Activated Carbon)	Removes chlorine, VOCs (Volatile Organic Compounds), odors, and improves taste.
5 PPF Filter (Polypropylene Filter – Stage 2)	Adds redundancy to remove any remaining particulates.
6 Reverse Osmosis (RO)	Removes salts, heavy metals, and microorganisms via membrane filtration.
7 LED UV Sterilization (Ultraviolet)	Inactivates bacteria, viruses, and pathogens using ultraviolet light.
8 Storage Tank	Treated water is stored in a built-in stainless steel tank.
9 Dispensing	Water is distributed via tap or direct piping.
10 SmartCell Control System	Logs performance data and sends alerts via remote dashboard.

Discover scalable and cost-effective atmospheric water generation with AtmoCell.

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