Water Harvesting with Aquabox

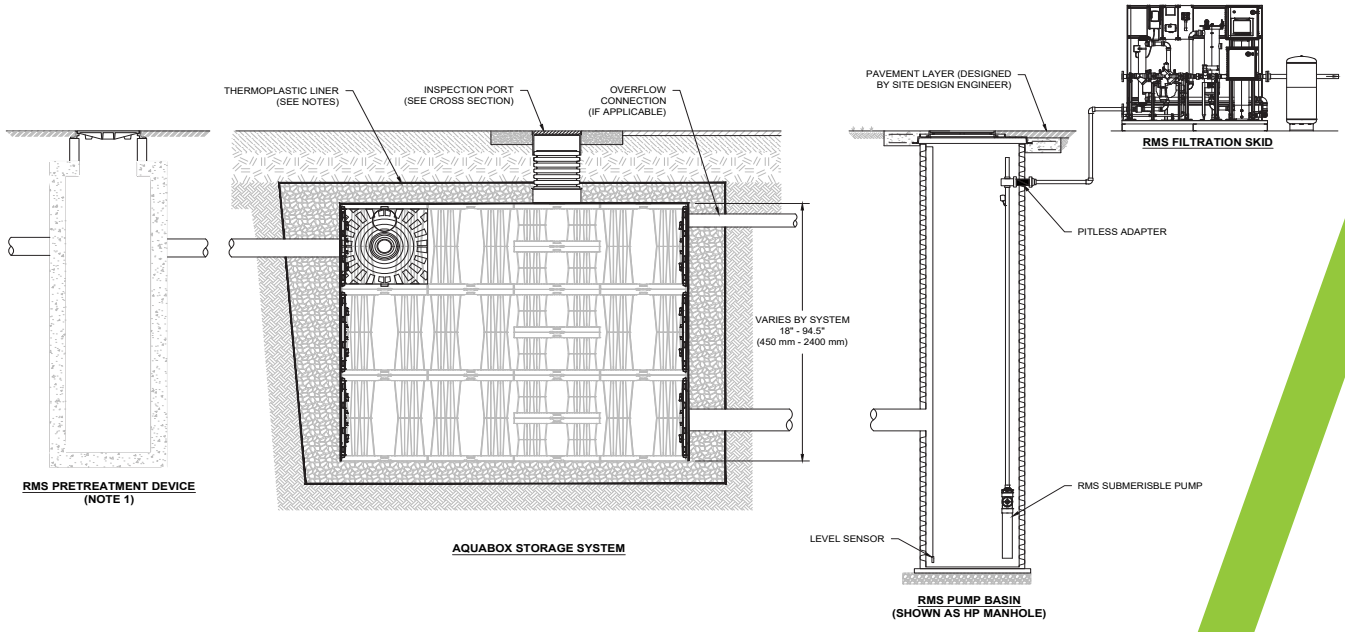
Advanced Drainage Systems (ADS) and Rainwater Management Solutions (RMS) work together to provide turn-key water harvesting solutions for commercial, industrial, and residential applications that utilize subsurface basins designed for non-potable applications, such as Aquabox.

Aquabox is a polypropylene, crate-based system engineered for stormwater management and non-potable water reuse. Aquabox offers flexible, high-capacity storage that maximizes land use and supports water harvesting and reuse projects.

Aquabox can also be integrated with RMS engineered components such as filtration, pumping, and post-storage treatment, to enable tailored solutions for specific reuse needs, along with green infrastructure best practices.

Benefits

- Flexible & Scalable Designs
- Solution for any Water Reuse Application
- Meet Regulatory Guidelines & Sustainability Goals
- Resources from Concept to Installation and Maintenance
- Best-in-Class Water Quality & Filtration



Water Harvesting System Component Information

Pre-tank filtration



The filter has one inlet, a filtered water outlet and a debris/overflow outlet. These filters reduce the amount of debris entering the tank, promote a healthy tank environment, and reduce system maintenance. Pre-tank filters do not allow debris larger than 400 micron to enter the tank under any circumstances. The polyethylene constructions allows for direct burial. Load rated lids are available. Above grade installation is possible with available mounting brackets.

Pressure rated stainless steel units

- 4” (100 mm) 280-micron filtration from up to 2,100 ft^2 (195 m^2)
- 6” (150 mm) 280-micron filtration from up to 5,500 ft^2 (511 m^2)
- 12” (100 mm) 380-micron filtration from up to 33,000 ft^2 (3,065 m^2)

Smoothing inlet



Gently introduces water into the tank, helping prevent unnecessary turbulence and oxygenating the tank to ensure optimal water quality.

- 4” (100 mm) inlet & 8” (200 mm) inlet

Floating intake

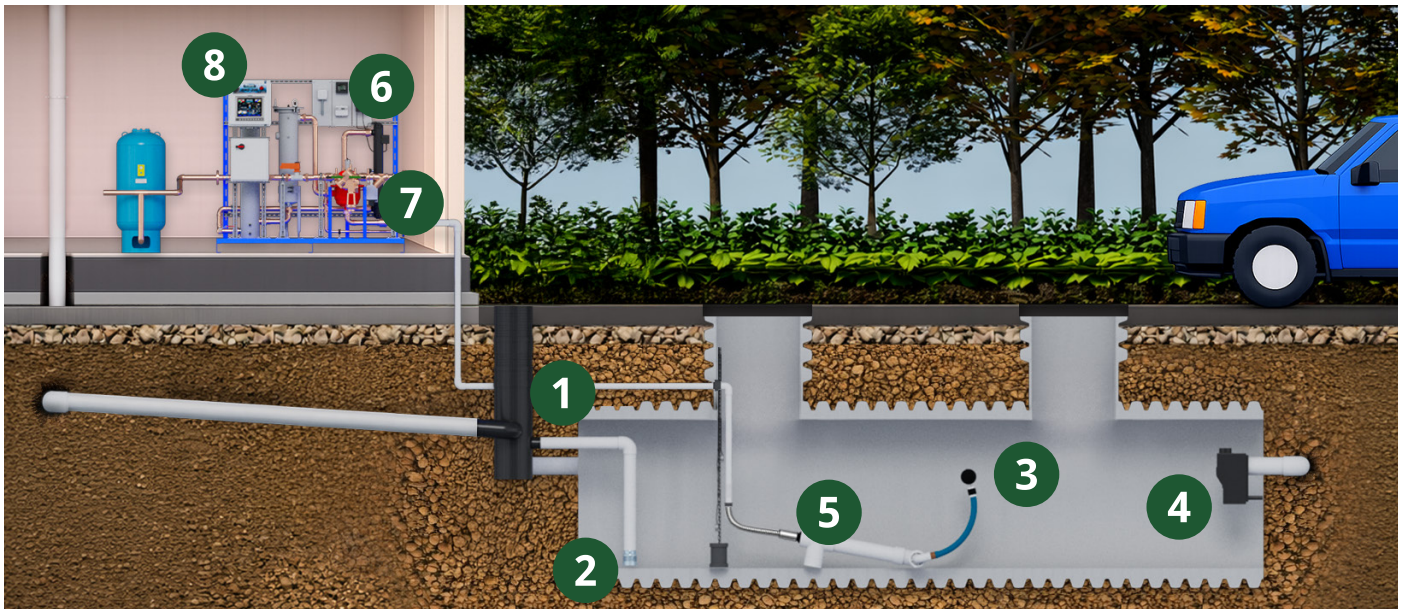


Draws water from the tank to be sent for treatment. The intake device floats just below the surface of the water where the water is the cleanest. This ensures optimal water quality being sent to treatment. These devices come in multiple sizes and filtration intensities. 1” (2 mm) inlet, 1 ¼” (31 mm) inlet, 2” (50 mm) inlet, 1,200-micron filtration, 300-micron filtration.

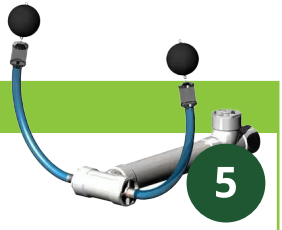
Overflow device



Skim and remove floating particles from the water’s surface, helping protect water quality inside the tank. They are designed with vermin prevention and back-flow prevention capabilities. They also prevent storm odors from entering the tank. 4” (100 mm) inlet 8” (200 mm) inlet.



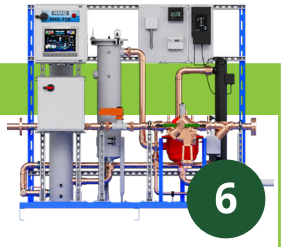
Pumping systems



RMS offers pumps to meet a wide variety of horsepower and voltage demands, plus custom, manufacturer approved cooling jackets to house large pumps and motors.

RMS can provide booster pump skids when desired flow or pressure needs increased. Booster pump skids are also ideal for flooded-suction applications. RMS has partnered with industry leaders to develop a Variable Frequency Drive (VFD) for water harvesting to reduce energy spikes by powering the motor at adjustable rates. A VFD reduces wear on the pump motor and provides more consistent pressure/flow output.

Modular Treatment Skids



Available starting at 25 gpm to 200 gpm in 25 gpm increments and can be tailored to specific needs

UL/CA certified treatment systems to address the following:

- Self-Cleaning/Back-Flushing Screen Filters to remove large particulate matter.
- Cartridge/Bag Housings for secondary sediment filtration to level of 5 microns.
- Carbon filtration reduces discoloration, odor, and volatile organic compounds.
- Ultraviolet Lights to sterilize pathogens.
- Integrated Backup Water Supply ensures continuous water when rainwater is depleted.
- Flow meters for rainwater and domestic sources.
- Pressure Differential Transmitters to signal required servicing.
- Single Point Power Source connects to building power and provides a single point connection and a step-down transformer to power 120V secondary and low voltage control wiring. Units are U.L./CA listed.
- RMS 200 Controller is touch screen PLC with graphical interface to display system health and control certain components. BAS interference provided through MODBUS or BACnet.
- All equipment is mounted on an RMS skid made of powder coated carbon steel. The standard color is safety blue, but additional options available. Piping materials include copper, schedule 80 PVC, stainless steel, CPVC, and PEX.

Specialty Treatment Solutions



RMS Provides additional treatment solutions including ultra filtration, reverse osmosis, ozone, and chemical injection.

Controls



RMS produced touch-screen Programmable Logic Controllers that are constructed, programmed, and testing in its UL508A Panel Shop for the rainwater harvesting industry. RMS can directly assist with any controller operation needs, no third party is necessary. The RMS controls team provides guidance throughout design construction, operation, and maintenance.

- RMS Series 200 Controller: 10.4” (260 mm) Screen
- RMS Series 200 Mini Controller: 5.7” (142.5 mm) Screen
- Run light boxes are also available.





RMS
RAINWATER MANAGEMENT SOLUTIONS

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