



AX-CTI WATER MANAGEMENT CENTER

Rainwater harvesting • Graywater reuse • Condensate recovery



Smarter water use today for a greener tomorrow.

Aquanomix believes in never wasting anything that can be used again. Aquanomix is proud to introduce the AX-CTI Water Management Center, a state-of-the-art system for water reclamation. Water reclamation provides a viable solution for reducing the strain on traditional sources of water. Many buildings and facilities have water uses that can be met with non-potable water. Alternate water may include rainwater, graywater, or condensate. Uses include cooling tower makeup, landscape irrigation, and water closets. Smarter water use today is the solution for a greener tomorrow.



Cooling towers are large consumers of water in facilities.

Rainwater Harvesting as a Stormwater Best Management Practice

The AX-CTI system can help to minimize stormwater runoff volume, and may impact the construction and maintenance costs of stormwater best management practices for buildings and facilities. Municipalities around the world have adopted policies and regulations for using rainwater harvesting as a stormwater best management practice. Many areas are also offering incentives for installing and using rainwater systems, such as tax credits and rebate programs.



Rainwater harvesting is a stormwater best management practice.

Applications of the AX-CTI Water Management Center

Cooling towers- using reclaimed water in cooling towers provides the quickest ROI and is the best economic use of the AX-CTI system. Cooling towers may be the largest consumers of water in buildings and facilities, using millions of gallons of water each year in commercial systems.

Irrigation- one-third of all water use in the United States is for irrigation applications. Using reclaimed water from the AX-CTI system for irrigation is both an economical and an environmental solution.

Water closets- the AX-CTI can supply the water needed for water closet applications. This reduces the use of potable water.

Process water- reclaimed water from the AX-CTI can be used as non-potable process water in buildings and facilities.

Vehicle washing- vehicle wash stations can implement improved water conservation practices by using the AX-CTI for water reclamation



Aquanomix
610 Jetton Street, Suite 120-212
Davidson, North Carolina 28036
T/ 704.402.4373
F/ 704.892.5708



www.aquanomix.com

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AX Water Management Center Standard Controls System



The controls system manages water quality through SIEMENS Insight® software platform, an automated program that is tailored for the needs of each client and site. This software tracks water quality and quantity, in real-time, and provides supporting trend analysis for measurement and verification. Coupling this advanced controls logic with mechanical technologies makes the AX system a true water management solution. SIEMENS Insight® software provides an effective and efficient way for facility personnel to monitor the AX system. Individuals have the option of accessing the program from virtually anywhere, as long as there's an internet connection.

Benefits of the AX-CTI Water Management Center

Economy- with the AX-CTI Water Management Center, users will enjoy lower water and sewer bills for their building and facility operations. **By utilizing the recycled water of the AX system, payback begins with the first drop.**

Sustainability- the AX-CTI Water Management Center contributes toward earning **13 of the 40** points needed for a U.S. Green Building Council LEED certified project. These points are achieved in the categories of innovative design, water efficiency and sustainable sites. The AX-CTI system also impacts ASHRAE Standard 189.1, which provides the baseline for designing, building, and operating green buildings. By decreasing the demand on traditional sources of water, the AX-CTI system supports sustainability efforts of all users.

Versatility- the AX-CTI Water Management Center is programmable to be adapted for most non-potable water applications. Common uses include cooling towers; irrigation; water closets; and vehicle washing. Aquanomix engineers work individually with clients to tailor the AX system to their building and facility needs.



Return on Investment

The ROI for a project will be impacted by the building or facility size and water use application, as well as annual rainfall and water/sewer rates. The Aquanomix team will conduct a project assessment with the client, and provide ROI calculations based on project parameters. Savings may include lower water/sewer bills; lower construction and maintenance costs for stormwater management practices; and local tax credits or financial incentives for installation and use of a water reclamation system.



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Aquanomix Turnkey Approach

The water flowing through an Aquanomix system is monitored by an automated controls platform, resulting in proper water quality delivered to points of use. Turnkey approach includes:

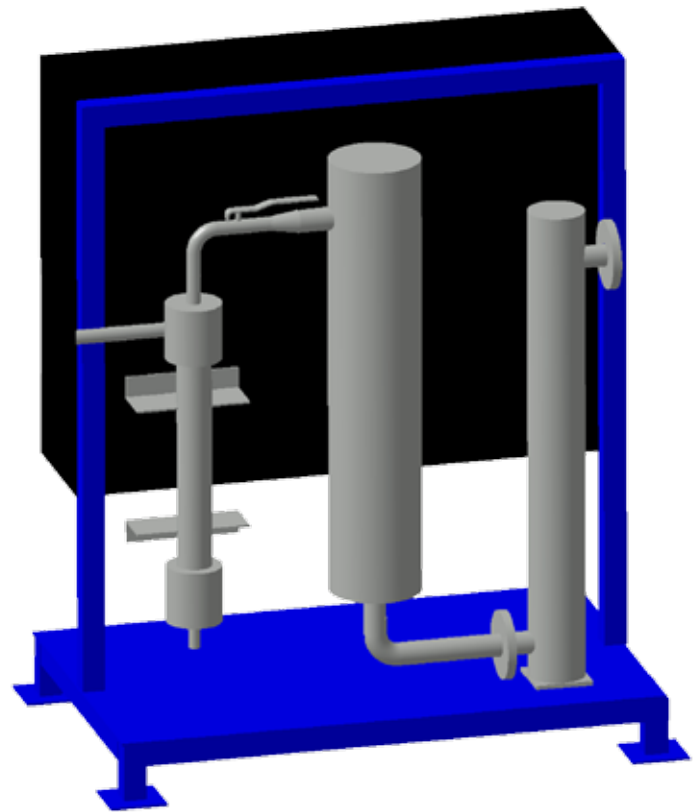
- AX Water Management Center skid
- Interconnecting water management system, including base programming, wiring, and plumbing
- Cistern selection and placement

AX Water Management Center Standard Features

- Controls system, to include:
 - Local user interface for manual override;
 - located on AX unit
 - SIEMENS Insight© software for automatic monitoring and control
 - BacNet compatibility to enable easy integration with BAS
- Separator (AX-CTI series only)
- Media Filter
- Ultraviolet disinfection unit
- 2D/3D modeling

Optional Features

- Custom engineered systems
- Green TouchScreen
- Analytical sensors
- Ozone unit (in place of UV, by request)



3D rendering of AX-CTI Water Management Center skid

QUICK FACTS

- **Global consumption of water has been doubling every 20 years**, more than twice the rate of population growth. ¹
- **Water is emerging as the next big environmental concern for two reasons:** one is the relative scarcity of freshwater resources around the world. The second reason is that the process of capturing, storing, transporting, distributing, and treating water is a large net consumer of electrical power. ²
- The U.S. Green Building Council's LEED green building certification program **now requires a 20% reduction** in water use as a prerequisite for project certification under all rating systems. ³
- **Cooling and process water can account for 80-90% of industrial water use.** Harvested rainwater can be used for these cooling and process water applications. ⁴

1. Van Giesen, Eddie, and Frances Carpenter. Georgia Rainwater Harvesting Guidelines. Georgia: Georgia Rainwater Harvesting Guideline Committee, 2009. Print.
2. Yudelson, Jerry. Water Efficient Technologies for Mechanical Contractors: New Business Opportunities. Rockville, MD: Mechanical Contracting Education & Research Foundation, 2009. Print.
3. U.S. Green Building Council, . LEED 2009 for New Construction and Major Renovations. U.S. Green Building Council, Apr. 2010. Web. 08 June 2010. <<http://www.usgbc.org/ShowFile.aspx?DocumentID=7244>>.
4. Lawson, Sarah, Adrienne LaBranche-Tucker, and Hans Otto-Wack. Virginia Rainwater Harvesting Manual. Salem, VA: The Cabell Brand Center, 2009. Print.



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