

New Generation Gray-water System

Pontos Aquacycle

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Introduction

With constant looming water bans and rising water bill costs, consumers are looking for ways to save money without limiting their usual activities. Pontos gray water system developed by Hansgrohe is a new generation gray water system. Gray water systems are designed to help reduce water consumption, by reusing some of the used house hold water. Unlike the traditional systems designed to reuse gray water, Pontos systems are actual recycling systems.

Benefits

Saving money

Today's consumers are more cost conscience than in past generations. Pontos Aquacycle gray water systems are designed to help recycle and reuse gray water from,

- Showers
- Bathtubs
- Bathroom sinks

As figure 1 indicates, by recycling the above mentioned water, the average household can save 40-50% of their fresh water consumption.

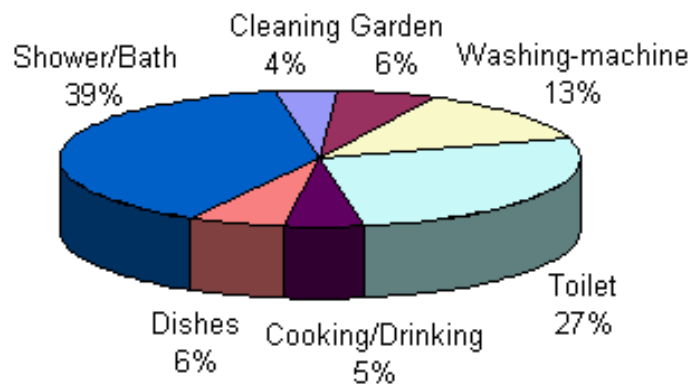


Figure 1: Average water consumption ("Steps," 2008, fig. 1)

Legal

With the current water bans, particularly in the southern states, households are limited on their water consumption habits.

- Lawn irrigation
- Washing cars
- House cleaning

Water bans limit such activities to particular days, weeks, or even full bans. As the water crisis increases, so do the fines for water usage violations. The fines for water misuse can add up to over 1000 dollars (“Badertscher,” 2008)

Environment

As consumers and corporations continue to strive for greener products, reducing waste is becoming more of a hot topic. The Pontos system is not only environmentally friendly because it reduces water usage, but also because it is energy efficient.

Technology

The Aquacycle from Pontos uses a 4 stage treatment process to filter and treat the gray-water (“Technology”, 2008). This patented treatment process is called “SmartClean” (“Pontos”, 2008). The water becomes cleaner during the process in Figure 2.

1. During this stage all solids such as hair and lint are filtered out of the gray water.
2. After the water has been filtered, the bacterial treatment process begins by infusing the water with oxygen. The oxygen makes the bacteria super active.
3. Once the bacteria treatment is complete, the solids that form are removed from the water and discarded into the sewage drain.
4. The final step is an Ultra violet light (UV-light) treatment. The UV-light kills all remaining bacteria and germs that are in the water.

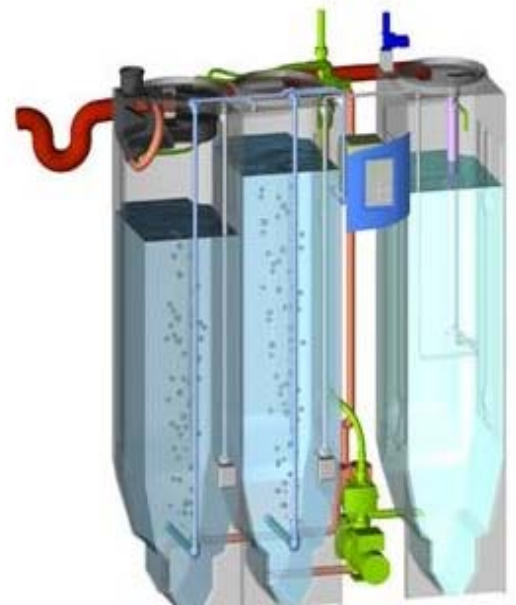


Figure 2: Inside view (“Technology,” 2008, fig. 1)

Costs

The cost for the Aquacycle varies depending on size. The size of the Aquacycle ranges based on the water recycling needs of the consumer. The average ROI on an Aquacycle is 6-7 years based on average water consumption (“Investment”, 2008).

Currently, the Aquacycle is not distributed in the US and therefore there is no current pricing information available. However, test trials are being ran in the U.S. and Hansgrohe is working on getting all approvals to sell the product in the U.S.

Comparison

Traditional Gray-water systems require large tanks and can be an “eye sore” to landscaping. These systems also require extensive maintenance and setup time. Additionally, gray-water treated with the older systems cannot be stored (“Common gray”, 2008). If stored, the water will quickly become septic (“Common gray”, 2008). Traditional gray-water systems typically are limited to lawn watering and irrigation, and outside water usage.

- Recycles water for re-usage in toilets
- Treats gray-water for longer possible storage
- Odorless, clean treatment of water
- Multiple sizes for most applications, including commercial applications such as hotels
- Increased cost savings by reusing water inside the house
- Virtually maintenance free design

Installation

Unlike traditional gray-water systems, the Aqua Cycle does not require any outdoor installation. The unit’s compact design enables it to fit inside the house. The Aqua Cycle must be installed in the basement of the house. The reason is because gray-water must be able to freely drain into the unit (“Product Information”, 2008). The foundation must be able to withstand 1259kg/m² or 260lb/ft² (“Product Information”, 2008). Pipes used for gray-water drainage and distribution must be labeled according to local installation codes. It is advisable to have a licensed electrician perform all electrical terminations.

Conclusion

Pontos is really a great system with benefits and capabilities that far exceed any traditional gray-water system. Even though the system cannot process water from the kitchen sink or dishwasher, the cost savings from recycling gray water and reusing it in toilets, makes the product very attractive to consumers. This makes the system not only economically feasible, but also helps protect the environment.

Recommendation

I am interested in participating in an Aquacycle product trial testing. The testing period will last for 1 year, or until US product rollout. Hansgrohe will evaluate the building to ensure a successful trial.

Hansgrohe, Inc., will provide the test unit for free. The testing participant is responsible to provide all necessary plumbing to install the unit. Costs for plumbing failures, not related to the Aquacycle unit are not the responsibility of Hansgrohe.

The participant agrees to allow Hansgrohe to photograph the unit after installation and agrees to accommodate for potential customer viewing.

Upon the completion of the trail period, the tester will keep the unit as a thank you.

The manufacturer’s warranty that comes with the unit will begin after the installation.

I, _____ agree to the terms above from Hansgrohe, Inc and will participate in the US Aquacycle trail program. Once successfully evaluated, a unit will be derived and installed by a Hansgrohe selected contractor.

Sign _____

Date _____

References

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