



wahaso™

WATER HARVESTING SOLUTIONS

Custom Greywater Processing Systems from Wahaso

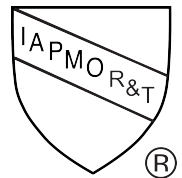


WAHASO ULTRA-FILTRATION SKID

Patent Pending

WAHASO'S GREYwater PROCESSING SYSTEM

for commercial properties has been officially certified to meet IAPMO 324 and NSF/ANSI 350. The Wahaso system has been tested and proven to provide a safe, treated supply of water that can be used for toilet flushing, irrigation and cooling tower makeup, saving MILLIONS of gallons of water each year.



Greywater captured from showers, sinks, laundry and light commercial processes can be an excellent source of water when harvested and treated properly.

While the contaminants and biological activity inherent in greywater require more stringent processing, standards such as IAPMO 324 and NSF/ANSI 350 ensure that the water is safe for non-potable applications.

Treatment

The proprietary treatment train of Wahaso's Greywater System contains multiple filtration and sanitation steps that provide an astonishing level of treatment. Treatment includes:

FILTRATION The Wahaso Greywater System contains both mechanical and Ultra Filtration (UF) steps that process the water down to 0.02 microns. This level of filtration will remove suspended solids, bacteria and viruses.

SANITATION Ultra Violet (UV) is used post-filtration to further sanitize the water and keep it clean in the processed water holding tank. Consumables such as chlorine residual (for toilet flushing application) or Cupridyne® (to reduce odor in the greywater collection tank) can be added when needed.



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IAPMO 324 and NSF/ANSI 350 Certified

The Wahaso Greywater System has both IAPMO 324 and NSF/ANSI 350 certification. Throughout testing, the system processed over 2.8 million gallons of greywater containing varying levels of E. Coli and other contaminants. During this time the system operated without any failures or stoppages.

The results show that the system exceeds the requirements, producing water with less than 0.5 NTU turbidity, no detected total suspended solids (TSS), no detectable levels of bacteria, and an average log reduction of 7.0.

GW-UF35-50, GW-UF70-100, GW-UF140-150 and GW-UF210-210 are certified by IAPMO R&T against NSF/ANSI 350 and IAPMO IGC 324.

System Benefits

Wahaso's Greywater System not only provides the peace of mind that comes with third party certification, but also provides additional benefits:

FULLY AUTOMATIC PROCESSING Raw greywater is treated as it is generated to minimize the growth of harmful pathogens. No greywater is held for more than a few hours. System is self-monitoring for pH, turbidity and UVT.

LOW MAINTENANCE Reliable for long intervals with minimum maintenance required. Filters backwash automatically and UV bulbs are replaced once every 12 to 18 months.



1. Before Treatment



2. After Treatment

SCALABLE The Wahaso Greywater System can be scaled to treat 2,000 to 130,000 gallons per day or more. The only real limitation is the amount of supply and demand.

AUTOMATED CONTROLS and REPORTING Wahaso's Proprietary Control System monitors all system activity. Data and alarms are reported locally and communicated to the Building Automation System through BACNET or MODBUS.

INTEGRATED SYSTEM DESIGN Comprehensive system designs include all pumps, storage, filtration and controls. Systems are pre-built on skids, tested and delivered ready for installation.

	IAPMO 324 Required Value	NSF/ANSI 350 Required Value	Wahaso GW-UF Value
Turbidity	≤ 2 NTU	5 NTU max 2 NTU average	≤ 0.5 NTU
TSS	≤ 10 mg/L	30 mg/L max 10 mg/L average	none detected
pH	6.0 - 9.0	6.0 - 9.0	6.0 - 9.0 pH will be the same as influent
E.coli	≥ 4 log reduction	200 MPN/100 mL max 2.2 MPN/100mL average	7 log reduction none detected
CBOD	n/a	25mg/L max 10 mg/L average	≤ 2mg/L MDL
Odor	n/a	no odor	no odor

IAPMO 324 and NSF/ANSI 350 standards with WAHASO test results.