



Aqua2use[®]

"The Answer for Greywater Reuse"



Up to 76% of house wastewater is available for reuse as greywater!



● What is Greywater ? ●●●●●●

Greywater is the house wastewater from your washing machine, shower, bath and basins.

Use of the Aqua2use® system results in an annual potential water reuse of 147,800 litres (40,000 gallons)!

Usage	Base case (KL/Year)
Laundry machine / taps	53.2
Showers, baths, basins	94.6
Kitchen taps, dishwasher	20.1
Toilets	27.6
Total Indoor H2O	195.5
Total Greywater	147.8
Greywater %	76%

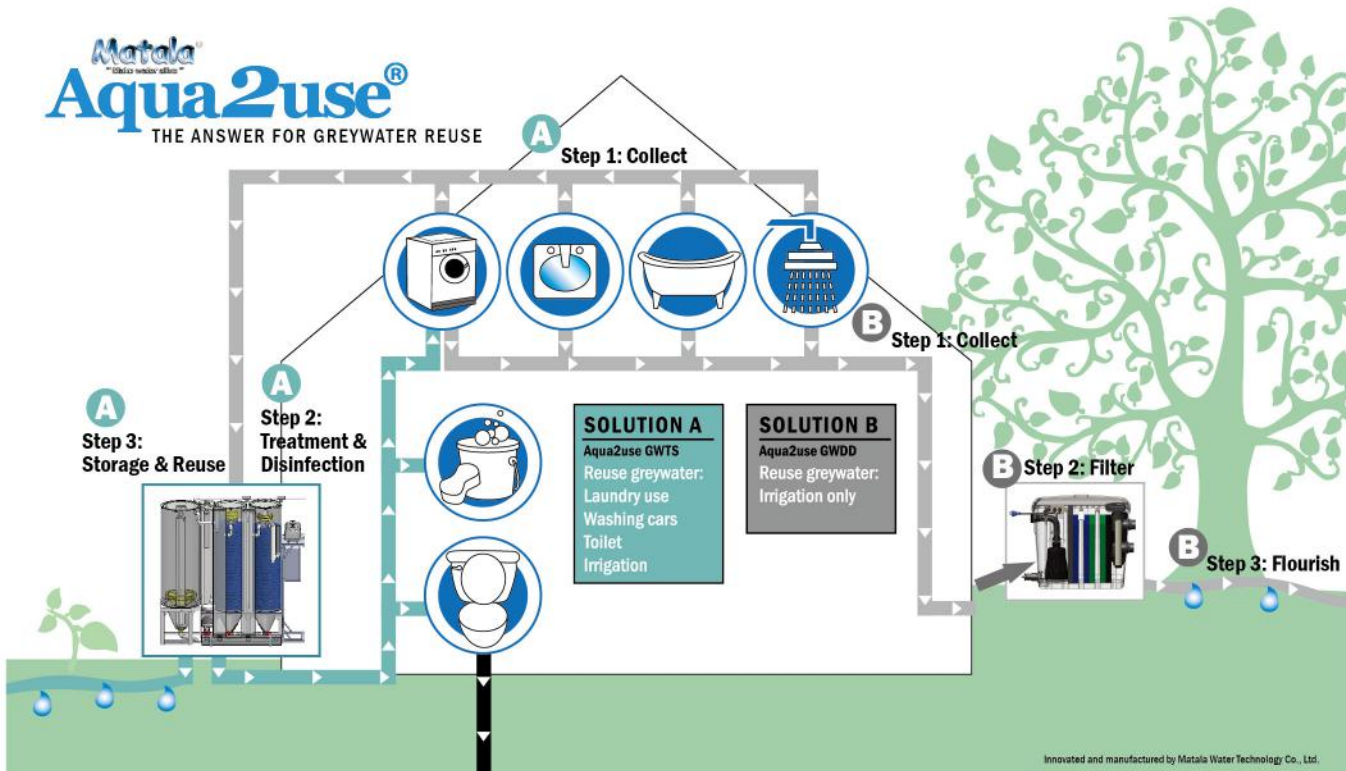
Data source VICTORIA H2OME, 2008



76% of house wastewater is available for reuse as greywater!

Victoria, Australia, Residential Water Usage in a Single House of 4 Persons (indoor annually)

Aqua2use® provides 2 different solutions for your greywater reuse needs.



Solution A: Aqua2use® Greywater Treatment System:

A SAFE SOLUTION

Aqua2use® Greywater Treatment System GWTS 2000
 THE ANSWER FOR GREYWATER REUSE



Certification Test Results of Aqua2use® Greywater Treatment System

NATA-approved lab water tests over a period of 6 months with 31 samplings total

		BOD	SS	E.Coli	Turbidity	pH	Conduct.
		mg/L	mg/L	Orgs/100ml	NTU	pH units	uS/cm
AU Standard	Indoor use	<10	<10	<10	n.a.	n.a.	n.a.
	QLD Class A	20	5	<10	<2 (5)	6-8.5	1600
"Aqua2use® Effluent"	average	<3	<2	<1	0.47	7.9	497
	max	<3	5	<1	0.9	8.2	728
	min	<3	<2	<1	0.3	7.6	324
"Aqua2use® Influent"	max	666	110	220000	268	9.8	856
	min	36	26	160	30	7.04	244

Flow rate 900 LPD(243GPD)

Water sampling and analysis done by:

Moreton Bay Water Scientific Services Caboolture District, Australia

NATA Accreditation no. 14476



●●● **Eco-Design** ●●●

Low power consumption

No chemical or disinfectants added

No new water needed for backwash

Long lasting Matala[®] filter media, no regular replacement needed

Compact module

Proven Technology

The Matala[®] Progressive Filtration Technology used in all the Aqua2use[®] treatment systems is a proven technology in more than 40 countries.



Reference Project 1:

Belleaqua BVBA, Belgium, uses Matala[®] filter media in its domestic wastewater treatment system.



Reference Project 2:

Pingtung Detention Center, Taiwan, uses Matala[®] filter media in its domestic wastewater treatment system.



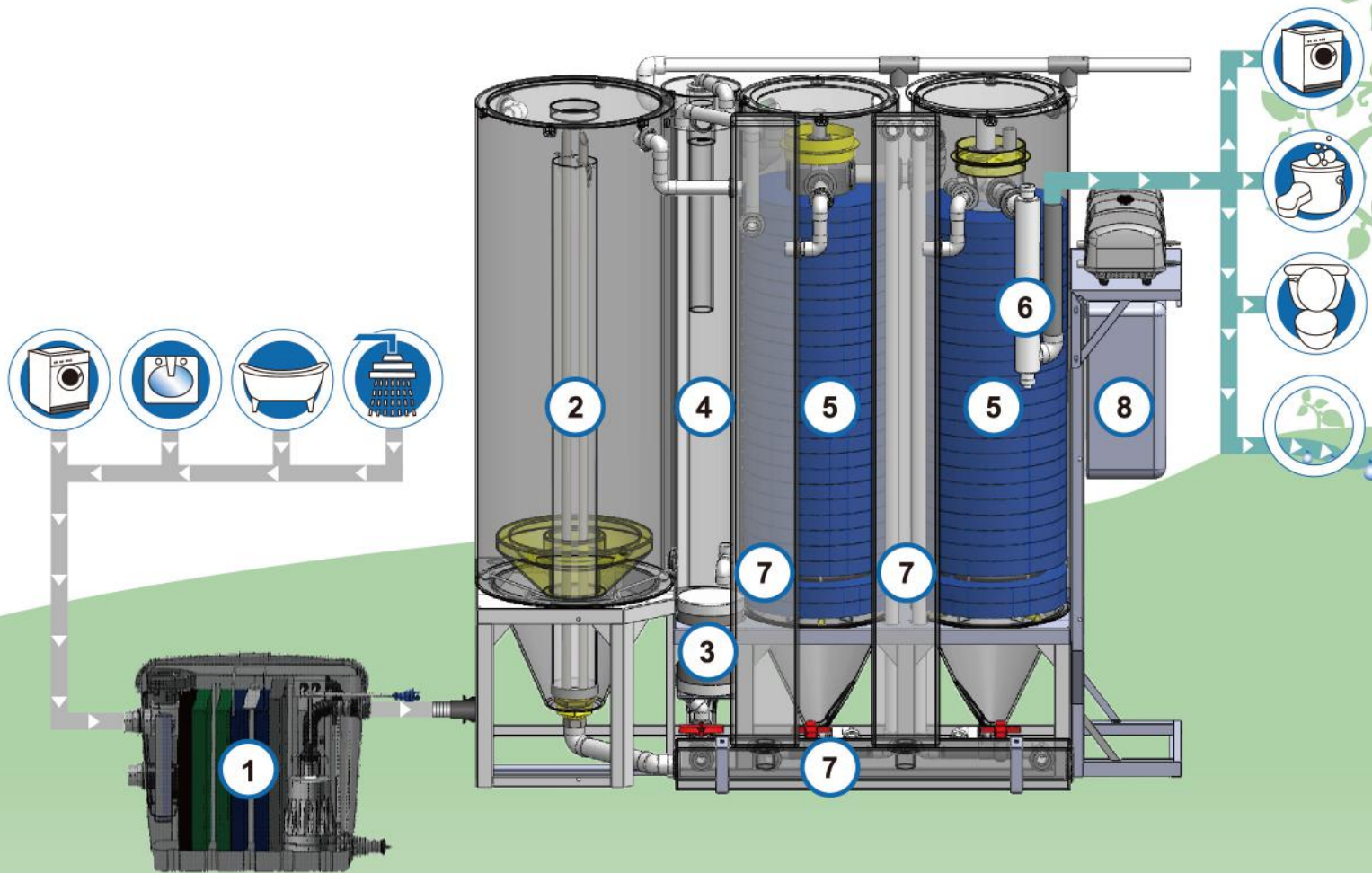
Reference Project 3:

Hyperion Treatment Plant, United States, uses Matala[®] filter media in its biotrickling filters for odor control.



Reference Project 4:

Haifa Farm, Tanggu, China, uses Matala[®] filter media in its high-density aquaculture indoor recirculation system.

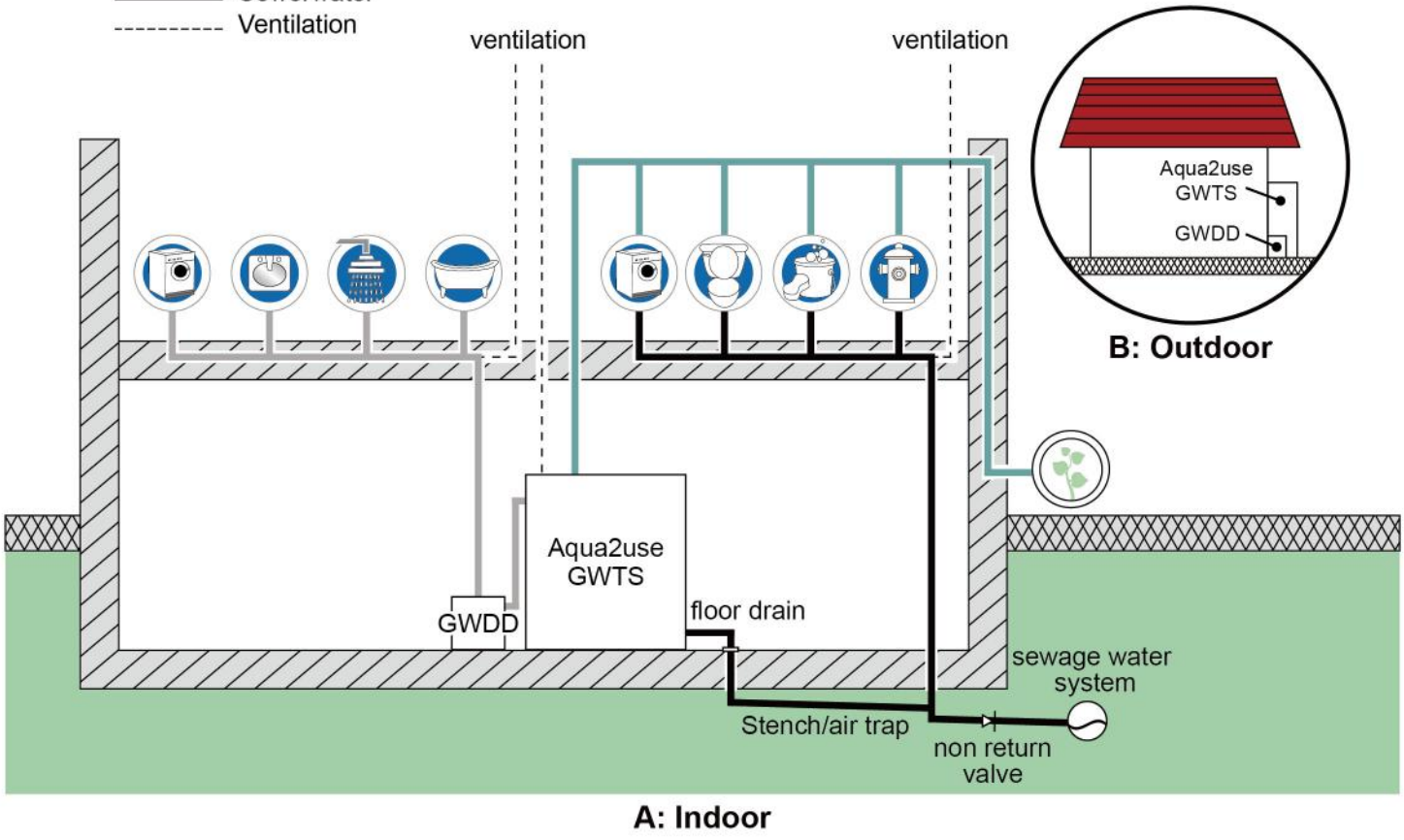


This is how Aqua2use® greywater treatment system works :

- 1 Pre-Filtration**
Progressive Depth Filtration, a step system, first filters out bigger and then smaller particles, catching 60% to 90% of the suspended solids. Grit, hair lint, sand, soap scum, and silt are taken out.
- 2 Buffer Chamber / Active Sludge Treatment / Skimming**
Buffering : The greywater flow to the treatment system is irregular. The flow usually experiences a peak in the morning and evening. The irregular flow is collected and buffered in this tank in order to secure a more regular flow to the next sections of the treatment system. Simultaneously, the buffer chamber operates as an active sludge process tank with an integrated skimmer, foam ejection, and purging of sediment and sludge.
- 3 Air Water Pump**
Air transports the water without grinding the particles.
- 4 Second Sedimentation Process**
This tank gathers the organic sediments that were produced during the active sludge process.
- 5 Two-Fold Biological Treatment**
The water undergoes two stages of Matala® progressive 3-D biofiltration. The secondary biofiltration process is resilient against shock loads. There are additionally fixed biofilter skimmers. The rotating air spitter periodically clears the Matala® biofilter media of attached flock. This cleaning feature is built-in and can be auto-programmed.
- 6 UV Disinfection**
After the two-stage biological treatment, the water flows through a stainless steel chamber UV-C system for disinfection.
- 7 Drainage**
Each chamber has its own sludge collection and purging. The concentrated sludge and sediment is disposed of through the drainage chamber connected to the sewage or septic tank.
- 8 Control Panel**
The electronic control panel contains programmable functions and operational settings, including self-cleaning, energy saving, and functional alarms.

INSTALLATION DIAGRAM - Alternative A: Indoor and B: Outdoor

- Aqua2use water
- Greywater
- Sewerwater
- - - - Ventilation



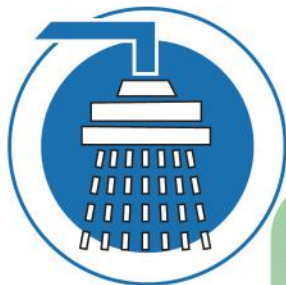
A: Indoor

B: Outdoor

Solution B: Aqua2use® Greywater Diversion Device

Features and Benefits

- State of art progressive filtration
- High volume of Matala® filter media
Aqua2use® GWDD: 30 litres (8 gallons) or
Aqua2use® UG GWDD: 60 litres (16 gallons)
- Cross-flow depth filtration: Each filter web has a 3-dimensional structure, able to trap a high volume of impurities without clogging.
- Multichamber plug flow concept: If the first filter web gets clogged, the filtration is done by the second and third filter webs. If the second filter web gets clogged, the filtration is done by the third filter web.
- Submersible pump with integrated Electronic Pump Controller (EPC).
- Durability: The pump is protected from dry run, clogging and other damage.
- Built-in overflow safety.
- Easy to clean.
- Flexible installation: Systems can be installed above ground, half-submerged in the ground, or underground.
- WaterMark approved.



Step 1: Collect

The Aqua2use®GWDD diverts water from the laundry, bath and shower.



Step 2: Filter

Aqua2use®GWDD's state of art filter mats offer the best filtration available for greywater.



Step 3: Flourish

The subsurface dripline system delivers a slow and precise application of greywater throughout the garden.

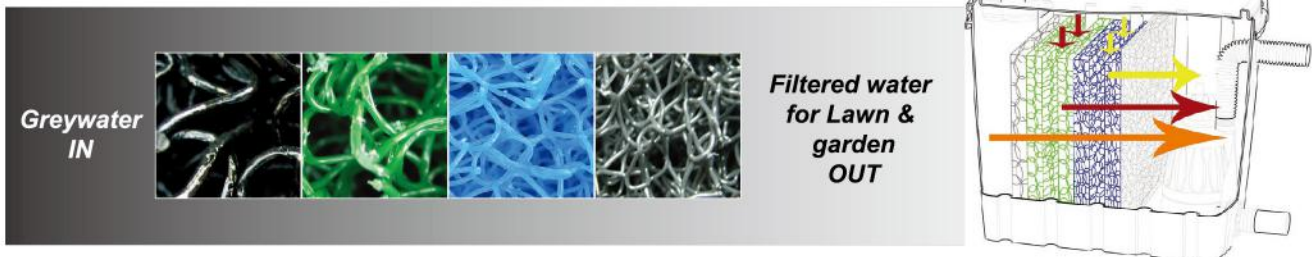
Consult an irrigation specialist for the dripline systems available in your market



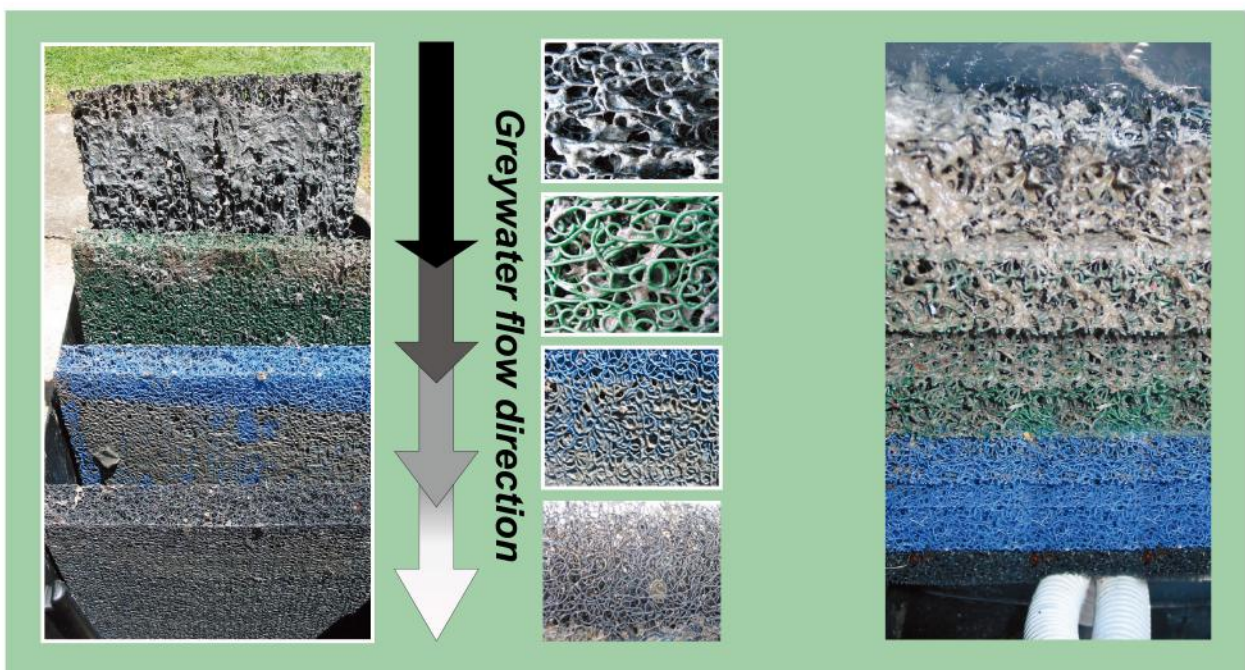
MATALA® PROGRESSIVE FILTRATION TECHNOLOGY APPLIED IN GREYWATER DIVERTER



The pictures attest to the high filtration efficiency achieved with the progressive density Matala® filter pads. The filter can hold a huge volume of hair, lint, sand, soap residue, and other particles.



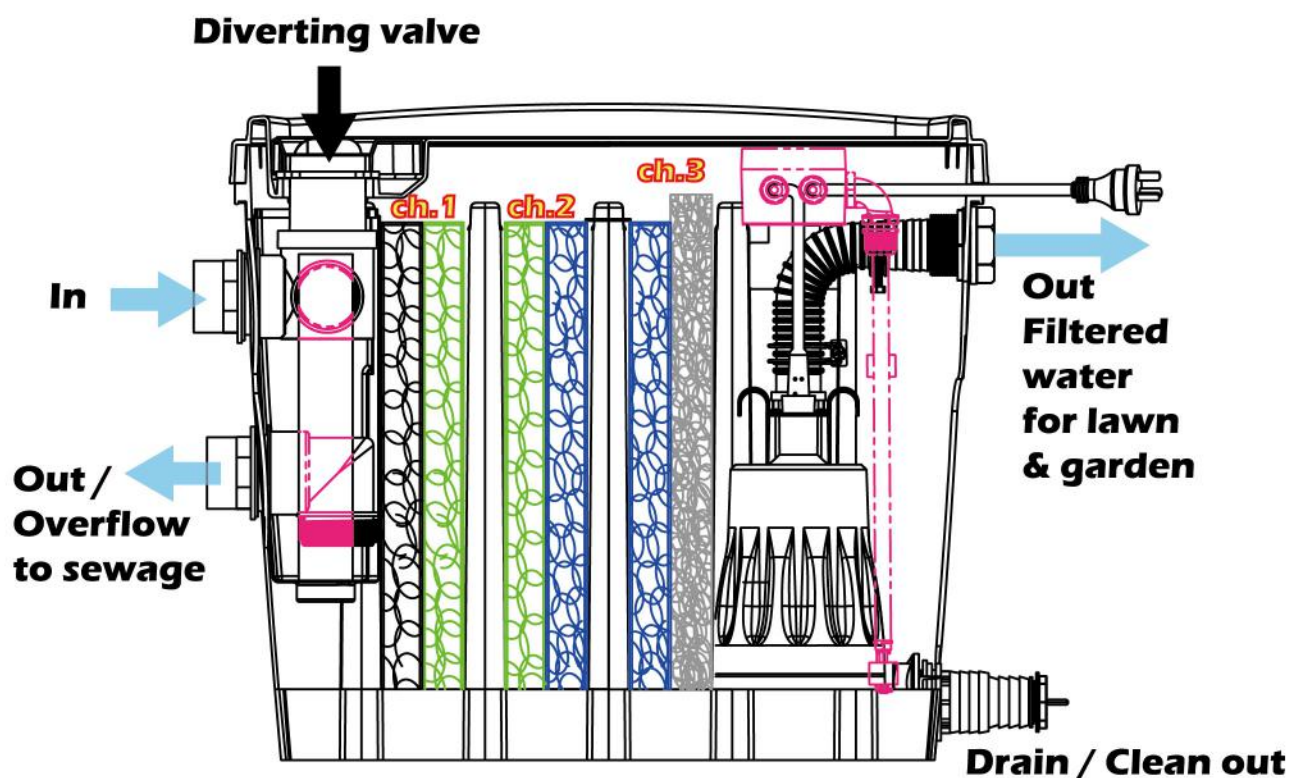
Unit tested in a caravan park, Australia: Matala® Greywater Diverter checked after filtering 40,000L (10,810 gallons) of incoming greywater. This system was used with the public shower rooms and laundry facilities.



Working Principle

This is how Aqua2use® Greywater Diverter works:

- Step 1:** When the diverting valve's arrow points away from the Matala® filter, greywater flows directly to the main sewage.
- Step 2:** When the diverting valve's arrow points towards the Matala® filter, greywater from the house is diverted to the inlet of the filter.
- Step 3:** The greywater flows through the first Matala® progressive filtration chamber (ch. 1), where major and medium particles (such as hair, lint, paper, detergent, and other impurities) are retained. Matala® black (low density) and Matala® green (medium density) filter pads are used.
- Step 4:** The greywater flows through the second Matala® progressive filtration chamber (ch. 2), where medium and small particles are retained. Matala® green (medium density) and Matala® blue (high density) filter pads are used.
- Step 5:** The greywater flows through the third Matala® progressive filtration chamber (ch. 3), where small and minor particles are retained. Matala® blue (high density) and Matala® grey (super high density) filter pads are used.
- Step 6:** Filtered greywater is pumped to the irrigation system.



Aqua2use pre-filter



GR-32
(for GWDD)

Aqua2use® GWDD

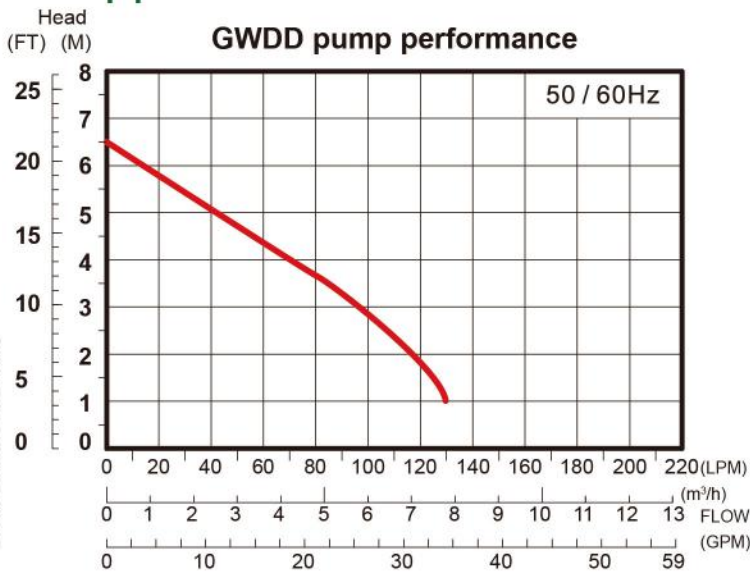
Dimensions: 59(L) x 37(W) x 51(H) cm
23(L) x 15(W) x 20(H) inches

Submersible pumps specifications

Model	Output		Outlet		Max Flow(LPM)	LPM Flow @ Head					Max Head(M)	Dimension LxWxH (inch/mm)	Weight (lbs/kg)
	HP	W	mm	inch		1.5M	3M	4.5M	6M	7.5M			
GWDD	1/4	200	32	1-1/4"	130	125	95	55	10	—	6.5	6.1x5.6x13.6 154x143x345	8.6 / 3.9

• The above specifications are subject to change without prior notice.

Pump performance





Aqua2use® GWTS 2000



Aqua2use® GWDD

Greywater reuse	Solution A: provides water for toilet flushing, laundry, car wash, house cleaning and irrigation	Solution B: provides water for irrigation only
Classification	Greywater treatment system	Greywater diverter
Overview	The Aqua2use® greywater treatment system collects, buffers, treats and disinfects greywater to the standard specified in Australian Health Domestic Greywater Treatment Systems Accreditation Guidelines.	The Aqua2use® greywater diversion device is a system that diverts and filters untreated greywater using Matala® Progressive Filtration, and that provides the filtered greywater to a sub-surface irrigation system via a pump or directly by gravity.
Working principle	Mechanical filtration Biological treatment Effluent water disinfection	Mechanical filtration
Main functions	Remove grit, hair, lint, sand, soap scum, silt. Reduction of pollutants BOD,COD, SS, turbidity and disinfection.	Remove grit, hair, lint, sand, soap scum, silt from greywater, as well as the non-soluble pollutants BOD, COD, SS contained therein.
Effluent water quality	BOD < 3 mg/L, SS < 2 mg/L, E.Coli < 1, Orgs/100ml, Turbidity: 0.47 NTU, pH: 7.9, Conductivity: 497 uS/cm	Aqua2use® GWDD flow rate 300LPH (81GPH): SS influent 473 mg/L, SS effluent 47mg/L
Model type	Aqua2use® GWTS 2000	Aqua2use® GWDD
Dimensions	Aqua2use® GWTS 2000 Max flow rates: 2000 LPD Dimensions: 195(L) x 65(W) x 181(H) cm 77(L) x 26(W) x 71(H) inches	Aqua2use® GWDD Capacity: 3000 L/day Dimensions: 59(L) x 37(W) x 51(H) cm 23(L) x 15(W) x 20(H) inches





DISTRIBUTED BY



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