

Aqua2use[®] UG GWDD

"The Answer for Greywater Reuse"

www.aqua2use.com

Installation and Operating Instructions



Congratulations, you are now the proud owner of an Aqua2use UG -GWDD!

Matala[®]
"Make water alive"

INSTALLATION OF PUMP OPERATED AQUA2USE UG-GWDD

The Matala Aqua2use UG-GWDD is specifically designed for Grey Water (Gray Water) reuse from the laundry, shower and bath waste water.

We recommend that you also check with your local Water Authority if an approval must be applied for to install this type of Seasonal Use Grey Water Diversion Device and if there is any restriction as to who is allowed to install this unit.

It is mandatory that the power circuit to the Aqua2use UG-GWDD is protected by a residual current circuit breaker and **we highly recommend a surge protection device be fitted as well.**

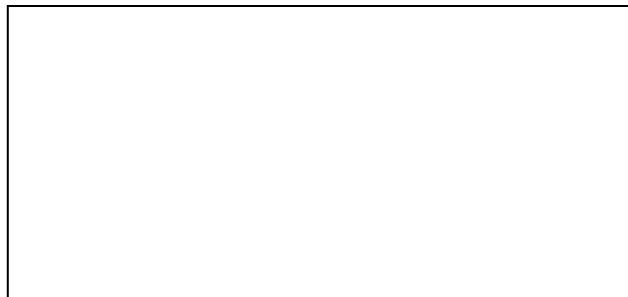
CONNECTING YOUR UNIT

1. The tank is designed and engineered to be installed below ground level with the top of its cover positioned equal to ground level. In function of the existing or planned lay-out of the greywater sewage pipes, it can be installed in a footpath alongside the house or at distance from the house, positioned in a garden bed. The cover of the tank is trafficable for pedestrian usage only. A tank extension collar is needed in case the greywater sewage piping lays lower than 420mm (16.5") beneath the ground level. Where possible, install the tank close to the point where the greywater sewage pipe leaves the internal perimeter of the house as this will logically be the point where the pipe is embedded less deep and easier to connect.
2. The design of this greywater diverter as well as the height and width of the front end of the tank allows for connection of 50mm (2") DWV up to 100mm (4") DWV greywater waste pipe. The tank doesn't come with pre-drilled holes for the greywater inlet and overflow as the diameter need to follow the existing or planned lay-out of the greywater pipes at your property.
3. Please use the paper template that is included in the tank as an assist to drill the holes for inlet and overflow. Place the tank on a hard floor or work bench and position the drilling template flat to the tank front, in a way that the bottom edge of the template rests on the floor or work bench and the 2 grooves in the template follow exactly the position of the grooves in the front of the tank (you can use 2 wedges to hold the template in place at the bottom and use some transparent tape to hold the template in place at the top).

Fig 1. Template design for hole drilling

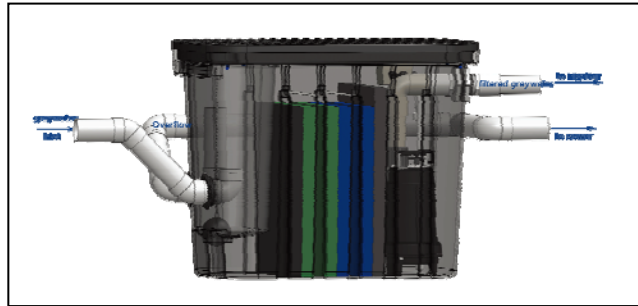


4. The provided template offers a solution to connect 50mm (2") and 100mm (4") DWV greywater waste pipe. We suggest drilling the holes close to the lower limit shown on the



template, and using 90 degree elbows at the inside of the basket and outside of the tank to create an airlock as to avoid any bad smells from the waste pipes entering the Aqua2use UG-GWDD. (Check your local regulations if this concept is OK)

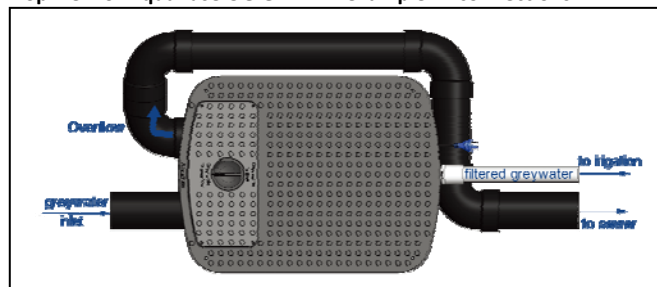
Fig. 2: Transparent view showing all pipe connections and their function – example 2”



To create the overflow to sewage, at the inside of the basket, add on a short piece of pipe to the upside turned elbow. Once installed the top of this pipe should be at the same level as the top of the installed black Matala sheet.

5. The most suitable fittings to connect the pipes to the tank are flexible pipe seals, pipe donuts or pipe connectors such as offered by Uniseal or Fernco. For 2” pipe connections , bulkhead fittings may be a second choice.
6. Position the unit near your 50mm or 100mm (2” or 4”) DWV greywater waste pipe, where possible close to the point where the DWV pipe leaves the perimeter from the house. Decide the exact spot for installation with the inlet side of the unit (basket side) facing the incoming water. Dig a hole of about 1200mm x 800mm x 700mm, longitudinal to the direction of the DWV pipe, leaving this waste pipe intact, and make a hardened slab with the top of the slab being level, 630mm below the ground or path level.
7. Once the slab is hardened, measure the section of DWV pipe that needs to be cut out to allow you to make all connections for the tank inlet and overflow + air-lock elbows. Sit the unit on the concrete slab and proceed with the connections. Now divert the overflow pipe around the tank and reconnect to the outgoing sewer line, eventually adding a reflux valve to avoid wastewater to flow into the unit in case of flooding (check local regulations).

Fig. 3: Top view of Aqua2use UG GWDD – example 4” connections



8. If the unit doesn't come pre-assembled, follow the steps shown in the Aqua2use UG GWDD Quick Assembling Guide added to this booklet.

As a last check: Make sure that water flows from inlet towards the pump outlet through the Black => Green => Blue => Grey Matala filter sheets. Make sure also that the Matala filter sheets are well inserted and touch the bottom of the tank to avoid that any unfiltered water shortcuts beneath the filter sheets towards the pump.

Your Matala Aqua2use UG-GWDD unit is now ready for operation.

GRAVITY OPERATION OF MATALA AQUA2USE UG-GWDD UNIT

1. For the assembly of the Gravity operated unit follow step 1 and 2 shown in the included Quick Assembly Guide. You will need to find a stopper to close of the outlet hole of the bulkhead fitting that is normally used to connect the pump outlet.
2. Source an appropriate flexible pipe seal or bulkhead fitting for 25mm to 100mm (1" to 4") piping to be connected in the bottom or the back of the tank on the outlet side (Opposite side to the basket side) behind the Grey Matala Filter Pad. Drill a hole in the tank bottom or in the backside near the bottom, install the pipe seal or bulkhead fitting and connect the pipe that will lead to your irrigation field.
For further assembling follow steps 18 through 31 as shown in the Quick Assembly Guide.
3. Because you are not using a pump to produce the head pressure to move the water out of the Aqua2use UG-GWDD, it is critical that the location of the Gravity unit is of sufficient height to operate the drip system.
Generally 1 metre (40 inch) is the absolute minimum head required, so practically spoken if you bury the Aqua2use unit underground to have the cover level with the ground your field for irrigation should lay 1.50 m (+/-5 feet) below that point.
It is also possible to install the unit above ground level for those situations where the greywater DWV pipe exits the house sufficiently high above ground level.
4. Use the bigger diameter pipe to lead the water to your irrigation field and from there on you can connect multiple smaller diameter branches or drip lines to irrigate your shrubs or garden beds. Using a larger pipe for the main feeder line will mean less friction loss. This is critical for the efficient operation of a gravity system.
5. Where possible install a Tee in the irrigation line and use two gate- or knife valves on each direction. This will allow you to branch of any cleaning water during cleaning operation. The sludge water during cleaning can be diverted to the sewer.
6. At the end of the irrigation feeder line use a valve to close of the line.
You will need this valve to flush the mainline once per season.

TROUBLE SHOOTING

Water does not flow into the unit	Check the diverting valve, reset to correct position.
The unit is full but the pump is not operating	Check if pump is connected to the power source and check if power is available. The pump should automatically start when water reaches the higher float switch. If the pump does not start, clean the top float switch and test again. Make sure neither float is jamming. If it still doesn't operate, then call a licensed service agent.
The pump cannot maintain the rate of Inflowing water.	A correctly designed irrigation system should allow the outflow to be equal to the inflow. Are you using the correct main line and drip tube? And do you have enough drip tube

	connected. Also check for kinks or blockages in pipe work from unit. If you intend to irrigate sloped area, please consult an irrigation specialist to adjust your irrigation equipment and lay-out accordingly.
The pump section is empty while the water level is high on inlet side	Service and clean the filter media to maintain Flow.
Grey Residual is building up around the Pump	Check the filter media, make sure it is seated correctly and that there are no voids under the filter mats which will cause bypass around the filters. Your unit could need servicing.
Offensive odours are released from your unit	Thoroughly clean the unit and the filter media. Make sure No non dissolving substances have entered the unit. IE fats and oil.

WARNINGS AND PRECAUTIONS FOR GREYWATER REUSE

- Do not connect your Aqua2use UG-GWDD to your kitchen sink, dishwasher or a toilet system.
- When washing items such as soiled nappies, please switch your diversion valve to divert direct to the sewerage system.
- Do not distribute grey water from your Aqua2use UG-GWDD unit via sprinklers or allow for airborne dispersion.
- Only irrigate when necessary and switch unit to divert when raining.
- Do not let diverted greywater to run off to neighbouring properties.
- Do not leave unit unattended when carrying out maintenance or when the cover is removed.
- In case of extended periods of non operation it is advised to complete a service and clean of the unit to avoid the possibility of drying out the sludge on the filters.

MAINTENANCE OF YOUR AQUA2USE UG-GWDD

Your Aqua2use UG-GWDD has been designed for minimum maintenance.

Due to the high flow capabilities of the 3 dimensional MATA LA filters you should only need to clean your unit after approximately 80,000 litres (21,000 gallons) of flow through.

Depending of the number of occupants and the amount of water flowing through your unit the cleaning cycle will be between 180 – 365 days.

Your MATA LA filters still will keep working even up to maximum capacity.

Some heavy load situations may require servicing your unit on a more frequent basis.

If you are considering not using your unit for an extended period of time such as a few months.

Please carry out a full service and clean before decommissioning.

This will keep your Aqua2use UG-GWDD in optimum condition.

When servicing and cleaning your unit please we recommend that you wear protective rubber gloves and avoid skin contact as much as possible.

1. Turn the diverting handle **B** to the bypass position. This will prevent greywater entering the unit.
2. Remove the screws that tighten the main lid. Then remove the lid.

3. You can now access the MATAALA filter media.
4. For PUMP OPERATED UNITS if the tank is partly filled, disconnect and reconnect the pump to pump out any remaining water. After this you might untighten the PVC union fitting to temporarily connect the pump to a hose that can divert any cleaning water with sludge or sediment to the sewer pipe. After the cleaning operation is completed you can reconnect to the filter's pumping outlet towards irrigation.
5. For GRAVITY OPERATED UNITS you need to open your drain valve on the bypass tee. If you don't have this installed use a stopper to temporary close off the irrigation outlet drain until the tank has been cleaned and the sludge / sand has been scooped off from the bottom.
6. Rinse the pump with clean water. **Caution** Do not spray water onto the Electrical control box.
7. Remove the MATAALA filter media one at a time taking note of colour order. Black, Green, Blue, Grey.
8. Gently tap the filter on a raised flat surface; this will cause the grey sediment to be displaced.
9. Dispose of waste in compost heap or in a plastic bag in the garbage.
10. Rinse each filter until you are happy that they are clean.
11. Drain or sponge out the remaining residual in the very bottom of the Aqua2use UG-GWDD tank.
12. **WARNING: DO NOT PUMP THE GREY RESIDUAL THROUGH YOUR IRRIGATION SYSTEM.**
13. Reinstall the MATAALA filters to the tank in colour order Black, Green, Blue, Grey.
14. For Gravity systems remove the stopper from the outlet towards irrigation or close your drain valve and open the irrigation valve. Remove your temporary drain and reconnect your irrigation system.
15. Refit the tank covers S and A and refit the screws that tighten the covers.
16. Finally turn diverting valve **B** to operate position allowing the water to be diverted into your unit.
17. Your unit is now serviced and ready for operation.

At this time it is good practice to service your irrigation system.

Turn on the drain valves at the end of your irrigation lines and remove and sediment that may have accumulated in the pipes. Check for any leaks or damage to the irrigation pipe-work.

PUMP OPERATION OF YOUR AQUA2USE UG-GWDD

The Aqua2use UG-GWDD unit is unique in that it comes with an electronic pump control (EPC).

This pump control not only starts and stops the pump via the float level; it also is programmed to override the function of the high float switches at least once per day. This will ensure it will have little or no residual remaining in the unit. The EPC also avoids the use of an external clock which will easily be disrupted by temporary shutdown of electrical supply.

No electrician is required and only one standard 10amp outlet is needed to be connected to operate the unit. All government departments are pushing for low or no residual water in Grey Water (Gray Water) Diverters.

Your Aqua2use UG-GWDD meets or exceeds these requirements.

Pump Performance:

- Maximum flow of 177 lpm (46.6 gpm) at 1 metre head. (3-foot head)
- Rated flow of 86 lpm (22.6gpm) at 10 metres head. (28-foot head)
- Maximum current 4.2 amps 240 volt. (8.4amps 115 volt): Cable length 6M (20 feet)
- Warranty is 12 months replacement, on condition that pump is returned to the factory for inspection.
- All pumps have a serial number. This allows for tracking of sales and warranty claims.
- Make sure you keep your proof of purchase for any claims that may arise.

To Start the Aqua2use UG-GWDD

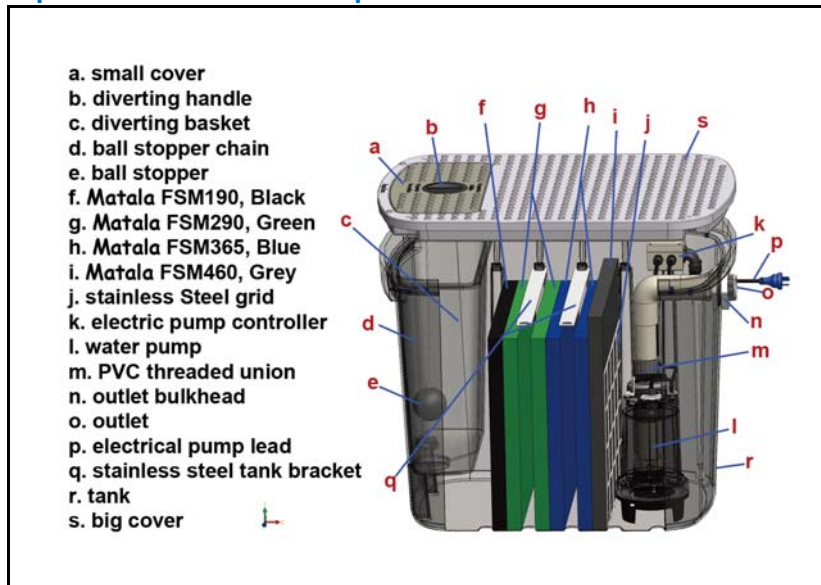
- Direct the diverting valve **B** to allow grey water (gray water) to divert into the unit.
- Connect the power plug to 240V/50Hz or 115V/60Hz (**pay attention to power specification which indicated in the colour box**) power supply with surge protection.
- Note: This circuit must be protected by a residual circuit breaker and or by a Ground Fault interrupter "GFI" breaker. Your pump should need no further attention other than periodic cleaning along with the Matala filter mats.

GRAVITY OPERATION OF THE AQUA2USE UG-GWDD

To start up the unit:

Direct the diverting valve **B** to allow grey water (gray water) to divert into the unit. Ensure you have positioned the unit with enough height (head) to operate the irrigation system. Minimum requirements will have to be calculated out on site. Grey water (Gray water) will flow through the filters and out to your distribution system from the outlet to be drilled as described above..

Aqua2use UG-GWDD Components



Warrant

- Matala Water Technology Co., Ltd. Warrant this unit for a period of 12 months from the date of purchase.
- On condition that all faulty parts or pump are returned to the manufacturer.
- Parts or pumps will be replaced or repaired upon inspection if deemed to be faulty if inside the warranty period and the fault was no caused by misuse.
- Incorrect installation or operation of your unit is not covered by warranty.
- Damages incurred to persons or property by incorrect operation or installation of your unit are not covered by this warranty.
- Warranty commences from date of purchase please provide proof of purchase with all warranty claims.

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