



## COST-EFFECTIVE, COMPACT GREYWATER TREATMENT SYSTEMS

Aerofloat is the leading supplier of Certified Greywater treatment systems for houseboats. Aerofloat has recently developed a new range of models which uses its patent-pending technology to provide quieter, compact, effective and affordable treatment solutions. The technology is based on an adaptation of the widely used Dissolved Air Flotation technology (DAF). Aerofloat's DAF units are designed and assembled in Australia and they are the first such product to comply with the Australian Standard AS 4995-2009, relating to treatment of greywater on vessels travelling on inland waters. The unique design of the new models means they only need to operate for short periods each day and can be used for smaller houseboats, cruisers, pontoons and marinas as well as residential or industrial applications.

There are 4 sizes of the Aerofloat Compact DAF unit available which are ideally suited for private and commercial houseboats. In addition there are two larger models in the design phase which are being developed to compete in the larger residential and commercial greywater and industrial wastewater treatment markets.

## BACKGROUND

The Environment Protection Authority of South Australia (EPA) introduced new legislation in 2008 making it mandatory for most houseboats operating on inland waters to treat or contain greywater. This legislation has been phased in over 3 years. The new Australian Standard AS 4995-2009 was developed to assist suppliers and stakeholders to comply with the new legislation, so as to minimise the environmental and public health risks caused by untreated greywater being discharged and to ensure that treatment systems complied with an approved standard. Aerofloat's DAF units are the first products to meet the discharge requirements of this Standard, and allow effective and efficient treatment of greywater on houseboats and other vessels of any size.

## AEROFLOAT 200, 400 & 400-s

The Aerofloat 200 & 400 models have been specifically designed to cater for the smaller boats and the private houseboat market (typically 2-6 berth boats). These models are light in weight, low in height and take up a small area. Couples who live on houseboats will generally only produce a total of 150 -180 litres per day. An Aerofloat Model 200 will process this in 45-50 minutes per day. By installing slightly larger under hull storage (recommended 6m x 300mm pipe or around 400 litres) the Aerofloat 200 only needs to operate every 2nd or 3rd day if you so choose. This means that if your power supply operates on a generator it does not need to be operated each day. Aerofloat design engineers would be happy to discuss with owners the best configuration for your needs.

While containment is an option for those who live on houseboats, the reality is that unless you reside near an authorised pump out facility and are prepared to spend the time to motor to these facilities once or twice each week, containment is not a practical solution. In addition containment will generally restrict where you can motor to and how long you can spend away from your normal berthing location.

## OTHER APPLICATIONS

Aerofloat offers a compact and affordable solution for homes, multi-dwelling residences and for small volumes of industrial wastewaters (such as those generated from cleaning hulls) to capture, treat and re-use their grey water. While the treatment and reuse of greywater is not new, the degree of treatment provided by the Aerofloat system ensures a high quality effluent which can be reused for irrigation of gardens and grounds, vehicle washing and toilet flushing. In times of drought this will provide a secure source of water and reduce the dependency on potable water supplies.

## GREYWATER TREATMENT SPECIALISTS

### HOW DOES THE AEROFLOAT TECHNOLOGY WORK?

Aerofloat is an adaptation of the technology known as Dissolved Air Flotation (DAF). A small quantity of a chemical is automatically added to flocculate the greywater to assist in clumping together smaller particulates. A recirculated water stream is saturated with air under pressure and is then allowed to degas. The flocculated contaminants in the greywater are mixed with this degassing stream and they are floated to the surface by the air bubbles, where the float material is concentrated and automatically pushed off the top of the tank into the blackwater tank. This removal mechanism is different to conventional DAF units which require large complex mechanical scrapers to remove the waste float material. This is why Aerofloat units are so compact and affordable.

### ADVANTAGES OF THE AEROFLOAT PRODUCT RANGE

- Fast treatment rates – only needs to operate for as little as 45 minutes per day. For 2-4 berth boats with additional storage the treatment units only need to operate once every 2nd or 3rd day if you so choose.
- Complies with current legislation and the requirements of the Australian Standard AS 4995-2009
- Compact
- Cost-effective
- Range of sizes available, starting at 200 litres per hour
- Low overall weight requirements – as the treatment rates are 2-7 times as fast as competing products, storage and hence weight requirements are much less.
- Low noise levels and power requirements
- Fully automated system with fewer moving parts - hence less maintenance
- Does not require weekly clean out which is a requirement of our main competitors product
- Easy to install and can be retro-fitted onto existing vessels

Below: Aerofloat 750





## Frequently asked questions

### What do the new regulations mean and how can Aerofloat help?

From 1st January 2010, it was mandatory for all commercial vessels operated on inland waters to contain or treat their greywater and from 1st January 2011, many private vessels also need to treat or contain. In South Australia all vessels are required to be audited for compliance. Aerofloat would be happy to talk with you to assist you with your needs.

### Will the system fit on my boat / meet my specific requirements?

There are a range of products available, from the model 200 which is suitable for 2-4 berth vessels, up to the model 750 which is suitable for up to 12 berths. There are also larger models currently in development. For most houseboats one of our models will be able to fit within your existing available space. A member of our design team can assist you with these choices.

### What is the process for installing an Aerofloat system?

For most applications, the Aerofloat system will come pre-fabricated and will be delivered to your boat like a small refrigerator. Installation of the unit should take around 4 hours, and will require basic plumbing and electrical work. The connection points required are power supply; a greywater feed line, a black water disposal line and a treated effluent line. In addition most boats will require additional drainage work to facilitate the capture, storage and transfer (by pumping) of greywater to the Aerofloat unit. This will typically take 3-5 days on the slip.

### How difficult / expensive will it be to maintain?

As there are fewer moving parts and no cleaning required of the tanks, maintenance is limited to periodic cleaning of the filters and top up of chemicals. This would require approximately half an hour per week.

Aerofloat Greywater Treatment Plants - Model details  
Valid from 18 March 2011

Aerofloat Model number NOTE 3	Treatment capacity litres / hour	Suitable for the following number of berths	Hours of operation per day - NOTE 1	Dimensions Height-mm x width-mm x depth-mm	Holding tank size - length of 300mm pipe - metres NOTE 2	Operating Weight - Kg
200	200	2 to 4	1.5 - 3.0	1000x750x570	6	195
400	400	6 to 12	1.7 - 4.5	1200x750x570	6.0 - 12.0	245
400-s	400-s	6 to 12	1.7 - 4.5	1000x930x630	6.0 - 12.0	295
750	750	6 to 12	1.2 to 2.4	1630x930x630	6.0-9.0	395

NOTE 1 - Based on 150 litres of greywater for each person per day. If the water consumption is less the operating time is less.

NOTE 2 - For smaller boats if weight and size is a problem, smaller capacity holding tanks can be used. Please consult one of our staff.

NOTE 3 - Before you select your model size you need to consider - Price, hours of operation, power supply, holding tank size, weight and dimensions.

GENERAL NOTE - Our sales staff would be happy to assist you with your choice of model and prepare a detailed quotation. Our standard terms and conditions of supply apply.

### Will it make a lot of noise?

Noise levels are very low (45dBA at the unit) and the unit does not need to run continuously. The Aerofloat unit will switch off shortly after the greywater stops being produced.

### What if something goes wrong with my unit?

There is a 12 month warranty on the Aerofloat units, and most parts are built to last 20-25 years. Repairs can be undertaken and spare parts purchased at an authorised installer (slipway) and after hours contact numbers are available to assist when required.



Aerofloat 200



Aerofloat 400



Aerofloat 400-s



Aerofloat 750

Please see the website and review the Conditions of Supply for further information.