



waveairTM

INSTALLATION & OPERATING INSTRUCTIONS

Waveair Tank Vent Filter 16mm

Waveair Tank Vent Filter 19mm

Waveair Tank Vent Filter 25mm

www.waveinternational.co.uk

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Section 1. Introduction

1.1 Important

It is important to us that this product works as advertised and that you enjoy the extra peace of mind that Waveair controlling noxious gases. If you have any queries that can not be answered by your supplier or engineer, please contact us direct on +44 (0) 1476 861717 or e-mail info@waveinternational.co.uk

1.2 What it does

- Waveair is a filter that removes foul odours from holding tank vents. Waveair is engineered to remove the organic compounds that cause bad odours from tank vent emissions. Volumes of air/gas are particularly present in the vent when toilets are flushed or when the tank is being pumped out. The smell from your tank can not only be unpleasant for you but also for your neighbour.
- Waveair is a single module, supplied with brackets and hose tails, so there is no separate cartridge to change, simply remove the complete filter unit and replace at least once a year and no more foul smells. The replacement cartridge for all 3 filters is **the Waveair Tank Vent Filter Cartridge - WAC**

CAUTION
Do not used in conjunction with onboard sewage treatment systems or if significant volumes of chemicals, other oxidising agents, may enter the tank.

- This product should not be used in conjunction with onboard sewage treatment systems or if significant volumes of chemicals, such as chlorine and other oxidising agents, may enter the tank.

1.3 About these instructions

The panels on the left of the pages draw attention to SAFETY CONSIDERATIONS of the adjacent text in accordance with the conventions of the EU Recreational Craft Directive.

DANGER

- DANGER. Indicates a hazard that could easily result in death or serious injury if proper precautions are not taken. If you have any doubts about what precautions to take, you should seek expert advice.

WARNING

- WARNING. Indicates a hazard that could result in death or serious injury if proper precautions are not taken. If you have any doubts about what precautions to take, you should seek expert advice.

CAUTION

- CAUTION. Indicates a hazard that could result in personal injury or damage to your boat or its equipment if suitable care is not taken.

NOTE

- NOTE. Contains additional information that may be of help.

1.4 Before you begin

- Before you start, please read through these instructions carefully. Fitting the Waveair involves:
 - Cutting in to a section of flexible hose or vent pipe between the holding tank and outside vent.
 - Installing the Waveair filter in to the flexible hose or vent pipe between the holding tank and outside vent with hose tails and clamps, screwing in to a threaded section of pipe or using a flanged and bolted fitting.
 - Mounting the Waveair filter by bolting or screwing the mounting brackets to a solid fixing point.
 - Waveair should be installed in the vent line above the overboard discharge point so no water can get in to the filter which will limit its capabilities, do not overfill the tank which may also cause wetting of the filter.
 - Always check with the Wave International Technical Department if in doubt.

NOTE

install in the vent line above the overboard discharge so no water can get in to the filter which will limit its capabilities, do not overfill the tank.

Section 2. Tools and Fasteners

The Waveair can be installed in to a flexible discharge hose with the average DIY toolkit. You will also need:

NOTE

Take care if using a sharp knife to cut flexible hose.

- A sharp knife or hacksaw to cut existing flexible vent hose.
- A flat blade or Philips screwdriver for the hose clamps and bracket screws.

Section 3. Basic Components

NOTE

Hose tails and hose clamps are not supplied and will need to be obtained prior to fitting. See **Section 4.** for thread size.

- Before you start, please check that your system kit contains the following components. If you think you are short of any items, please call us immediately. Following is the contents for each of the 3 different size of Waveair Tank Vent Filters that are available.

Waveair Tank Vent Filter 16mm WA16

- 1 x Waveair Tank Vent Filter.
- 2 x Hosetail connections 16mm.
- 2 x Mounting brackets.
- 1 x set of instructions.

Waveair Tank Vent Filter 19mm WA19

- 1 x Waveair Tank Vent Filter.
- 2 x Hosetail connections 19mm.
- 2 x Mounting brackets.
- 1 x set of instructions.

Waveair Tank Vent Filter 25mm WA25

- 1 x Waveair Tank Vent Filter.
- 2 x Hosetail connections 25mm.
- 2 x Mounting brackets.
- 1 x set of instructions.

All the above units use the same replacement filter cartridge – **Waveair Tank Vent Filter Cartridge - WAC**

Section 4. Wavestream™ Filter System Specifications

Waveair Tank Vent Filter 16mm WA16

Waveair Tank Vent Filter 19mm WA19

Waveair Tank Vent Filter 25mm WA25

The units are for the 3 main size of tank vent hose lines.

Section 5. Installing the Components

5.1 Fitting Wavestream™ (flexible bilge pump hose installation). See Fig 1.

WARNING

Before fitting the filter ensure the bilge pump is not running.

WARNING

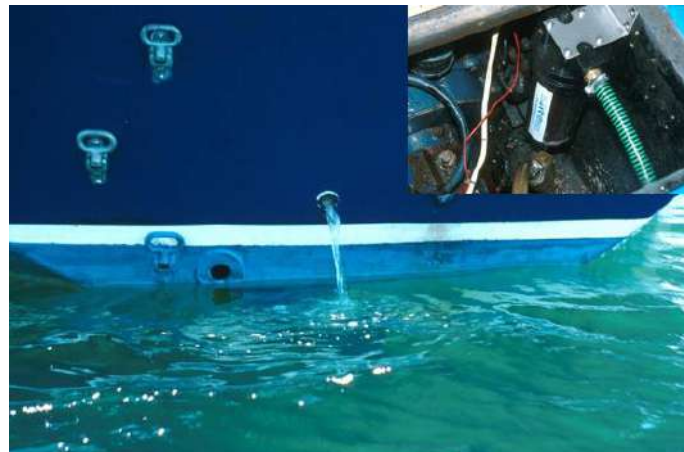
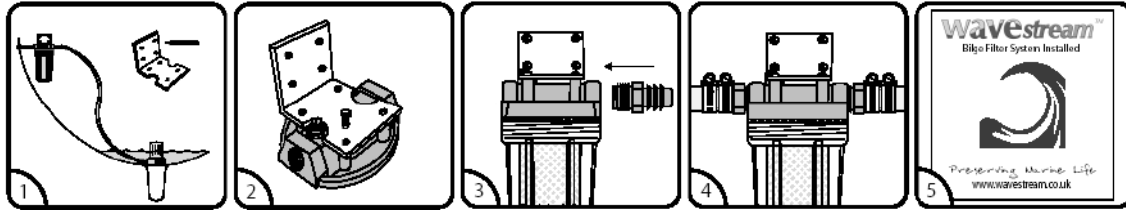
It is advisable to use two hose clamps on each hose tail, so each connection is double clamped.

NOTE

If installing in a hard piped system refer to the BSP thread data in **Section 4**

- Locate a suitable position, refer to **Section 1.4** and **Fig.1**, and fix the mounting bracket. The bracket is different with the Micro System compared with all the other units but the same tools and installation guidelines apply.
- Attach the filter housing to the mounting bracket using the screws provided, ensuring the flow direction is correct; there is an arrow on the top of the unit. The arrow must point in the direction of flow from the bilge pump towards the through hull fitting.
- Screw two hose tails in to the filter head using thread tape or compound to ensure a watertight seal. The hose tails are to be the corresponding size to match the flexible bilge water discharge hose
- Cut the flexible bilge water discharge hose immediately before and after the filter.
- Slide the two ends of the flexible supply hose over the hose tails on the filter head, check again the direction of flow and fit the hose clamps.
- It is preferential the Wavestream™ filter is vertical and it is required to have enough space below the filter unit to remove the filter bowl when changing the Wavestream™ filter cartridge, check the system specifications at **Section 4** above.
- Tighten the hose clamps, using two on each hose connection.
- Remove the filter bowl and check the 'O' ring is in position and the filter cartridge in place, tighten the bowl by hand. A plastic wrench is supplied for removing the bowl on the System 2 & 3 models, the wrench must only be used to remove the bowl not to tighten it.
- Run the bilge pump and bleed any air out of the filter housing using the bleed screw or button on the top of the unit.
- If the bilge pump overboard outlet is close to the waterline ensure water cannot flow back in to the bilge through the filter and bilge pump.

Fig 1.



Section 6. Cartridge Replacement

WARNING

Before replacing the cartridge ensure the bilge pump is switched off.

WARNING

Only use the plastic spanner provided with system's 2 & 3 to remove the bowl, do not use to tighten. Hand tighten only

- Make the cartridge replacement part of a regular maintenance programme, making sure to replace the Wavestream™ cartridge before it allows oily bilge water to pass. The period between cartridge replacements will depend on the condition of the bilge.
- Ensure you have the correct cartridge for your system.
- Ensure the bilge pump is switched off.
- Unscrew the filter bowl and pour the excess bilge water remaining in the bowl back in to the bilge. For the Wavestream System 2 & 3 there is a plastic spanner supplied
- Remove the saturated cartridge placing it in a suitable receptacle for onward responsible disposal.
- Check the 'O' ring is in the top of the bowl and it is in good condition and the seals on top and bottom of the new cartridge are in also in place.
- Locate the new cartridge in the centre of the bowl and then tighten the bowl firmly by hand.
- Turn on the bilge pump and bleed any air from the housing using the bleed screw on the top of the Micro and System 1 and the bleed button on top of the System 2 & 3, and check for any leaks.

Section 7. Functional Checks

7.1 Installation Check

DANGER

If the bilge pump overboard outlet is close to the waterline ensure water cannot flow back in to the bilge through the filter and bilge pump.

- Go over all your work one last time, ensuring that:.
- Ensure the clamps securing the flexible bilge water discharge hose are fully tightened.
- Make sure any other components you disturbed or removed during the fitting process have been refitted correctly.

7.2 With Bilge Pump Running Check

- If fitted check the bilge pump discharge valve is OPEN.
- Check the entire discharge system for leaks.

7.3 Operational / Maintenance Check

WARNING

Check the Wavestream™ cartridge condition regularly and change at least once a year. Debris in the water can affect the performance of the cartridge.

- Make cartridge replacement part of a regular maintenance programme and change at least once a year.
- Replace the cartridge after there has been a heavy spill of oil in the bilge.
- Particulate material in the bilge water may reduce flow and the life of the cartridge.
- Do not pump your bilge if you suspect the cartridge needs changing.

Section 8. Code of Practice

8.1 Some points to remember

WARNING

Discharging oily bilge water damages the environment and wild life.

- Make sure engines, fuel lines, connections and other systems that could be a source of oil or fuel contamination have seals and gaskets in good order and are not leaking.
- Use drip trays under engines and separate engine room bilges from the main bilge to reduce the chance of contaminating bilge water with oil.
- Carry absorbent pads or pillows in case of excessive spillage in to bilge due to fuelling, maintenance or other accidental dumping. The Wavestream System is a polisher only to remove the trace amounts from the overboard discharge.
- Prior to pumping inspect bilge to ensure no excessive amounts of oil or fuel are present, if there are use the pads to remove prior to pumping through Wavestream.
- Take ashore in proper containers any Wavestream cartridges, absorbents and sump oils which are to be disposed of at approved facilities at marinas, lock stations or local authority waste disposal sites.
- As far as possible, use biodegradable oils and unleaded fuel.
- Never use detergents or emulsifiers, as these will increase the risk of harming the environment when discharged overboard.

8.2 When refuelling

NOTE

Remember it is an offence to discharge contaminated bilge water into any watercourse. On no account should detergents or emulsifiers be used in bilge water.

- Take care not to spill fuel in to water
- Do not fill to very top, know the volume in your tanks and their total capacity.
- Place an absorbent pad over fuel inlet and under vent to prevent any spillage should there be any blow back or overfilling
- Listen to the filler pipe carefully to anticipate the fill level and prevent splash back
- If a spill occurs stop fuelling immediately.



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- If after having taken all reasonable care when fuelling there is still spillage then notify the marina or fuelling point immediately so they can initiate their spill response procedures.
- When filling portable containers do so away from the waters edge and take care not to overflow. Loose containers should be secured safely when on board the vessel.

8.3 Approvals

- Wavestream™ systems are Lloyds Register of Shipping Type Approved and meets the 5ppm discharge requirement within the UK Boat Safety Scheme for the discharge of normal bilge waters.

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All the Wavestream™ products in this brochure meet the requirements of the Recreational Craft Directive at 1st January 2000

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