Grey Waste Tank with Integrated Intelligent Control

GT0810B / GT0812B / GT0831B
GT1610B / GT1620B / GT1631B
GT2010B / GT2012B / GT2020B / GT2031B

INSTALLATION & USER INSTRUCTIONS

Thank you for purchasing this Whale® product.

For over 70 years Whale has led the way in the design and manufacture of freshwater, bilge and waste management systems including plumbing, taps, showers and pumps, for low voltage applications. The company and its products have built a reputation for quality, reliability and innovation backed up by excellent customer service.

CONTENTS

FIGURES

1. SPECIFICATION

Model	**Grey Waste Tanks**										
Product Codes	**GT0810B**	**GT0812B**	**GT0820B**	**GT0831B**	**GT1610B**	**GT1620B**	**GT1631B**	**GT2010B**	**GT2012B**	**GT2020B**	**GT2031B**
Old Codes	**GW0810**	**GW0812**	**GW0820**	**GW0831**	**GW1610**	**GW1620**	**GW1631**	**N/A**	**N/A**	**N/A**	**N/A**
Capacity	8 Ltrs (2.1 US gals)				16 Ltrs (4.2 US gals)			20 Ltrs (5.3 US gals)			
No. of Sensors	1	2	2	1	1	2	1	1	2	2	1
Voltage	12V d.c. / 24V d.c.										
Electrical Connections	Tinned wire ends		2 x Deutsch DT06-3S-P012	1 x Deutsch DT06-3S-P012	Tinned wire ends	2 x Deutsch DT06-3S-P012	1 x Deutsch DT06-3S-P012	Tinned wire ends		2 x Deutsch DT06-3S-P012	1 x Deutsch DT06-3S-P012
Inlet Hose Connections	19mm (¾") x 2, 25mm (1") x 3 38mm (1½") x 3				25mm (1") x 4 38mm (1½") x 4						
Outlet Hose Connections	19mm (¾") x 1 25mm (1") x 1				25mm (1") x 2			25mm (1") x 2			
Service Kit - Replacement Lid with Sensor	AK1005	AK1008	AK1007	AK1006	AK1005	AK1007	AK1006	AK1005	AK1008	AK1007	AK1006
Materials	Tank: MDPE Seals: EPDM/Neoprene, Monprene® Lid: Glass Filled Polypropylene, ABS, Polyurethane										

2. PRINCIPLES OF OPERATION

The Grey Waste Tank enables the user to manage all grey waste on board easily, through one skin fitting. The Intelligent Control sensor integrated into the tank lid provides automatic operation of the grey waste pump. The sensor will detect water in the grey waste tank at a pre-determined level, and will automatically activate the grey waste pump. When the tank is emptied, the switch will automatically turn the grey waste pump off. The 2 sensor models include a second sensor which can be used to control a second grey waste pump. It is factory set to activate at a higher water level and will provide additional pumping capacity during periods of high inflow to the grey waste tank. Alternatively, the second sensor can be wired to a high level alarm, warning of a high water level within the grey waste tank.

Read the following carefully before installation.

WARNING: Please note that incorrect installation may invalidate warranty.

3. TO THE FITTER & TO THE USER

To the Fitter:
Check that the product is suitable for the intended application, follow these installation instructions and ensure all relevant personnel read the points listed below. Also ensure that these operating instructions are passed on to the end user. The manufacturer cannot be held responsible for claims arising from incorrect installation, unauthorised modification or misuse of the product.

To the User:
Read the following instructions carefully.

4. APPLICATION

The Grey Waste Tank is designed to collect grey shower waste water. If it is intended for use for any other purpose or with any other liquid, it is the user's responsibility to ensure that the tank and switch are suitable for the intended use and, in particular, that the materials are fully compatible with the liquids to be used. The integrated Intelligent Control sensor is designed to operate at 12V d.c or 24V d.c. only. The sensor is suitable for use with pumps operating with current up to 20A, and is recommended for use with Whale Gulper® 220 or Gulper® 320 grey waste pumps.

5. WARNINGS

WARNING

• With all applications, it is important that a system of safe working practice is applied to installation, use and maintenance. Ensure the electric supply is turned off and that the waste water system is drained before installation.

- The Grey Waste Tank is designed for the storage of grey waste water in recreational marine vessels. Your warranty may be invalidated if the product is used in other applications or outside the remit of the standards quoted on the packaging/product literature.
- All pipework **must** contain a correctly installed anti-syphon valve/loop. (Figure 1)
- The pumped water **must** be evacuated through a skin fitting or seacock **above the waterline**. (Figure 1)
- Do not screw directly to the hull – **must** be mounted on a bulkhead or an additional board.
- **WARNING:** Installation **must** be carried out by a qualified electrician. Improper wiring can cause a fire resulting in injury or death. Suggested wiring information (Figure 8A and Figure 8B) is given as a guide only, and wiring **must** comply in accordance with the applicable electrical standards. Appropriate size fuses or circuit breakers **must** be installed.
- Do not shorten the wires.

6. PARTS

QTY: 1	Grey Waste Lid with integrated sensor(s)
QTY: 4	M4 x 20 screws
QTY: 1	Grey Waste Tank
QTY: 4	M5 Spring Washers

7. INSTRUCTIONS FOR INSTALLATION

The grey waste tank is designed for use with grey waste water in recreational marine vessels. Typical installation is shown in Figure 1. For tank dimensions see Figure 2.

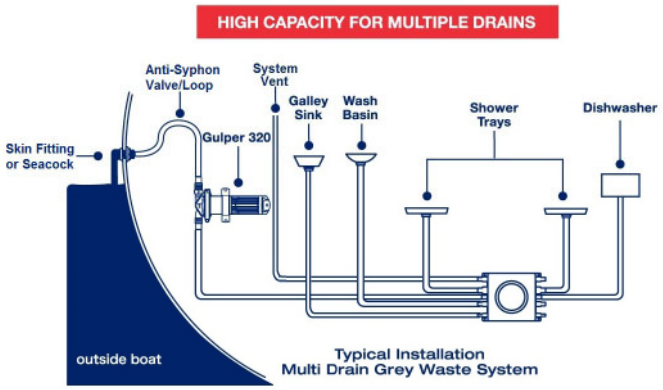
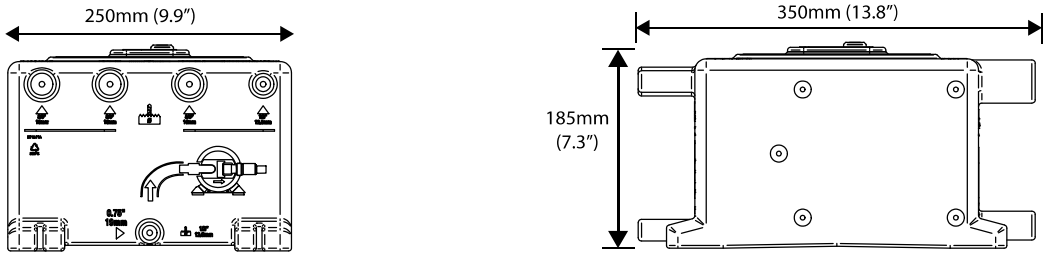
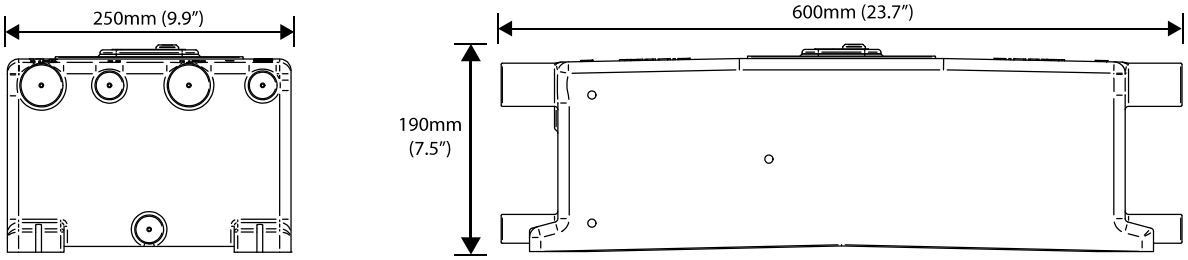


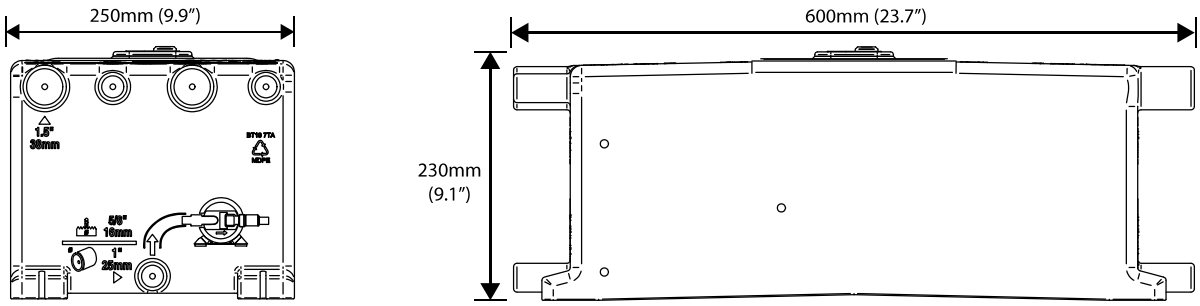
Figure 1 Typical Grey Waste Tank Installation in Multi Drain Grey Waste System



8ltrs (2.1 US gals) Tank Models



16ltrs (4.2 US gals) Tank Models



20ltrs (5.3 US gals) Tank Models

Figure 2 Grey Waste Tank Dimensions

Step 1: **Drill only the ports which are to be used in the installation**. Port sizes and recommended drill diameters are shown in Figure 3 for 8ltr (2.1 US Gals) tank models, and Figure 4 for 16ltr (4.2 US Gals) and 20ltr (5.3 US Gals) tank models. Ensure all swarf is removed from inside the tank after drilling.

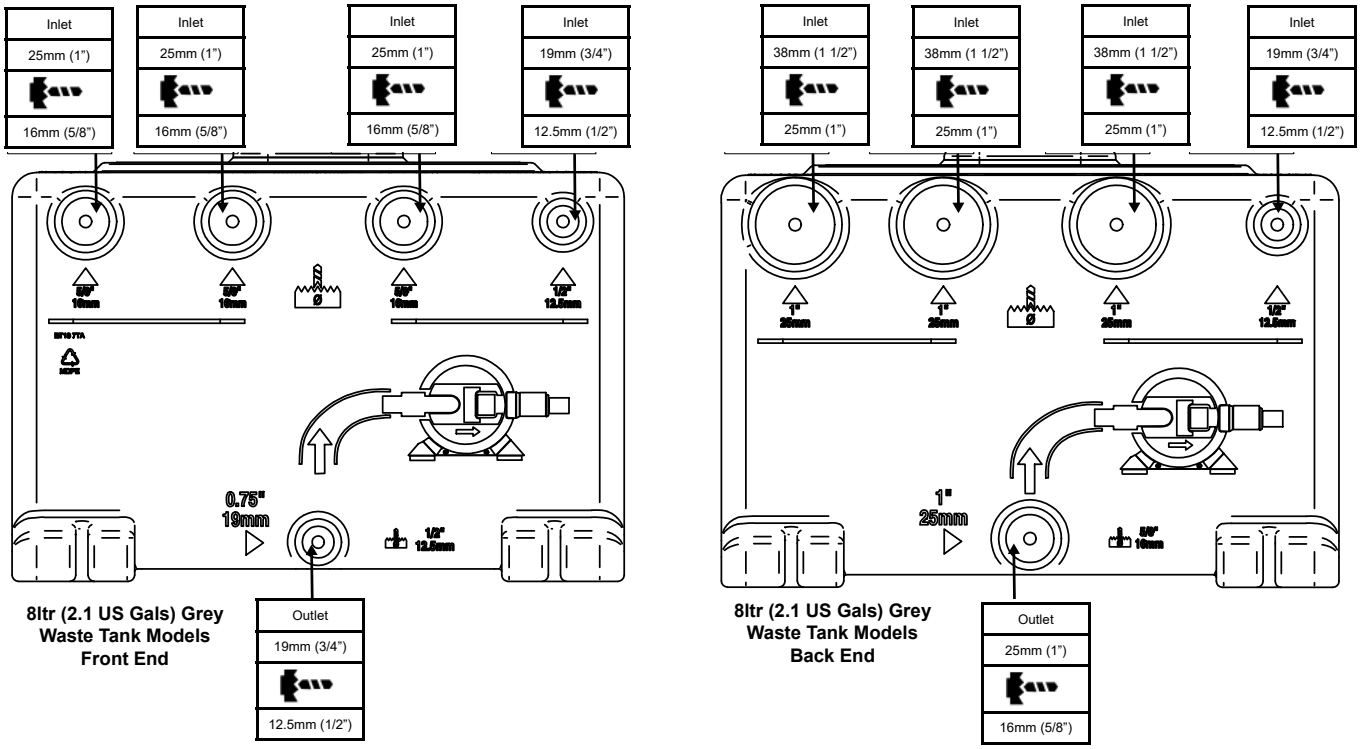


Figure 3 Port Sizes & Recommended Drill Diameters For 8ltr (2.1 US Gals) Grey Waste Tank Models

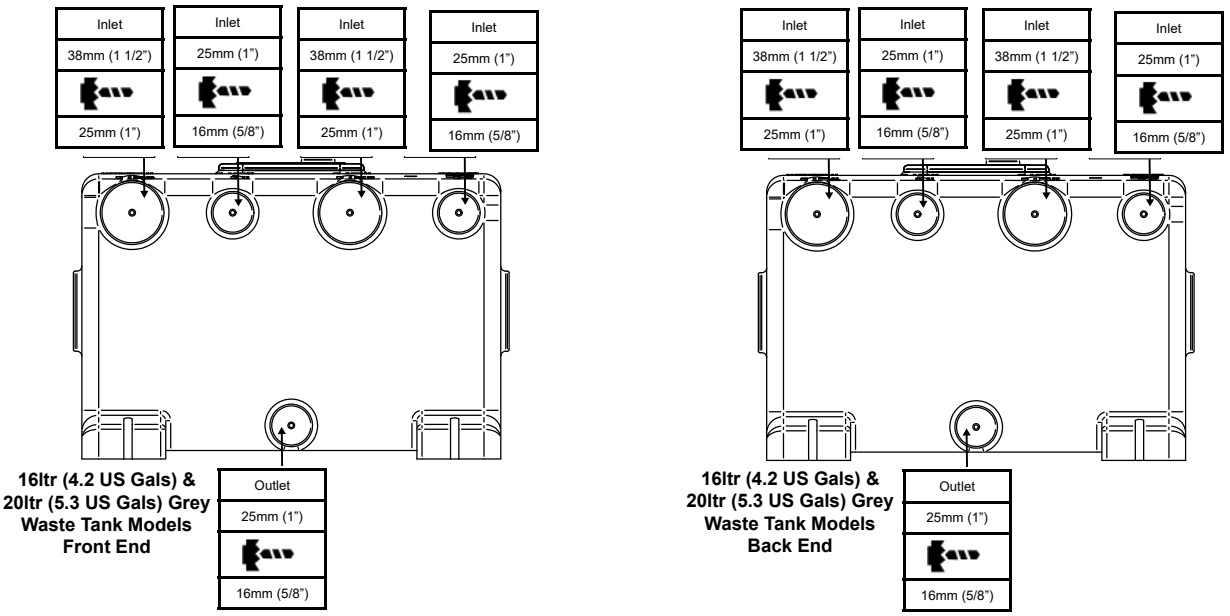


Figure 4 Port Sizes & Recommended Drill Diameters For 16ltr (4.2 US gals) And 20ltr (5.3 US gals) Tank Models

Step 2: The tank **must be** secured using 4 appropriate screws, through the feet of the tank as shown in Figure 5. **NOTE:** The angle of the tank **must not** exceed 10° (Figure 6). **NOTE: Do not screw directly to the hull** – **MUST** be mounted on a bulkhead or an additional board.

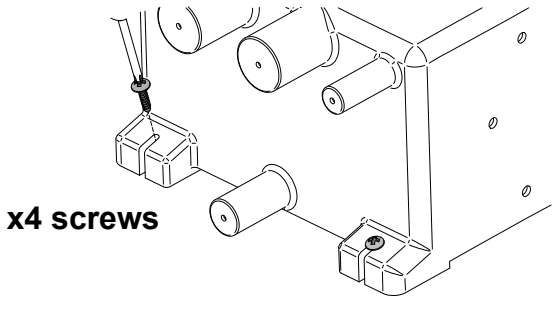


Figure 5 Securing The Tank

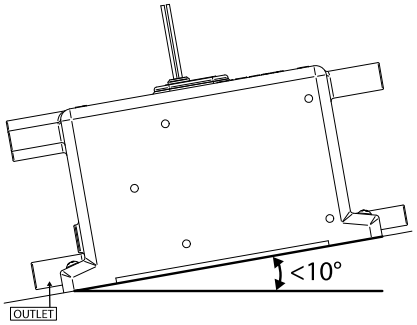


Figure 6 Maximum Possible Angle of Installation

Step 3: Secure all hosing onto the selected ports using appropriate hose clamps, as shown in Figure 7. Check no leaks occur. Do not overtighten hose clamps.

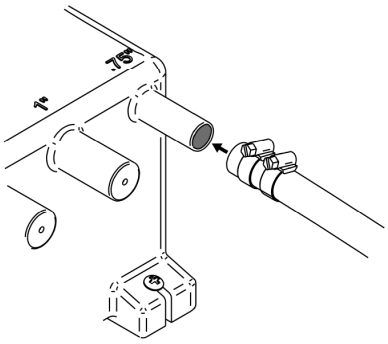


Figure 7 Securing Hose to Tank Port

Step 4: **Wiring:** See Figure 8A or Figure 8B.

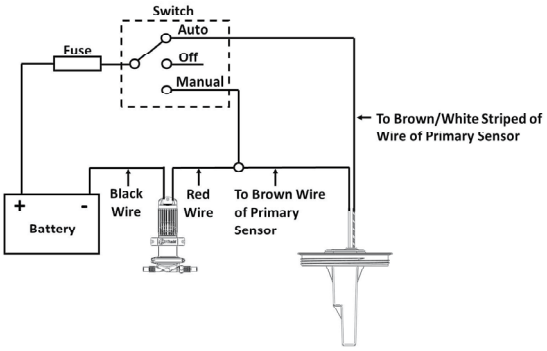


Figure 8A Wiring Diagram - for Single Sensor Models

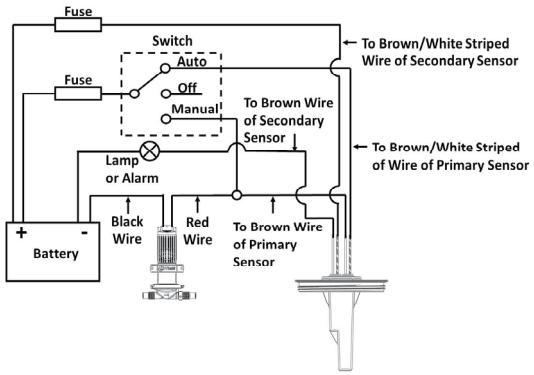


Figure 8B Wiring Diagram - for Double Sensor Models

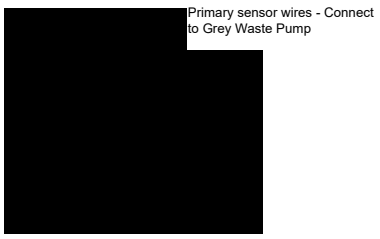


Figure 9A Single Sensor Models

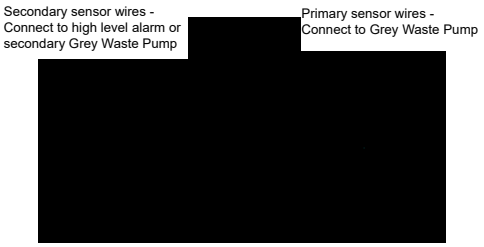


Figure 9B Double Sensor Models

Step 5: **Instructions for Use**

Once installed, turn on shower or tap to fill grey waste tank. Ensure the pump is operating and waste water is being removed from the tank. **Note**: If using a seacock, ensure it is open before use.

8. MAINTENANCE

For best performance, the sensor faces on the lid **must be** cleaned from debris/residue regularly, at least every 3 months. See Figure 10. Do not use an abrasive cleaner.

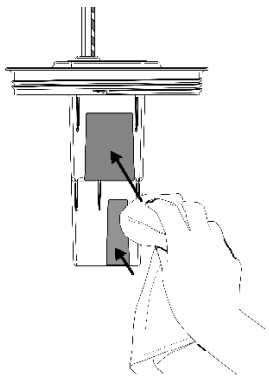


Figure 10 Cleaning/Maintenance

The lid is not a serviceable part. The yellow cover **must not** be removed and doing so will invalidate warranty.
It is advisable to have an annual check on all plumbing and fittings to prevent leaks and blockages.

Helpful Hint - The grey waste tanks have integrated threaded inserts which can be used to attach the Gulper grey waste pump directly to the tank.

9. TROUBLESHOOTING

Problem	Possible Cause	Potential Solution
Sensor fails to operate pump	No power to sensor	Check power supply, leads and connections
	Fuse has blown	Replace fuse
	Dirt/debris has covered sensor	Carefully remove the lid from the tank, and clean debris from the sensor faces - Figure 10
	Pump is faulty	Replace pump
	Sensor is faulty	Replace tank lid (see table Specification for appropriate service kit)
Sensor is operating pump continuously	Dirt/debris has covered sensor	Carefully remove the lid from the tank, and clean debris from the sensor faces - Figure 10
	Tank not emptying water	Check water supply level and pressure relief settings are appropriate for the system
	Incorrect wiring	Check wiring Figures 8A / 8B
	Sensor is faulty	Replace tank lid (see table Specification for appropriate service kit)
	Pump is faulty	Remove pump and check non-return valve and remove any debris. Replace non-return valve if necessary.

10. WINTERIZING

The system must be fully drained, including the contents of the grey waste tank. If water is allowed to freeze in the system, serious damage to the plumbing, pump and/or accessories may occur. Failures of this type will invalidate the warranty.

11. SERVICE SUPPORT DETAILS

12. EU DECLARATION OF CONFORMITY

We hereby declare, under our sole responsibility, that the enclosed equipment complies with the provisions of the following EC Directives.

Electromagnetic Compatibility Directive 2014/30/EU on the approximation of the laws of the Member States relating to electromagnetic compatibility.

CE mark affixed: May 2017
Basis on which conformity is declared - The above equipment complies with the protection requirements of the EMC Directive.

Standards applied

2011/65/EU	ROHS II
2013/53/EU	Recreational Craft Directive
ISO10133:2012	Extra-low voltage DC Installation
EN55014-1:2006	EMC Emissions
EN55014-2:1997+A2:2008	EMC Immunity
ISO 8846:2017	Ignition Protection

Richard Bovill
Engineering Director

13. PATENTS AND TRADEMARKS