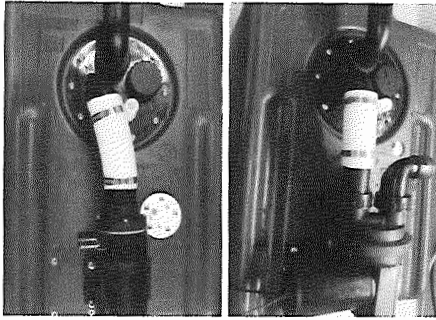
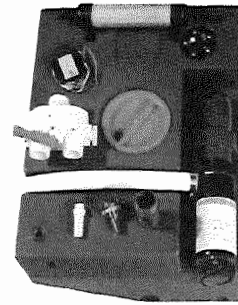


Waste Water Tank kits:

53 L, 73 L, 113 L Rectangular with Macerator Pump / Diaphragm Waste water pump



50 L, 75 L, 98 L Angled. with 12 V or 24 V Macerator Pump



- 47 L or 72 L 113 L reinforced waste water tanks , for holding tanks because of resistance to corrosion and odor permeation.
- 12V or 24V macerator or waste water diaphragm pump 12 V, gas vent, active carbon filter, control panel and probe for level control.
- Black/grey water tank, complete of outboard emptying system with pump
- Two discharge outlets; one for connection to a deckmounted discharge fitting and one for connection to an overboard discharge pump.

- 50 L, 75 L, 98 L Reinforced polyethylene angles tanks , best suited material for holding tanks because of resistance to corrosion and odor permeation.
- Complete kits include high performance waste water macerator pump 12V or 24V, gas vent, active carbon filter, control panel and probe for level control
- Complete with 4 dead female unions 3/4" dim. 19/20 mm. and 4 dead female unions 1 1/2" dim 38/40 mm. for rubber gasket

General Installation

Your toilet, as a general rule, should be positioned as low in the hull as possible with all interconnecting hoses or pipes sloped to permit gravity drainage and prevent potential hose odor permeation. The holding tank must not be exposed to temperatures above 120°F (45°C). Do not place near heat sources such as engine manifolds, water heaters, generators, etc. Be certain to estimate holding tank weight when filled (typical effluent weighs about 9 lbs. per 1 gallon or 1.08 Kg per liter. Make certain to allow for total filled weight when selecting materials for mounting the tank. Also consider impact of a full tank on vessel trim.

Preparing a mounting surface

1. Mount tank to surface that supports the entire area of the tank. 2. If required, fabricate mounting surface and toe blocks from 13 mm or 19 mm (1/2" or 3/4") plywood. 3. Do not mount tank on projections such as screw or bolt, which could puncture the tank. 4. Do not allow holding tank to block free flow of bilge water.

Through-hull fittings

For overboard waste disposal from the waste water holding tank and/or the use of raw water for flushing, you will need through-hull fittings. Please follow local and international regulations regarding the disposal of waste in the waterways.

- 19 mm (3/4") bore seacock for the flushing water inlet
- 25 mm (1") or 38 mm (1 1/2") bore seacock for the waste outlet.
- 19 mm (3/4") and 25 mm (1") or 38 mm (1 1/2") vented loops

Follow the seacock manufacturer's instructions concerning materials and methods of installation. Make sure that the inlet seacock is positioned where it will be below the waterline at all times when the boat is under way and also that any outlet seacock is both aft of, and higher than the inlet seacock.

Pipework: general instructions

- Run spiral reinforced smooth bore flexible hoses of minimum 25 mm (1") or 38 mm (1 1/2") internal diameter so that they slope into the holding tank. This facilitates self drainage into the tank. Hose failure due to degradation from sewage and odor permeation almost always occurs in hose runs which retain sewage when the system is not in use.

- Eliminate all unnecessary runs which retain trapped liquids, if possible.
- Where possible, use rigid PVC pipe in sections that cannot be arranged to drain.
- Simplify hose layout by removing unnecessary valves. [For specific installations, some regulations and standards may require the installation of a vented loop (anti-siphon valve), one-way valve or seacock in sewage discharge piping.]
- Avoid binding corners and sharp bends.
- Do not use wire ties to secure the hose or pipe.
- Support flexible hose every 30 cm (12") and support rigid pipe every 1.5 m (5 ft).
- When creating new holes, avoid reinforcement stringers and tabs.

Vented loops on discharge lines:

- If there is ANY possibility that the discharge elbow of the toilet may be below the top of the tank at ANY time, a ventilated anti-siphon loop must be fitted in the outlet pipework to ensure that the contents of the tank do not siphon out through the bowl.
- Use appropriately sized Albinus vented loops; 25 mm (1") vented loop, or 38 mm (1 1/2") vented loop.
- Arrange the outlet hose to form a loop which is at least 20 cm (8") above the highest possible level that the tank may reach, and fit the Vented Loop at that highest point.
- In the event that the discharge elbow of the toilet is situated above the highest level of the tank, arrange the discharge hose at least 20 cm (8") above the level of the discharge elbow, and fit the Vented Loop at that highest point. This will retain water in the bowl.

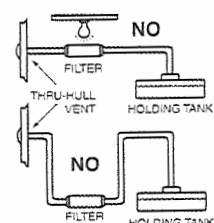
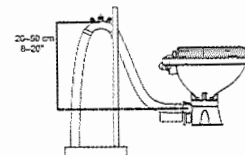
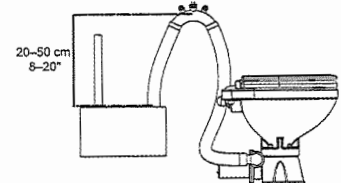
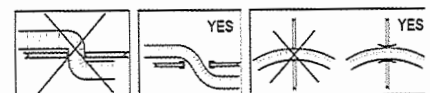
Waste water holding tank ventilation:

To facilitate the dispersal of gases built up in the tank and the ease of emptying, the tank must be ventilated. The provided holding tank vent carbon filter will absorb heavier-than-air gases associated with organic waste and eliminate a source of malodor from the vent at the exterior of the boat.

- Holding tank vent lines must be free of low points which can trap liquid and prevent the free flow of gases from or air into the holding tanks.
- Use only reinforced hose for vent lines. Otherwise, over time, the hose will tend to kink and effectively block the vent.

When installing vent filters that are not mounted directly on a holding tank units :

- Avoid areas near excessive heat sources such as engine manifolds or lights.
- Do not install the filter below top of holding tank.
- The filter can be mounted in any position. Installations near the through-hull vent reduce the chance of filter damage from overfilling of the holding tank.



Solvent bonding for rigid pipe and fittings

1. Use PVC cleaner on both bonding surfaces.
2. Use PVC cement (must contain tetrahydrofuran [THF]) on both bonding surfaces.
3. Connect parts using a twist and hold motion until the cement is set.
4. Let the joint cure for at least four hours or according to instructions on PVC cement container. (Cold temperatures require longer cure times.)
5. Position clamp screws 180° apart from each other and tighten clamps.

Y-valve

To simplify the selection of pumping waste to an onshore treatment facility or, where allowed, overboard, install an -valve – not included, must be ordered separately.

Operating instructions, Waste Water Tank with Diaphragm pump

1. Waste Water Tanks come with the discharge pump already mounted on the tank. The discharge port on the included diaphragm pump is 38 mm
2. diaphragm pump can be run dry without damage to the pump, but, all the same, it is not rated for continuous duty.
3. Can handle a mixture of air and water without difficulty.

Operating instructions, Waste Water Tank with Diaphragm pump 32 L

1. Complete Waste Water Tanks come with the discharge pump already mounted on the tank. The discharge port on the included diaphragm pump is 38 mm (1½").
2. Your diaphragm pump can be run dry without damage to the pump,
3. Can handle a mixture of air and water without difficulty

Electrical connections, Diaphragm pump:

Connect black wire to negative (–) terminal of battery. The red wire should run to a properly sized overload protected switch or circuit breaker, with a wire from switch or breaker to positive (+) terminal of battery. Electrical circuit must be independent of all other accessories. Use proper wire

Wire size (based on 10% voltage drop)	Max wire length (total distance from the battery to the pump and back to the battery)	
	12V	24V
1.5 mm ² (16 ga)	20 m (66')	60 m (197')
2.5 mm ² (14 ga)	30 m (98')	120 m (394')

Electrical connections, Macerator pump The circuit for the macerator pump power supply must be independent and cannot be used for any other appliance. Connect the battery positive terminal to a fuse of adequate capacity load.

1. Connect the red wire from the pump to the appropriate connection on your controller switch. See the Switch manufacturer's wiring instructions
2. Connect the switch to the battery positive (+) terminal via a fuse
3. Connect the black wire from the pump to the battery negative (–) terminal

Wire size per feet and meter of run (3% voltage drop)							
Voltage	Fuse size	0m – 2.5m (0'–10')	2.5m – 4.2m (10'–15')	4.2m – 6.8m (15'–25')	6.8m – 10.1m (25'–40')	10.1m – 16.9m (40'–60')	16.9m – 27m (40'–60')
12V	20A	1.5 mm ² (#16)	2.5 mm ² (#14)	4 mm ² (#12)	6 mm ² (#10)	10 mm ² (#8)	16 mm ² (#4)
24V	12A	0m – 11m (0'–10')	11m – 18.3m (0'–10')	18.3m – 29.3m (0'–10')			
		1.5 mm ² (#16)	2.5 mm ² (#14)	4 mm ² (#12)			

Level indicator with probes

1. Install the probes by cutting a hole in the holding tank with a 40 mm (1.6") hole saw.
2. Connect the probes to the supplied gasket
3. Secure the gasket, with the probes, onto the waste water holding tank with proper selftapping screws
4. Connect the probes to the control panel according to the wiring scheme below
5. A 30 x 50 mm (1.2 x 2") cut out must be made in the mounting surface for the control panel to make room for board. Drill four 2.5 mm (0.1") holes for fastening the panel to the mounting surface.

Wiring scheme for Level indicator probes and panel

Combination printed circuit colored wires Combination colored wires/ probes

White long probe (1) = common

Blue/Green long probe (2) = half tank

Yellow short probe (3) = full tank

Black – battery Red + battery

Warning! Do NOT short-circuit the side probes with the central one. The color indications above refer to the complete kit (control panel, wires and terminals). The standard length of the wires is 3.5 m

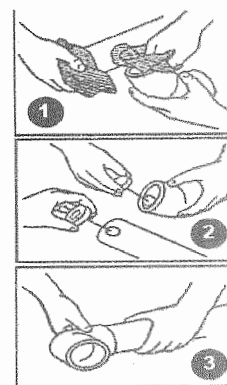
A. LIMITED WARRANTY: 1 year



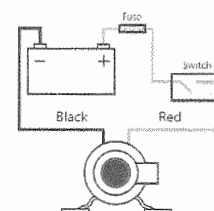
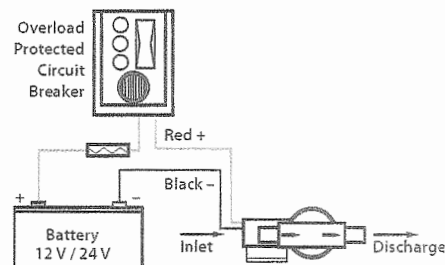
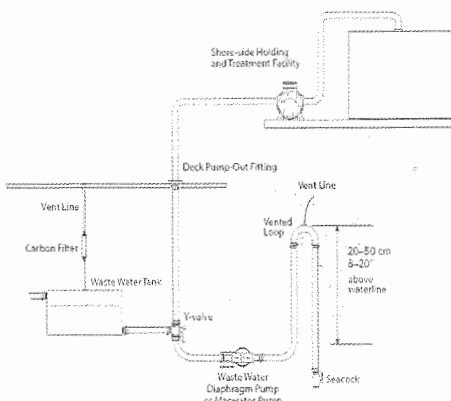
EN 55014-1
ISO 8846

Waste handling & material recycling

At the product's end of life, please dispose of the product according to applicable law. Where applicable, please disassemble the product and recycle the parts according to material.



Position clamp screws 180° apart from each other and tighten clamps.



12V • 12 A • fuse 20 A
24V • 7 A • fuse 12 A

A 30 x 50 mm (1.2 x 2") cut out must be made in the mounting surface for the control panel to make room for the electronics of the panel

