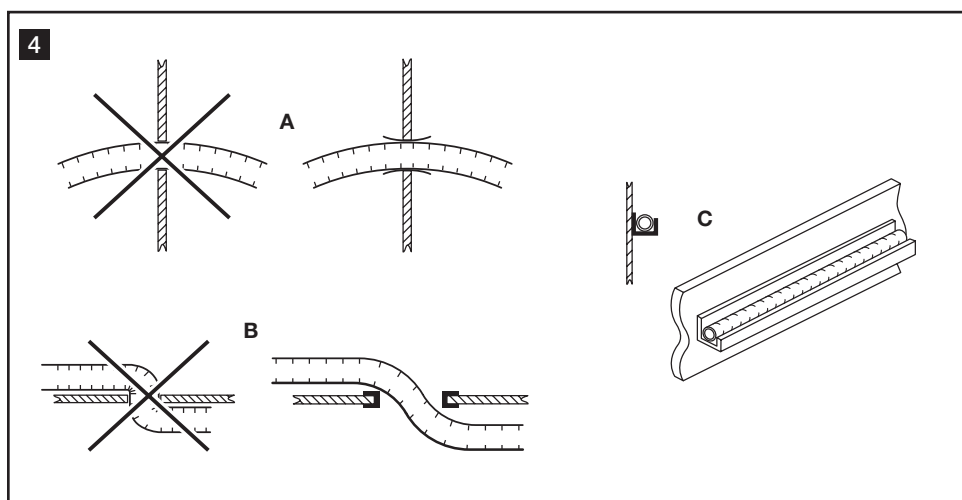
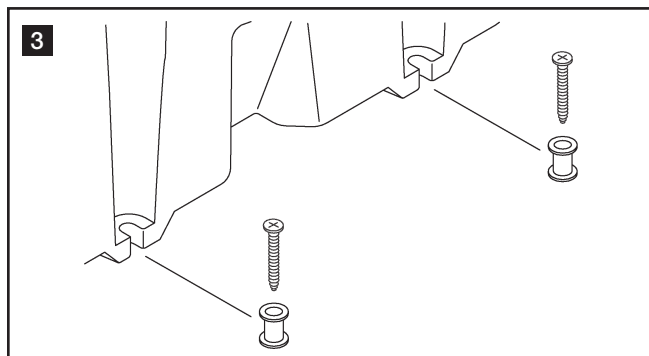
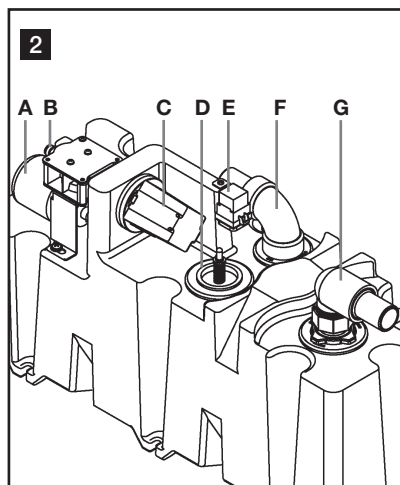
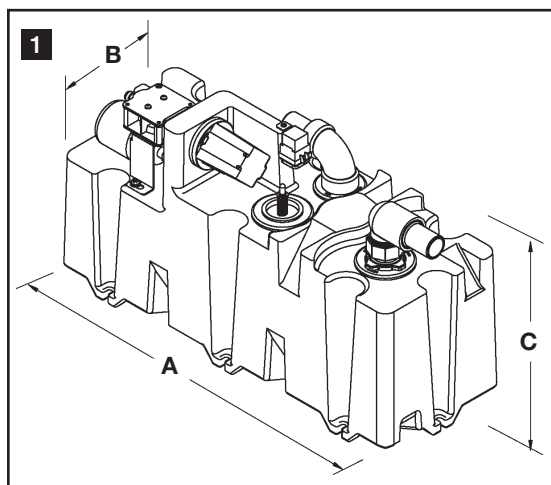




VacuFlush® Vacuum Holding Tank



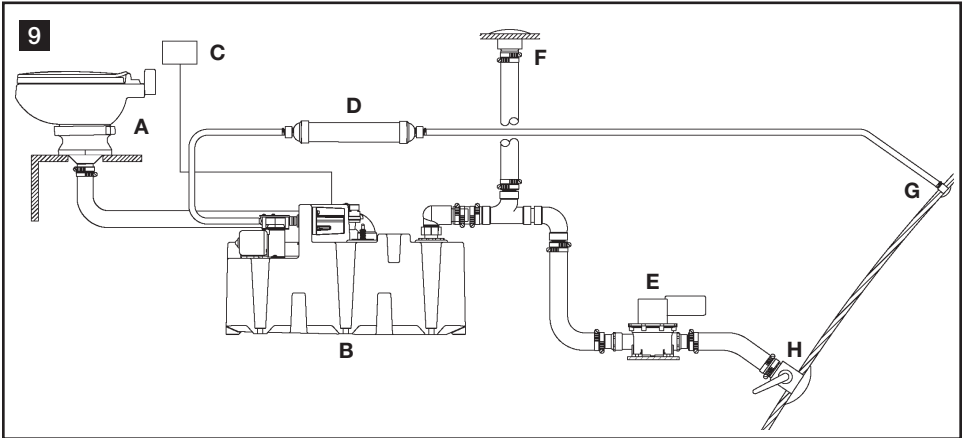
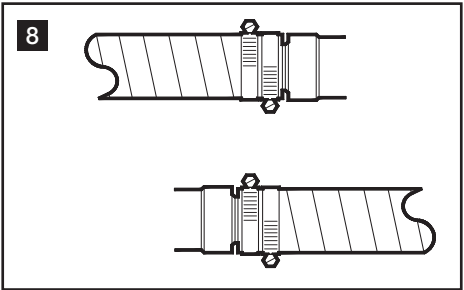
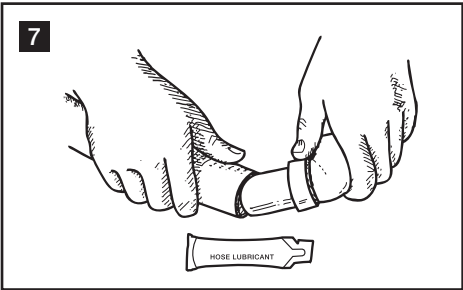
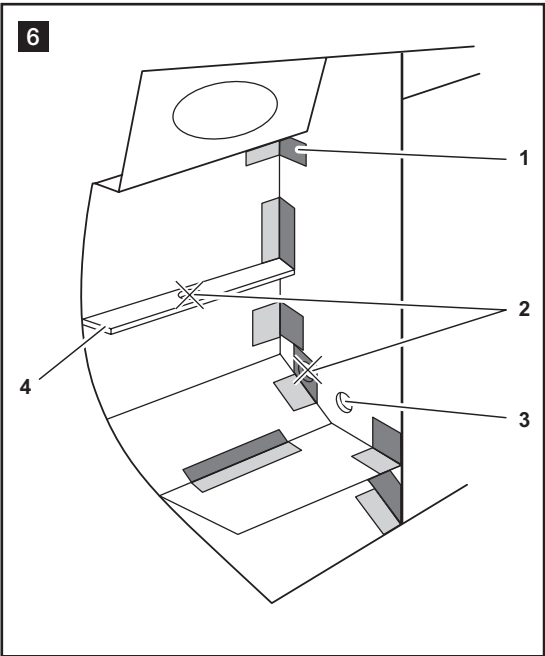
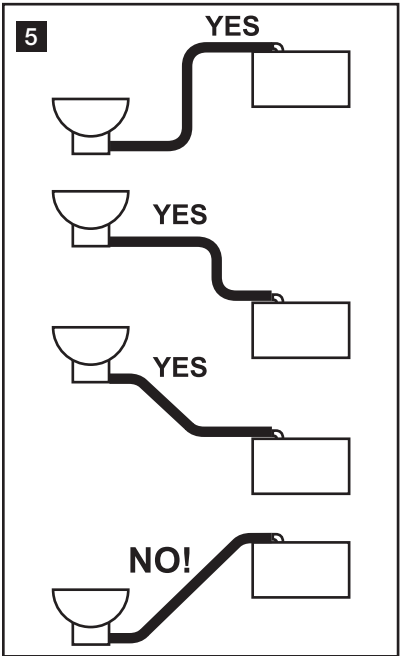


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1

Notes on using the manual



Caution!

Safety Instruction: Failure to observe this instruction can cause material damage and impair the function of the device.



Note

Supplementary information for operating the device.

fig. **2** A, page 2 : This refers to an element in an illustration. In this example, item A in figure 2 on page 2.

2

General safety instructions

Read all instructions before use or installation.

The manufacturer will not be held liable for claims for damage resulting from the following:

- Faulty installation or connection
- Damage to the unit from mechanical influences, misuse or abuse
- Alterations to the unit without express written permission from the manufacturer
- Use for purposes other than those described in this manual

3

Intended use

The Dometic Vacuum Holding Tank (VHT) brings the powerful flushing performance, convenience and efficiency of VacuFlush® technology to smaller boats (as small as 22 ft./6.7 m) in an easy-to-install package. VHT units produce and store vacuum for flushing, and also is a waste holding tank with 6.5-gallon/25-liter capacity.

3.1

Features

Combines vacuum pump, vacuum tank and holding tank into one unit. Eliminates plumbing between vacuum source and holding tank. Complete Type III MSD system for a VacuFlush toilet.

Extremely efficient flushing. Using as little as 1 pint/0.4 liter per flush, the VHT holds as many flushes as tanks up to three times larger that are connected to standard marine toilets.

“Full” tank probe and automatic shutdown relay. Turns off power when tank is full to prevent over-fill. “Full” level indicator panel (available separately from Dometic) can be wired to probe.

Vacuum relief valve (not available on all VHT models). Provides additional protection against potential tank collapse if subjected to excessive vacuum pressure during pump-out.

Long-lasting reliability. Tank is constructed of high-strength polyethylene. Pump motor can operate dry without burning up.

Energy efficient. Draws only 3 amps in 12 V DC system.

4 Components

4.1 Vacuum holding tank (fig. 2, page 2)

Ref	Description	Ref	Description
A	Vacuum pump	E	Shutdown relay
B	Vent fitting	F	Inlet fitting (from toilet)
C	Vacuum switch	G	Discharge fitting
D	Vacuum relief valve (not available on on all models)		

4.2 VacuFlush toilet system (fig. 9, page 3)

Ref	Description	Ref	Description
A	VacuFlush toilet	E	Discharge pump
B	Vacuum holding tank	F	Dockside discharge fitting
C	Status panel	G	Thru-hull vent fitting
D	Vent filter	H	Overboard discharge fitting

5 Specifications

5.1 Materials

Holding tank: polyethylene; 0.25 in./6.3 mm nominal wall thickness

Plumbing fittings: polyvinyl chloride

Pump body: Glass-filled polypropylene

5.2 Electrical

Model	Voltage (DC)	Power Draw (amp average)	Fuse/ breaker
VHT12	12	3	5
* 14-gauge or larger diameter wire is recommended. Specifications subject to change without notice.			

5.3 **Dimensions** (fig. **1** , page 2)

Ref.	Dimension
A	28 in. / 711 mm
B	10 in. / 254 mm
C	15.5 in. / 394 mm

5.4 **Capacities**

Model	Capacity US gal. / L	Empty Weight lb. / Kg	Full Weight lb. / Kg
VHT12	6.5 / 25	26.5 / 12	81 / 37

6 **Installation**

6.1 **Determine best location**

- The VHT inlet (fig. **2** F, p. 2) must be located no further than 20 ft./6.1 m from the outlet of the toilet, and no more than 3 ft./0.9 m above the toilet outlet.
- Consider hose routes and connections, and electrical connections, when choosing VHT location.
- Install horizontally on a flat surface.
- Do not expose VHT to temperatures greater than 120°F/49°C. Do not install near heat sources such as engine manifolds, water heaters, generators, etc. Provide for free flow of air around VHT.

6.2 **Routing sanitation hose**

- Protect hose when routing through walls or other barriers (fig. **4** A, p. 2)
- Avoid binding corners or sharp bends in hose (fig. **4** B, p. 2)
- Do not use wire ties to secure hose or pipe runs (fig. **4** C, p. 2)
- Where required, install vertical hose runs as vertical as possible, with no upward angled slopes from toilet to VHT, for best efficiency (fig. **5** , p. 3)

Bulkhead Penetrations (fig. **6** , p. 3)

Check each side of a bulkhead to ensure that there will be no cutting into:

- fuel or water tanks
- wiring or pipes
- reinforcement stringers (4) that support the hull

When creating new holes, avoid tabs (1) and stringers (4) that hold bulkheads or partitions in place. Provide additional reinforcement so that structural integrity is not compromised.

- avoid (2)
- possible (3)

Hose and Heat Sources

The operating temperature of flexible hose prohibits exposure to sources of high or direct heat, such as light bulbs or engine manifolds. If any part of the hose system must be run close to a heat source, use rigid pipe instead of hose.

6.3 Make connections

1. Fasten VHT to floor using spindles (optional) and #12x1.5 in. wood screws (fig. **3**, p. 2). If not using spindles, fasten VHT to floor with #14x1.5 in. wood screws and washers. Be sure to fasten at least six of the eight available mounting feet at the base of the tank.
2. Route 1.5 in./38 mm ID sanitation hose from toilet to VHT inlet, and from VHT outlet to the boat's discharge fitting(s) (see previous section for hose routing guidelines).
3. Route 5/8 in./16 mm vent hose from vacuum pump discharge to vent filter or thru-hull vent fitting.
4. Place two hose clamps on hose near each end that attaches to fittings. Use Dometic Hose Lubricant (fig. **7**, p. 3) or liquid dishwashing soap on fitting and inside ends of hose, then twist hose onto fitting. Make sure hose end is flush against fitting shoulder.
5. Tighten hose clamps at ends of hose with screws positioned as shown (fig. **8**, p. 3).
6. With electrical power off, make electrical connections according to the Wiring Schematic shown on the parts list provided with this unit.



Caution!

Failure to follow the procedures above may result in vacuum leaks or inefficient flushing.

7 Operation

7.1 System start-up

1. Fill freshwater tank, then turn on inlet water supply to VacuFlush toilet.
2. Turn on electrical power to vacuum holding tank (VHT).
3. For foot-pedal operated VacuFlush toilets, flush toilet for about 15 seconds to assure water starts flowing through vacuum pump. For electronic VacuFlush toilets, flush five times, allowing each flush cycle to complete (when vacuum pump shuts off) before next flush. VHT unit may take up to three minutes to recharge vacuum level between flushes.

7.2 Normal operation

VACUUM FLUSHING ACTION

Every time the VacuFlush toilet is flushed, the VHT unit pulls wastewater from the toilet to the holding tank. The vacuum pump then runs until the proper vacuum level is achieved for the next flush. Follow flushing instructions in VacuFlush toilet operation manual.

“FULL” TANK PROBE

When the holding tank contents activate the “full” tank probe, a signal is sent to a shutdown relay which turns off electrical power to the toilet system to prevent the VacuFlush toilet from flushing and overfilling the VHT. The VHT must be emptied before electrical power is restored for normal VacuFlush toilet operation.

7.3 Holding tank pump-out operation

To assure thorough discharge of vacuum holding tank, follow these steps:

1. Turn off electrical power to VHT at circuit breaker and water supply to VacuFlush toilet. This prevents vacuum pump from starting during pump-out operation.
2. For foot-pedal VacuFlush toilets with built-in pedal lock, follow instruction in toilet operation manual to keep flush ball in toilet open for holding tank pump-out operation. For electronic VacuFlush toilets, follow Service Mode instructions for keeping the flush ball open. For all other VacuFlush toilets, make sure flush ball stays open to allow air into VHT unit during pump-out operation.
3. Pump out holding tank through dockside or overboard discharge fitting.
4. After pump-out, close flush ball in toilet and resume normal VacuFlush toilet operation.

8 Cleaning and winterizing

8.1 Cleaning

A small amount of water remains in vacuum holding tank at all times, so it is good practice to rinse the VHT completely after contents have been discharged.

- 1. After initial pump-out, add holding tank deodorant or cleaner to toilet bowl, and flush with water.
- 2. Continue flushing and pumping out tank until holding tank discharge is clear.

8.2 Winterizing

Use only propylene glycol freshwater antifreeze to winterize the holding tank. **Make sure the antifreeze does not contain alcohol.**

- 1. Pump out the holding tank.
- 2. Thoroughly flush system with fresh water before adding propylene glycol freshwater antifreeze to the holding tank.



Caution!
Never use ethylene glycol automotive antifreeze in freshwater systems.

9 Troubleshooting

Problem	Possible Cause	Service Instruction
1. Vacuum pump running too much between flushes.	a. Flush ball in toilet leaks.	a. Refer to VacuFlush toilet manual for information.
	b. Vacuum line leak.	b. Tighten all hose connections at vacuum holding tank and toilet.
	c. Foreign material has fouled vacuum pump valves.	c. Disassemble vacuum pump and inspect under the two flat disk valves. If foreign material is present, remove it and reassemble pump.
	d. Pump diaphragm worn or damaged.	d. Inspect diaphragm in pump for small hole or rip. Replace if necessary.
	e. Duckbill valve in discharge fitting stuck open.	e. Disassemble discharge outlet and inspect duckbill valve. Clean or repair if necessary.
2. Toilet will not flush (no vacuum).	a. Vacuum pump will not run.	a. See problem 3.
	b. Plugged vacuum discharge line.	b. Blockage usually at base of toilet below flush ball. Disconnect line and clear.
	c. Plugged vacuum pump valve.	c. Inspect and clean pump valves. Replace if needed.
	d. Vacuum pump discharge or intake lines plugged.	d. Disassemble lines and clean.

Problem	Possible Cause	Service Instruction
3. Vacuum pump will not run.	a. No electrical power.	a. Check input power, circuit breaker and fuse.
	b. Loose or broken electrical wiring.	b. Tighten or reconnect wires at vacuum holding tank.
	c. Improper electrical connections.	c. Make certain wires at vacuum switch are connected to the "B" terminals. (Refer to Wiring Schematic included with parts list.)
	d. Faulty vacuum switch.	d. To check vacuum switch, short across "B" terminals with jumper wire.
	e. Faulty pump motor.	e. Replace motor.
4. Vacuum pump will not shut off.	a. Insufficient vacuum.	a. Verify pump pulls minimum 10 in. Hg of vacuum.
	b. Excessive vacuum leak.	b. See problem 1.
	c. Faulty vacuum switch.	c. To check switch, remove one "B" terminal wire.
	d. Improper wiring.	d. Check wiring. Refer to Wiring Schematic included with parts list.
5. Vacuum pump is making a loud noise.	a. Loose set screw in crank assembly.	a. Remove cover from pump and check crank assembly setscrew for tightness.
	b. Pump bearing is worn.	b. Check pump bearing for wear. Replace if needed.
	c. Dirt or debris in pump body.	c. Disassemble vacuum pump assembly and inspect inside of pump body for foreign objects.
	d. Worn or defective motor.	d. Replace motor assembly.
	e. Motor loose from mounting bracket.	e. Tighten the four screws that secure the motor to the mounting bracket.
6. Vacuum pump is running too slow, overheating, blowing fuses or tripping circuit breakers.	a. Improper voltage.	a. Check input power for low voltage.
	b. Loose or broken electrical wiring.	b. Tighten or reconnect wires.
	c. Improper wire size.	c. Wire size too small – check electrical diagram for proper wire size for voltage of pump used.
	d. Motor worn or defective.	d. Check motor and replace if necessary.
	e. Tank is overfilled – vacuum pump forced to pump water.	e. Disassemble vacuum pump and empty out water.
7. Difficulty in emptying waste from holding tank.	a. The toilet pedal is not open during holding tank pump-out.	a. Keep the toilet pedal open (see "Holding Tank Pump-out Operation", page 7).
8. Vacuum pump emits odor.	a. Worn, torn or punctured pump diaphragm.	a. Replace pump diaphragm.
9. Toilet system emits odor.	a. Check for improper flexible sanitation hose.	a. Replace hose where necessary.

10 Warranty and product liability

North America

Manufacturer's One-Year Limited Warranty

Dometic Corporation, Sanitation Division (Dometic) warrants to the original purchaser only that this product, if used for personal, family or household purposes, is free from defects in material and workmanship for a period of one year from the date of purchase.

If this Dometic product is placed in commercial or business use, it will be warranted to the original purchaser only to be free of defects in material and workmanship for a period of ninety (90) days from the date of purchase.

Dometic reserves the right to replace or repair any part of this product that proves, upon inspection by Dometic, to be defective in material or workmanship. All labor and transportation costs or charges incidental to warranty service are to be borne by the purchaser-user.

EXCLUSIONS

IN NO EVENT SHALL DOMETIC BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, FOR DAMAGES RESULTING FROM IMPROPER INSTALLATION, OR FOR DAMAGES CAUSED BY NEGLIGENCE, ABUSE, ALTERATION OR USE OF UNAUTHORIZED COMPONENTS. ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, ARE LIMITED TO A PERIOD OF ONE YEAR FROM DATE OF PURCHASE.

IMPLIED WARRANTIES

No person is authorized to change, add to, or create any warranty or obligation other than that set forth herein. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one (1) year from the date of purchase for products used for personal, family or household purposes, and ninety (90) days from the date of purchase for products placed in commercial or business use.

OTHER RIGHTS

Some states do not allow limitations on the duration of an implied warranty and some states do not allow exclusions or limitations regarding incidental or consequential damages; so, the above limitations may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

To obtain warranty service, first contact your local dealer from whom you purchased this product or go to <http://www.dometic.com> for a dealer near you.

Europe:

Warranty and Customer Service

Warranty arrangements are in accordance with EC Directive 44/1999/CE and the normal conditions applicable for the country concerned. For warranty or other service, please contact our Dometic Service department listed elsewhere in this manual. Any damage due to improper use is not covered by the warranty.

The warranty does not cover any modifications to the product or the use of non-original Dometic parts; the warranty does not apply if the installation and operating instructions are not adhered to and no liability shall be entertained.

Product Liability

Product liability of Dometic Group and its subsidiary companies does not include damages which may arise from: faulty operation; improper alterations or intervention in the equipment; adverse effects from the environment which may impact the equipment itself or the direct vicinity of the equipment or persons in the area.

To obtain warranty service, first contact your local dealer from whom you purchased this product or go to <http://www.dometic.com> to locate a dealer near you.

11 Customer service

There is a strong, worldwide network to assist in servicing and maintaining your toilet system. For the Authorized Service Center near you, please call from 8:00 a.m. to 5:00 p.m. (ET) Monday through Friday.

You may also contact or have your local dealer contact the Parts Distributor nearest you for quick response to your replacement parts needs. They carry a complete inventory for the Dometic product line.

Telephone:	1-800-321-9886	U.S.A. and Canada
	330-439-5550	International
Fax:	330-496-3097	U.S.A. and Canada
	330-439-5567	International
Web site:	http://www.DometicSanitation.com	

Dometic is a customer-driven, world-leading provider of leisure products for the RV, automotive, truck and marine markets. We supply the industry and aftermarket with a complete range of air conditioners, refrigerators, awnings, cookers, sanitation systems, lighting, mobile power equipment, comfort and safety solutions, windows, doors and other equipment that make life more comfortable away from home.

Dometic supplies a wide range of workshop equipment for service and maintenance of built-in air conditioners. Dometic also provides specially designed refrigerators for hotel rooms, offices, wine storage and transport and storage of medical products.

Our products are sold in almost 100 countries and are produced mainly in wholly-owned production facilities around the world.



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