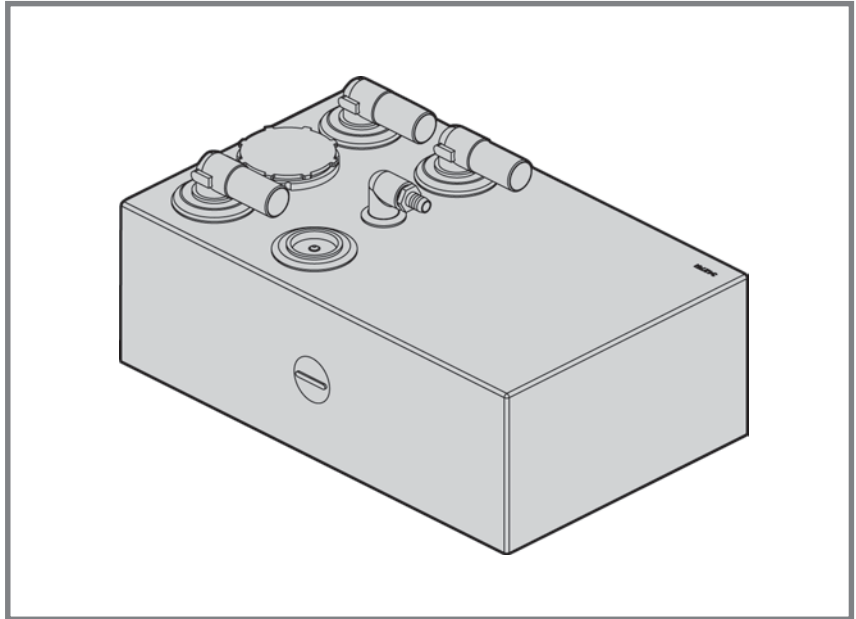

BASIC HOLDING TANK SYSTEM

OWNER'S MANUAL

For VacuFlush® and other marine sanitation systems



! WARNING

This manual must be read and understood before installation, adjustment, service, or maintenance is performed. Modification of this product can result in property damage.



Dometic Corporation • Sanitation Systems
13128 State Rt 226, PO Box 38
Big Prairie, OH 44611
SeaLand Product Customer Service: 1-800-321-9886
(8:00 a.m. - 5:00 p.m. ET)

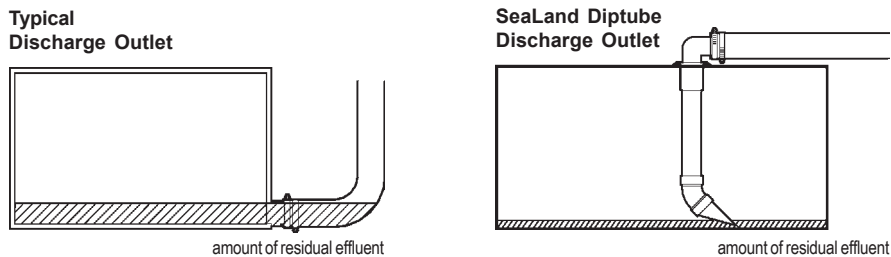
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FEATURES

Superior Durability: SeaLand® holding tanks are molded from 100% virgin polyethylene resin. Polyethylene is best suited for holding tank construction because of its resistance to corrosion and odor permeation, and it will last longer than the life of a typical fiberglass hull.

Leak-Proof Design: All hose connections in SeaLand holding tanks are on the top of the tank, eliminating possibility of leakage due to a faulty connection below the liquid level of the tank contents. Our unique diptube design reduces the risk of plugging while keeping the residual contents in the tank to a minimum.



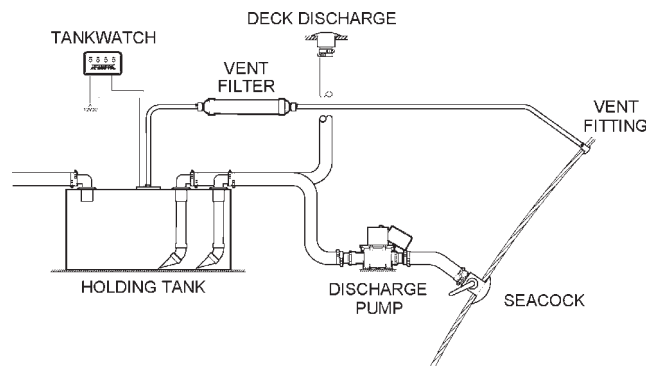
ISO/USCG Compliant: SeaLand Basic holding tanks are fully compliant with the ISO 8099:2000(E) standard and applicable requirements of the United States Coast Guard for pleasure craft installation.

Odor-Free Design: SeaLand tanks have extra-heavy wall thickness to prevent odor permeation. Tanks can be fitted with a SaniGard in-line vent filter that stops unpleasant odors from escaping through the holding tank vent.

Implosion Protection: SeaLand Basic holding tanks are equipped with a TankSaver vacuum relief valve which prevents damage from dockside pumps that operate at very high levels of vacuum. The TankSaver valve opens automatically under vacuum conditions, but remains sealed regardless of shock-loading or vibration.

Multiple Tank Outlets: Basic holding tanks are equipped with two discharge outlets. One is for connection to a deck-mounted discharge fitting and one is for connection to an overboard discharge pump.

Other Components: Basic holding tanks can be easily upgraded with other SeaLand accessories, including discharge pumps, remote level indicator systems and automatic discharge controls. See page 7.



Dometic Corporation reserves the right to change specifications without notice.

INSTALLATION

CHOOSING A LOCATION FOR THE BASIC HTS

As a general rule, the HTS 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.

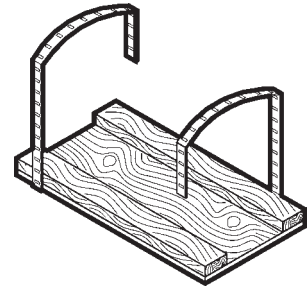
The holding tank must not be exposed to temperatures above 120°F (45°C). Do not place near heat sources such as engine manifolds, water heaters, generators, etc.

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 full tank on vessel trim.

PREPARING A MOUNTING SURFACE

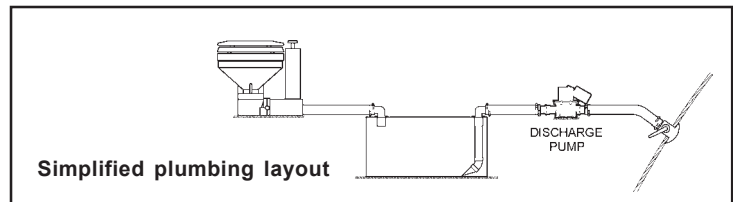
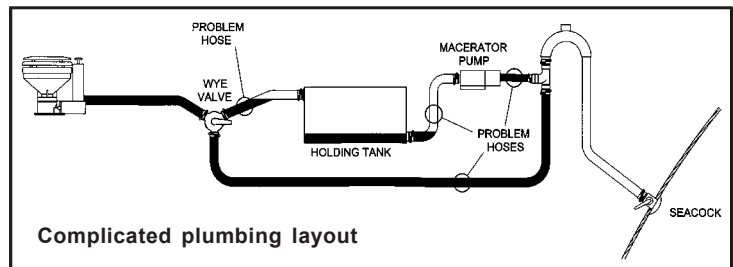
1. Mount tank to surface that supports the entire area of the tank.
2. If required, fabricate mounting surface and toe blocks from 13 mm or 19 mm (1/2-inch or 3/4-inch) plywood.
3. Do not mount tank on projections such as screw or bolt heads, which could puncture the tank.
4. Do not allow holding tank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

Mounting surface made from plywood and securing straps

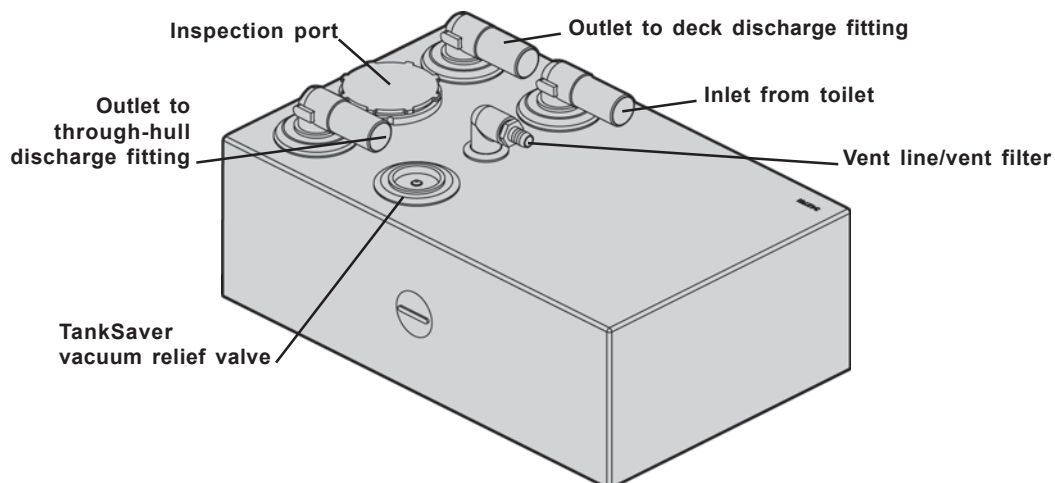


AVOIDING HOSE ODOR PERMEATION

- Hose failure due to 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.]



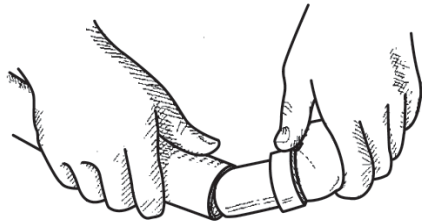
BASIC HTS CONNECTIONS



INSTALLATION (cont'd)

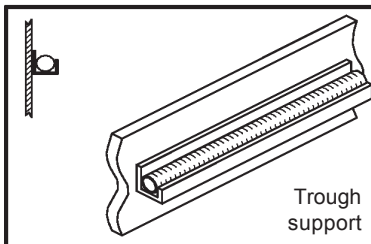
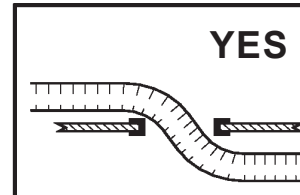
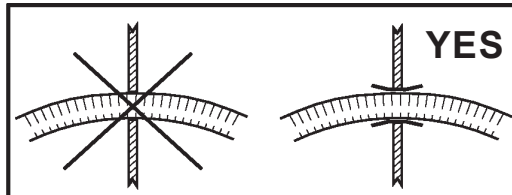
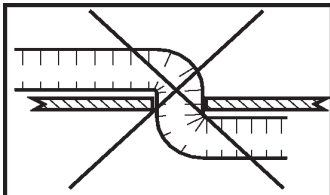
PLUMBING CONNECTIONS AND HOSE LAYOUTS

When connecting flexible hose to plastic fittings, use liquid dish soap on end of fitting and inside hose end to make connection easier.



Do not use any other lubricants, sealants or adhesives when connecting sanitation hoses and fittings.

Do not restrict the ability to pull the hose or pipe.



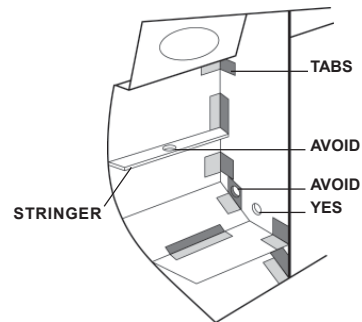
EXCELLENT

Avoid binding corners and sharp bends.

Do not use wire ties to secure the hose or pipe.

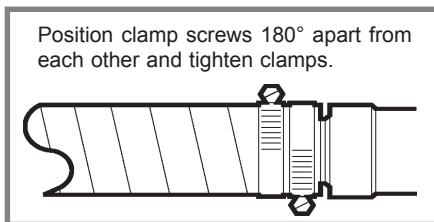
Support flexible hose every 12 inches (.3 m), and support rigid pipe every 5 feet (1.5 m).

When creating new holes, avoid reinforcement stringers and tabs.

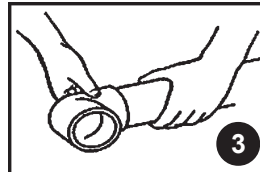
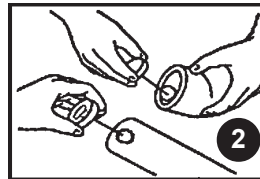
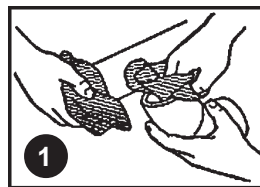


CLAMP CONNECTIONS FOR FLEXIBLE HOSE AND FITTINGS

Dometic recommends that each hose connection be secured with two hose clamps to prevent any leaks.



SOLVENT BONDING FOR RIGID PIPE AND FITTINGS



1. Use PVC cleaner on both bonding surfaces.
2. Use PVC cement (must contain tetrahydrofuran) 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.)

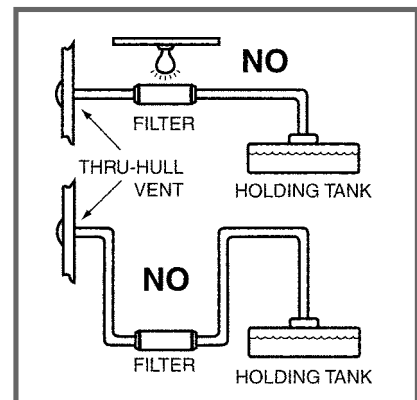
INSTALLATION (cont'd)

VENT LINE AND FILTER INSTALLATION

- 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.
- Do not use non-reinforced hose for vent lines. It will tend to kink over time effectively block vent.
- A holding tank vent filter will absorb heavier than air gases associated with sewage and eliminate a source of malodor from the exterior of the boat. See vent filter details in this guide.

When installing vent filters that are not mounted directly on an HTS unit:

- 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.



SERVICE ACCESS

Because SeaLand holding tanks may require minimal service in normal operation, the tank must be installed so that there is easy access to the tank inspection port, discharge pump and vent filter (if installed).

An in-line maintenance valve must be installed in any piping runs which retain liquid and are connected to components that may require periodic servicing (such as discharge pumps).

CLEANING

A small amount of water remains in all marine holding tanks. It is good practice to rinse the tank after the contents have been discharged. This can be accomplished by adding water to the toilet bowl. Add 8 ounces (237ml) of SeaLand® Holding Tank Deodorant and Cleaner to the bowl. Flush the entire contents into the holding tank and continue flushing until the discharge from the holding tank is clear.

Do not use chlorine-based cleaners, caustic cleaners or chemicals, such as drain-opening products, as they may damage the system's seals and hose.

WINTERIZING

If using the HTS with SeaLand's VacuFlush® components, refer to VacuFlush Owner's Manual for winterization instructions. If using antifreeze to winterize the HTS, use only propylene glycol freshwater antifreeze that **does not contain alcohol**. Antifreeze that contains alcohol will result in damage to your sanitation system.

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

PLUMBING FITTINGS, HOSE AND PIPE

SeaLand® valves and fittings are designed for use with 1-1/2" (38mm) ID OdorSafe® Plus sanitation hose and 1-1/2" (38mm) PVC pipe.

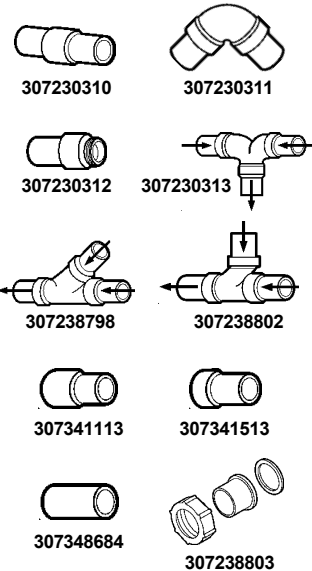
HOSE BALL VALVE

PART NO.	DESCRIPTION
307346087	Ball Valve Non-corrosive PVC with Teflon® seals.



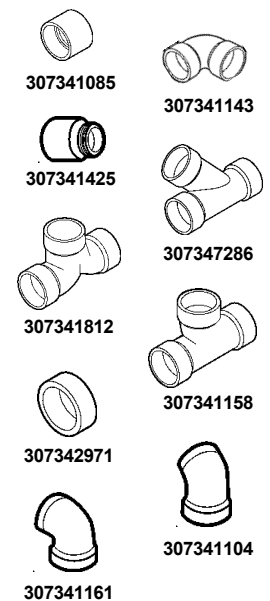
HOSE FITTINGS

PART NO.	DESCRIPTION
307230310	Hose Mender Kit Connects 1½" (38mm) for maintenance purposes.
307230311	90° Bend Kit Provides smooth sweep bend. Eliminates hose kinking in sharp bends.
307230312	Hose Adapter Kit Connects 1½" (38mm) hose to 1½" (38mm) NPT thread.
307230313	Double Bend Kit Connects intersecting 1½" (38mm) hose segments per indicated flow.
307238798	Wye Kit Connects intersecting 1½" (38mm) hose segments per indicated flow.
307238802	Tee Kit Connects intersecting 1½" (38mm) hose segments per indicated flow.
307341113	Reducing Adapter Connects 1½" (38mm) hose to 1" (25mm) hose.
307341513	Custom Hose Adapter Can be used with all 1½" (38mm) PVC fittings with socket connection. Lubricated hose or cuff slides on easily.
307348684	Flexible Vinyl Couplings 3" (76mm) length of soft vinyl to couple 1 ½" (38mm) hose adapter fittings.
307238803	Hose Tail Piece Connects hose to 1½" (38mm) MPT with swivel nut and sealing ring included.



PIPE FITTINGS

PART NO.	DESCRIPTION
307341085	Pipe Coupling Connects 1½" (38mm) PVC pipe sections.
307341143	90° Bend 90° Ell for connecting 1½" (38mm) PVC pipe sections.
307341425	Threaded Male Adapter Adapts 1½" (38mm) PVC pipe to 1½" (38mm) NPT thread.
307347286	45° Wye Makes three way connection to 1½" (38mm) PVC pipe.
307341812	Double Bend Makes three way connection of 1½" (38mm) PVC pipe.
307341158	Sanitary Tee Makes three way connection of 1½" (38mm) PVC pipe.
307342971	Special Adapter for Toilet Outlet Adapts VacuFlush toilet outlet to other PVC pipe connections.
307341104	PVC 45° Street Ell For custom fitting design. Adapts to all 1½" (38mm) PVC fittings shown here.
307341161	PVC 90° Street Ell For tight bends. Can be used with other PVC fittings shown. 1½" (38mm) Hub.



PLUMBING PIPE AND HOSE

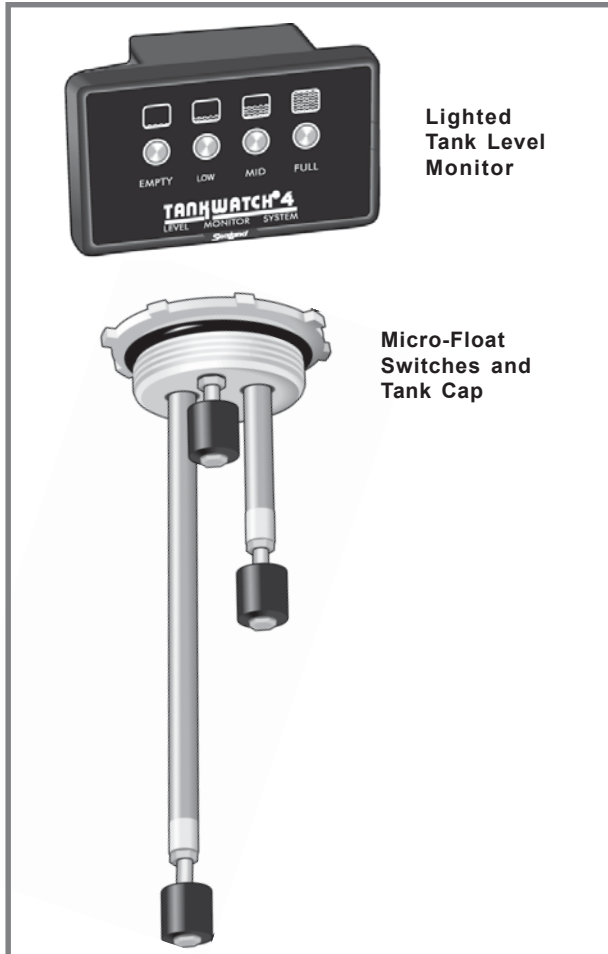
PART NO.	DESCRIPTION
307001540	PVC Rigid Pipe 1½" (38mm) ID x 5-ft. (1.5m) length.
307342871	OdorSafe® Plus Sanitation Hose 1½" (38mm) ID x 50-ft. (15.2m) roll.
307345650	Vent Hose 5/8" (16mm) ID x 50-ft. (15.2m) roll. Use for holding tank vent line. Connects to SaniGard vent filter.



OPTIONAL HTS COMPONENTS

TankWatch® 4 Level Monitor and Micro-Float Switches

Includes four tank level indicator lights – Empty, Low, Mid and Full, and international symbology of four tank levels. One light is always on. Reliable micro-float switches are installed in holding tank. No electrical components come in contact with waste or water. Operates on 12 or 24-volt DC. Uses only .017 amps at 13-volts.



Toilet System Shut-Off Relay

Shuts down electrically operated toilet systems, including VacuFlush, when holding tank is full. Operates with TankWatch 4 level monitor. Available in 12- or 24-volt DC. (Not shown.)

TankMaster™ 4 Automatic Discharge Pump Control

Increases owner convenience and simplifies plumbing system layout. Diverts sewage directly overboard in unrestricted waters with the simple turn of optional keyed control switch to “automatic” position. Prevents accidental overboard discharge in restricted waters when control switch is turned to “off” position. Simplifies plumbing by eliminating wye valves, seacocks and vented loops. Automatically maintains holding tank at empty level and eliminates stagnating sewage standing in interconnecting hoses. Works in conjunction with optional discharge pump, TankWatch level indicators and seacock interlock system.



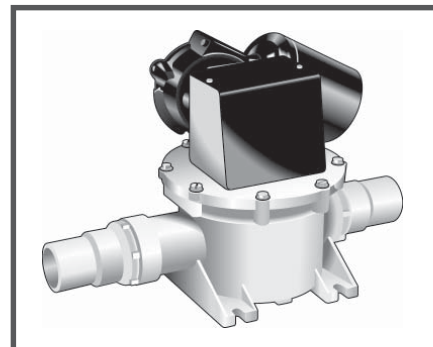
SaniGard™ Holding Tank Vent Filter

The vent filter stops odors that escape from the holding tank vent. It contains odor-removing filter media to keep your boat smelling clean and pleasant. Each cartridge is good for an entire season and is easily replaced for a fresh start. The vent filter includes mounting brackets and hose adapters, and is available with either 5/8" (16mm) (p/n 309310002), 1" (25mm) (p/n 309310005) or 1½" (38mm) (p/n 309310003) hose fittings.



SaniPump™ Overboard Waste Discharge Pump

This T-series discharge pump can run dry without harm and draws just 6 amps at 12 VDC. Delivers flow rate of just over 3.9 gallons per minute (14.7 liters per minute). Emptying the tank of a 10-gallon tank takes about three minutes, and for a 42-gallon tank, about 11 minutes. The discharge pump is connected to a through-hull fitting. Check Marine Sanitation Regulations for information on areas where discharge is allowed. 12 VDC model – p/n 360301200. 24 VDC model – 360302400.



ORDERING PARTS

Dometic is ready to assist you in the event service is required. Before calling, please have the following information available. Your cooperation in having this information ready is appreciated and allows us to better meet your needs.

1. Basic HTS Model Number (see Parts List on separate sheet)
2. Serial Number
3. Part Number, Description and Quantity (see Parts List)

CUSTOMER SERVICE

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

Telephone: **1 800-321-9886** U.S.A. and Canada
330-496-3211 International

Email: **sealand@dometicusa.com**

MANUFACTURER'S ONE-YEAR WARRANTY

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 (1) 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 THE 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.



Dometic is the leading worldwide provider of product systems for increased convenience away from home. Dometic provides RV and Pleasure Boat Systems, Silent Refrigeration Systems and Medical Systems. Dometic continuously applies the group's industrial and technological expertise to new, related fields of business.

Dometic has production facilities in 10 countries, its own sales and marketing operations in 35 countries plus approximately 65 distributors globally.

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