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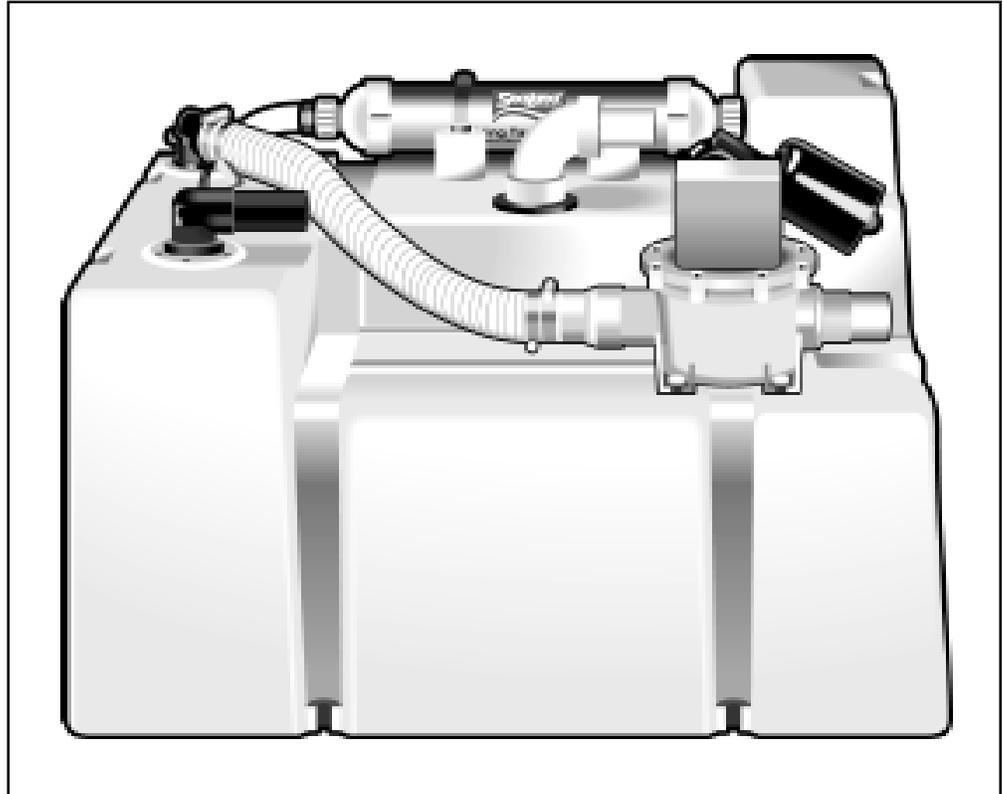
# HOLDING TANK SYSTEM

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## OWNER'S MANUAL

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**VacuFlush® 10HTS, 18HTS, 35HTS and 42HTS Models;  
Standard 28HTS and 40HTS Models**



**! 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.



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## FEATURES

SeaLand's standard 28 and 40 Holding Tank System (HTS) models feature a space-saving design that combines the level indicator, vent filter, overboard discharge pump (optional) and TankSaver® vacuum relief valve into one package.

VacuFlush models 10HTS, 18HTS, 35HTS and 42HTS include vacuum generator, level indicator and Tank-Saver vacuum relief valve. Models 35HTS and 42HTS also include a vent filter and overboard discharge pump (optional).

HTS technology simplifies installation and assures quality by assembling and testing all components at the factory. Integral mounting feet eliminate all strapping. Separate connections are provided to the overboard discharge and dockside fittings.

Each HTS exceeds proposed ISO standard with 95% removal of tank contents. Tank material is 5/16-inch [7.9mm] durable linear low density polyethylene (LLDPE) with no seams to leak. All penetrations are located above highest level of tank contents.

The TankWatch® level indicator cap has three floats that are adjusted to indicate when tank is empty, mid range and full. The HTS can also be used with the optional TankWatch 4 level indicator panel which designates the level of the tank contents.

SeaLand's SaniGard™ holding tank vent filter contains odor-removing media which eliminate odors from the tank vent. Each cartridge is good for one boating season and is easily replaced. Filter sold separately from 10-gallon and 18-gallon HTS.

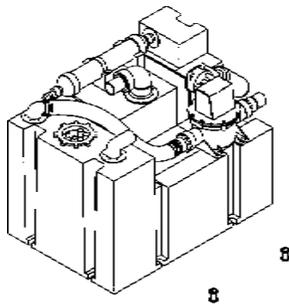
The SaniPump™ T-series overboard discharge pump will empty a tank at a rate of 3.9 gpm [14.7 liters/minute], can run dry without harming the pump, and is self priming.

The 1 1/2" TankSaver valve provides an excellent odor seal and meets the ISO standard on venting requirements. The TankSaver valve will protect the holding tank from excessive suction by dockside pumps.

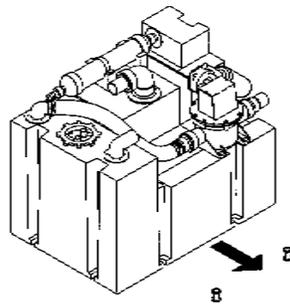
## INSTALLATION INSTRUCTIONS

Note: Spindles not supplied with 18HTS.

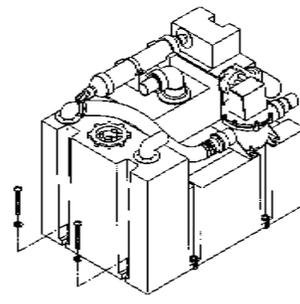
1. Avoid mounting the holding tanks next to extreme heat sources, such as engine manifolds.
2. Mount to surface supporting the entire area of the tank. Avoid mounting tank on projections such as fastener heads, which could puncture the tank.
3. Secure the tank as indicated below.



Mount (2) brass spindles using #10 x 2" (minimum) screw. Spindles are to be mounted on the two sides of the tank with limited access.



Slide tank and secure to the brass mounting spindles.



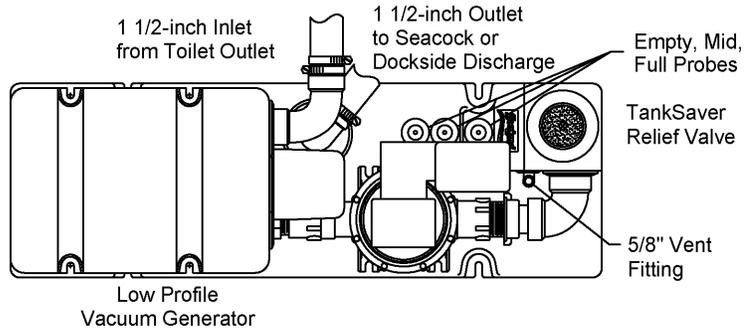
Secure the remaining mounting locations with #14 x 2" (minimum) screws and washers.

# INSTALLATION INSTRUCTIONS (cont'd)

Secure 5/8" vent hose, 1 1/2" holding tank inlet hose, 1 1/2" dockside discharge hose, and 1 1/2" overboard discharge pump hose (optional). SeaLand recommends that all 1 1/2" hoses be secured with double clamps to prevent any leaks that may occur if the fittings are undersized.

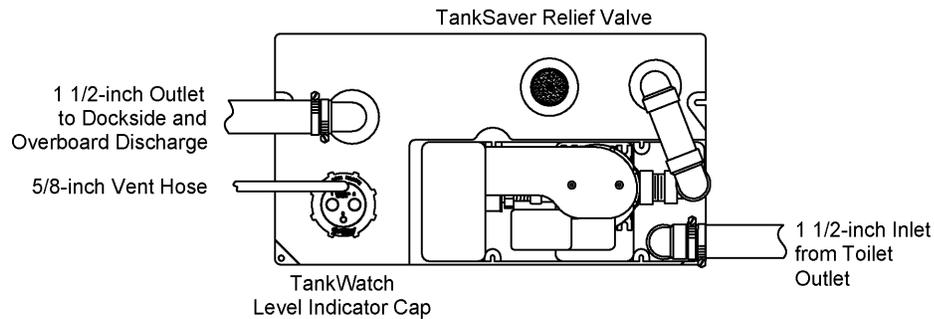
## MODEL 10 HOLDING TANK SYSTEM WITH VACUFLUSH TOILET SYSTEM VACUUM GENERATOR

(top view shown)



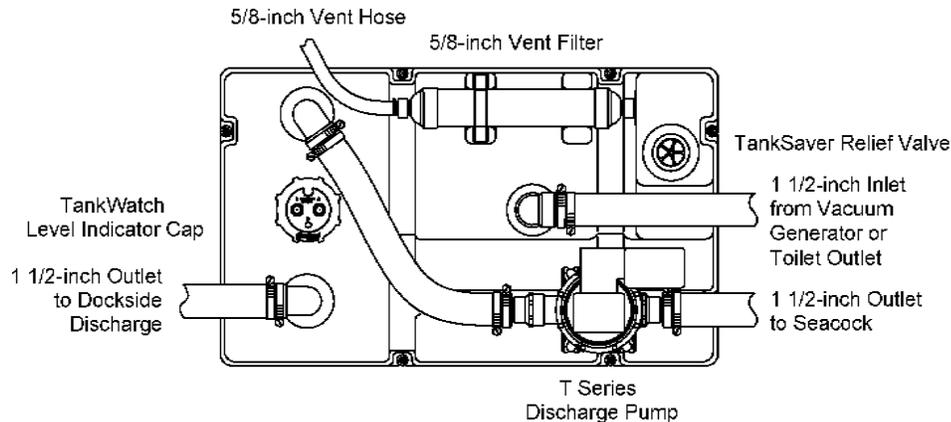
## MODEL 18 HOLDING TANK SYSTEM WITH VACUFLUSH TOILET SYSTEM VACUUM GENERATOR

(top view shown)



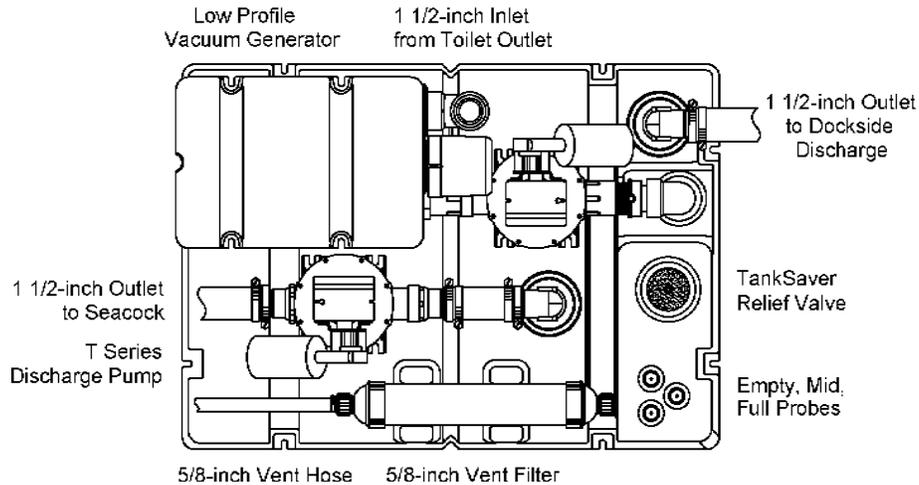
## MODEL 28 AND 40 HOLDING TANK SYSTEMS (SHOWN WITH OPTIONAL OVERBOARD DISCHARGE PUMP)

(top view shown)

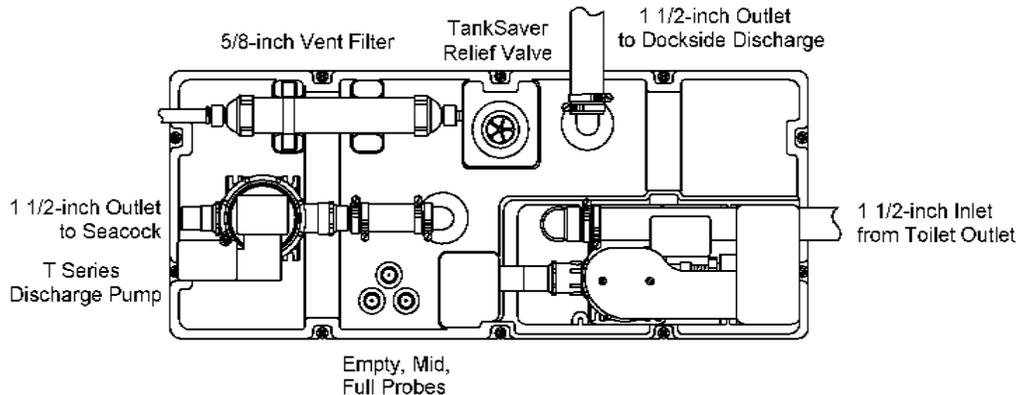


# INSTALLATION INSTRUCTIONS (cont'd)

## MODEL 35 HOLDING TANK SYSTEM WITH VACUFLUSH TOILET SYSTEM VACUUM GENERATOR (top view shown)



## MODEL 42 HOLDING TANK SYSTEM WITH VACUFLUSH SYSTEM VACUUM GENERATOR (OPTIONAL OVERBOARD DISCHARGE PUMP SHOWN) (top view shown)



## 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

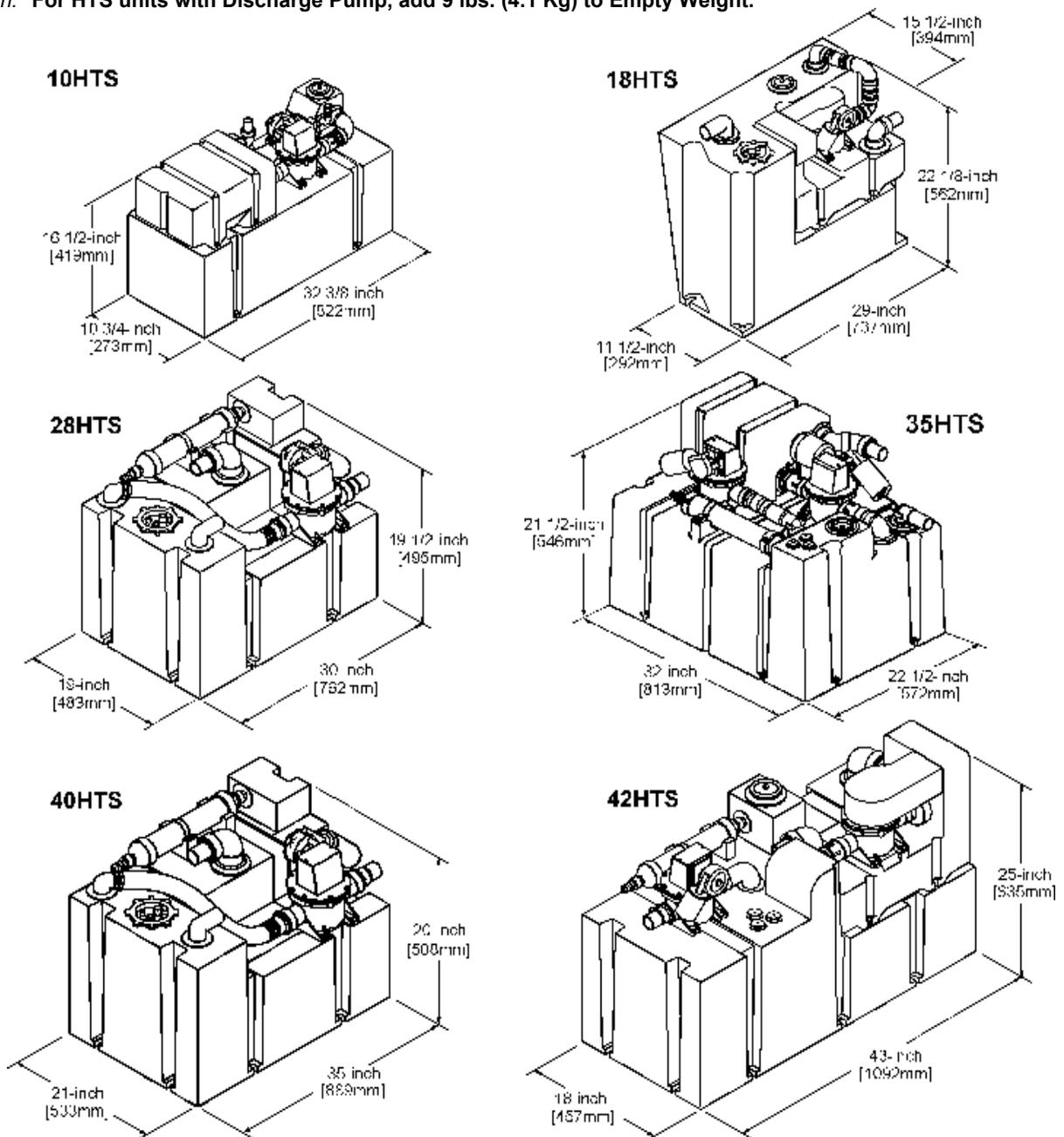
If using the HTS with SeaLand's VacuFlush® components, refer to VacuFlush Owner's Manual for winterization instructions. If using antifreeze to winterize the HTS, use only propylene glycol freshwater antifreeze that **does not contain alcohol**. Antifreeze that contains alcohol will result in damage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

# SPECIFICATIONS

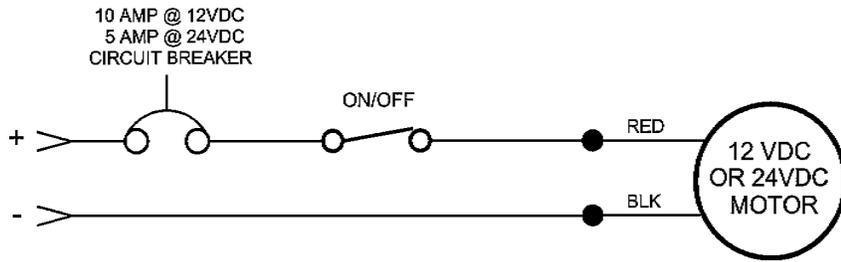
Model	Size Length x Width x Height	Capacity	Empty Weight	Max. Weight	Residual Capacity	Number of Flushes*
10HTS	32 3/8" x 10 3/4" x 16 1/2" 822mm x 273mm x 419mm	10 Gallons 38 Liters	36 Lbs. 16.3 Kg	116 Lbs. 52.6 Kg	.5 Gallons 1.9 Liters	28
18HTS	29" x 15 1/2" x 22 1/8" 737mm x 394mm x 562mm	18 Gallons 68 Liters	39 Lbs. 17.7 Kg	183 Lbs. 83 Kg	1.5 Gallons 5.6 Liters	50
28HTS	30" x 19" x 19 1/2" 762mm x 483mm x 495mm	28 Gallons 106 Liters	40 Lbs. 18 Kg	268 Lbs. 121.5 Kg	.8 Gallons 3 Liters	82
35HTS	32" x 22 1/2" x 21 1/2" 813mm x 572mm x 546mm	35 Gallons 132 Liters	58 Lbs. 26.3 Kg	338 Lbs. 153 Kg	1.0 Gallons 3.8 Liters	105
40HTS	35" x 21" x 20" 889mm x 533mm x 508mm	40 Gallons 151.4 Liters	44 Lbs. 20 Kg	380 Lbs. 172 Kg	1.6 Gallons 6 Liters	117
42HTS	43" x 18" x 25" 1092mm x 457mm x 635mm	42 Gallons 159 Liters	70 Lbs. 32 Kg	410 Lbs. 186 Kg	1.6 Gallons 6 Liters	123

\* VacuFlush toilets use as little as 0.11 gal. (0.4 l) of water per flush. Because we recommend adding more water when flushing solids, we conservatively estimate average water use at 0.2 gal. (0.76 l) per flush. Total effluent averages .34 gal. (1.29 l) per flush. For HTS units with Discharge Pump, add 9 lbs. (4.1 Kg) to Empty Weight.

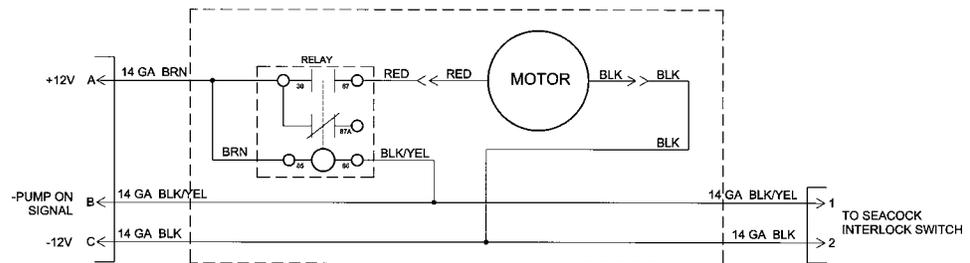


# WIRING

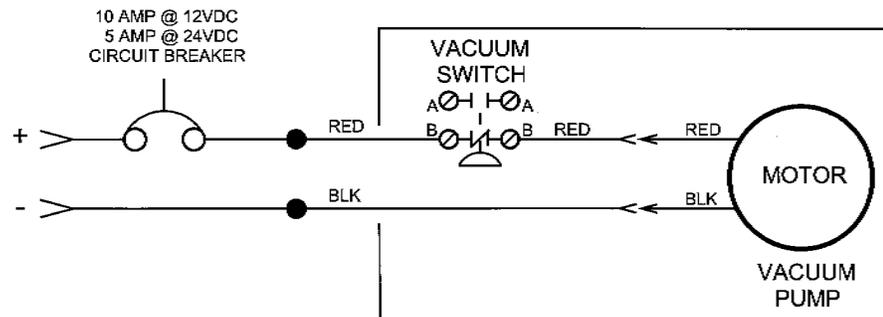
## Overboard Discharge Pump



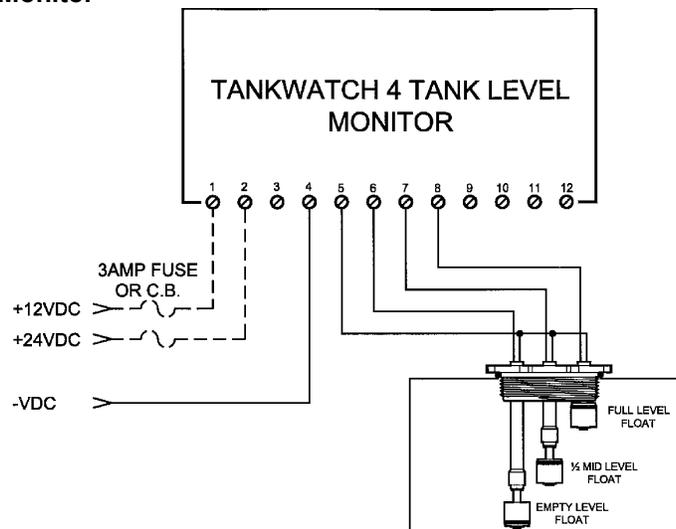
## Overboard Discharge Pump with Seacock Interlock Relay & Deutsch Connectors



## Vacuum Generator



## Tank Level Monitor



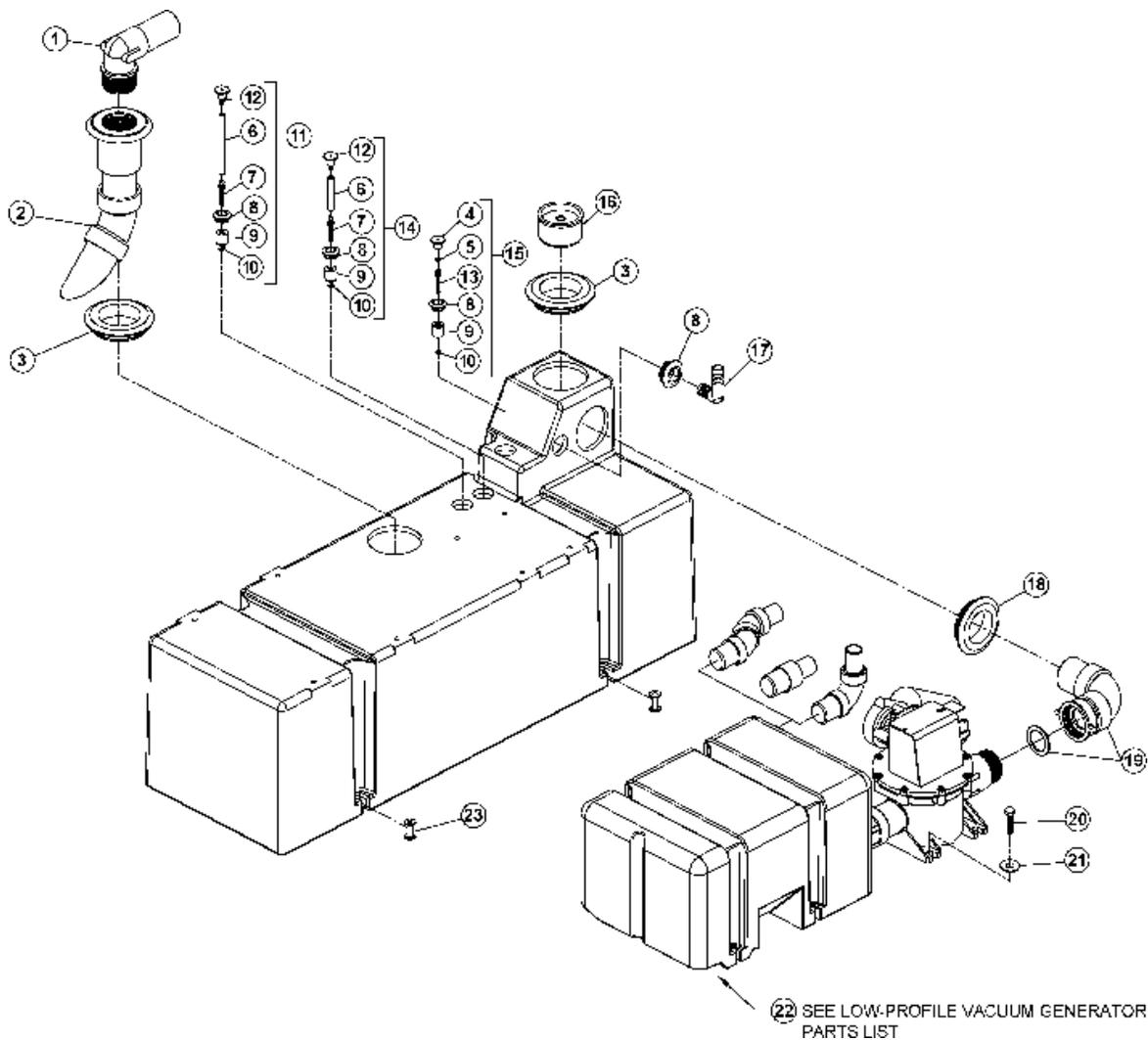
PLEASE NOTE THAT THE RECESSED SHOULDER OF THE FLOAT IS DOWNWARD ON THE EMPTY FLOAT.



# PARTS LIST – 10HTS

Item	Part No.	Description	Item	Part No.	Description
1	600342806	1 ½" MPT x 90° Elbow	13	600340425	Reed Switch Stem (threaded)
2	385310767	10 HTS Diptube Kit (includes item 3)	14	385311037	Mid Level Float Indicator Kit – 10 HTS
3	600343023	2" Uniseal®	15	313900101	Full Float Indicator – 10 HTS
4	600343758	Tank Full Probe Adapter	16	313255247	1 ½" TankSaver™ Valve (incl. item 3)
5	600342766	O-ring, ½" OD x 3/8" ID	17	600343974	5/8" Barbed Elbow
6	600342238	½" Flexible Tubing	18	600342932	1 ½" Uniseal
7	600343657	Reed Switch Stem (barbed end)	19	385310772	Swivel Elbow/Uniseal Kit
8	600342958	½" Uniseal	20	600342467	¼-20 x ¾" Hex Head Screw
9	600340423	Reed Switch Float	21	600346795	Flat Washer, 5/8" OD x .281" ID x .050" Thick
10	600340424	Float Lock Ring	22	317770012	12VDC Low-Profile Vacuum Generator
11	385310768	Empty Float Indicator Kit – 10 HTS	22	317770024	24VDC Low-Profile Vacuum Generator
12	600344258	Barbed Adapter (Uniseal)	23	600342798	Mounting Spindle

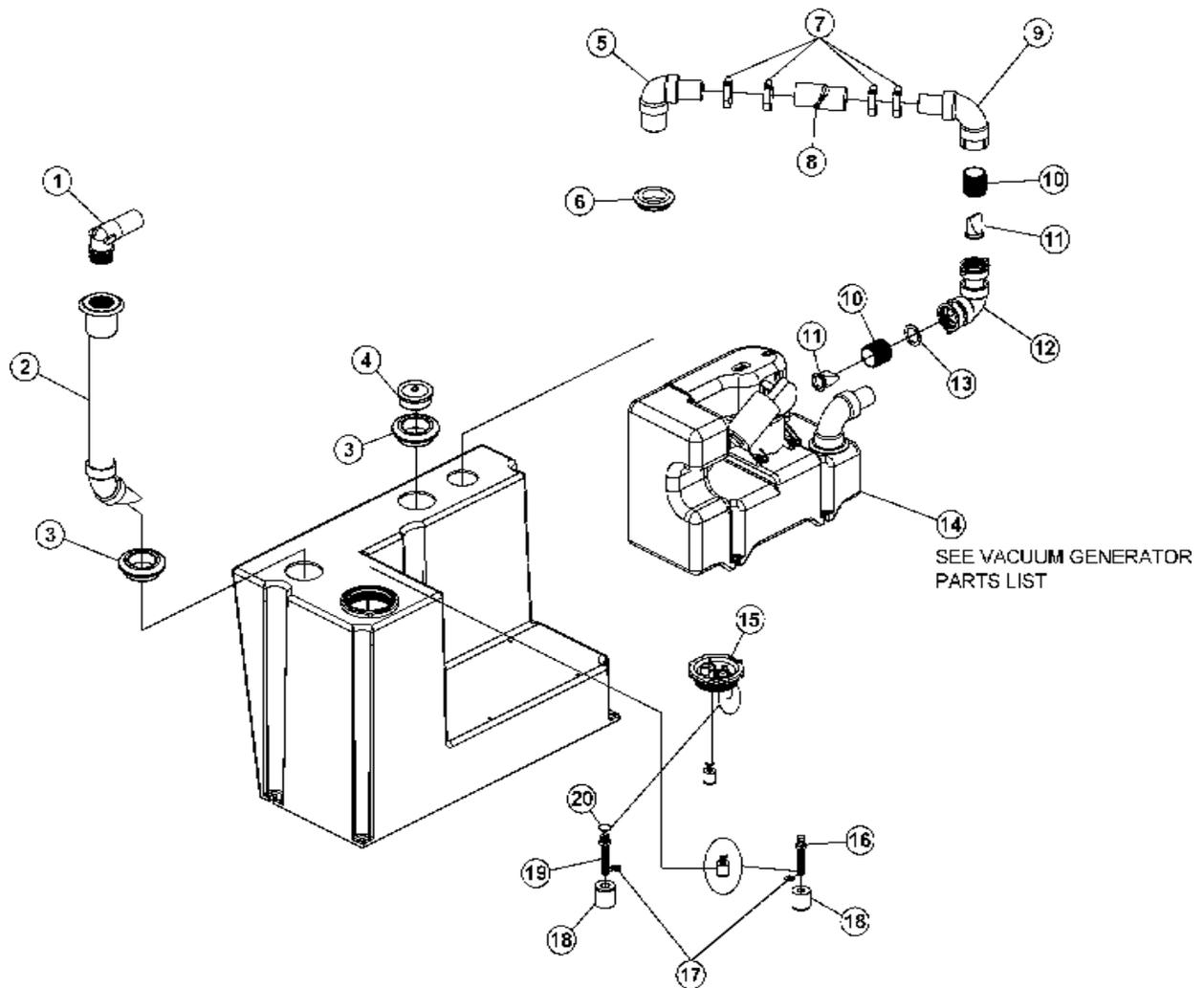
## 10-GALLON HOLDING TANK SYSTEM



# PARTS LIST – 18HTS

Item	Part No.	Description	Item	Part No.	Description
1	600342806	1 ½" MPTx 90° Elbow	13	600342781	1 ½" Slip Joint Seal
2	385310707	Diptube Kit, 18HTS (includes item 3)	14	317759012	12VDC Vacuum Generator
3	600343023	2" Uniseal		317759024	24VDC Vacuum Generator
4	313255247	1 ½" TankSaver (includes item 3)	15	385310713	TankWatch Cap w/vent
5	385310708	1 ½" Short Elbow Kit (includes item 6)		385310711	TankWatch Cap w/vent, Deutsch Connector
6	600342932	1 ½" Uniseal	16	600343657	Stem, Barbed-End
7	600343071	2" SS Hose Clamp	17	600340424	Float Lock Ring
8	306342871	1 ½" OdorSafe Hose	18	600340423	Reed Switch Float
9	385310709	1 ½" Sweep Elbow Kit	19	600340425	Stem, Threaded-End
10	600342789	1 ½" Close Nipple	20	600342766	O-Ring, 3/8" x 1/2" x .060
11	600347802	1 ½" Duckbill Valve	-	385310714	Optional 10' Wiring Harness with Deutsch Connectors (not shown)
12	385310710	1 ½" Swivel Nut Elbow Kit (includes item 13)			

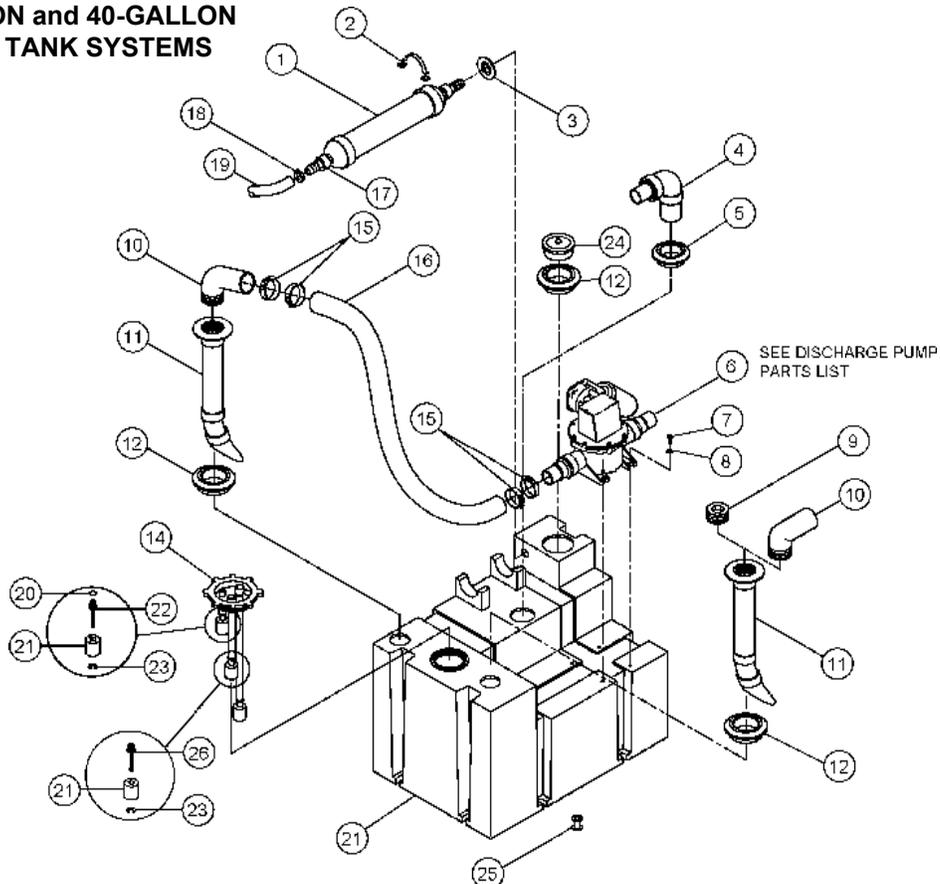
## 18-GALLON HOLDING TANK SYSTEM



# PARTS LIST – 28HTS and 40HTS

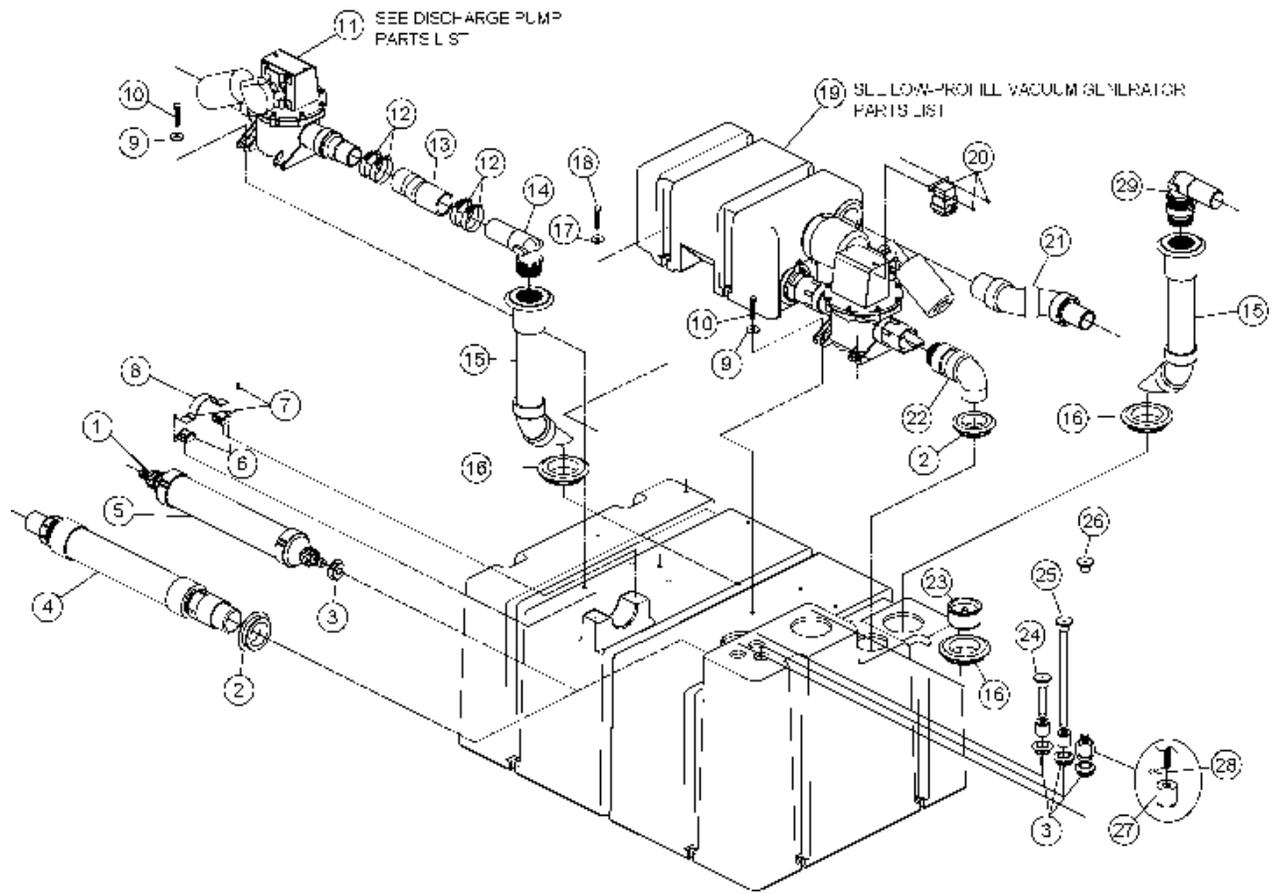
Item	Part Number		Description
	28HTS	40HTS	
1	309310001		Holding Tank Vent Filter (does not include item 17)
2	385310673		Filter Mounting Hardware
3	600342958		½" Uniseal®
4	385310635		Inlet Elbow (includes item 5)
5	600342932		1 ½" Uniseal
6	317301200		12VDC Discharge Pump
	317401200		12VDC Discharge Pump with Deutsch Connectors
	317302400		24VDC Discharge Pump
	317402400		24VDC Discharge Pump with Deutsch Connectors
7	600342467		¼-20 x ¾" Hex Head Screw
8	600346795		¼" Flat Washer
9	600342173		1 ½" PVC Male Plug (used only without optional discharge pump)
10	600342806		1 ½" MPT Elbow x 90
11	385310647	385310648	Diptube Assembly
12	600343023		2" Uniseal
13	385310719	385310720	Holding Tank, Machined
14	385310645	385310646	TankWatch Cap
	385310715	N/A	TankWatch Cap w/optional Deutsch connectors
15	600343071		2" Hose Clamp
16	306342871		1 ½" OdorSafe® Hose
17	385310135		Vent Filter Fittings
18	600345932		7/8" Hose Clamp
19	306345688		5/8" Vent Hose
20	600342766		O-Ring
21	600340423		Float
22	600340425		Stem, Threaded-End
23	600340424		Lock Ring
24	231355247		TankSaver Valve (includes item 12)
25	600342798		Mounting Spindle
26	600343657		Stem, Barbed-End

## 28-GALLON and 40-GALLON HOLDING TANK SYSTEMS



# PARTS LIST – 35HTS

## 35-GALLON HOLDING TANK SYSTEM

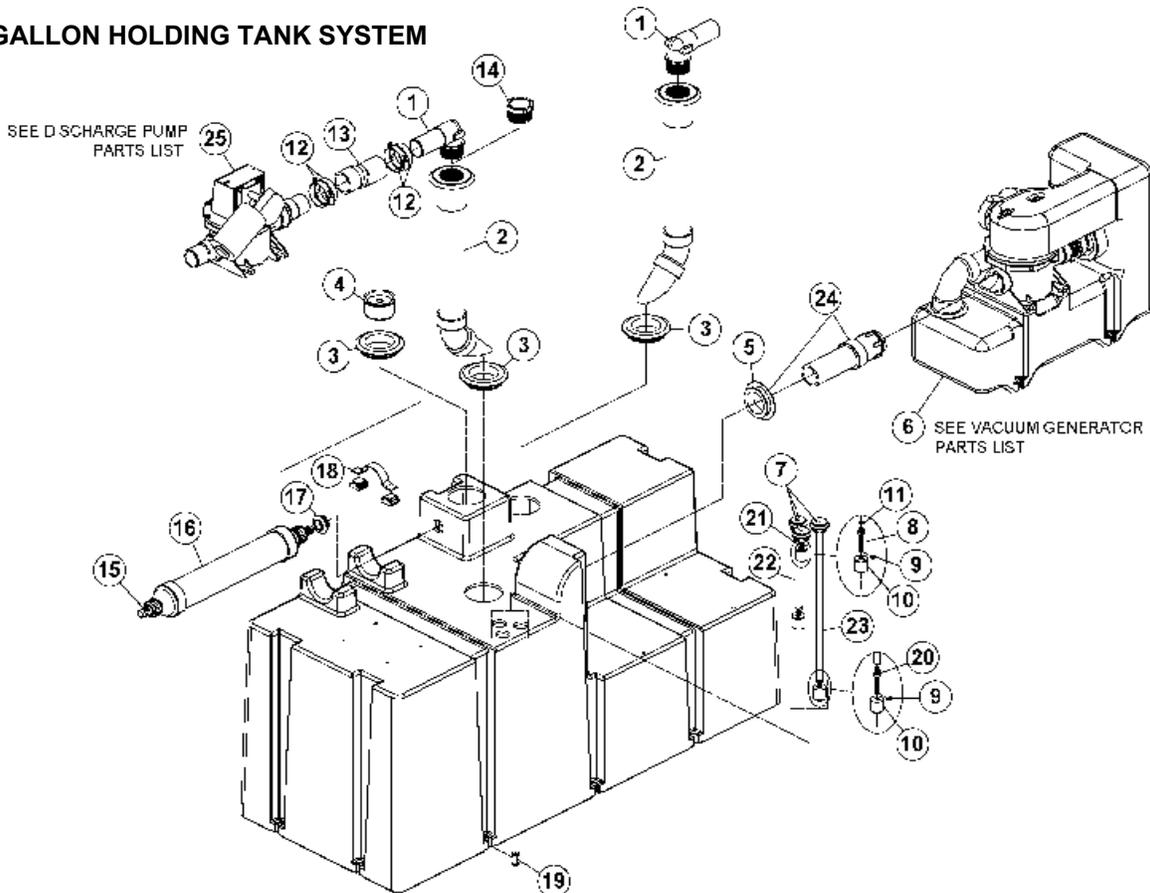


Item	Part Number	Description	Item	Part Number	Description
1	385310135	Vent Filter Fittings	16	600343023	2" Uniseal
2	600342932	1½" Uniseal®	17	600341370	¼-20 X 1¼" long Hex Head SS Screw
3	600342958	½" Uniseal	18	600347167	Flat Washer, .850 x .294 x .050 SS
4	385310004	1½" Holding Tank Vent Filter	19	317770012	12VDC Low-Profile Vacuum Generator
5	385310001	5/8" Holding Tank Vent Filter	317770024	24VDC Low-Profile Vacuum Generator	
6	600343528	Thumblock Clamp	20	385310842	Relay/Bracket Kit – 12VDC
7	600343536	#6 x ½" Oval Head SS Screw	385310843	Relay/Bracket Kit – 24VDC	
8	600343529	Strap	21	385310787	45° Elbow Kit (includes item 2)
9	600346795	Flat Washer, .625 x .281 x .050 SS	22	385310844	Tank Inlet Elbow Kit (includes item 2)
10	600342467	¼-20 x 3/4" Long Hex Head SS Screw	23	313255247	1½" TankSaver Valve (includes item 16)
11	317301200	12VDC Discharge Pump	24	385310841	Full Level Indicator
	317302400	24VDC Discharge Pump	25	385310840	Mid Level Indicator
12	600343071	2" SS Clamp	26	385310839	Empty Level Indicator
13	306342871	1½" OdorSafe® Hose	27	600340423	Float
14	600342806	1½" MPT Elbow	28	600340424	Lock Ring
15	385310837	Diptube Kit – 35 HTS (includes item 16)	29	385310914	1½" Swivel Elbow Kit

# PARTS LIST – 42HTS

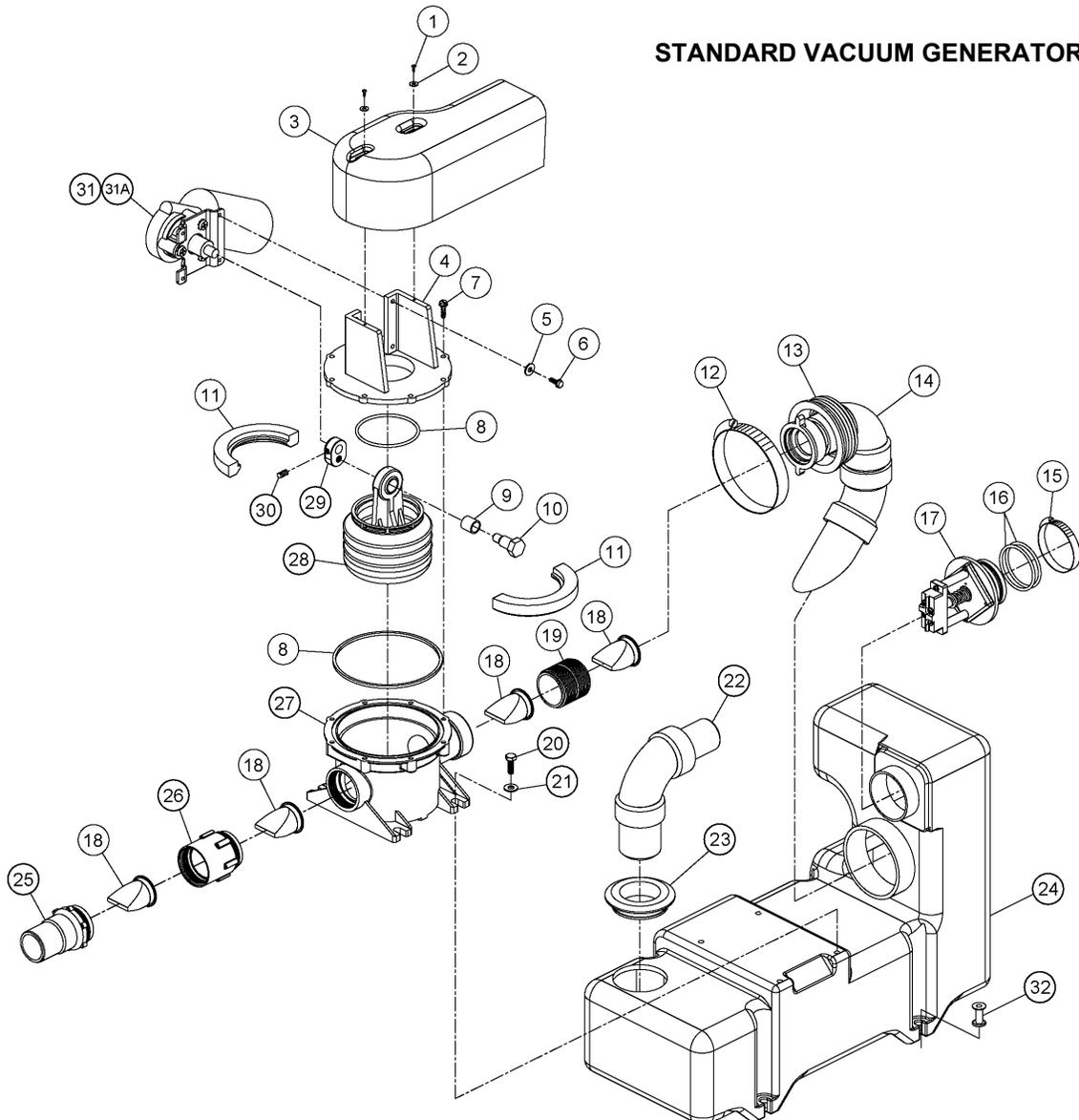
Item	Part No.	Description
1	600342806	1-1/2" MPT Elbow x 90
2	385310668	42 HTS Diptube (includes item 3)
3	600343023	2" Uniseal
4	313255247	TankSaver Valve (includes item 3)
5	600342932	1-1/2" Uniseal
6	385310669	12VDC Vacuum Generator (includes item 24)
	385310717	12VDC Vacuum Generator with Deutsch Connectors (includes item 24)
	385310672	24VDC Vacuum Generator (includes item 24)
	385310718	24VDC Vacuum Generator with Deutsch Connectors (includes item 24)
7	385310905	Kit, Level Indicators – 42HTS, with Deutsch connectors
8	600340425	Stem, Threaded-End
9	600340424	Lock Ring
10	600340423	Float
11	600342766	O-Ring
12	600343071	2" Hose Clamp
13	306342871	1-1/2" OdorSafe Hose
14	600342173	1-1/2" PVC Male Plug (used only without optional T Pump)
15	385310135	Vent Filter Fittings
16	385310001	Vent Filter (does not include item 15)
17	600342958	1/2" Uniseal
18	385310673	Filter Mounting Hardware
19	600342798	Mounting Spindle
20	600343657	Stem, Barbed-End
21	313900101	Tank Full Float
22	385310909	42 HTS Mid Level Float
23	385310915	42 HTS Empty Level Float
24	385311035	42 HTS Vacuum Generator Outlet (includes item 5)
25	317301200	12VDC Discharge Pump
	317401200	12VDC Discharge Pump with Deutsch Connectors
	317302400	24VDC Discharge Pump
	317402400	24VDC Discharge Pump with Deutsch Connectors

## 42-GALLON HOLDING TANK SYSTEM



# PARTS LIST – VACUUM GENERATOR

Item	Part No.	Description	Item	Part No.	Description
1	600340237	Pan Phillips Head Screw, #4 x 3/8", SS	19	600342789	1 1/2" NPT Close Nipple
2	600343027	Flat Washer, .312" OD x .030 Thick, SS	20	600342467	1/4-20 x 3/4" Hex Head Screw, SS
3	600342804	Motor/Switch Cover	21	600346795	Flat Washer, .625" OD x .281" ID x .050
4	600341506	Pump Top Closure	22	385310635	Inlet Elbow Kit (includes item 23)
5	600344087	Flat Washer, #10 x 5/8" OD, SS	23	600342932	1 1/2" Uniseal®
6	600342332	Hex WasherHead Screw, #10-32 x 1/2", SS	24	385310542	Vacuum Generator Tank
7	600341503	Hex WasherHead Screw, #10-32 x 7/8", SS	25	600347800	Valve Nipple
8	385310151	O-Ring Kit	26	600347801	Valve Adapter
9	600340664	Bushing	27	600341504	Pump Body
10	600343006	Shoulder Screw, 1/2 x .687 x 3/8-16	28	385230980	Bellows Assembly (includes item 9)
11	600347807	Bellows Clamp	29	600344470	Pump Eccentric
12	600342783	3-3/4" Diameter Worm Gear Clamp	30	600347788	1/4-28 x 5/16" Set Screw, 1/2 Dog Point
13	600342779	O-Ring, 3" ID x 3 1/4" OD	31	385310245	12 VDC Motor Kit
14	385310539	Diptube Assembly Kit (includes item 13)	31A	385310246	24 VDC Motor Kit
15	600342782	2 1/2" Diameter Worm Gear Clamp	32	600342798	Mounting Spindle
16	600342778	O-Ring, 2" ID x 2-1/4" OD	NS	385310774	Kit, VG Pump Assembly, 12VDC
17	385310540	Vacuum Switch Kit (includes items 15, 16)	NS	385310775	Kit, VG Pump Assembly, 24VDC
18	600347802	Duckbill Valve			

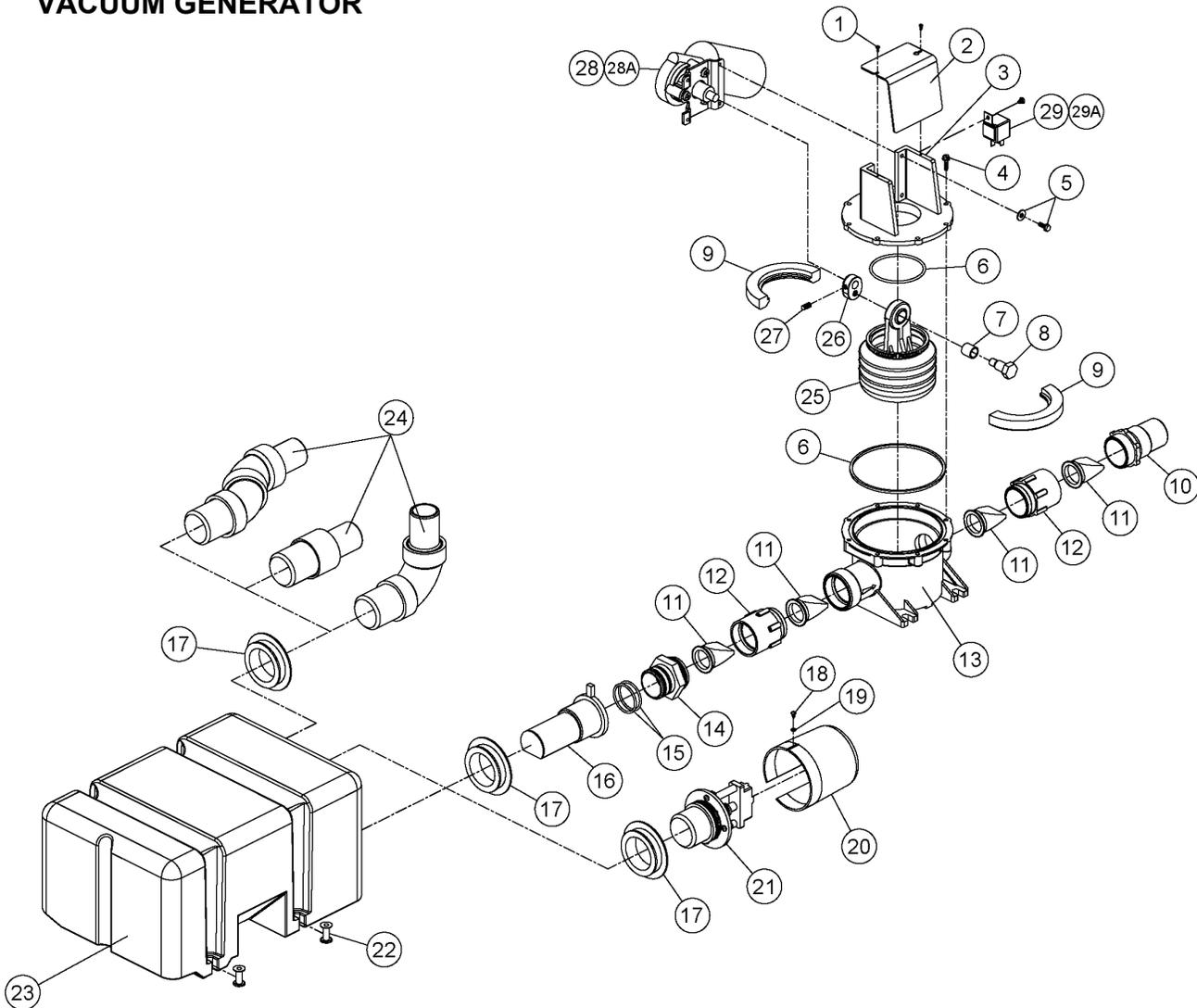


**STANDARD VACUUM GENERATOR**

**NOTE:** When reassembling pump, tighten screw (item no. 7) , to 20 ±2 lbs., or until snug. Overtightening will cause holes to strip.

# PARTS LIST – LOW-PROFILE VACUUM GENERATOR

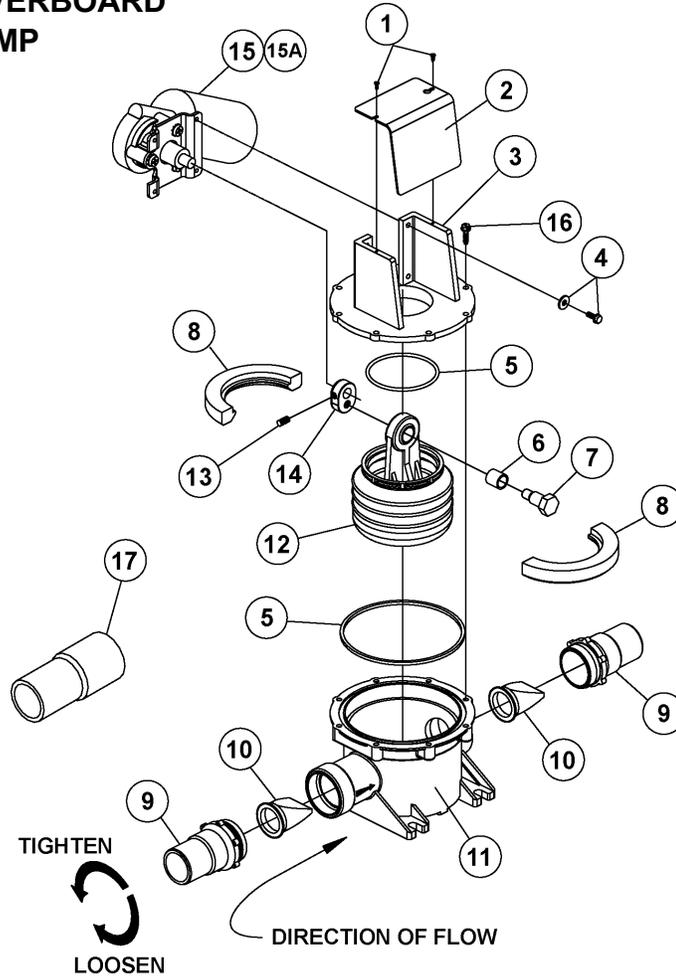
## LOW-PROFILE VACUUM GENERATOR



Item	Part No.	Description	Item	Part No.	Description
1	600340237	Pan Phillips Head Screw, #4 x 3/8", SS	19	600343027	Washer, #6 x 3/8"
2	385640239	Pump Cover	20	600343913	Vacuum Switch Cover
3	600341506	Top Closure	21	385310626	Vacuum Switch Kit
4	600341503	Hex Washer Head Screw, #10-12 x 7/8", SS	22	600342798	Mounting Spindles
5	600342332	Hex Washer Head Screw, #10-32 x 1/2", SS	23	385310755	Low-Profile Vacuum Tank
6	385310151	O-Ring Replacement Kit	24	385310635	Inlet Elbow Assembly
7	600340664	Bushing		385310690	Straight Inlet (Optional)
8	600343006	Shoulder Screw, 1/2" x .687 x 3/8-16		385310787	45° Inlet (Optional)
9	600347807	Bellows Clamp	25	385230980	Bellows Assembly
10	600347800	Valve Nipple	26	600344470	Pump Eccentric
11	600347802	Duckbill Valve	27	600347788	Set Screw, 1/4-28 x 5/16", 1/2 Dog Point
12	600347801	Valve Adapter	28	385310756	12 VDC Motor w/ Deutsch Connection
13	600341504	Pump Body		385310245	12 VDC Motor
14	600344676	Pump Fitting		385310757	24 VDC Motor w/ Deutsch Connection
15	600343936	O-Ring		385310246	24 VDC Motor
16	600344675	Diptube Kit – Low-Profile VG	29	600343053	Relay, SPDT 12 VDC 40/30 Amp, VF4
17	600342932	Uniseal® 1 1/2"	29A	600343053	Relay, SPDT 12 VDC 40/30 Amp, VF4
18	600343621	Pan Phillips Head Screw, #4 x 1/4"			

# PARTS LIST – DISCHARGE PUMP

## SANIPUMP™ OVERBOARD DISCHARGE PUMP



Item	Part No.	Description
1	600340237	#4 x 3/8" Pan Head Screw
2	385640239	Pump Cover Kit
3	600341502	Pump Top Closure
4	600342332	#10-32 x 1/2" Hex Head Screw
5	385310151	O-Ring Replacement Kit
6	600340664	Bushing
7	600343006	Shoulder Screw, 1/2" x .687 x 3/8-16
8	600347807	Bellows Clamp
9	600340669	Valve Nipple
10	600347802	1 1/2" Duckbill Valve
11	600341489	Pump Body
12	385230980	Bellows Assembly (includes item 6)
13	600347788	Set Screw, 1/4-28 x 5/16"
14	600344470	Eccentric
15	385310245	12 VDC Motor
15A	385310246	24 VDC Motor
16	600341503	#10-12 x 7/8" Hex Washer Head Screw *
17	600341113	1" x 1 1/2" Reducing Adapter
	385310250	<b>Not Shown</b> Pump Assembly, Less Motor (includes items 3, 5, 6, 8, 9, 10, 11, 12, 19)

\*Note: When reassembling pump, tighten screws to 20±2lbs., or until snug. Over-tightening will cause holes to strip.

# 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. Micro-float switches are installed in all HTS tanks either as a unit (with a TankWatch cap) or as individual Empty, Mid and Full probes.

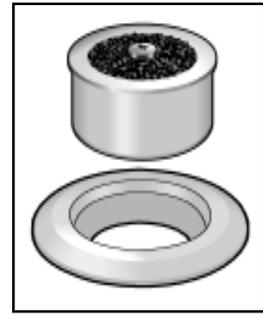


## VacuFlush Shutdown Relay

To prevent overfilling of a holding tank, a shutdown relay is supplied as standard with 10HTS, 18HTS, and 35HTS models. The relay is optional (p/n 600341292 - 12VDC, p/n 600342490 - 24VDC) on standard 28HTS, 40HTS, and 42HTS models. The relay shuts off power to the vacuum generator when the holding tank reaches the "Full" level, preventing further flushing of the toilet.

## TankSaver™ Vacuum Relief Valve

SeaLand's TankSaver™ vacuum relief valve prevents damage due to holding tank implosion from dockside pumps that operate at very high levels of vacuum. The TankSaver valve opens automatically under vacuum, but remains sealed regardless of shock-loading or vibrations.



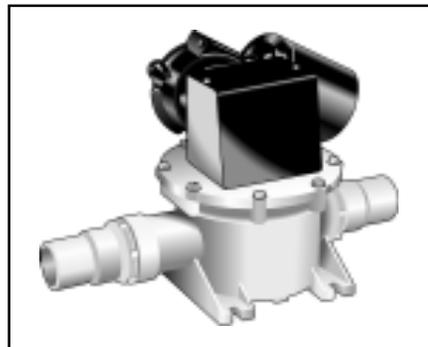
## SaniGard™ Holding Tank Vent Filter\*

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-inch (16mm) or 1½-inch (38mm) 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 the 10HTS takes about three minutes, and for the 42 HTS 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.

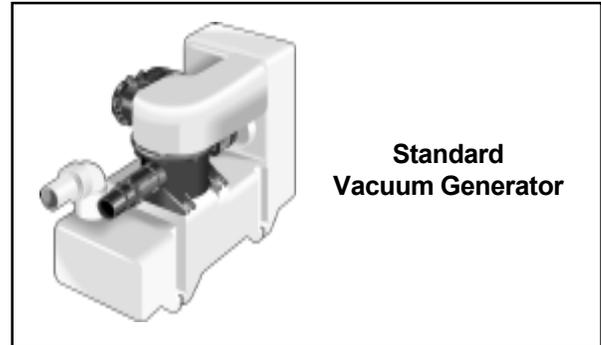
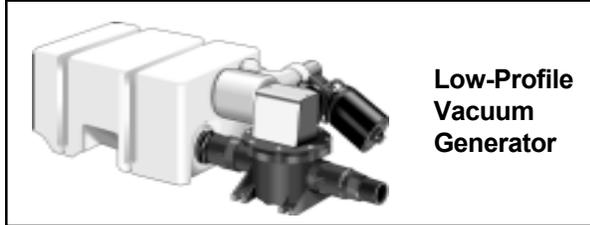


\* Not available on all HTS models.

# VACUFLUSH® VACUUM GENERATORS

## Vacuum Generators

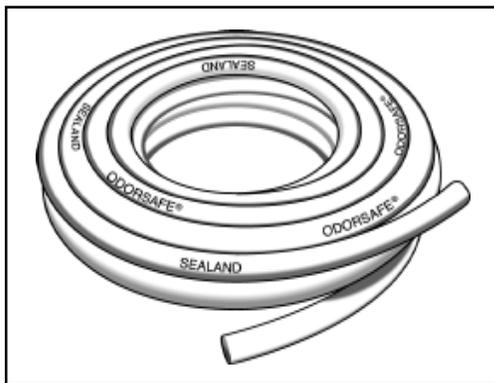
VacuFlush vacuum generators combine the vacuum tank and vacuum pump in one unit. Our standard and low-profile configurations eliminate hose runs between the vacuum tank and pump that are found in previous VacuFlush sanitation system installations.



## OTHER HTS FEATURES

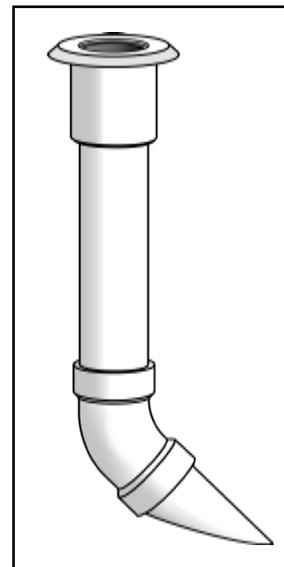
### OdorSafe® Sanitation Hose

Our exclusive OdorSafe hose provides the best odor barrier of any marine hose available. A result of more than a decade of research and development, this sanitation hose delivers up to 16 times greater resistance to sulfurous malodors than other so-called “no-odor” marine hoses. On HTS models, this hose is used for all 1 1/2-inch (38mm) hose connections. It's also the best choice for connecting the discharge pump to the through-hull and deck waste fittings.



### Diptube Discharge Kit

Our diptube discharge design allows for removal of waste from the top of the holding tank rather than near the bottom of the tank. This feature greatly reduces the opportunities for stagnant sewage to sit in tank discharge lines – a main cause of odor permeation and hose failure.



# HOLDING TANK DISCHARGE INFORMATION

## OVERBOARD DISCHARGE

### *When is it okay to discharge overboard?*

The answer to this question depends on where you are boating. If you are three miles or more offshore in U.S. coastal waters, you can legally discharge untreated effluent from the holding tank.

Within three miles of shore, however, it is not legal to dump raw sewage into the water. Effluent can only be discharged if it has been treated by a Type I or II marine sanitation device (MSD), and if the waters have not been designated as a “No Discharge Zone.”

Otherwise, boats within a coastal “No Discharge Zone” must contain their waste in a Type III MSD which uses a holding tank. SeaLand Holding Tank Systems are Type III MSDs. The waste can be discharged at dockside pump-out facilities. All rivers and freshwater lakes, including the Great Lakes, are protected by the Environmental Protection Agency as “No Discharge Zones” as well, so Type III MSDs must be used in these areas, and sewage can be discharged only at dockside pump-out facilities.

### **No Discharge Zones**

An up-to-date list of No Discharge Zones can be located on the World Wide Web at:

[http://www.epa.gov/owow/oceans/regulatory/vessel\\_sewage/vsdnozone.html](http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/vsdnozone.html).

## DOCKSIDE DISCHARGE

When pumping out a holding tank, it is important to create an airtight seal between the deck’s discharge fitting and the dockside suction pump discharge hose. But because deck fittings vary in thread size and internal dimensions, it is sometimes difficult to achieve this seal.

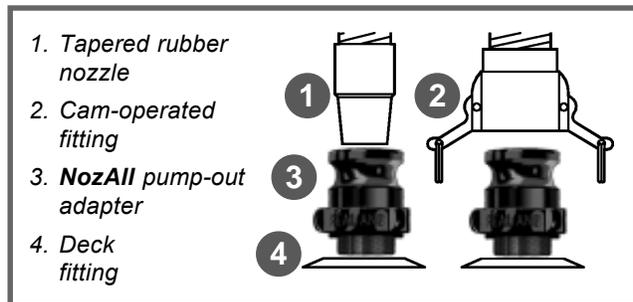
Dockside pump suppliers have tried to solve this problem by using a tapered rubber nozzle that will fit most standard size openings. But the fit is not airtight, so not enough vacuum may be achieved for complete pump-out. And the rubber abrades over time, reducing its effectiveness.

Another remedy is a cam-operated coupling. A special adapter is required for this, and marina-supplied adapters have a strange way of disappearing.

The SeaLand **NozAll™ Pump-out Adapter** works with both tapered rubber nozzle and cam-operated fittings. There are three NozAll models available to match the most popular deck fitting threads and sizes.

### **NozAll**

<b>Part No.</b>	<b>Deck Fitting Thread, Size Description</b>
310343502	11.5 tpi (4.5 tpcm), 1-7/8 in. OD (48mm)
310343503	11.5 tpi (4.5 tpcm), 1-5/8 in. OD (41mm)
310343504	16 tpi (6.3 tpcm), 1-5/8 in. OD (41mm)



### **Helpful Pump-out Hints**

**Completely unroll the suction hose** and lay it with the straightest possible runs to help increase flow.

**Inexpensive plastic or latex gloves** should be used. Do not dispose of gloves in water.

**Always wash hands with hot water and soap** when finished.

**Clean and disinfect surfaces** with typical bathroom cleaner.

**Store hose and attachments** after every use. Leave area in clean condition for next boat owner.

**Continually flush pump-out connection** with fresh water during pump-out if you cannot make an airtight connection.

# 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. You may also write us at Dometic Corp., P.O. Box 38, Big Prairie Ohio 44611.

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

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 SeaLand product line.

Fax: 330-496-3097 U.S.A. and Canada  
330-496-3220 International

## U.S.A. MASTER SANITATION DISTRIBUTORS

### U.S.A. – North Central (IL, IN, KY, MI, OH)

Midwest Marine Supply  
24300 Jefferson Ave.  
St. Clair Shores, MI 48080  
Tel: 586-778-8950  
800-860-1540

Fax: 586-778-6108  
E-mail: midwestmarine@yahoo.com

Contact: Bob Kennedy

### U.S.A. - Northeast (CT, DE, DC, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV)

Northeast Marine Sanitation  
69 Florida Street  
Farmingdale, NY 11735  
Tel: 631-752-7606  
800-352-4323

Fax: 631-752-7615  
888-283-7606

E-mail: northeast@northeast sanitation.com  
Contact: Mike Starito

### U.S.A. - Northwest (AK, ID, MT, OR, WA, WY)

Marine Sanitation, Inc.  
1900 N. Northlake Way, Suite 212  
Seattle, WA 98103  
Tel: 206-633-1110  
800-624-9111

Fax: 206-633-0317  
E-mail: marinesan@mindspring.com

Contact: Ric Kolb

### U.S.A. - South Central (AR, KS, LA, MO, MS, NM, OK, TX)

AER Supply  
P.O. Box 349  
2301 Nasa Road #1  
Seabrook, TX 77586  
Tel: 281-474-3276  
800-767-7606

Fax: 281-474-2714  
E-mail: rsmiller@aersupply.com  
Contact: Richard Miller

### U.S.A. - Southeast (AL, FL, GA, NC, PR, SC, TN, VI)

Environmental Marine  
111 S.W. 23rd Street, Suite A  
Fort Lauderdale, FL 33315  
Tel: 954-522-2626  
800-522-2656

Fax: 954-522-5152  
E-mail: info@environmentalmarine.com  
Contact: John or Jill Hopkins

### U.S.A. - Southwest (AZ, CO, NV, UT, CA-south)

Ardemco Marine Specialties  
778 West 17th Street  
Costa Mesa, CA 92627  
Tel: 949-722-7672

800-253-0115  
Fax: 949-642-9582  
E-mail: ardemco@earthlink.net  
Contact: Rick Glasser

### U.S.A. – Upper Midwest (IA, MN, NE, ND, SD, WI)

PowerHouse Marine  
518 Logan  
La Crosse, WI 54603  
Tel: 608-784-9580  
888-752-4539

Fax: 608-784-8422  
E-mail: dave@powerhousemarine.com  
Contact: Dave Tucker

### U.S.A. – Northern California

Fox Marine  
2250 Zanker Road, Unit D  
San Jose, CA 95131  
Tel: 408-451-9055  
800-826-2873

E-mail: foxmarco@pacbell.net  
Contact: Charlie Barker

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PCIA, De Buenos Aires  
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E-mail: trimer@trimer.com.ar  
Contact: Carlos Friedlander  
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Contact: Petra Bach

### Austria

Ocean Marine  
See **Germany**

### Austria

Ocean Marine  
See **Germany**

### Belgium

Auerhaan B.V.  
See **The Netherlands**

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12-A Leslie Street  
Toronto, Ontario M4M 3H7  
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Fax: 416-465-2098  
E-mail: info@eastmar.com  
Contact: Paul Gales

### Canada - West

Western Marine Company  
1494 Powell Street  
Vancouver, BC V5L 5B5  
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800-663-0600  
Fax: 604-253-2656  
800-663-6790  
E-mail: sales@westernmarine.com  
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Contact: Andy Y. Lim

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Contact: Rosa Dahlberg

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E-mail: sales@leesan.com  
Contact: Chris Coburn

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# MANUFACTURER'S ONE-YEAR LIMITED WARRANTY

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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.

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## 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.



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