

# ATLANTES FREEDOM™ TOILET with VORTEX-VAC™

## Installation and Maintenance Instructions

MODEL AVHW (Household Size, White Bowl) Manufactured after September 2015

MODEL AVHA (Household Size, Almond Bowl) Manufactured after October 2023

THE FOLLOWING ARE CAUTIONARY STATEMENTS THAT MUST BE READ AND FOLLOWED DURING BOTH INSTALLATION AND OPERATION.

**WARNING:**



*Raritan Engineering Company, Inc. recommends that a qualified person or electrician install this product. Equipment damage, injury to personnel or death could result from improper installation. Raritan Engineering Company, Inc. accepts no responsibility or liability for damage to equipment, injury or death to personnel that may result from improper installation or operation of this product.*

**WARNING: HAZARD OF SHOCK OR FIRE**



Always use recommended fuse, circuit breaker and wire size.

Motors used with this product are "Ignition Protected". They are not however, explosion-proof.

**DO NOT** run continuously for more than 30 seconds.

**WARNING: HAZARD OF FLOODING**



Always shut off seacock(s) before leaving the boat unattended. Double clamp all below waterline hose fittings and check frequently for integrity.

### Description:

Our Atlantes Freedom with Vortex-Vac Household size toilet is available in white or bone, 12 VDC, 24 VDC and 120V/240V AC. Fresh Water Model utilizes onboard pressurized fresh water. Raw Water Pump Model utilizes a remote intake pump to pump raw water to the bowl. The Sea/Fresh Model can switch between fresh and raw water source.

### Flush control options available:

**Flush Handle Control:** Provides momentary operation of flush water and discharge. Available in momentary or timed.

**Smart Toilet Control (STC):** Provides timed operation and independent control of flush water and discharge with handle or wall switch.

### Multifunction Flush Panel

**(221600 [White] or 221600B [Black]):** Provides momentary operation and independent momentary control of flush water and discharge.

### Wireless Remote Bluetooth Control (STCBL):

Operate your Atlantes smart toilet control panel up to 50 ft. (15 m) away from the toilet. Eliminates the need to route wires through bulkheads and cabinetry.

### Pressurized Fresh Water Model



### Remote Raw Water Pump Model



1-800-352-5630

www.raritaneng.com

**IMPORTANT SAFETY INSTRUCTIONS:**

Toilets mounted at or below the waterline must have a vented loop installed in the discharge line. The top of the vented loop must be a minimum of 4" (10 cm) above the waterline at the boat's greatest angle of heel (see vented loop manufacturer's instructions).

Remote Raw Water Pump Models must also have a vented loop installed between the intake pump and the toilet bowl.

Double clamp all below waterline connections.

Always replace circuit breaker and fuses with same rating. Use Raritan parts to maintain ignition protection requirements.

**WARNING:**

Young children should NOT be left unsupervised around toilet. Serious injury or death could occur. A sharp blade is used for maceration of waste. Children can drown in water retained in the bowl. Seat and/or lid could close and strike child.

**Install the Warning Label (L322) where it can be easily seen.**

**Cleaning Instructions**

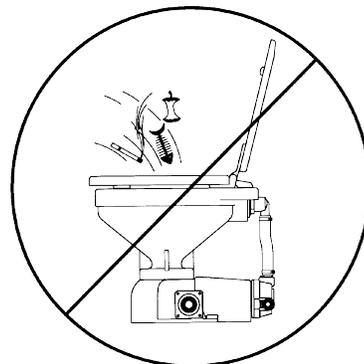
**IMPORTANT:** Do not use cleaners that contain ammonia, ethyl acetate, phosphoric acid or concentrated chlorine bleach. Do not allow acids, such as vinegar, and other cleaners to sit for extended periods of time in the toilet. These may cause damage to the toilet. Do not use abrasive cleaners or cleaning pads. Flushing fresh water through toilet when leaving for extended periods is recommended.

Using C.P. a bio-enzymatic toilet bowl cleaner (available from Raritan Engineering Part #1PCP32) will keep the bowl clean and fresh smelling.

**Recommended Visual Inspection**

- No leaks at toilet and hose connections
- Hose clamps
- Condition of hoses
- Seacocks
- Condition of wires and connections
- In-Line Strainer (if installed)

- No special toilet paper is required.
- Water should appear in the bowl within ten seconds. If not, see troubleshooting section.
- Hard objects or stringy substances (paper towels, feminine hygiene products, cigarette filters, etc.) must not be thrown into the toilet as they will cause damage.
- Always shut off seacock(s) before leaving the boat unattended.



## SYSTEM START-UP

1. Open seacock(s).

**NOTE:** Pressurized Fresh Water Models; open water source valve.

2. Turn on power to toilet.
3. Flush toilet per Operation Instructions.
4. Check for leaks.

**IMPORTANT:** If toilet does not flush properly or if water does not enter the bowl within 10 seconds, refer to Troubleshooting.

## WINTERIZING

- Improper winter lay up is a major cause of marine toilet failure.
- Use only nontoxic antifreeze.
- Flush toilet several times to clear waste from system.
- Dispose of all antifreeze in accordance with local and federal regulations.
- Winterize holding tanks, plumbing, treatment systems (MSD's), etc. independently following manufacturer's instructions.

### Winterizing Pressurized Fresh Water Models

#### Parts Required

- 1" (25 mm) or 1 1/2" (38 mm) I.D. discharge hose, approximately 3 feet (1 m) long
- Two buckets
- Nontoxic antifreeze approximately 1 quart (1 liter)

#### Steps

1. Close discharge seacock (if one exists).
2. Shut off intake water at source.
3. Turn off power to unit.
4. Disconnect and drain intake and discharge hose.
5. Disconnect intake hoses from toilet and place in one of the buckets.
6. Connect short hose to toilet's discharge and place in other bucket.
7. Pour antifreeze in bowl.
8. Turn on power to unit and flush until antifreeze is removed from the bowl and water is drained from the solenoid and hose.
9. Disconnect power to toilet.
10. Reconnect intake hoses to water solenoid.

### Winterizing Raw Water Pump Models

#### Parts Required

- 3/4" (19 mm) I.D. intake hose approximately 3 feet (1 m) long.
- 1" (25 mm) or 1 1/2" (38 mm) I.D. discharge hose approximately 3 feet (1 m) long.
- Two buckets
- Nontoxic antifreeze approximately 1 quart (1 liter)

#### Steps

1. Close the intake and discharge seacocks.
2. Turn off power to unit.
3. Disconnect and drain pump intake hose and discharge hose.
4. Connect short hoses to toilet's pump intake and discharge.
5. Place one bucket under hose connected to toilet's discharge.
6. Pour nontoxic antifreeze in other bucket.
7. Place hose connected to intake pump into bucket with antifreeze.
8. Turn on power to unit and flush toilet until antifreeze begins to be discharged from toilet.
9. Disconnect power from toilet.

### RECOMMISSIONING

1. Using the buckets, hoses and approximately 1 gallon (3.8 liters) of clean fresh water, flush antifreeze out of the toilet (see Winterizing). Dispose of antifreeze in accordance with local and federal regulations.
2. Reconnect the intake and discharge hoses and open both seacocks and water source valve.
3. Check all connections for leaks with several test flushes.

**Plumbing**

Maximum suction of Intake pump (Maximum height above waterline)	4 Ft. (1.2m) from Intake Pump.
Maximum height of discharge vented loop	10 Ft. (3 m) from base of toilet.
Pressurized water source <b>minimum</b> requirements	Minimum flow rate 3 gallons (11.3 liters )per minutes, Minimum Pressure 5 PSI(34.5 Kpa)

**NOTES: for Wiring**

1.	Distances are from source to unit and back to source.
2.	Distance from power source to remote intake pump <b>MUST</b> be included when determining total distance. Same wire size <b>MUST</b> be used for lower base and remote intake pump.
3.	Recommended conductor wire minimum AWG (mm <sup>2</sup> ) for 3% voltage drop.
4.	Recommended conductor sizes are based on 105°C rated insulation. Refer to ABYC Standards for other insulation ratings.
5.	For 120/240 VAC units use 12VDC specifications from transformer to unit.

**Hose Sizes**

**Inlet:**

1/2" (13 mm) for Fresh Water Model  
3/4" (19 mm) for Raw Water Model

**Discharge:**

1" (25 mm) or 1 1/2" (38 mm)

CONVERSIONS								
Wire - AWG to mm <sup>2</sup>								
AWG	16	14	12	10	8	6	4	2
mm <sup>2</sup>	1.5	2.5	4.0	6.0	10.0	16.0	25.0	35.0
Feet to Meters								
Feet	10	15	20	25	30	40	50	
Meter	3.1	4.6	6.1	7.6	9.2	12.2	15.2	

**Recommended Wire and Fuse/Circuit Breaker Sizes**

**Raw Water Model** (sizes based on both remote intake and discharge pumps amps added together)

Units Voltage	Circuit Breaker/ Fuse size	Toilet Discharge amps draw	Remote Pump Only amp draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	30	18	10	10 AWG	8 AWG	6 AWG	4 AWG	4 AWG	2 AWG
24 VDC	20	10	5	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG

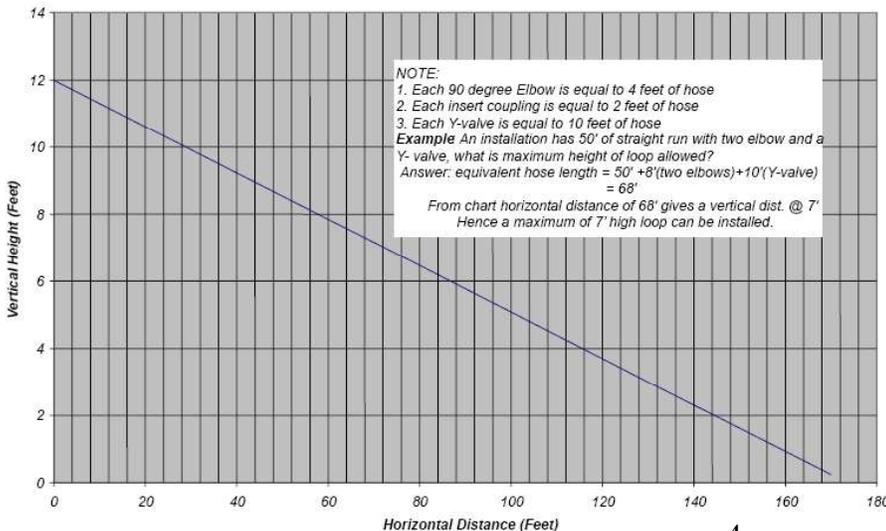
**Pressurized Fresh Water Model**

Units Voltage	Circuit Breaker/ Fuse size	Amp draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	25	18	10 AWG	10 AWG	8 AWG	6 AWG	6 AWG	4 AWG
24 VDC	15	10	16 AWG	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG

**Remote Intake Pump Only (Raw Water and Sea/Fresh Models)**

Units Voltage	Circuit Breaker/ Fuse size	Amp Draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	15	10	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG	6 AWG
24 VDC	10	5	16 AWG	16 AWG	16 AWG	16 AWG	14 AWG	12 AWG

**Atlantes discharge Maximum recommended 1" (25mm) or 1 1/2" (38mm) hose length**

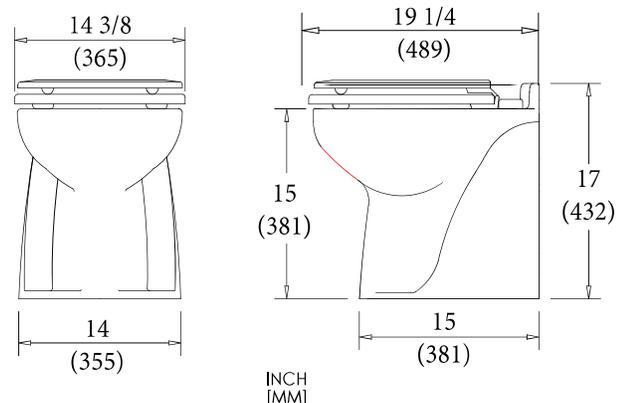


**Water Consumption:**

Water Saver : 2 pint\*

Regular Flush: 2 quarts

\* requires timing adjustment



**Parts included with all models:**

1. Toilet bowl assembly
2. Mounting bracket kit
3. Seat and Cover
4. Flush control - includes QR code for Operation and Installation Guides
5. QR code for Installation and Maintenance Guide
6. Warning Labels

**Parts included with Raw Water Model:**

1. Remote pump assembly
2. Sea/Fresh models include relay for remote pump

**Additional parts required (not included):**

- 1" (25 mm) or 1 1/2" (38 mm) I.D. discharge hose
- Reinforced intake hose:  
**Raw:** 3/4" (19 mm)  
**Fresh:** 1/2" (13 mm)
- 3/4" (19 mm) and 1" (25 mm) or 1 1/2" (38 mm) hose clamps (two for each connection below waterline)
- Wire (See specification chart)
- Terminals
- Fuse/circuit breaker (See specification chart)
- Strainers are optional and recommended:  
 Fresh Water Strainer part 190601  
 Raw Water Strainer part 163000

**MOUNTING**

1. Place toilet where it will be located.  
**Make sure there is room to route hoses.**  
**Make sure seat will open properly.**
2. Using a pencil, mark location of bowl mounting holes (FIG 2).
3. A. If hoses will be routed through floor, trace one side of toilet on floor.  
 B. If hoses will be routed through wall, trace one side of toilet on wall.
4. Remove toilet and mark location for hoses and wiring on deck or wall.
5. Cut necessary holes for hoses and wiring.

**NOTE:** Check outside diameter of hoses and adjust accordingly.

- **Discharge Hose Opening:**  
 1 1/2" Hose: 2" (51 mm)  
 1" Hose: 1 1/2 (38 mm)
- **Inlet Hose Opening:**  
 FRESH: 7/8" (22 mm)  
 RAW: 1" (25 mm)
- **Wiring Hole Opening:**  
 3/4" (19 mm)

6. Drill holes for toilet mounting bolts/screws.

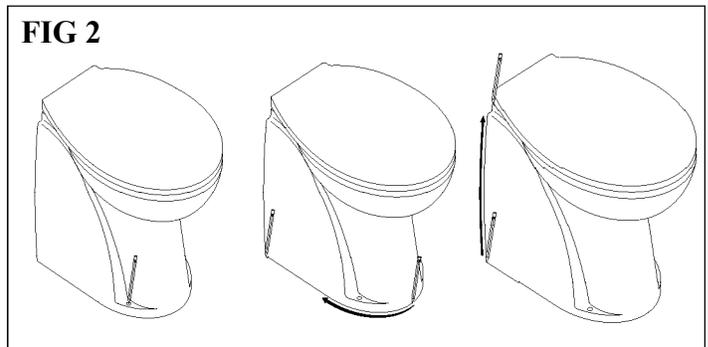
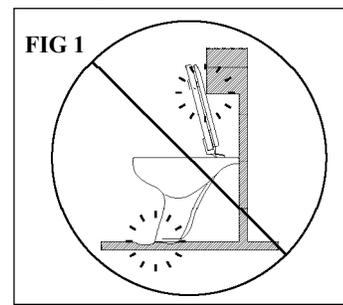
**NOTE:** Use 1/4" (6 mm) size bolts/screws. To select proper screw or bolt length, measure thickness of deck plus 1 1/8" (29 mm).

**TIP:** Do not install until all wiring and plumbing is done. Secure toilet to floor after installation is complete.

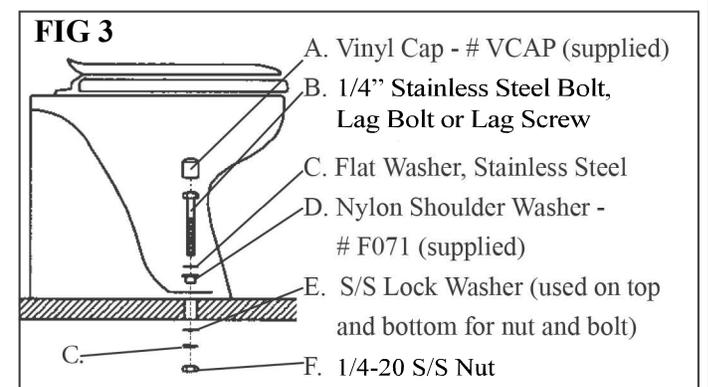
**Mounting Toilet**

1. Connect plumbing and wiring before mounting toilet.
2. Tighten bolts being careful to not overtighten (Do not exceed 30 inch lb. when tightening).
3. Install caps over mounting bolts.

**Mounting surface must be flat and solid.  
 Seat must open more than 90 degrees.**



**CAUTION: Do Not over tighten mounting bolts. Damage to the toilet bowl may occur. Tighten both mounting bolts evenly and slowly.**



# PLUMBING

## PLUMBING

### WARNING: HAZARD OF FLOODING

Toilets mounted at or below the waterline, at greatest angle of heel, and connected to a Seacock/Thru Hull Fitting(s) **MUST** have **VENTED LOOPS** installed in toilet discharge plumbing and between raw water intake pump and toilet bowl.

Install vented loops per manufacturer's instructions. Double clamp all below-waterline connections.

### IMPORTANT

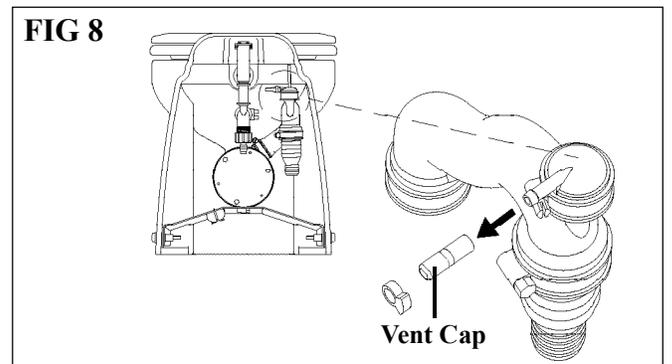
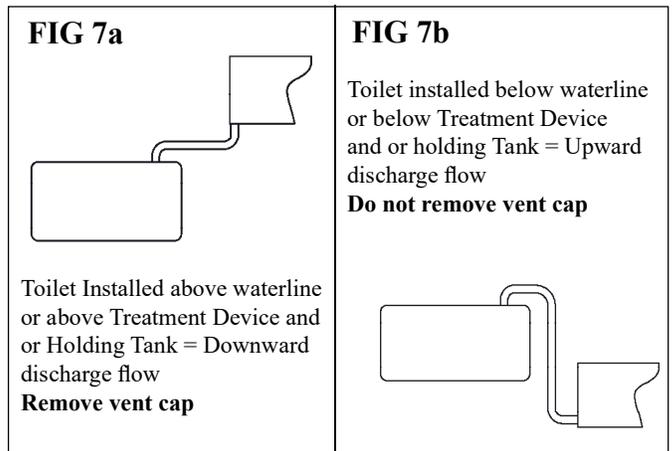
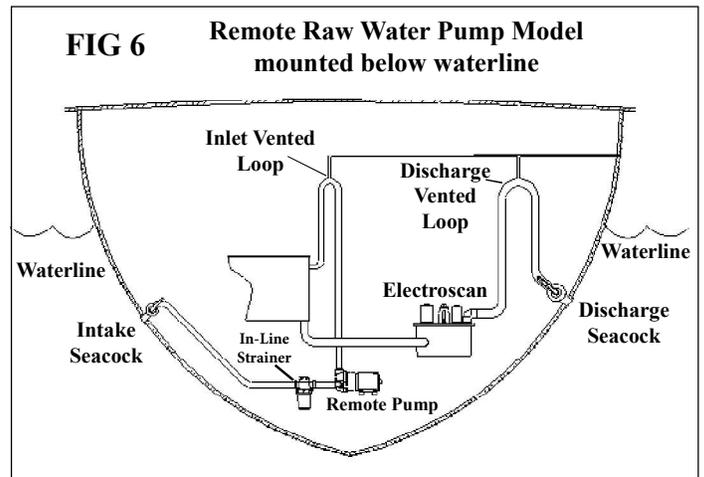
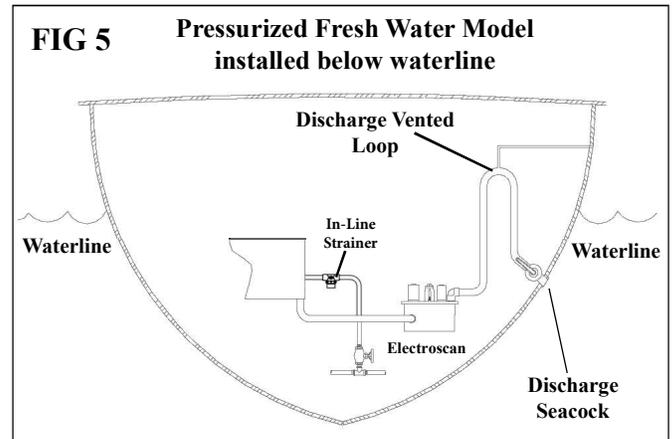
- Discharging untreated sewage is forbidden in all U. S. waters within the three-mile limit.
- Fittings and 90° bends should be kept to a minimum.
- In-Line Strainer may be installed on raw water models to prevent clogs.
- Thru-hull fittings and seacocks must be installed where they are easily accessible.
- Use only quality reinforced hoses such as Raritan SANIFLEX HOSE.
- Secure all hoses properly.

### Residual Water in the Bowl

The Atlantes Internal Discharge Hose is equipped with an integral vent to maintain water, up to 4" (10 cm), in the bowl when the plumbing lines are routed downward (See FIG 7a and FIG 7b). A flush control that adds water at the end of the flush cycle, such as our Smart Toilet Control (STC), is required for optimal water retention. The toilet must be highest connection in the discharge plumbing when using this vent to retain water in the bowl. IF THE DISCHARGE PLUMBING IS ROUTED UPWARD (such as below water line installations).

DO NOT REMOVE THE VENT CAP (FIG 7b).

To enable Integral Vent, remove Vent Cap (FIG 8), connect 1/4 hose and connect hose to a deck vent fitting (Reference FIG 6). Hose and deck fitting not included.



### Discharge Lines

**Raritan Sanitation Hose is recommended**

**SaniFlex Hose Part numbers:**

**SFH 1 1/2 inch (38 mm)**

**SFH1 1 inch (25 mm)**

1. Connect sanitation hose to discharge fitting on toilet.
- NOTE:** Discharge fitting is designed for 1" (25 mm) or 1 1/2" (38 mm) hose. 1 1/2" (38 mm) hose is secured at top of fitting and 1" (25 mm) is secured at the bottom. It is not necessary to remove the 1" (25 mm) barb if using 1 1/2" (38 mm) hose. Use the fitting as is.
2. Run hose to appropriate device (e.g.: treatment system, holding tank, etc.).

**NOTE:** If installation requires routing through the backwall rather than the floor, 90 degree kits are available:  
221147 for 1 1/2" (38 mm) hose  
221148 for 1" (25 mm) hose.

### Intake Lines Pressurized Fresh Water Models

**NOTE:** To avoid malfunction of water solenoid due to debris in water, installation of Fresh Water Strainer (190601) is recommended.

1. Connect 1/2" (13 mm) I.D. hose to pressurized fresh water supply.
2. Install a shut off valve in intake line before toilet.
3. Connect hose from shut off valve to inlet fitting of water solenoid valve at the toilet.

### Mounting Remote Pump

1. Remote pump uses 3/4" (19 mm) ID hose for connection. Preferably at or slightly above waterline.
2. Locate remote pump between thru hull fitting and toilet bowl.
3. Locate in an area away from berth to keep noise level down.
4. Use Inline Strainer, part 163000 (recommended) to avoid clogs.
5. Secure remote pump to the floor using four bolts through the pump base (FIG 10).

### Connecting Remote Pump

Remote pump fittings are interchangeable to allow more flexibility during installation. Inlet ports are located on either side of intake pump. Outlet port (to toilet bowl) is at top of intake pump (FIG 11).

**NOTE:** To avoid poor pump performance installation of strainer (163000) is recommended

1. Slide fitting clips to open position (FIG 12)
2. Select inlet port to be used.
3. Install appropriate fittings into inlet and outlet ports.

**NOTE:** The 90° fitting can be rotated 360°.

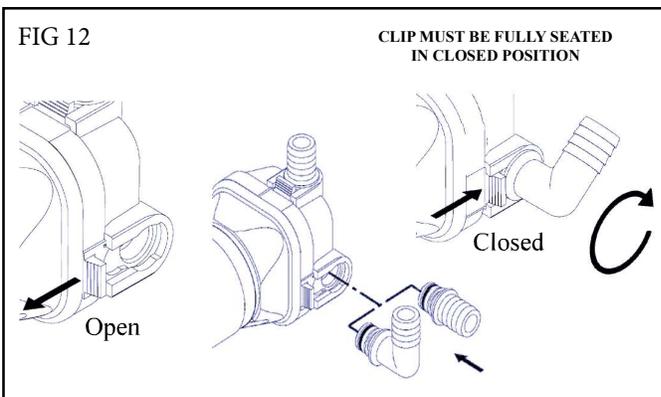
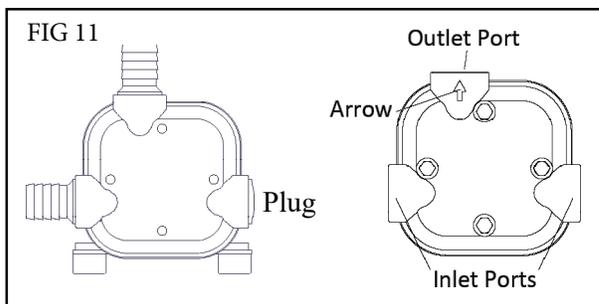
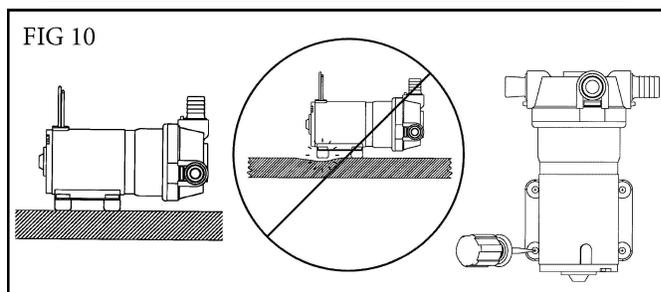
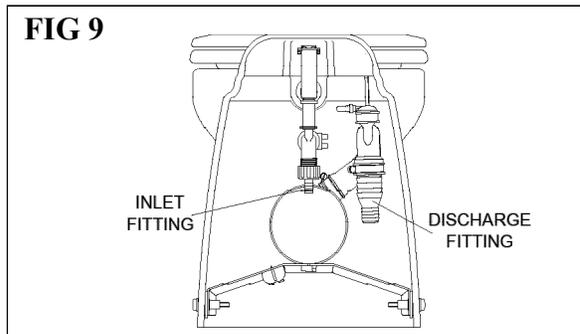
4. Install the plug fitting into unused inlet port.

**IMPORTANT: DO NOT install plug fitting into outlet port! Damage to pump will occur!**

5. Slide fitting clips back to closed position (FIG 12).
6. Connect hose from seacock to inlet port of intake pump. If used, strainer is in-line. Use hose clamp provided.

**IMPORTANT: Double clamp all below waterline hose connections!**

7. Connect hose from outlet port of intake pump to bowl elbow located on back of toilet bowl.



**WIRING CONTROLS  
FOLLOW THE INSTRUCTIONS INCLUDED  
WITH FLUSH CONTROL**

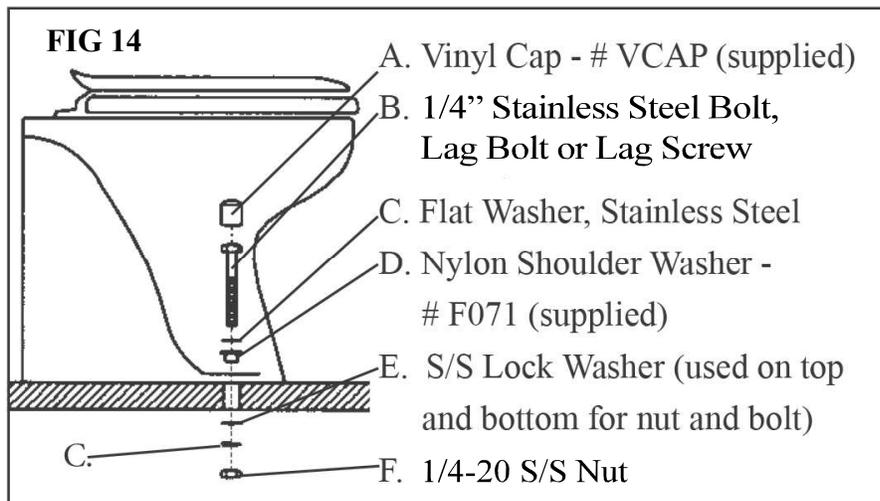
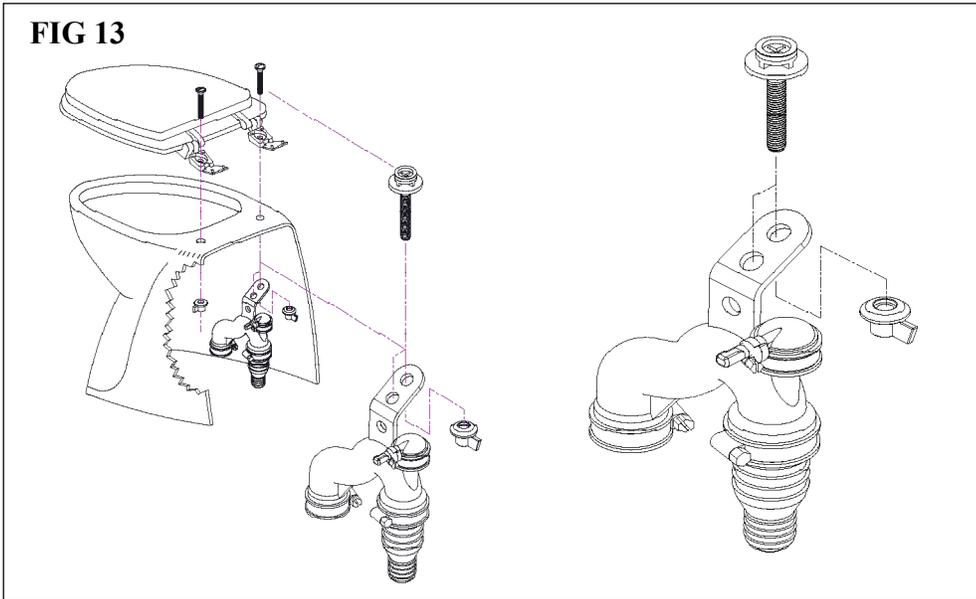
**Connect Hoses and wiring to toilet**

- Route wire from control per wiring diagrams.
- Install seat. Install discharge support strap between seat nut and the bowl (FIG 13).

**Mount toilet**

- Install mounting bushings, bolts. (FIG 14)
- Tighten bolts being careful to not overtighten (Do not exceed 30 inch lb. when tightening)
- Install caps over mounting bolts.

**Caution: To avoid kinking, do not pull on the discharge hose. Be certain there is no pressure on the discharge line.**



**TROUBLESHOOTING**

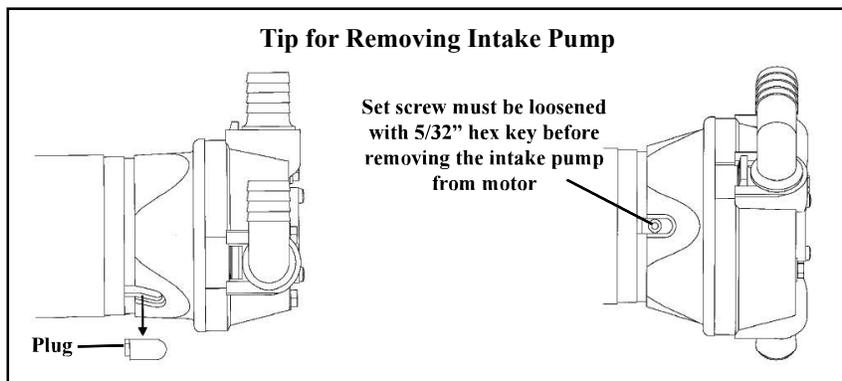
**WARNING: HAZARD OF ELECTRIC SHOCK - Before beginning any work on the toilet, be sure that all power to the unit has been turned off.**

**WARNING: HAZARD OF FLOODING - Make sure seacocks are in the CLOSED or OFF position before working on toilet.**

**NOTE:** The following information reflects the most probable causes and solutions to problems although not every possible cause and solution is provided.

Any questions regarding servicing or operation of the Atlantes should be directed to our Technical Support Department in Millville, NJ. Please have model and serial number available before calling.

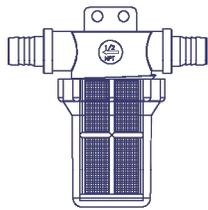
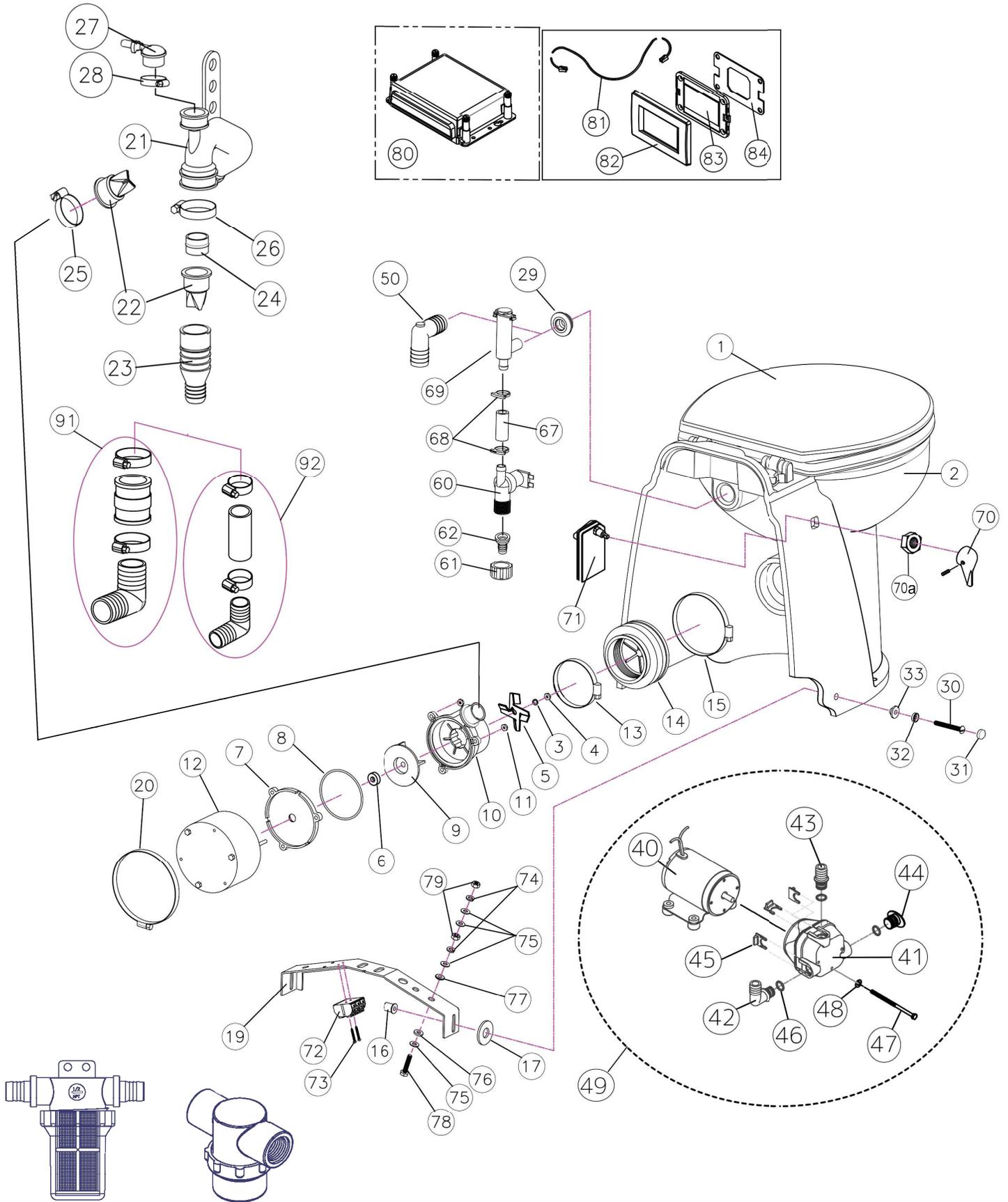
PROBLEM	POSSIBLE CAUSE	SOLUTION
1. Poor pumpout, especially solids.	1A. Clogged discharge line. 1B. Plumbing restrictions, bends and ells. 1C. Clogged vents. 1D. Mineral buildup in hoses and fittings. 1E. Low voltage.	1A. Be sure discharge seacock is open. Clear line, remove clog. 1B. Replumb to eliminate bends and ells. 1C. Clean holding tank vent and vented loop vents 1D. Clean or replace affected parts. Replace hose if needed. 1E. Check voltage at toilet <b>while toilet is running</b> . If less than nominal voltage of toilet (12 or 24), check condition of batteries and wire sizes. Check terminals and wire connections for corrosion (heat at terminals and junctions indicates a bad or corroded connection).
2. Poor water flow, especially at front of bowl (or no water flow).	2A. Toilet not level. 2B. Restriction in intake line. 2C. Pump sucking air.  2D. Low voltage. 2E. Clogged strainer.	2A. Raise rear of toilet; check with level. 2B. Be sure seacock is open. Clear line-remove clog. 2C. Check all connections from intake thru-hull to intake pump to be sure no air leaks are present. 2D. See 1E, above. 2E. Remove or Clear debris from strainer.
3. Foul odors from toilet area.	3A. "Marine life" lodged in rim of bowl.  3B. Permeated discharge hose. 3C. Sewage remaining in discharge line	3A. Remove and flush bowl with pressure hose to remove all material. Install strainer in intake line to avoid recurrence. 3B. Replace hose with Raritan sanitation hose (#SFH). 3C. Flush toilet longer; replace hose if permeated; reroute hose making a shorter run if possible.
4. Bowl fills while underway.	4A. Pressure buildup at seacocks.	4A. Close intake, then discharge seacock to determine which is causing problem. If discharge, be sure the vent or vented loop is clean. If intake, there is too much pressure on seacock; contact Raritan Technical Support.
5. Water leaking from under unit.	5A. Leaking Bowl Throat adapter. 5B. Leak at shaft seal. 5C. Leak from bowl spud. 5D. Leak at vacuum breaker	5A. Tighten adapter clamps. 5B. Check seal and motor shaft. 5C. Check and reseat bowl grommet 5D. Clean by gently pressing downward and turn clockwise 1/4 and remove cap and remove plastic piston and clean. Replace if needed.



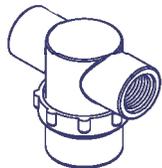
# ATLANTES FREEDOM VORTEX VAC PARTS LIST - HOUSEHOLD

ItemNo.	Part No.	Description	<b>BOWL MOUNTED FLUSH HANDLE</b>	
1	1245SC	Seat & Cover (Slow Close - White)	70	AM665W Handle SS W/Set Screw
1	1245ASC	Seat & Cover (Slow Close - Bone)	70a	F104 Brass Panel Hex Nut
2	AM003W	Atlantes Houshold Size Bowl (White)	71	AV600W Flush Control & Wire Harness
2	AM003AW	Atlantes Bowl (Bone)	72	ETB3 Terminal Block 3 Poles
3	M23A	#10 Lockwasher SS	73	F108 Screw #4 x 7/8" (2)
4	1108A	10-32 SS Nut	74	HLWQB 1/4" Split Lock Washer (4)
5	53145	Macerator Blade	75	M31 1/4" Brass Flat Washer (8)
6	31-102	Motor Shaft Seal	76	31-722 Nylon Shoulder Washer (2)
7	221110	Discharge Pump Seal Plate	77	F069 1/4" Fiber Washer (2)
8	221105	O-Ring	78	HSB1 1/4-20 Brass Screw (2)
9	161115	Impeller	79	M30 1/4-20 Brass Nut
10	221115	Discharge Pump Macerator Housing	<b>SMART TOILET CONTROL</b>	
11	31-114	Lock Nut 10-32 W/Nylon (3)	<b>STC Complete Smart Toilet Control Kit (12 &amp; 24 VDC)</b>	
12	221012	Discharge Motor 12 VDC	<b>STCBL Complete Bluetooth STC Kit (12 &amp; 24 VDC)</b>	
12	221024	Discharge Motor 24 VDC	80	STC548W STC Circuit Board w/Enclosure (12 & 24 VDC)
13	221125	Bowl Throat Adapter Clamp - Pump	80	STC566W Bluetooth STC Circuit Board w/Enclosure (12 & 24 VDC)
14	221120	ME: Bowl Throat Adapter	81	STC545 Control Cable 7 ft
15	221130	ME: Adapter Clamp, Large	82	221524 Wall Switch Cover Plate (White)
16	F035	Well Nut (2)	82	221524A Wall Switch Cover Plate (Bone)
17	CH57	Rubber Slinger (2)	83	STC543W Wall Touch Panel w/Back Plate
19	AM021A	Pump Mounting Bracket	83	STC564 Bluetooth Wall Touch Panel w/Back and Gasket
20	221127	Discharge Motor Mounting Clamp	84	221525 Touch Panel Gasket
21	AM166W	Discharge Hose (includes items 22 thru 28)	<b>MULTIFUNCTION FLUSH PANEL (NOT SHOWN)</b>	
22	221135W	Joker Valve (2) (includes item 24)	221600	Multifunction Flush Panel, White
23	221145	Discharge Adapter Fitting	221600B	Multifunction Flush Panel, Black
24	221146	Joker Valve Insert	221524	Wall Switch Plate, White
25	221160	Discharge Hose Clamp (small)	221524B	Wall Switch Plate Black
26	221165	Discharge Hose Clamp (large)	<u>Black / White</u>	
27	VLVE	Vent Valve Assembly	221601 / 221601W	Fill/Empty Switch
28	FC001A	Vent Valve Hose Clamp	221602 / 221602W	Flush Switch
29	221150	Spud Seal	221603 / 221603W	Switch Actuator-Flush, Horizontal Panel
30	F089	Screw: 1/4-20 x 2" (2)	221604 / 221604W	Switch Actuator-Fill/Empty, Horizontal Panel
31	F196	ME: Front Mounting Cap (2)	221605 / 221605W	Switch Actuator-Flush, Vertical Panel
32	F195	Washer: Cup (2)	221606 / 221606W	Switch Actuator-Fill/Empty, Vertical Panel
33	F071	Nylon Shoulder Washer (2)	<b>REPAIR/ REPLACE KITS</b>	
<b>REMOTE RAW WATER PUMP</b>			MERK	Discharge Pump Repair Kit (includes items 6, 8 and 22)
40	166012A	Intake Pump Motor 12 VDC	DIAPUMPRK	Intake Pump Repair Kit
40	166024A	Intake Pump Motor 24 VDC	AV30012	12 VDC Discharge Assembly (includes items 3 thru 12 and 21 thru 28)
41	162000W	Remote Intake Pump w/o Motor (includes items 45 and 46)	AV30024	24 VDC Discharge Assembly (includes items 3 thru 12 and 21 thru 28)
42	162405	3/4" Hose Barb 90° Fitting	162400	Fitting Kit (includes items 42 thru 44 and 46)
43	162410	3/4" Hose Barb Sraight	<b>PARTS NOT SHOWN</b>	
44	162415	Plug Fitting	RTME12D	Power Converter for 120/240VAC UNIT
45	162420	Fitting Retaining Clip (3)	<b>ADDITIONAL OPTIONAL ACCESSORIES AVAILABLE FROM RARITAN</b>	
46	162425	O-Ring (3)	91	221147 1 1/2 inch Thru Wall Discharge Kit
47	F162VT	Inlet Pump Mounting Bolt (4)	92	221148 1 inch Thru Wall Discharge Kit
48	F144	#10 Washer SS Flat (4)	1PCP32	C.P. Cleans Potties, 32 oz
49	166000	Complete Remote Pump 12 VDC	1PCHGAL	Cleans Hoses, Tanks and MSD (gal)
49	166100	Complete Remote Pump 24 VDC	1PKO32	Kills Odors, 32 oz
50	PLA26	Elbow Adapter 3/4 x 1/2 Barbed	KO2	Deodorant System (Seawater Models)
<b>PRESSURIZED FRESH WATER UNITS</b>			SFH	Sanitation Hose 1 1/2" (38 mm) (sold by foot)
60	221351	Solenoid Valve 12 VDC	SFH1	Sanitation Hose 1" (25 mm) (sold by foot)
60	221352	Solenoid Valve 24VDC	190601	Fresh Water Strainer
61	221356	ME: Nut 3/4 BSP	163000	Sea Water Strainer
62	221357	ME: Hose Adapt. Straight	RTME12D	Power Converter for 120/240 VAC
67	221335	Hose, 1/2"	STCTSA	Holding Tank Full Sensor (Sensa Level TM) For use with STC Flush Control.
68	221340	Hose Clamps 1/2" (2)	STCFL	Holding Tank Full Sensor (Float Switch) For use with STC Flush Control.
69	221300	Vacuum Breaker Assembly		

# Atlantes Freedom Vortex Vac Exploded Parts View - Household



Optional Raw Water Strainer  
Part 163000



Optional Pressurized Fresh Water Strainer  
Part 190601

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## LIMITED WARRANTY

Raritan Engineering Company warrants to the original purchaser that this product is free of defects in materials or workmanship for a period of one year from the product's date of purchase. Should this product prove defective by reason of improper workmanship and/or materials within the warranty period, Raritan shall, at its sole option, repair or replace the product.

1. TO OBTAIN WARRANTY SERVICE, Consumer must deliver the product prepaid, together with a detailed description of the problem, to Raritan at 530 Orange St., Millville, N.J. 08332. When requesting warranty service, purchaser must present a sales slip or other document which establishes proof of purchase. **THE RETURN OF THE OWNER REGISTRATION CARD IS NOT A CONDITION PRECEDENT OF WARRANTY COVERAGE.** However, please complete and return the owner Registration Card so that Raritan can contact you should a question of safety arise which could affect you.
2. **THIS WARRANTY DOES NOT COVER** defects caused by modifications, alterations, repairs or service of this product by anyone other than Raritan; defects in materials or workmanship supplied by others in the process of installation of this product; defects caused by installation of this product other than in accordance with the manufacturer's recommended installation instructions or standard industry procedures; physical abuse to, or misuse of, this product. This warranty also does not cover damages to equipment caused by fire, flood, external water, excessive corrosion or Act of God.
3. **ANY EXPRESS WARRANTY NOT PROVIDED HEREIN, AND ANY REMEDY FOR BREACH OF CONTRACT WHICH BUT FOR THIS PROVISION MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, IS HEREBY EXCLUDED AND DISCLAIMED. ALL IMPLIED WARRANTIES SUCH AS THOSE OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, IF APPLICABLE, AS WELL AS ANY IMPLIED WARRANTIES WHICH MIGHT ARISE BY IMPLICATION OF LAW, ARE EXPRESSLY LIMITED TO A TERM OF ONE YEAR. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG A LIMITED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**
4. **UNDER NO CIRCUMSTANCES SHALL RARITAN BE LIABLE TO PURCHASER OR ANY OTHER PERSONS FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT, OR OTHERWISE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.**
5. No other person or entity is authorized to make any express warranty, promise or affirmation of fact or to assume any other liability on behalf of Raritan in connection with its products except as specifically set forth in this warranty.
6. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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[www.raritaneng.com](http://www.raritaneng.com)

# Thank you for purchasing a Raritan Atlantes Freedom™ Vortex-Vac™

Model and Serial #:

Please have this available if support is needed.

SCAN for  
Owners Manual



L479 0525

SCAN for  
Warranty Form



If you prefer a printed version of the Owners Materials:  
Email: [info@raritaneng.com](mailto:info@raritaneng.com)

Questions on installation?  
Email: [techsupport@raritaneng.com](mailto:techsupport@raritaneng.com)



## Do not return this product to store.

**PLEASE RETAIN FOR YOUR RECORDS**