

# **Installation and Maintenance Instructions**

**Manufactured after August 2016** 

# 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 as defined in 46CFR 110.15-65(e), Subchapter J-Electrical Engineering.

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

# Pressurized Freshwater Model



Sea Water Model (Remote Pump)





www.raritaneng.com

# **Desription:**

Our Marine Elegance toilet is available in 12V or 24V DC. Bowls are available in four models: standard with angled back, standard with straight back, tall with angled back and tall with straight back. Fresh water model utilizes onboard freshwater, the Sea water model utilizes a remote pump installed between raw water source and bowl. Sea/Fresh model can switch between fresh and raw water source.

Three different control options are available:

- 1. **Smart toilet control:** provides timed operation and independant control of water and discharge.
- 2. **Multifunction control:** provides momentary operation and independent momentary control of water and discharge.
- 3. **Push button switch:** providing only the ability to flush with no independent control of water or discharge.

# **Model and Serial Number:**

# **IMPORTANT SAFETY INSTRUCTIONS:**

 $\textbf{WARNING:} \quad \textbf{HAZARD OF FLOODING} \text{ -} \text{ Always shut off seacock}(s) \text{ before leaving the boat unattended}.$ 





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" (10cm) above the waterline at the boats greatest angle of heel (see vented loop manufacturer's instructions).

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

Double clamp all below waterline connections.

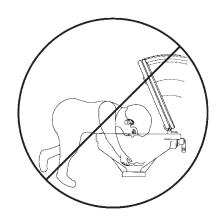
# **Recommended Visual Inspection**

- ✓ For leaks at toilet and hose connections
- ✓ Hose clamps
- ✓ Condition of hoses
- ✓ Seacocks
- ✓ Condition of wires and connections
- ✓ In-Line Strainer (if you have one)

## **WARNING:**

Young children should NOT be left unsupervised around toilet. Serious injury or death could occur. Children can drown in water retained in the bowl. Seat and/or lid could close and strike child.

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



- No special toilet paper is required, but 1-ply toilet paper is recommended.
- Water should appear in the bowl within ten seconds. If not, see troubleshooting section.
- Hard objects or stringy substances (paper towels, feminine hygiene products, filter cigarettes, etc.) must not be thrown into the toilet as they will cause damage.
- Always shut off seacock(s) before leaving the boat unattended.



# **OPERATION:**

# Refer to manual enclosed in control switch.

# 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.

# **Pressurized Freshwater 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 discharge hose.
- 5. Disconnect intake hoses from water solenoid 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.

# **Integral and Remote Intake 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 intake hose and discharge hose.
- 4. Connect short hoses to toilet's 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 one 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.

# **SYSTEM START-UP**

1. Open seacock(s).

**NOTE**: Pressurized freshwater 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.

# 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 minimum requirements	Minimum flow rate 3 gallons (113 liters) per minute. Mini- mum pressure 5 PSI (34.5 KPA)

# **NOTES:** for Wiring

	1201101 //11116
1.	Distances are from source to unit and back to source.
2.	Distance from power source to remote intake pump MUST be included when determining total distance.Same wire size MUST be used for lower base and remote intake pump.
3.	Recommended conductor wire minimum AWG (mm²) 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.

CONVERSIONS Wire - AWG to mm <sup>2</sup>											
AWG	16	14	12		10	10 8			6	4	2
mm²	1.5 2.5 4.0 6		6.0	)	10.0		16.0	25.0	35.0		
			F	eet	to I	Лe	ters	5		•	
Feet	10	1	15	20	20		25 3		0	40	50
Meter	3.1	4	4.6	6.	1	7.	6	9	.2	12.2	15.2

# **Hose Sizes**

# INLET

1/2"(12.7 mm.) for freshwater model 3/4" (19 mm.) for sea water model

## Discharge

1"(25.4 mm.) or 1 1/2"(38 mm.)

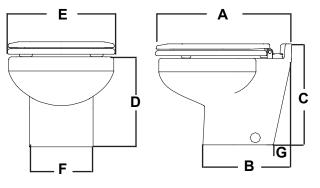
# Sea Water Model - Recommended Wire and Fuse/Circuit Breaker Size

Units Voltage	Circuit Breaker/fuse size (amps)	Elegance toilet Amp. draw @ nominal Voltage/	Remote Pump Only Amp. draw @ nominal voltage	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	30	18	10	10 AWG	8 AWG	6 AWG	6 AWG	4 AWG
24 VDC	20	10	5	14 AWG	14 AWG	12 AWG	10 AWG	10 AWG

# Pressurized Freshwater Model - Recommended Wire and Fuse/Circuit Breaker Size

Units Voltage	Circuit Breaker/fuse size (amps)	Amp. draw @ nominal voltage	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	25	18	12 AWG	10 AWG	10 AWG	8 AWG	6 AWG	6 AWG
24 VDC	15	10	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG	6 AWG

# SIZE inch (mm.)



Bowl type	A	В	С	D	Е	F	G
Angled Back	18 3/8	12 1/4	14	12	14	8 1/2	2 1/8
	(467)	(311)	(355)	(305)	(355)	(216)	(54)
Straight Back	18 3/8 (467)	12 1/4 (311)	14 (355)	12 (305)	14 (355)	8 1/2 (216)	NA
Tall	18 3/8	12 1/4	17	15	14	8 1/2	2 1/8
Angled Back	(467)	(311)	(432)	(380)	(355)	(216)	(54)
Tall	18 3/8	12 1/4	17	15	14	8 1/2	NA
Straight Back	(467)	(311)	(432)	(380)	(355)	(216)	

## Parts included with all models:

- 1. Toilet bowl assembly
- 2. Mounting bracket kit
- 3. Seat
- 4. One of the following flush controls:
  - a. Smart Toilet Control
  - b. Momentary Multifunction Control
  - c. Push Button Control
- 5. User guide and Installation guide with labels

## Additional Parts included with sea water model:

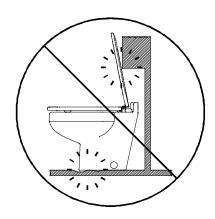
- 1. Remote pump assy.
- 2. Relay for remote pump (Push Button and SeaFresh models only)

# **Mounting Toilet**

# Mounting surface must be flat and solid.

# Seat must open more than 90 degrees.

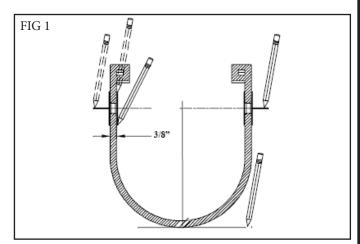
1. Place the toilet and mark mounting holes' center line, and outside of the bowl (FIG 1). Draw a center line between two holes. Mark front hole outside and center and draw a line perpendicular to first center line.

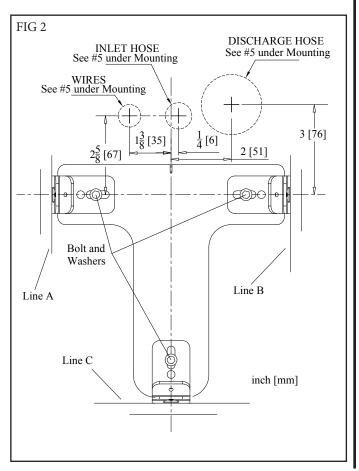


- 2. Mark three lines A, B, and C, 3/8" from outside lines
- 3. Line up outside edges of the brackets with marked lines A, B, and C.
- 4. Secure bracket assembly to deck. Using three #14 self threading bolts and flat washers. Other types of fasteners may be used if so desired.
  - **Note**: place bolts as close to mark lines A, B, and C as possible
- 5. Drill holes for discharge hose (2"(51 mm.) for 1 1/2" hose; 1 1/2"(38 mm) for 1" hose), inlet hose (7/8" (22 mm.) and wires (3/4"(19 mm.) using dimensions shown in FIG 2.
  - Note: check outside diameter of the hoses and adjust hole sizes accordingly.
- 6. Complete plumbing and wiring before installing toilet.

# **Additional Parts Required:**

- 1" (25 mm.) or 1 1/2" (38 mm.) I.D. discharge hose
- 3/4" (19 mm.) I.D. reinforced intake hose
- 3/4" (19 mm.) and 1" (25 mm.) or 1 1/2" (38 mm.) hose clamps (two for each connection below waterline)
- Wire
- Terminals
- Fuse/circuit breaker





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# **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.

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

Double clamp all below-waterline connections.

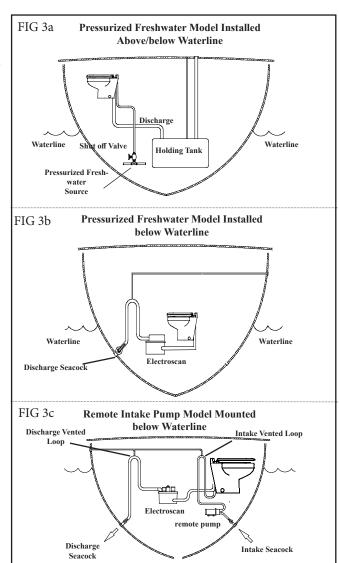
# **IMPORTANT**

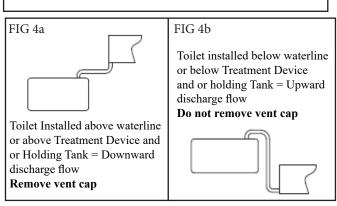
- Fittings and 90° bends should be kept to a minimum.
- In-Line Strainer may be installed on Sea Water Models per Installation Instructions. This will prevent clogs.
- Discharging untreated sewage is forbidden in all U. S. waters within the three-mile limit.
- Thru-hull fittings and seacocks must be installed where they are easily accessible.
- Use only quality reinforced hoses such as Raritan Saniflex (SFH)
- Secure all hoses properly.

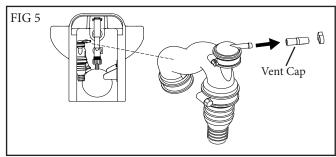
### **Residual Water in the Bowl**

The Marine Elegance Internal Discharge Hose is equipped with an Integral Vent. The Integral Vent is for toilet installations where the discharge flow is downward and residual water after the flush is desired. 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. The maximum height of water retained is approximately 4" from the bottom of the bowl. IF THE DISCHARGE PLUMBING IS ROUTED UPWARD (such as below water line installations), DO NOT REMOVE THE VENT CAP (FIG 4b).

To enable vent, remove Vent Cap, see FIG 5







## **Discharge Lines**

- 1. Connect quality sanitation hose 1" (25 mm.) or 1 1/2"(38 mm.) discharge fitting on toilet.
- 2. Run hose to appropriate device (i.e.: treatment system, holding tank, etc.).

## **Inlet lines**

1. Connect 1/2"(13 mm.) hose to pressurized supply or 3/4"(19 mm.) hose to remote pump

### **Intake Lines**

### Pressurized Freshwater Models

- 1. Install a shut off valve in intake line before water solenoid valve.
- 2. Connect hose from shut off valve to inlet port of water solenoid valve at the toilet.

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

### Remote Sea Water Models

Intake 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.

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

- 1. Slide fitting clips to open position.
- 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: Be sure not to install plug fitting into outlet port! Damage to pump will occur!

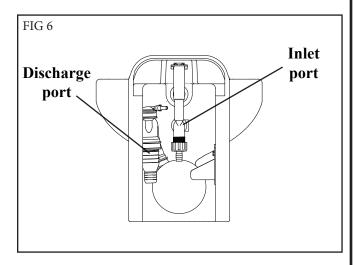
- 5. Slide fitting clips back to closed position.
- 6. Connect hose from seacock to inlet port of optional In-Line Strainer if installed. Use hose clamp provided.
- 7. Connect hose from outlet port of In-Line Strainer to inlet port of intake pump. Use hose clamp provided.

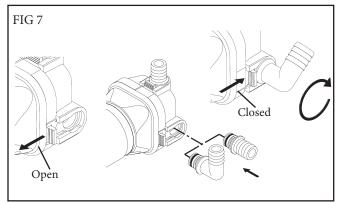
# IMPORTANT: Double clamp all below waterline hose connections!

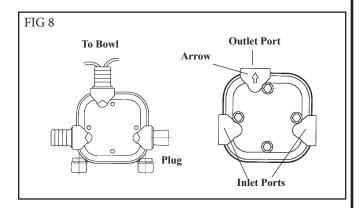
8. Connect hose from outlet port of intake pump to bowl elbow located on back of toilet bowl.

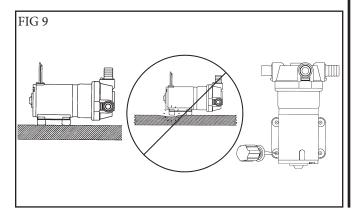
# **Mounting Remote Pump:**

- 1. Locate remote pump between thru hull fitting and toilet bowl.
- 2. Locate in an area away from berth to keep noise level down.
- 3. Use Inline Strainer (optional) to avoid clogs.
- 4. Secure remote pump to the floor using four bolts through the pump base.









# Mounting controls:

Refer to instruction enclosed with control. Install the Warning Label (L322) where it can be easily seen.

### WIRING

WARNING: Hazard of Shock and Fire

- Always use proper wire, wire connectors and fuse/circuit breaker. See Specification Chart.
- Secure wire properly.
- Do not connect appliances to toilet circuit.
- Make sure power is off before proceeding.
- Use proper wire terminals for all wire connections.
- 1. Determine proper wire size by measuring distance from:
  - Power Source to push button to toilet motor and back to power source.
  - Remote pump units also include distance from power source for remote pump to remote pump and back. Same wire gauge must be used for both lower base and remote pump.
- 2. Select proper wire and fuse/circuit breaker size from Specifications on Installation page.
- 3. Install fuse/circuit breaker in positive line at source.
- 4. Wire control to the toilet and battery using one of the wiring diagram supplied with the control.

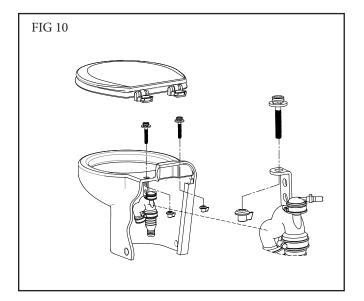
# **Connect Hoses and wiring to toilet**

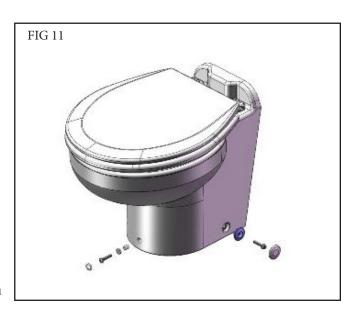
- 5. Route wire from control per wiring diagrams.
- 6. Install seat. Install discharge support strap between seat nut and the bowl per FIG 10.

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

## Mount toilet

- 7. Install mounting bushings, bolts. (FIG 11)
- 8. Tighten bolts being careful to not overtighten (Do not exceed 30 inch lb. when tightening)
- 9. Install caps over mounting bolts.





# **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

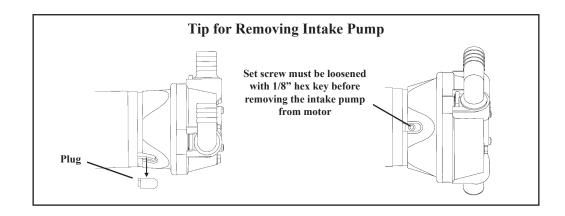
working on toilet.

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 Marine Elegance should be directed to our Technical Support Department in Millville, NJ or Ft. Lauderdale, FL. Please have model and serial number available before calling.

PROBLEM	POSSIBLE CAUSE	SOLUTION			
Poor pumpout, especially solids.	<ul><li>1B. Plumbing restrictions, bends and ells</li><li>1C. Clogged vents.</li></ul>	<ul> <li>1A. Be sure discharge seacock is open. Clear line, remove clog.</li> <li>1B. Replumb to eliminate bends and ells.</li> <li>1C. Clean holding tank vent and vented loop vents</li> <li>1D. Clean or replace affected parts. Replace hose if needed.</li> <li>1E. Check voltage at toilet while toilet is running. 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).</li> </ul>			
2. Poor water flow, especially at front of bowl (or no water flow).	Restriction in intake line.     Intake Pump sucking air.	<ul> <li>2A. Raise rear of toilet; check with level.</li> <li>2B. Be sure seacock is open. Clear line-remove clog.</li> <li>2C. Check all connections from intake thru-hull to intake pump to be sure no air leaks are present.</li> </ul>			
	<ul><li>2D. Low voltage.</li><li>2E. Clogged strainer.</li></ul>	<ul><li>2D. See 1E, above.</li><li>2E. Remove or Clear debris from strainer.</li></ul>			
3. Foul odors from toilet area.	3A. "Marine life" lodged in rim of bowl.	3A. Remove and flush bowl with pressure hose to remove all material. Install strainer in intake line to avoid recurrence.			
	<ul><li>3B. Permeated discharge hose.</li><li>3C. Sewage remaining in discharge line.</li></ul>	<ul><li>3B. Replace hose with Raritan Saniflex Hose (#SFH).</li><li>3C. Flush toilet longer; replace hose if permeated; reroute hose making a shorter run if possible.</li></ul>			
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.	<ul><li>5A. Leaking Bowl Throat adapter.</li><li>5B. Leak at shaft seal.</li><li>5C. Leak from bowl spud.</li></ul>	<ul><li>5A. Tighten adapter clamps.</li><li>5B. Check seal and motor shaft.</li><li>5C. Check and reseat bowl grommet</li></ul>			

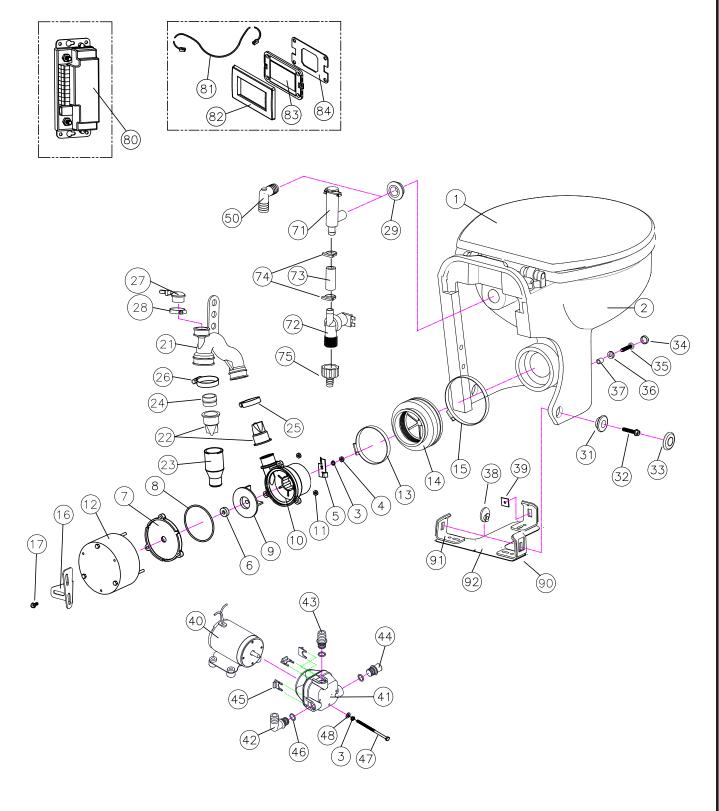


# **Marine Elegance PARTS LIST**

# EXPLODED PARTS

I ItamNo	Part No.	Description			
1	1245SC	Seat & Cover (Slow Close)		JRIZED FRESH WA	
1	1245A	Seat & Cover (Slow Close)	71	221300	Vacuum Breaker Assembly
2	221100W	ME Bowl, Std Hgt, Angled Back, White	72	221351	Solenoid Valve 12VDC
2	221100W 221100AW		72	221352	Solenoid Valve 24VDC
Almond	221100AVV	ME Bowl, Std Hgt, Angled Back,	73	221335	Hose 1/2"
	224404\\	ME Boul Ctd Hat Ctroight Book	74	221340	Hose Clamps 1/2" (2)
2	221101W	ME Bowl, Std Hgt, Straight Back,	75	221356	ME Nut 3/4 BSP
White	004404 8\8/	ME David Ctd Llat Ctaningt David	75	221357	ME Hose Adadpter Straight
2	221101AW	ME Bowl, Std Hgt, Straight Back,			
Almond	224400\\	ME Dowl Toll Angled Book White	PARTS	NOT SHOWN	
2	231100W	ME Bowl, Tall, Angled Back, White		221175	L Bolt (2)
2	231100AW	ME Bowl, Tall, Angled Back, Almond		F321P	Washer Fender Style (3)
2	231101W	ME Bowl, Tall, Straight Back, White		F188	Well Nut 10-32 (3)
2	231101AW	ME Bowl, Tall, Straight Back, Almond		F144	Washer #10L 18-8 SS (2)
3	M23A	#10 Lockwasher SS (5)			
4	1108A	10-32 SS Nut	FLUSH	I CONTROL OF	PTIONS
5	161123	Macerator Blade	SMART	TOILET CONTRO	L
6	31-102	Motor Shaft Seal	80	STC548W	Smart Toilet Control (12 & 24 VDC)
7	221110	Discharge Pump Seal Plate	81	STC545	Control Cable 7 ft
8	221105	O-Ring	82	221524	Wall Switch Cover Plate White
9	161115	Impeller	82	221524A	Wall Switch Cover Plate Almond
10	221115	Discharge Pump Macerator Housing	83	STC543	Touch Panel w/Back Plate
11	31-114	Lock Nut 10-32 W/Nylon(3)	84	221525	Touch Panel Gasket
12	221012	Discharge Motor 12 V	•		
12	221024	Discharge Motor 24V	MULTIF	UNCTION MOMEN	TARY CONTROL (NOT SHOWN)
13	221125	Bowl Throat Adapter Clamp - Pump		221553	Manual (Relay) Control
14	221120	Bowl Throat Adapter		SF75	Switch Assembly
15	221130	Bowl Throat Adapter Clamp - Bowl		0170	GWILDITY GOOTHISTY
16	221155	Pump Mtg. Bracket, Angled Back Bowl	PUSH B	UTTON SWITCH	
16	221156	Pump Mtg Bracket, Striaght Back Bowl		164000BR	Heavy Duty Switch, Brass
17	F193VT	Screw 10-32 X 3/8 W/VT		10-1000BIX	ricary Baty Gwiton, Brass
21	AM166	Discharge Hose	MOLINT	ING BRACKET AS	SEMRIY
22	221135W	Joker Valve (2) (Also includes #24)	90	221230W	Mounting Bracket w/Hardware
23	221145	Discharge Adapter Fitting	50	221200VV	(includes items 31-39, 91 & 92)
24	221146	Joker Valve Insert	91	221205	Bowl Mtg Bracket (3)
25	221160	Discharge Hose Clamp (small)	92	221230	Mounting Bracket Base
26	221165	Discharge Hose Clamp (large)	02	221200	Woulding Bracket Base
27	VLVE	Vent Valve Assembly	REPAIR	KITS	
28	FC001	Vent Valve Hose Clamp	MERK		Repair Kit (includes #6, 8, 22 and 24)
29	221150	Spud Seal	22100**		Assembly (includes #3 thru 12 and 21
31	221210	ME Bowl Mtg Bushing (2)	22100	thru 28)	document (morados no una 12 ana 21
31	221210A	ME Bowl Mtg Bushing Almond (2)		** Voltage	
32	F186VT	Screw Bowl Mtg (2)		voitage	
33	221215	ME Bowl Mtg Cap (2)			
33	221215A	ME Bowl Mtg Cap Almond			
34	F196	ME Front Mounting Cap		JNAL ACCESSORI	ES AVAILABLE FROM RARITAN
34	F196A	ME Front Mounting Cap Almond	221147		1 1/2 inch Thru Wall Discharge Kit
35	F187VT	Screw ME Bowl Mtg	221148		1 inch Thru Wall Discharge Kit
36	F195	Washer Cup	1PCP22		C.P. Cleans Potties, 22 OZ
37	F199	Bushing Bowl Mtg	1PCHG/	AL.	Cleans Hoses, Tanks and MSD (gal)
38	221240A	Cam Nut (2)	SFH		Sanitation Hose 1 1/2" (sold by foot)
39	F197	Cage Nut	163000		Seawater Inline Strainer
			TD90319	9	Vented Loop 3/4" (19mm) White
REMOTE	E INTAKE PUMP UN	NITS	TD9032	1	Vented Loop 1" (25mm) White
40	166012A	Pump Motor 12VDC	TD9032	3	Vented Loop 1 1/2" (38mm) White
40	166024A	Pump Motor 24VDC	TD90314		Aquavalve White w/ 3 TD90294 Tails
41	162000W	Remote Intake Pump w/o Motor	RTME12	2D	Power Converter for 120/240 VAC
42	162405	3/4" Hose Barb 90° Fitting	KO2		Deodorant System (Seawater Models)
43	162410	3/4" Hose Barb Straight			
44	162415	Plug Fitting	STCTSA	: Holding Tank Full	Sensor (Sensa Level TM)
45	162420	Fitting Retaining Clip (3)		For use with STC	CFlush Control.
46	162425	O-ring (3)	STCFL:	Holding Tank Full	Sensor (Float Switch) For use with
47	F162VT	Inlet Pump Mounting Bolt (4)		STC Flush Contro	ol.
48	F144	#10 Washer SS Flat (4)			
50	PLA26	Elbow Adapter 3/4 X 1/2			
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# EXPLODED PARTS



# 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, or 3101 SW 2nd Ave. Ft. Lauderdale, FL 33315. 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 SUCHAS 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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