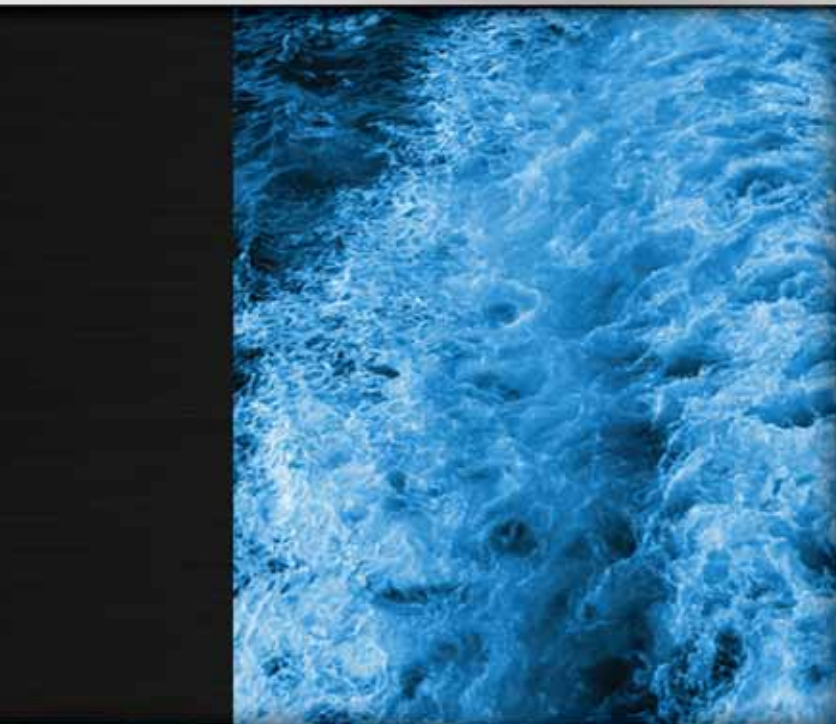




The Most Dependable Name on the Water.



For Over 50 Years.

TO OUR CUSTOMERS, TRADING PARTNERS AND FRIENDS,

For more than fifty years, Raritan has been meeting our customers needs for outstanding service and product reliability establishing ourselves as “the most dependable name on the water.” Our customers continue to be our focus, and the primary source of the ideas for our new products and product enhancements.

The median length of service for Raritan employees is about twenty years, an unusual number in the fast changing world we live and work in. It is a measure of the dedication of the men and women who design, manufacture, distribute and support Raritan’s products. Raritan, for example, was the first company to develop a flow through sewage treatment system suitable for small boats, well before there were any legal requirements. That product evolved into the ElectroScan which is the gold standard for small onboard treatment systems.

Our catalog represents a significant resource for both current and future users of our Marine Product line. Copies of the catalog are available on request from either our Millville, New Jersey or Fort Lauderdale, Florida Offices. It is also available in PDF format on the home page of our website <http://www.raritaneng.com>.

Over the more than fifty (50) years of Raritan’s history, we have always emphasized the maintainability and repairability of our products. Our catalog includes:

- Detailed product descriptions including benefits to our end users
- Exploded parts views help in identifying products, and their component parts
- Product dimension section
- Product selection guide aids in identifying the best products for various applications
- Product selection guide for repair kits helps identify the correct kit for a given product
- The most commonly sold product numbers are listed for each product
- There is a section explaining the structure of Raritan’s part numbers
- All sections are color coded and cross-referenced for ease of use

In the tradition of constantly improving our products and product offerings, we are pleased to introduce product enhancements and new products in this catalog:

- The Atlantes Freedom™ Vortex-Vac™ retains the substantial look and feel of our Atlantes toilets, while incorporating the flushing technology and performance of our newer heads at a lower cost
- Our exclusive distribution arrangement with TruDesign gives our customers access to the highest quality valves, thru-hull fittings and plumbing fittings; of particular interest are the electronic diverting valve (Electronic Aquavalve®) and a comprehensive ball valve range that includes electronic monitoring of the ball valve position
- Raritan’s new Saniflex Sanitation Hose is particularly remarkable for its odor free composition with the lowest permeation level of any rubber or PVC hose, and its extreme tight radius flexibility; we warrant it for five years for odor permeation

Best wishes for an enjoyable boating season,



Arthur J. “Bret” Bretnall, Jr.
President

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All toilets are easy to clean and maintain. Certified Installers NOT REQUIRED.

They can be used with Electro Scan, Purasan or Lectra/San Type I MSD's or Managem Type II.

Elegance Series - Quiet operation, low water consumption and small footprint is combined with an elegant looking bowl. Our Vortex-Vac flush technology eliminates remote mounted vacuum pump. Choice of three separate controls are available to meet customers preferences. Unique mounting system makes installation of this toilet simple and elegant.

Whisper Series - Whisper operation and quiet operation carry many different meanings. Raritan uses its years of experience to produce a series of toilets that not only function better but also sound better than any toilet on the market. We understand how important it is to be on board and flush without letting everybody else know you have just flushed the toilet. Each model can be ordered for remote pump intake of outside water or for connection to the onboard pressurized fresh water system with solenoid valve. Models include Atlantes Freedom with vortex vac, Marine Elegance and SeaEra.

Practical Series - For those preferring to use a hand operated toilet, Raritan offers several options. Raritan was the first to introduce a dual action pump in the marine industry. The PHII remains a standard for others to follow. Initially designed in bronze the pump later became the largest piece to be injection molded of Delrin® at the time. Models include our PHC and our PHII.

THINGS TO CONSIDER

Marine Sanitation Devices (MSDs) and Waste Treatment Systems - Any boat with an installed toilet must have either a Type I MSD which treats the waste and makes it safe for overboard discharge, a Type II MSD used for the same purpose as a Type I but treats to higher standard and is typically designed for vessels over 65' or a holding tank Type III MSD. All waste water inside the three mile limit requires treatment or holding of the waste. A complete list of Federal No Discharge Zones can be found on the EPA web site.

Power Consumption - When choosing a marine toilet, remember to look at overall power consumption. Many manufacturers make claims that their units draw very low amps. A low amp draw for a long period of time means overall consumption may be higher than a unit that draws more amps.

Water Use - Very low water use normally equates to poor performance when removing anything other than liquid from the bowl. The easier it is for people to use your marine toilet means the less trouble you will have with it.

	Amp Draw for 12 V in amp hr Pump/ Solenoid	Average water usage per flush	Maximum height of inlet pump (above waterline)	Dry bowl flushing option	Maximum discharge height	Marine size bowl available	Household size bowl available	Elongated bowl available
Atlantes Freedom with vortex vac	06/ 04	2 qt./1 qt.	4 ft	YES	10 ft	NO	YES	YES
PHE II	04/ NA	2 qt.	3 ft	YES	3 ft	YES	YES	NO
Sea Era	06/ 04	1.5 qt.	4 ft	YES - remote and solenoid models only	8 ft.	YES	YES	NO
PHC	NA	2 qt.	NA	YES	15 ft.	YES	YES	NO
PH II	NA	2 qt.	NA	YES	15 ft.	YES	YES	NO
Elegance	06/ 04	3.5 pint	4 ft	YES	10 ft	NO	YES	NO

Visit RARITANEng.com for more information.

® Delrin is a registered trademark of DuPont.



Atlantes FreedomTM with Vortex-Vac

Vortex-Vac technology creates vacuum internally so no remote vacuum pump required.

The Atlantes Freedom toilet features:

- Powerful vacuum without remote pumps
- Less water consumption with new fully programmable control
- Solid one piece porcelain bowl in traditional and elongated
- Easily installs above or below waterline on any vessel
- Sturdy stainless steel handle has "fail-safe" operation
- Designed for commercial and recreational vessel applications
- Sea/Fresh model available, allows user to easily choose onboard or outside water
- 01 Models have a four function wall mounted switch including water saver, dry flush and normal flush
- 02 Models have momentary handle operation, no timer, offering flush and dry flush options
- 03 Models have flush handle with timed operation



MODELS

Pressurized fresh water

12 volt **AVHWF01203**

Regular bowl, white, flush handle with timed operation

24 volt **AVHAF01201**

Regular bowl, almond, Smart Toilet Control

Remote intake pump raw water

12 volt **AVLWR01202**

Elongated bowl, white, flush handle momentary

24 volt **AVLAWR02403**

Elongated bowl, almond, flush handle with timed operation

SeaFresh – raw water pump and pressurized fresh water

12 volt **AVWS01201** regular bowl, white, Smart Toilet Control

See page 34 for complete ordering instructions, part numbers, and models available.

EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 34-39

Elegance Series

MARINE Elegance™

Marine Elegance bowls are available in four models: standard angled, standard straight, tall angled and tall straight. Each model is available in Bone or White.

The first toilet in its class to offer:

- Quiet operation
- Unmatched rinsing capabilities
- Low water consumption
- Built in shredder reduces clogs
- Can pump 10 ft vertically, or 100 ft horizontally

Our full size vitreous china bowl offers:

- One piece construction
- Full size toilet seat
- Compact installation
- Unique mounting system, simple installation, easy cleaning
- Reduced weight while adding additional support where needed

The Raritan Smart Toilet Control offers:

- Fully programmable, easy to use control
- Attractive wall mount design
- Flush using no water, little water, or timed flush
- Optional lock out feature when tank is full



TALL



STANDARD

MODELS

Pressurized fresh water

12 volt **220HF012**

24 volt **220HF024**

Remote intake pump raw water

12 volt **220HR012**

24 volt **220HR024**

SeaFresh – raw water pump and pressurized fresh water

12 volt **220HS012**

24 volt **220HS024**

See page 32 for complete ordering instructions, part numbers, and models available.

EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 32-33

Elegance Series

MARINE Elegance™



Now available with new Sea Fresh flushing option!

Easily switch between fresh or raw water allowing conservation of onboard water while providing the benefit of freshwater flushing before leaving the boat to reduce odors. (patented)



Smart Toilet Control

Offers 4 flushing methods:
 Empty Only
 Water Only
 Normal Flush
 Water Saver Flush

Fully programmable with a Holding Tank lock-out feature



Multi-Function Switch

Momentary operation of the toilet where user can choose water only, empty only or both at the same time depending on where the switch is pressed

Push Button Control

Momentary operation of both intake and discharge



EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 32-33

Whisper Series*

SeaEra™

- Powerful flushing action with advanced design features
- An excellent replacement for less durable, non-Raritan units
- Low water usage as little as 1 quart (1 litre)
- Bowl can be rotated 90 degrees for mounting in confined spaces
- Full size joker valve reduces clogs
- Stainless steel macerating blade
- Household or marine size bowls available
- Self-priming inlet pump can run dry
- Separation of intake and discharge means dirty water cannot enter bowl if seal fails
- Two year warranty
- Both 90 degree and straight discharge included



MODELS

Pressurized fresh water

- 12 volt **160MF012** with marine size bowl
- 24 volt **160HF024** with household size bowl

Remote intake pump raw water

- 12 volt **160MR012** with marine size bowl
- 24 volt **160HR024** with household size bowl

Integral intake pump

- 12 volt **160HI012** with household size bowl
- 24 volt **160MI024** with marine size bowl

SeaEra™ Conversion Kit

- An economical way to replace your electric or manual toilet
- Save the toilet bowl and seat - just replace the lower base
- Three basic models (all include heavy duty push button)
- Pressurized freshwater includes solenoid valve and vacuum breaker
- Seawater with integral pump - includes strainer
- Seawater with remote intake pump - includes strainer
- Intake pumps can be run dry without damage
- Two year warranty
- Both 90 degree and straight discharge included



MODELS

Pressurized fresh water

- 12 volt **160LF012**
- 24 volt **160LF024**

Remote intake pump raw water

- 12 volt **160LR012**
- 24 volt **160LR024**

Integral intake pump

- 12 volt **160LI012**
- 24 volt **160LI024**

All units come with straight and 90 degree fittings.

EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGE 46-47

* Integral Pump Models are not Whisper Series.

Practical Series

PHII and PHEII

The most recognized and reliable manual toilets in the world. This manual design PHII is also available as our PHEII electric model.

- Electric model can be switched to manual operation within minutes
- Available for 12 or 24V DC operation
- Lever handle pumping – more efficient, simpler and cleaner than competing vertical piston pumps
- Powerful flushing action – 66% larger diameter housing and piston clears bowl in less strokes
- Pump construction – engineered polymer offers superior strength and durability over PVC
- Full size joker valve – reduces clogs and increases pump performance
- Conserves water – simple ¼ turn valve allows boaters to easily utilize dry pump option

MODEL

DESCRIPTION

PHII

Manual operation, white marine size bowl

PHHBII

Manual operation, white household size bowl

PHEII12

Electric operation, white marine size bowl, 12V

PHEHBII12

Electric operation, white household size bowl, 12V

PHECKII12

Electric conversion kit (manual to electric) 12V, includes switch

PHIIPUMP

Replacement pump only



EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 49-51

Practical Series

PHC

A more affordable and compact version of the PHII. Designed for sailboats and mid-sized powerboats without sacrificing durability. NEW retractable handle allows installation in smaller areas.

- Lever handle pumping – more efficient, simpler and cleaner than competing vertical piston pumps
- Powerful flushing action – 66% larger diameter housing and piston clears bowl in less strokes
- Pump construction – engineered polymer offers superior strength and durability over PVC
- Full size joker valve – reduces clogs and increases pump performance
- Conserves water – simple ¼ turn valve allows boaters to easily utilize dry pump option



MODEL

DESCRIPTION

PHC

PHII Pump, Compact II Base, marine size bowl

PHHBC

PHII Pump, Compact II Base, household size bowl

Toilet Water Kit

The Toilet Water Kit introduces a small amount of R.C. into incoming flush water and deodorizes the water as it comes into the toilet bowl. Eliminates the odors associated with using raw water to flush.

- Toilet bowl deodorant
- Emulsifies materials that cause odors
- Lubricates the internal components of the toilet
- Fits toilets with 3/4" inlet lines

PART #
TWK

DESCRIPTION
Toilet Water Kit



Raritime

- Sealed solid state timer and solenoid converts momentary push button to timed operation
- Adjustable from 1 - 15 seconds for electric toilets, horns and other timed applications
- RTC rated for 80 amps@ 12Vdc 50 amps all other
- RTCM rated for 1 amps all voltages



PART #	DESCRIPTION
RTC*	Raritime (*specify 12, 24 or 32V)
RTCM	Raritime module only (*specify 12, 24 or 32V)

Continuous Duty Solenoid

- Use with Push Button Switch to take high current load off switch
- Reduces need for long runs of heavy wire
- Rated at 80 amps@12Vdc 50 amps all other



PART #	DESCRIPTION
CDS*	Continuous Duty Solenoid (*specify 12,24 or 32V)

Push Button Switch

- Single pole momentary push button switch
- Rated at 15 amp 12V with resistive load



PART #	DESCRIPTION
PBS	Push Button Switch

Heavy Duty Push Button Switch

- Single pole momentary push button switch with protective rubber cover
- Rated at 35 amp 12V with resistive load



PART #	DESCRIPTION
164000	Heavy Duty Push Button Switch



Saniflex Hose

The most flexible marine grade hose on the market. Odor Free and the lowest permeation level of any rubber or PVC hose.

- Flexible radius for tight bending and easy installation
- Reinforced double steel wire Helix with high strength synthetic textile yarn
- Cover is abrasion, ozone, seawater resistant rubber
- Smooth inside wall surface allows for a greater fit and seal during installation
- 5 year warranty against odor permeation

PART #	DESCRIPTION
SFH	Saniflex Hose (sold by the foot)

Raritan Check Valve

- Stops unwanted back flow of water
- Helps to maintain pump prime
- Installs in a 3/4" I.D. plumbing hose line
- Not for pressurized lines

PART #	DESCRIPTION
RCV	Raritan Check Valve



Vented Loop

Vented loops are commonly used for inlet and discharge pipes on toilet installations below the water line. Our aquavent is moulded in a glass reinforced nylon composite, with a silicon bleed valve. The bleed valve allows air into the system to stop siphoning yet seals effectively when water or fluid pass through.

The advantage with our vented loops over others is that the internal diameter is the same throughout the bend - meaning there is no restriction.

PART #	DESCRIPTION
TD90321	1" (25mm) in white
TD90323	1 1/2" (38mm) in white
TD90319	3/4" (19mm) in white



Vented Loop with Solenoid

When connected to an electric toilet intake, the Vented Loop with Solenoid seals upon energizing, allowing full fluid flow. When not energized, the siphon is broken as per the manual system (although quicker).

- Power Consumption (upon energizing)– 400mA @12vDC

Vented Loop with Solenoid is only available in 3/4". Standard Vented Loops are also available in 3/4", 1", 1 1/2"

PART #	DESCRIPTION
TD90462	3/4" (19mm) in white





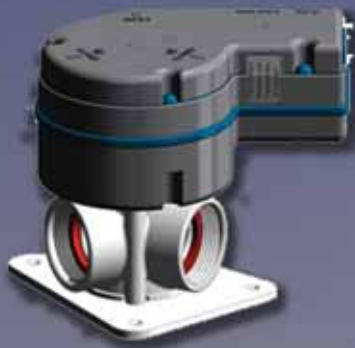
Manual Aquavalue

The Tru-Design Aquavalue® is moulded from a glass reinforced nylon composite. High strength, high-modulus glass fibers impregnated into the nylon provides dramatic strength, stiffness, toughness, and dimensional stability.

- Clear indication of which port is in the closed position
- Versatile - many plumbing options
- Easy mounting - screws directly to bulkhead or floor
- User serviceable - full service and parts backup
- Lockable feature - no ability for accidental discharge
- Each valve supplied with spanner wrench

PART #
TD90314
TD90314W

DESCRIPTION
 Y-valve no tail pieces
 Y-valve 3 straight tail pieces included



Electronic Aquavalue

The Tru-Design Electronic Aquavalue® with "Push Button" diversion can remotely control the flow of water or effluent discharge in your holding tank, overboard or to shore side facilities. Automatically rotates on power up to lubricate moving parts and seals reducing maintenance costs.

- Meets all maritime certification requirements
- Corrosion resistant
- User serviceable
- Light weight
- Manual override protection
- LED denotes holding tank or overboard position which valve port is closed
- Error diagnostics indicator
- OEM compatible for seamless integration
- Control panel offers holding tank lock to prevent accidental discharge



PART #
TD90344
TD90346

DESCRIPTION
 12V Y-valve
 24V Y-valve



Y-Valve Tail Pieces

Our new compact Y-valve designs are the easiest to install on the market. Each Y valve comes standard with 3 straight fittings.

For the ultimate in flexibility choose from our wide range of outlet sizes in 90, and 120 degree fittings with seals.

PART #
TD90294
TD90298
TD90299

DESCRIPTION
 1 ½" (38mm) straight
 1 ½" (38mm) 120 degree
 1 ½" (38mm) 90 degree

Raritan was the first company to develop a flow through system to treat sewage even prior to any legal requirements!

A flow through system is a tank directly connected to the toilet that treats waste each time the toilet is flushed. The advantage of Raritan flow through systems is that you are never holding raw sewage and only a limited amount of treated sewage is discharged each time. Large discharges of raw sewage, which includes full holding tanks containing chemicals used to control odor, can be dangerous to the environment. Raritan's first flow through system was simply a bottle of household bleach that was injected into the treatment tank each time the toilet was flushed killing all fecal coliform.

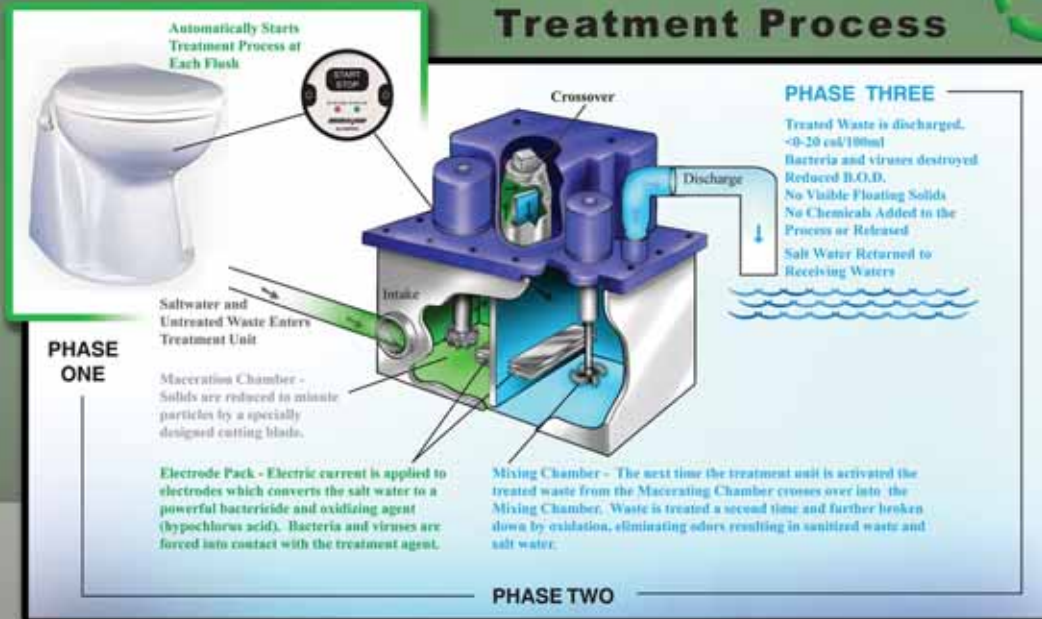
Raritan far exceeds the Federal standard for waste discharge to help preserve our waters. New advancements in flow through systems work differently but both Type I devices produced by Raritan far exceed the federal standard for discharge which is currently set at fecal coliform levels of less than 1000 per 100ml. Swimming beaches close when coliform levels exceed 200 per 100ml and shellfish beds close when coliform levels exceed 14 per 100 ml.



Both the Purasan and Electroscan discharge at levels lower than 10 per 100ml!

electro scan

- The most popular USCG certified Type I MSD
- Power requirements have been reduced by 36 % - each cycle uses only 1.2 amp hours of power
- Generates its own natural disinfectant from salt water
- Coated electrodes use salt water to kill bacteria and viruses without using harmful chemicals
- Records each treatment cycle and stores key information in non-volatile memory that can be summarized on the LCD display or downloaded to a PC
- Single button operation is possible
- Can be used with both manual and electric toilets
- Requires sea water salinity or salt feed tank
- Available in 12, 24 or 32V DC
- Sensor for manual toilet available for auto start part# 31-605



MODEL

EST12
 ESTDC
 31-3002
 32-3003
 32-700RFK

DESCRIPTION

Electro Scan, Type I MSD
 Electro Scan Dual Control
 Four Gallon Salt Feed Unit Complete
 Four Gallon Salt Feed Tank w/pump, 12V
 Upgrade from Lectra/San to Electro Scan 12V

EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 54-55



Purasan™

Originally designed for freshwater applications, the Purasan can be used in both fresh and salt water. Our USCG Type I certified marine sanitation device protects our waterways by neutralizing harmful waste.

- Treats each flush as waste is generated
- Lower power consumption than Electroscan
- Single button operation is available
- Easy to change tablet cartridge, neutralizes bacteria
- A single tablet cartridge lasts for up to 500 treatment cycles
- Can be used with both manual and electric toilets
- Can be used with 2 marine toilets in most applications
- Available in 12V, 24V and 32V DC

MODEL
PST1202

DESCRIPTION

Purasan, Type I MSD for use with one raw water toilet

PST1203

Purasan, Type I MSD, 12V, for use with pressurized fresh water toilets and installations with 2 toilets

41-135

Purasan Tablet Cartridge



EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 58-59



Hold n' Treat System

- A complete onboard waste management system
- Utilizes our best Type I & Type III MSD
- Satisfies legal requirements in all U.S. waters
- Complete "drop in place" system
- Ultimate flexibility with deck pump-out or treated sewage
- Operates with fresh, brackish and salt water
- Salt feed system required with Electroscan model when not using salt water to flush
- For use on inspected and uninspected vessels
- Available in 12 and 24 VDC Model
- Hold N'Treat Controls are available separately to add to an existing holding tank and/or Type I MSD for ultimate flexibility
- Improved pressure sensor for determining tank level



MODEL

21SR1512

DESCRIPTION

Hold N'Treat system complete with Electroscan

21SRP1512

Hold N'Treat system complete with Purasan 12V

The Hold n' Treat Controls

Available separately to add to an existing holding tank and/or Type I MSD for ultimate flexibility.

- Contact Raritan tech support for details

MODEL

21B12

DESCRIPTION

Hold N'Treat control 12V

21B1201

Hold N'Treat control w/ macerator pump 12V

Semi-Custom Holding Tanks and Water Tanks

- The finest quality holding tanks
- Over 300 tanks to choose from, simply add the fittings you want, where you want them
- Our tanks are made of cross-linked polyethylene with 3/8" walls for increased protection from odor permeation
- Call Raritan Technical Service in NJ for assistance with your tank

See our complete catalog on tanks at RaritanEng.com



EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 56-57

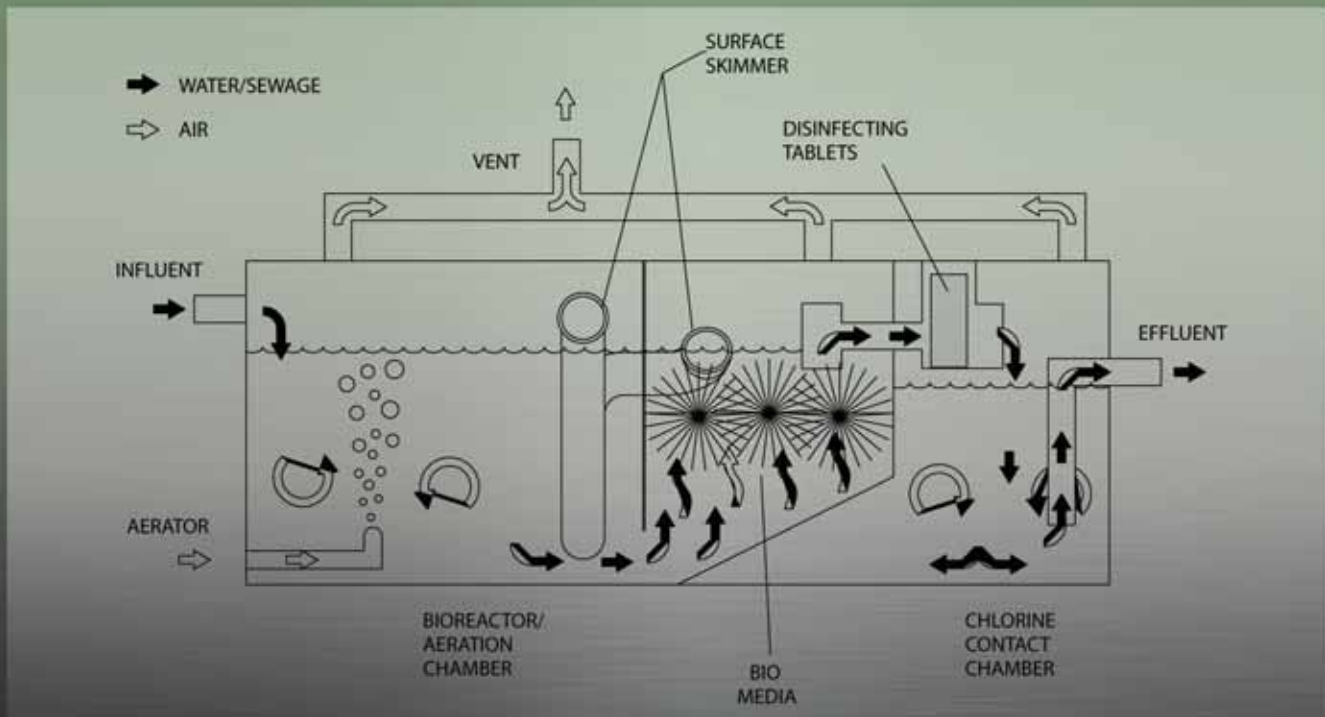
ManaGerm™

Complete onboard biological waste treatment system for up to 12 persons per day. Treats sewage biologically using air, water, and natural occurring bacteria.



- USCG Certified Type II Marine Sanitation Device
- Tank made of lightweight corrosion resistant polyethylene
- Easy installation - simple maintenance
- No moving parts in contact with sewage
- Quiet, durable 120V AC aeration pump included
- Uses very little electricity
- Operates with fresh, brackish and salt water
- For use on inspected and uninspected vessels
- Includes Bio-Starter, 10 lbs of tablets and five fittings
- Available with pump up kit for below water line installation
- Available for installation outside USA with non-hazardous (for shipping) P70 tablets, also 220v units

MODEL	DESCRIPTION
6400121	Managerm 120V AC Approximate Shipping weight: 172lbs (45 kg)
6400121B	Managerm for below water line Installation
6400122	Managerm 240V AC



EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 52-53

In-line Strainer

An inexpensive way to protect your equipment from debris, and toilet odors caused by marine life.

- Easy to install and maintain
- Convenient 1/2" female NPT connections
- 20 mesh plastic removable filter for easy cleaning
- Reduces toilet odors and maintenance

PART#	DESCRIPTION
163000	In-Line Strainer
163010	Strainer Filter
163020	Strainer Gasket



Raw Water Strainer

This is an inexpensive way to protect your engine, generators, AC units, and other components that require outside water. Each unit is individually pressure tested and designed with High Impact clear housing and lid.

- Easy to install and maintain
- Clear housing lets you see debris without opening strainer
- 16 mesh removable high capacity filter

PART#	DESCRIPTION
RWS	Raw Water Strainer
RWS5B	Basket
RWS5	O-Ring



Reverse Polarity Alarm

- Audible warning if neutral wire of incoming 120V AC shore power line is "HOT"
- Essential aid for traveling boaters when connecting to unfamiliar dock side power
- Enclosed in a corrosion resistant housing
- Meets ABYC E11 requirements

PART #	DESCRIPTION
RPA	Reverse Polarity Alarm



Ball Valves

The body of the Ball Valve is manufactured in glass reinforced nylon composite with high impact and tensile strength resulting in a light weight unit, free from corrosion and electrolysis issues. The ball and sealing rings utilize a PTFE polymer to ensure smooth action for many years.

- Large handle for easy operation
- Lockable
- Brightly colored handle allows easy viewing of position
- Valve position marked for easy identification

PART #	DESCRIPTION
TD90648	¾" NPS Ball Valve
TD90651	1 ½" NPS Ball Valve
TD90657	1 ½" NPS Ball Valve with Position Monitoring



TM-4000 Four Channel Tank Monitor/Controller

Our four channel tank monitor provides an intelligent networked solution for the monitoring of up to four tanks. The system consists of the TM-4000 display controller and up to four HT-100 tank controllers and any number of RM-400 repeater displays. The system communicates via a 2-wire network cable with a maximum cable length of 1000 meters. Note: Two different display options are available.

FEATURES INCLUDE:

- Full control from one central location on your boat
- Displays bar graph or Lts/Gals and percentage
- Visual indication of tank level, seacock position & pump status
- Turn holding tank macerator pump on manually & off manually or automatically
- Turn water maker on/off manually or automatically
- All tank names are user programmable e.g. (Grey Tank) (Black Tank) (Fresh Tank) (Fuel Tank) (Day Fuel Tank)
- Backlight



HT-100 Tank Controller

FEATURES INCLUDE:

- Manages the tank high output and provides an input for the fluid level sensor
- Teach-in for level sensor with four point interpolation for irregular shaped tanks
- Tank high level output which can be connected to the toilet controller which disables the toilet when the holding tank is full

Tank Monitor

The finest holding tank monitor. Available with easy-to-read tank level indicators. Monitors up to four tanks from one convenient location.

EASE OF INSTALLATION:

- All parts are mounted outside of the tanks – eliminates need for special tank fittings
- No internal probes or floats
- Flush-mounted indicator panel has a smooth surface (no protruding switches or gauge)

EASE OF USE:

- Reliable electronic design perfected for the marine environment
- Can be used with any polyethylene or fiberglass tank for fresh or waste water
- Easy to use
- No maintenance required
- Gold-plated connectors ensure consistent and trouble-free performance
- Low power consumption
- Available for 12, 24 or 32V DC installations

Width: 4 1/2" (11.4cm)
 Height: 2 1/4" (5.7cm)



PART #	DESCRIPTION
15100*	Tank Monitor (*12, 24 or 32 V)
15101	Tank Sensor Module Kit

Note: NOT for use with metal tanks or fuel tanks.

Tank Monitor comes with face plate and material to monitor two tanks. Purchase a Tank Sensor Kit for each additional tank up to four tanks. Approximate Shipping Weight: 1 lbs (.45 kg)

Rudder Master

Make life easier with our economical steering aid and rudder positioning device. Each unit comes with all necessary components needed, along with calibration box and sending unit.

- Constant monitoring of rudder angle from 0 to 45 degrees
- Repeater units are available for multiple station readouts
- Protects your boat at docking and close maneuvering

MK2 and MK3 Models

- Spray proof (IP64)



MK5 and MK6 Models

- Easy to read panoramic meter



NOTE WHEN ORDERING:

We ship units with 30 ft. (9.1m) of wire. Any model can be ordered with longer wire, just ask. MK2 and MK3 units are the only units designed as true spray proof (IP64) meters. You will need to place meters away from wash down areas and protect against the elements.

Rudder Master Parts List

PART #	DESCRIPTION
MK2*	Round 2" Meter
MK3B*	Round 3 3/8" Meter
MK5	Panoramic 4 1/2" Flush Mount Meter
MK6	Panoramic 3 1/2" Flush Mount Meter
MK2R*	Repeater Unit with MK2 Meter
MK5R	Repeater Unit with MK5 Meter
MK6R	Repeater Unit with MK6 Meter

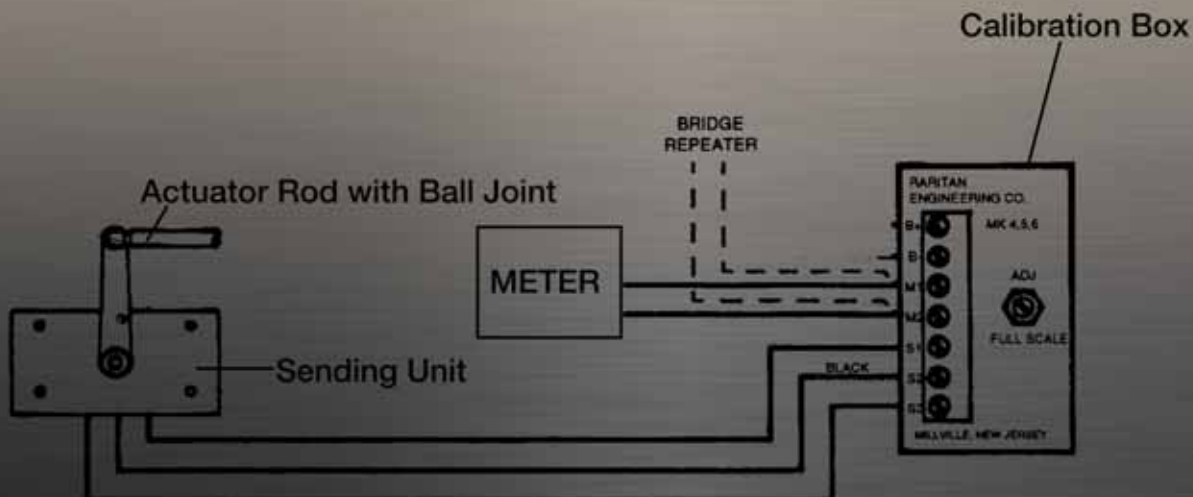
Any model can be special ordered with longer wire by adding length in feet to (suffix) part #. Example: MK5-60

* Specify Voltage

Approximate Shipping Weight: 3 lbs (1.4 kg)

Rudder Master Repair Parts

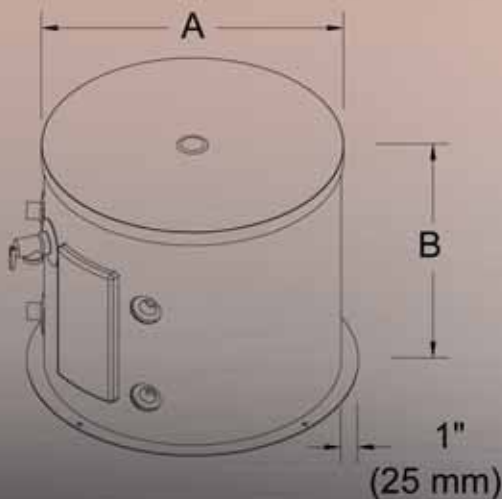
MK2M12	METER: 2 IN. CHROME, 12 V
MK2MB12	METER: 2 IN. BLACK, 12V
MK2R12	MK2 REPEATER UNIT
MK2RB12	MK2B REPEATER UNIT
MK5R	MK5 REPEATER UNIT
MK6M	METER: 3 1/2 IN. PANEL
MK6R	MK6 REPEATER UNIT
MKCB	CALIBRATION BOX
MKCBP	CALIBRATION POTENTIOMETER
MKDRW	ACTUATOR ROD ASSEMBLY W/BALL JOINTS
MKSII	SENDER ASSEMBLY
MKSII50	SENDER ASSEMBLY W/50 FT. OF WIRE
MKSP	SENDER POTENTIOMETER



1700 Series Water Heater

World-renowned water heater specially designed for the marine environment. Provides the comfort and convenience of reliable hot water.

- Solid foam insulation means the water stays hot longer than with traditional fiberglass insulation
- Proven long-life design
- Withstands the rigors of the marine environment
- Glass-lined tank is more durable than stainless steel
- Attractive polymer jacket resists corrosion from dampness
- Ignition-protected, adjustable thermostat
- Environmentally friendly CFC-free foam insulation
- Replaceable magnesium anode to protect tank and neutralize acids in the water
- The tank is covered by a five-year Limited Warranty, the entire heater is covered by a two-year Limited Warranty
- Each unit is assembled by hand, individually tested
- Available in 6, 12 and 20 gallon models – with or without engine heat exchangers
- Available for 120V AC or 240V AC



Solid Foam insulation keeps water hotter longer and Steel Glass lined tanks have a longer life span than most traditional tanks.



Hot Water Heater Ordering Instructions

To find the correct part number for your application, please read the following instructions:

COLUMN 1

enter(17) = water heater

COLUMN 2

enter (06) = 6 gallon

enter (12) = 12 gallon

enter (20) = 20 gallon

COLUMN 3

enter (0) = without a heat exchanger

Without a heat exchanger you will rely solely on the electricity for heat.

enter (1) = with heat exchanger

This option allows you to use the hot water generated from the engines to heat the water.

COLUMN 4

enter (1) = 120 volt AC

enter (2) = 220 volt AC

COLUMN 5

enter (01) = GAZ heat exchanger fittings

enter (02) = METRIC heat exchanger fittings

enter (03) = 4500 watt heating element for use with 240 VAC only

We want to make sure you get the most convenience for your money. Please feel free to contact us with questions, or to review additional features available for your custom application.

17	Water Heater	06	six gallon	0	without heat exchanger	1	120V AC	01	GAZ heat exchanger fittings
		12	twelve gallon	1	with heat exchanger	2	220V AC	02	METRIC heat exchanger fittings
		20	twenty gallon					03	4500 W heating element 240VAC only

PART #	DESCRIPTION
1790010	12/20 Gallon Magnesium Anode
1790610	6 Gallon Magnesium Anode
WH16	Water Heater Thermostat Assembly
WH1A	Bolt-on 1250W/115 VAC Heating Element w/Gasket
WH1A-S	Screw-in 1250W/115 VAC Heating Element w/Gasket
WH1B	Bolt-on 1250W/240 VAC Heating Element w/Gasket
WH1B-S	Screw-in 1250W/240 VAC Heating Element w/Gasket
WH1D-S	Screw-in 4500W/240 VAC Heating Element w/Gasket
WH3	Pressure Relief Valve 75PSI

SIZE	CAPACITY	A	B	SHIPPING WT.
6 gal. w/o HE	6 gallon	14 1/2" (36.9 cm)	16 1/4" (41.9 cm)	35 lbs/16kg
6 gal. w/HE	5.7 gallon	14 1/2" (36.9 cm)	16 1/4" (41.9 cm)	41 lbs/19kg
12 gal. w/o HE	11 gallon	18 3/42" (47.6 cm)	16 1/4" (41.9 cm)	51 lbs/23kg
12 gal. w/HE	10 gallon	18 3/42" (47.6 cm)	16 1/4" (41.9 cm)	58 lbs/26kg
20 gal. w/o HE	18 gallon	18 3/42" (47.6 cm)	24 1/4" (60.6 cm)	65 lbs/30kg
20 gal. w/HE	17.5 gallon	18 3/42" (47.6 cm)	24 1/4" (60.6 cm)	71 lbs/32kg

HE = Heat Exchanger

Other part numbers available. For other options contact Raritan.





Raritan Organics

All natural products to help preserve and protect the marine environment

K.O. KILLS ODORS!

K.O. is a holding tank treatment specially formulated for today's marine market. Unlike chemical products, K.O.'s bioactive formula breaks down and neutralizes odor-causing waste materials instantly. Eliminates holding tank odors at their source. K.O. works when nothing else will!

- Odor-killing bacteria digests liquids, solid waste and paper
- Does not require adding "tissue digesters" or other "boosters" to be effective
- A small amount of K.O. can easily keep a boat odor-free between pump outs
- A safe, non-chemical and non-polluting product

PART #	DESCRIPTION
1PK022	K.O. Kills Odors! Bioactive treatment 22 oz. (.65 liters)
1PKOGAL	K.O. Kills Odors! Bioactive treatment 1 gal. (3.79 liters)

C.P. CLEANS POTTIES!

C.P. eliminates the worst raw odors from the intake line without brushing. The only toilet bowl cleaner Raritan recommends for Raritan toilets. C.P. is the only bowl cleaner that can be combined with K.O.

- The first bowl cleaner to combine a specialized strain of bacteria with 100% biodegradable cleaning agents
- Specially designed to make the bowl shine like never before and keep the entire system odor-free
- Leaves toilet bowls, drains and sumps sparkling clean
- A safe, non-chemical, non-polluting product destroys odors on contact
- Can also be used to clean sinks, showers and basins

PART #	DESCRIPTION
1PCP22	C.P. Cleans Potties! Bioenzymatic 22oz. (.65 liters)



Raritan Non-Organics

R.C. RARITAN CONCENTRATE!

R.C. is a toilet deodorant and lubricant for the internal components of the toilet. R.C. is a non-organic product.

- Toilet bowl deodorant
- Emulsifies materials that cause odors
- Lubricates the internal components of the toilet
- Recommended for Atlantes ADS and Crown Head deodorant bottle
- Not for use in combination with K.O.

PART #	DESCRIPTION
CON22	Raritan Concentrate 22 oz. (.65 liters)

C.H. CLEANS HOSES!

C.H. is specifically designed to remove uric scale from black water system from the toilet to the tank without having to remove hoses!

- Eliminates clogs which can cause poor flushing performance
- Non-toxic, biodegradable and safe to use with all materials commonly found in black water systems
- Safe and effective replacement to the muriatic acid treatments recommended in Lectra/San and Electroscan waste treatment systems

PART #	DESCRIPTION
1PCHGAL	Cleans hoses and MSDs



Icerette

AUTOMATIC ICE CUBE MAKER

A dependable, environmentally friendly, fully automatic ice making machine designed specifically for marine applications.



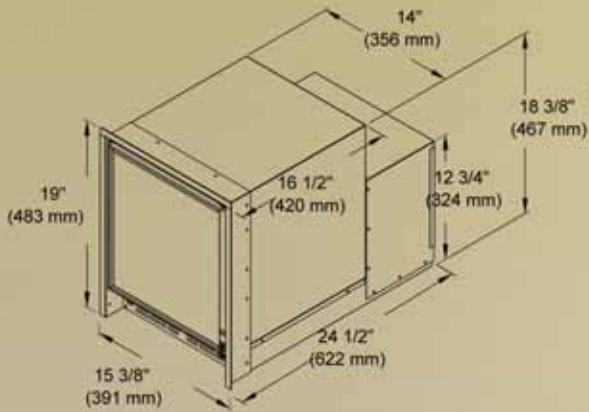
- Wrap around evaporator coil ensures an evenly cooled interior
- Produces up to 22 pounds of crescent-shaped ice a day
- Removable ice bucket stores 11 pounds of ice
- Ice production stops automatically when ice bucket is full
- No drain required
- Magnetically sealed door has sturdy stainless steel hinges and locking latch
- Unique door lock holds the door closed in rough seas or opens when unit is shut down to allow proper ventilation
- Non-corrosive materials, fittings and fasteners
- Door can be hinged for right-hand or left-hand opening
- Each unit is assembled by hand, individually tested and backed by Raritan's one-year Limited Warranty and legendary technical support team
- Two sizes and several door color combinations that complement any boat interior
- Available for 120V AC, 60 HZ and 240V AC, 50 HZ



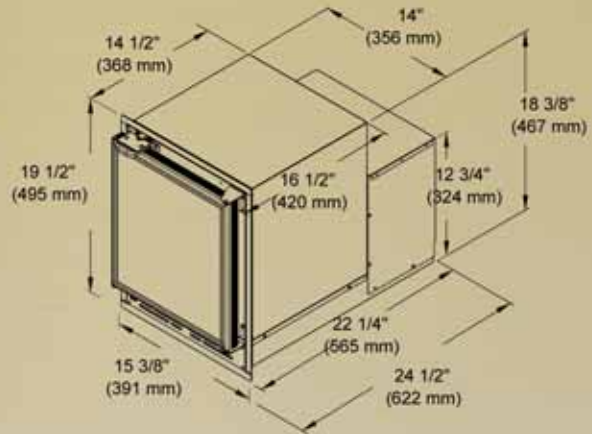
EXPLODED VIEWS, PARTS AND OTHER OPTIONS ON PAGES 28-31



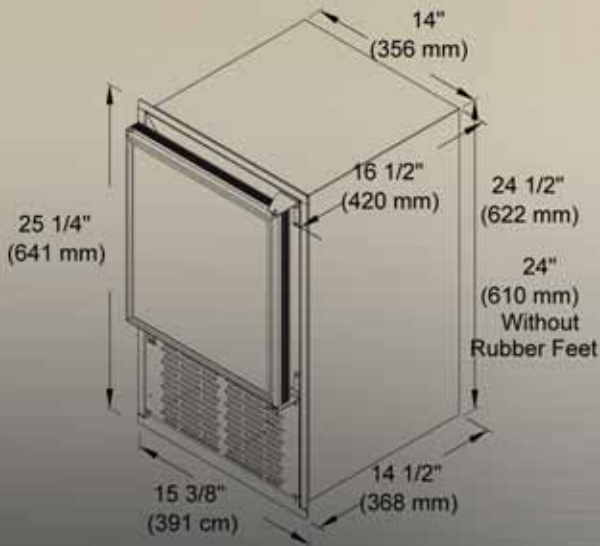
Icer-ette Exploded View



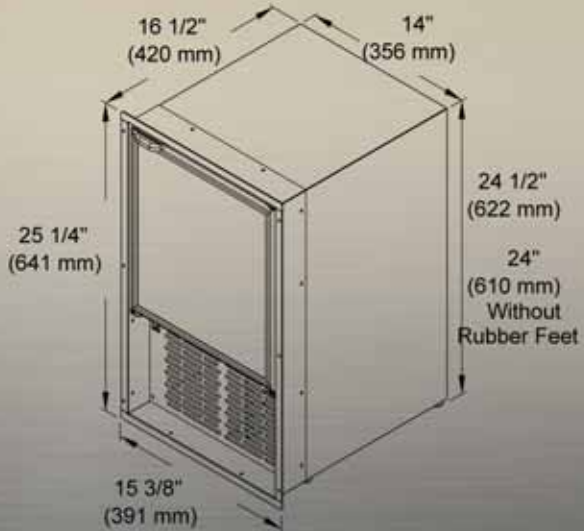
I-19A
MWS
28AUG09



I-19
MWS
05MAR07



I-20
MWS
05MAR07



I-20A
MWS
05MAR07



Icer-ette Ordering Instructions

To find the correct part number for your application, please read the following instructions:

COLUMN 1

enter (84) = Model 84 short version
 enter (85) = Model 85 tall version
**check current dimensions to order the correct size and model number*

COLUMN 2

enter (B) = built in has flange
 enter (BH) = flange with holes
 enter (E) = flush mount flange
 enter (EH) = flush mount flange with holes
 enter (F) = free standing without flange

COLUMN 3

enter (5) = stainless steel

COLUMN 4

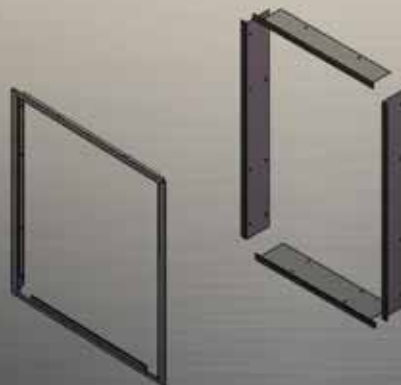
enter (15) = stainless steel door
 enter (16) = white vinyl door
 enter (17) = black vinyl door
 enter (18) = neutral vinyl door
 enter (19) = antique white vinyl door

COLUMN 5

enter (1) = 120 volts AC
 enter (2) = 240 volts AC

We want to make sure you get the most convenience for your money.
 Please feel free to contact us with questions, or to review additional features available for your custom application.

84 Icer-ette short	B Flange	Cabinet type	Door Type	1 120V AC
85 Icer-ette tall	BH Flange with holes	5 Stainless steel	15 Stainless steel	2 240V AC
	E Flush Mount Flange		16 White	
	EH Flush Mount Flange with holes		17 Black	
	F Free-standing -no flange		18 Neutral	
			19 Antique white	

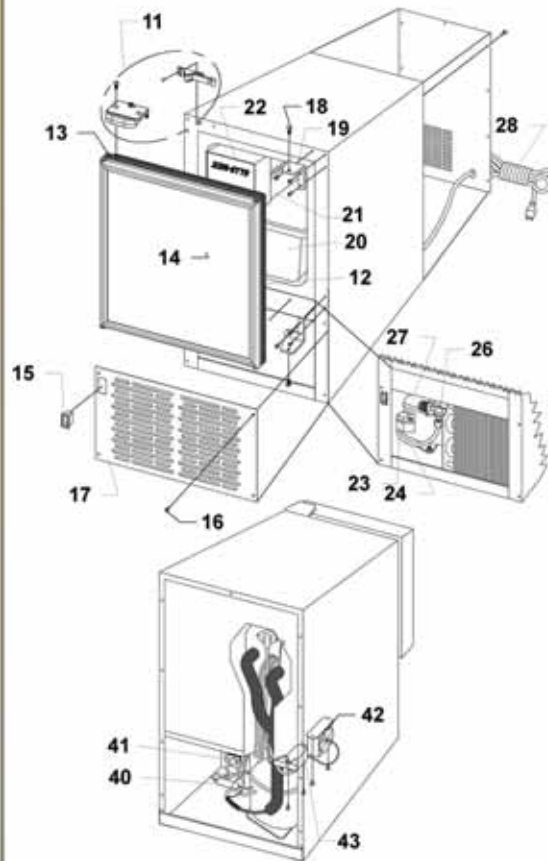


Icer-ette Parts List

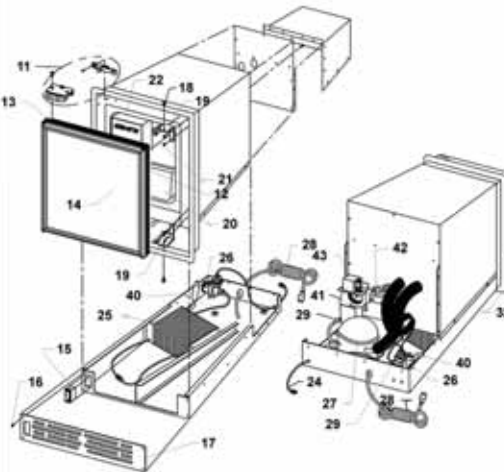
ITEM #	DESCRIPTION	PART #	MODEL 84	84 240V	MODEL 85	85 240V
1	Wiring Harness (not shown)	I44		I44220	I44	I44220
2	Module Assembly	I34M-1		I34M220	I34M-1	I34M220
3	Thermostat	I34T		I34T	I34T	I34T
4	Icemaker Mold with Heating Element	I34MH		I34MH220	I34MH	I34MH220
11	Black Handle Latch Assembly	IM135		IM135	IM135	IM135
12	Door Gasket	IM89		IM89	IM89	IM89
13	Black Nylon Snap Bushing	I2101		I2101	I2101	I2101
14	Stainless Steel Door Assembly	IM215W		IM215W	IM215W	IM215W
	White Laminate Door Assembly	IM216W		IM216W	IM216W	IM216W
	Black Laminate Door Assembly	IM217W		IM217W	IM217W	IM217W
	Neutral White Laminate Door Assembly	IM218W		IM218W	IM218W	IM218W
15	On-Off Rocker Switch	I37S		I37S	I37S	I37S
16	8-32 x 1/2 Phil Pan Head Stainless Steel Screw	I73		I73	I73	I73
17	Grille	IM9S01		IM9S01	IM901	IM901
18	Door Hinge Top Screw, 1/4-28 x 1/2 Hex Head	F181		F181	F181	F181
	Door Hinge Bottom Screw, 1/4-28 x 5/8 Hex Head	CH51		CH51	CH51	CH51
19	Hinge Set, Top & Bottom	IM13W		IM13W	IM13W	IM13W
20	Ice Bucket	I90		I90	I90	I90
21	Ice Maker	I34W		I34W220	I34W	I34W220
22	Ice Maker Front Cover	I34A		I34A	I34A	I34A
23	Compressor Relay w/Overload Protector	I1806-1		I1806-2	I1806-1	I1806-2
24	Water Line Tubing Assembly	I93SW		I93SW	I93W	I93W
26	Water Solenoid Valve	I34B		I34B220	I34B	I34B220
27	Compressor w/Hardware and Drier (includes #40)	I1800A-1W		I1800A-2W	I1800A-1W	I1800A-2W
28	Power Cord	I41		I41220	I41	I41220
29	Service Valve w/Tube	I101		I101	I101	I101
32	Flange	IM99S		IM99S	IM99	IM99
	Flange w/Holes	IM99SH		IM99SH	IM99H	IM99H
40	Drier	I30A01		I30A01	I30A01	I30A01
41	Motor and/or Blower Assembly	I28		I28220	I25	I25220
42	Cold Control	I33A		I33A	I33A	I33A
43	Relay	I52		I52220	I52	I52220

Icer-ette Exploded View

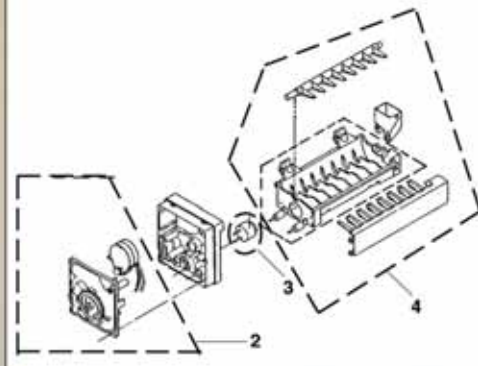
Exploded View of Model 85 Icer-ette



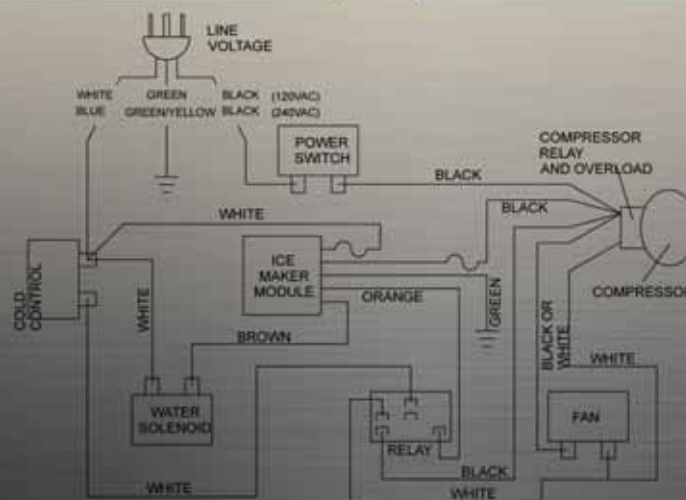
Exploded View of Model 84 Icer-ette



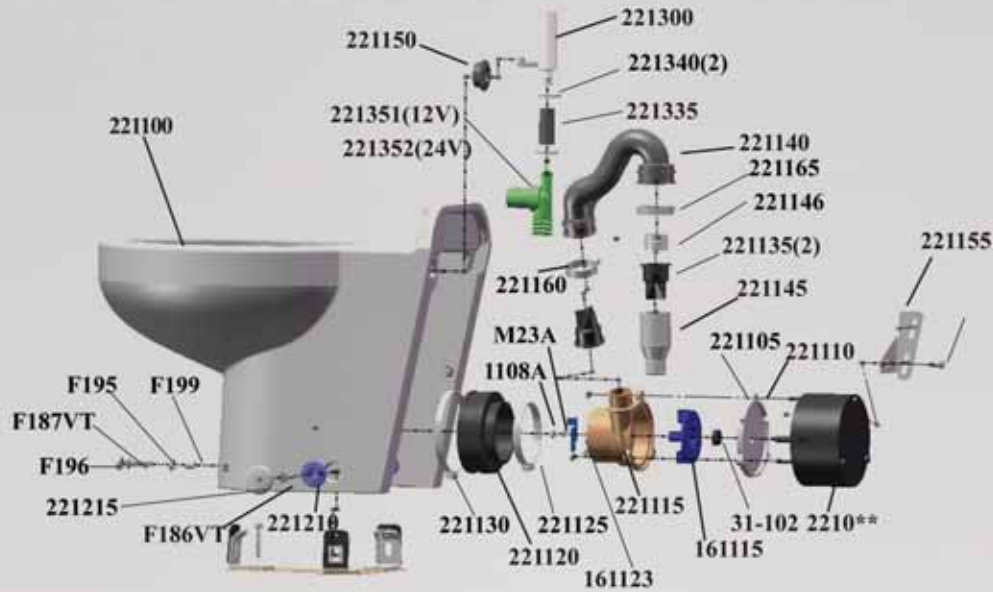
Exploded view of Item #21



Wiring Diagram
Raritan Icer-ette
Series 84 and 85



Marine Elegance Exploded Parts View



Marine Elegance Ordering Instructions

To find out the correct part number for your application, please read following instructions:

COLUMN 1

Insert (2) = Marine Elegance models

COLUMN 2

Insert (2) = standard height bowl
Insert (3) = tall height bowl

COLUMN 3

Insert (0) = angled back
Insert (1) = straight back

COLUMN 4

Insert (A) = bone, white is standard

COLUMN 5

Insert (H) = standard household

COLUMN 6

Insert (F) = fresh water solenoid
This allow user to flush using pressurized fresh water on board.
Insert (R) = remote sea water pump
This allows user to use raw water by installing pump remotely.
Insert (S) = sea/fresh option
This allows user to switch between fresh pressurized water and sea/raw water.

COLUMN 7

Insert (012) = 12V DC
Insert (024) = 24V DC
Insert (012T) = 120v/240V AC

COLUMN 8

Insert (blank) = fully programmable smart switch control
Insert (01) = momentary multifunction control
Insert (02) = heavy duty push button

MARINE ELEGANCE	BOWL HEIGHT	BOWL TYPE	COLOR	BOWL SIZE	WATER SOURCE	VOLTAGE	CONTROL
2	2 STANDARD	0 ANGLED	WHITE (STD)	H HOUSEHOLD	F PRESSURIZED FRESH WATER	012 12 V	SMART SWITCH (STD)
	3 TALL	1 STRAIGHT	A BONE		R REMOTE INTAKE PUMP	024 24 V	01 MULTIFUNCTION
					S SEAFRESH	012T 120/240 V	02 HEAVY DUTY PUSH BUTTON

Marine Elegance Parts List

PART#	DESCRIPTION
221100	Toilet Bowl, Standard, Angled, White (1)
221100A	Toilet Bowl, Bone (1)
2210012	Discharge Pump Assembly (1)
221012	MOTOR: 12V DC (1)
221024	MOTOR: 24V DC (1)
221105	O-RING (1)
221110	Discharge Pump Seal Plate (1)
221115	Discharge Pump Macerator Housing (1)
221120	Bowl Throat Adapter (1)
221125	Bowl Throat Adapter Clamp- Small (1)
221130	Bowl Throat Adapter Clamp - Large (1)
221135	JOKER VALVE (Custom) (2)
221140	Discharge Hose (Custom) (1)
221145	Discharge Adapter Fitting (1)
221146	Joker Valve Insert
221150	Uni Seal 1/2" (1)
221155	Discharge Pump Mounting Bracket (1)
221156	Discharge Mtg Bracket Straight Back Model
221160	Discharge Hose Clamp - Small (1)
221165	Discharge Hose Clamp - Large (1)
221170	Discharge Hose Strap (Not Shown)
221175	L Bolts (2) (Not Shown)
221210	Bowl Mounting Bushing (2)
221215	Bowl Mounting Bushing Cap (2)
221300	Vacuum Breaker Assembly 1
221325	Vacuum Breaker Seal Washer (1)
221330	Vacuum Breaker O-Ring (#16) (1)
221351	Water Solenoid Valve (12V)(1)
221352	Water Solenoid Valve (24V)(1)
221356	Water Line Adapter
221357	Water Line Adapter
221335	1/2" Hose 2.25" L (1)
221340	1/2" Clamps (2)
31-102	Motor Shaft Seal
31-114	Lock Nut 10-32 W/Nylon (3)
F144	#10 Lock Washer (Not Shown)
1108A	Nut
161115	Impeller
161123	Macerator Blade

PART#	DESCRIPTION
F321	Fender Washer (Not Shown)
F186VT	Bowl Mounting Screw (2)
F187VT	Bowl Mounting Screw (1)
F188	Well Nut (2)
F189	Deck Mounting (3)
F193VT	Pump Mounting (1)
F195	Front Mounting Washer (1)
F196	Front Mounting Snap Cap (1)
M23A	Lockwasher
F199	Bushing

REMOTE INTAKE PUMP See page 48

Optional:

190601	Fresh Water Strainer
163000	Raw Water Strainer

NOT SHOWN:

221101	Note: add suffix "A" for Bone Toilet Bowl, Standard, Straight White
231101	Toilet Bowl, Tall Straight White
231100	Toilet Bowl, Tall Angled White
1245	Seat and Cover, White
1245A	Seat and Cover, Bone
214**	Relay

Control Parts (Not Shown):

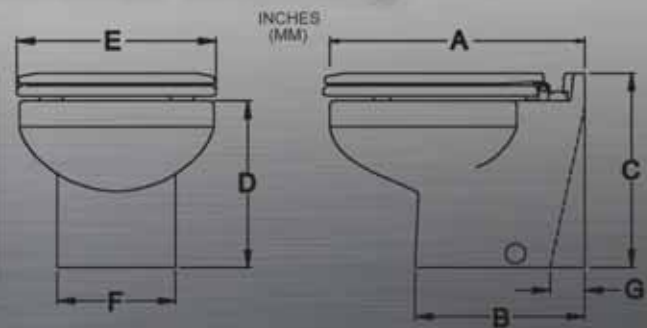
SSFC02	Smart Control Box
SSFC03	Smart Wall Panel
SSFC04	Cable
31-618	Cable
For Momentary Multifunction Control after 02/10	
221549	Momentary Multifunction Control Box
221524	Momentary Multifunction Bezel White
221543	Momentary Multifunction Wall Panel
221545	Cable for Momentary Multifunction Control

Repair Kits:

DIAPUMPRK	Inlet Pump Repair Kit
MERK	Discharge Pump Repair Kit
162400	Fittings and O-Rings for Inlet Pump

Marine Elegance Dimensional Drawing

BOWL TYPE	A	B	C	D	E	F	G
ME ANGLLED BACK	18 3/8 (467)	12 1/4 (311)	14 (355)	12 (305)	14 (355)	8 1/2 (216)	2 1/8 (54)
ME STRAIGHT BACK	18 3/8 (467)	12 1/4 (311)	14 (355)	12 (305)	14 (355)	8 1/2 (216)	NA
ME - TALL ANGLLED BACK	18 3/8 (467)	12 1/4 (311)	17 (432)	15 (380)	14 (355)	8 1/2 (216)	2 1/8 (54)
ME - TALL STRAIGHT BACK	18 3/8 (467)	12 1/4 (311)	17 (432)	15 (380)	14 (355)	8 1/2 (216)	NA





Atlantes Freedom with Vortex-vac Ordering Instructions

To find the correct part number for your application, please read the following instructions:

COLUMN 1

enter (AV) = for Atlantes Freedom with Vortex-Vac models

COLUMN 2

enter (H) = household bowl
 enter (L) = elongated bowl
 enter (B) = household bidet
 enter (C) = elongated bidet

COLUMN 3

enter (W) = white
 enter (A) = bone

COLUMN 4

enter (F) = Pressurized fresh water
This allows users to use the pressurized fresh water onboard to keep orders down associated with raw water intake. Features our Whisper Flush, designed for quiet operation.

enter (M) = sea water solenoid
 enter (R) = remote sea water pump
This option allows users to install pump away from the head to reduce noise levels, allows for easier access to the pump and is ideal where longer runs are required.

enter (S) = sea/fresh option
This allows user to switch between fresh pressurized water and sea/raw water.

COLUMN 5

enter (012) = 12 volts
 enter (024) = 24 volts
 enter (012T) = 120/240 volt hook up options

COLUMN 6

enter (01) = Smart Toilet Control
 enter (02) = Handle Momentary
This option allows users to flush toilet with incoming water and discharge or discharge only depending on your requirements.

enter (03) = Handle Timed
This option includes a toilet control unit which allows for a timed flush operation while still controlling the intake and discharge separately, momentary flush lever will work if electronic timer fails.

enter (04) = Multifunction Momentary

We want to make sure you get the most convenience for your money.

Please feel free to contact us with questions, or to review additional features available for your custom application.

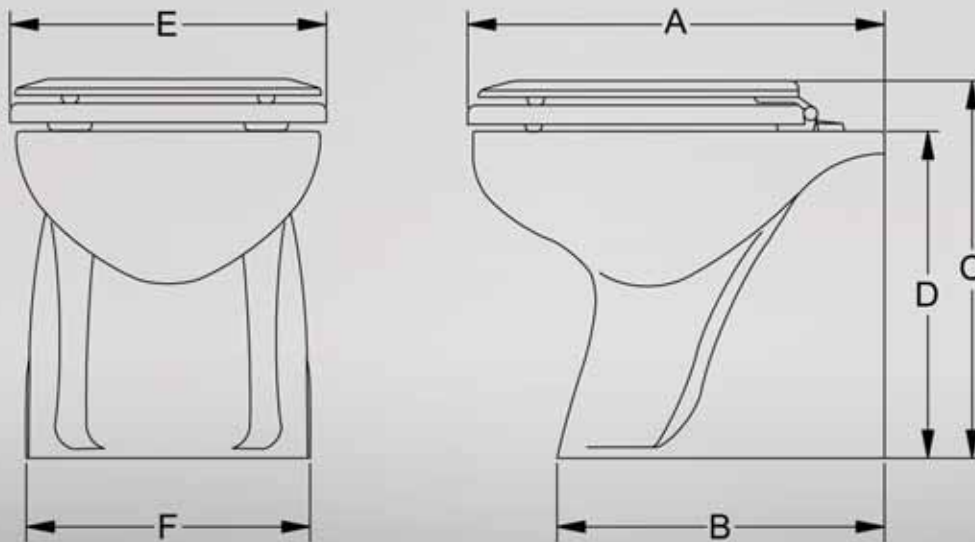
ATLANTES FREEDOM WITH VORTEX-VAC	BOWL SIZE/STYLE	COLOR	WATER SOURCE	VOLTAGE	CONTROL
AV	H HOUSEHOLD	W WHITE	F PRESSURIZED FRESH WATER	012 12 V	01 SMART TOILET CONTROL (STC)
	L ELONGATED	A BONE	M SEA WATER SOLENOID	024 24 V	02 HANDLE MOMENTARY
	B HOUSEHOLD BIDET		R REMOTE INTAKE PUMP	012T 120/240 V	03 HANDLE TIMED (STC)
	C ELONGATED BIDET		S SEAFRESH		04 MULTIFUNCTION MOMENTARY



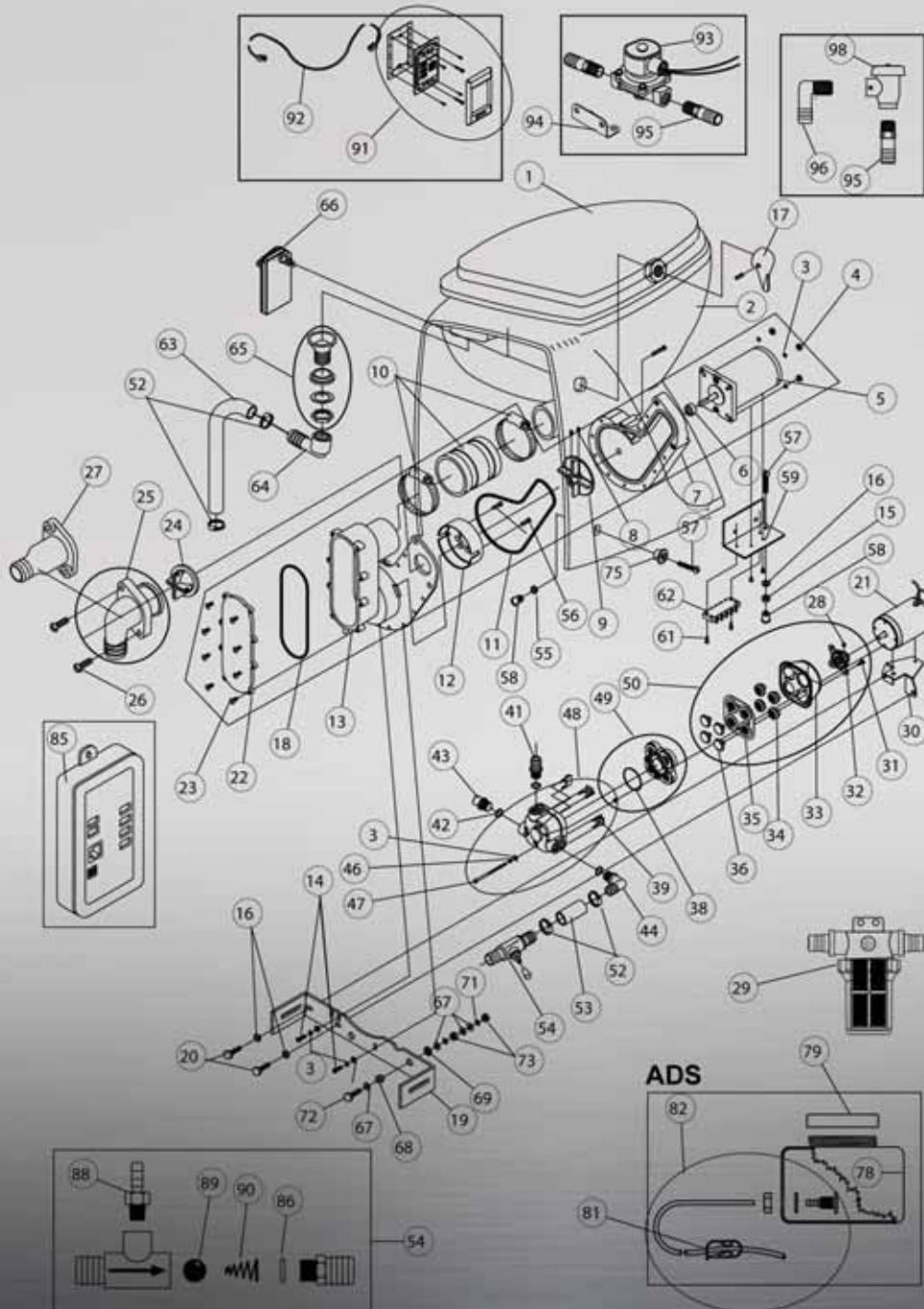
Atlantes Dimensional Drawing

BOWL TYPE	A	B	C	D	E	F
STANDARD	19 (482)	15 (380)	17 3/16 (440)	15 (380)	13 3/4 (350)	14 (355)
ELONGATED	21 (545)	18 1/4 (465)	17 3/16 (440)	15 (380)	14 1/2 (368)	14 (355)

INCHES
(MM)



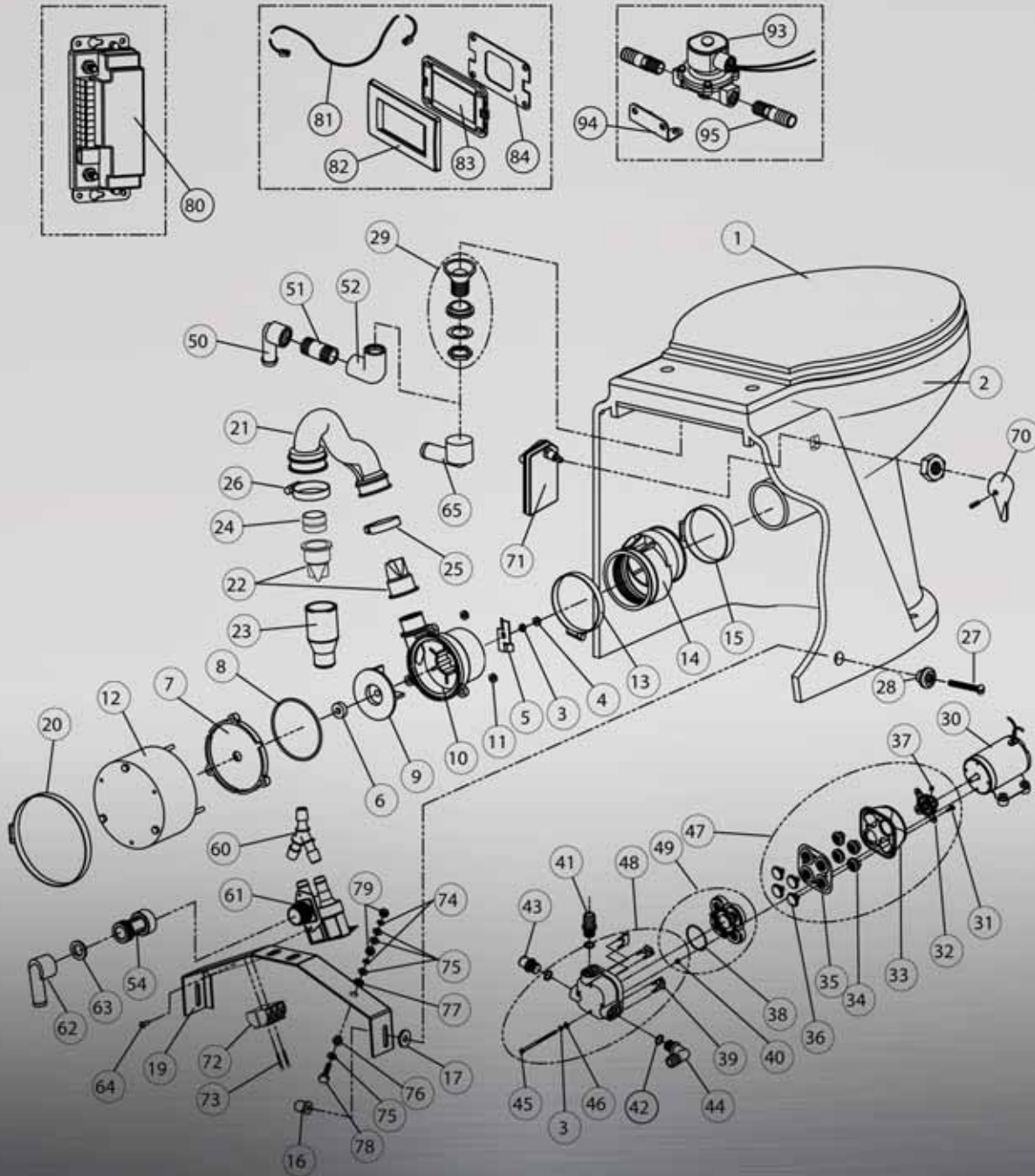
Atlantes Exploded View



Atlantes Freedom Parts List

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	1245+	Seat & Cover	42	162425	O-Ring (3)	WALL MOUNTED FLUSH CONTROL		
1	AL030+	Seat & Cover (elongated)	43	162415	Plug Fitting	91	ATW641	Flush Control w/ Bezel
2	AM001AW	Atlantes Bowl (Almond)	44	162405	3/4" Hose Barb 90° Fitting	92	31-618	Cable for Flush Control
2	AM001W	Atlantes Bowl (White)	46	F144	#10 Washer s/s Flat (4)	SOLENOID VALVE FRESH WATER UNITS		
2	AL001W	Atlantes Bowl	47	F162VT	Inlet Pump Mounting Bolt (4)	93	CWPS12B	1/2 GC Solenoid Valve 12V
		Elongated (White)	48	162100W	Upper Housing Assembly	93	CWPS24B	1/2 GC Solenoid Valve 24V
2	AL001AW	Atlantes Bowl	49	162200W	Middle Housing Assembly	93	CWPS32B	1/2 GC Solenoid Valve 32V
		Elongate (Almond)	50	162300W	Lower Housing Assembly	95	CWPSMB	Mounting Bracket for CWPS
3	M23A	#10 Lockwasher S/S (19)	52	CH43	Hose Clamp S/S 3/4" (5)	95	PLA14	1/2" MPT to 3/4" Barbed Nipple (2)
4	F111	10-32 S/S Nut (4)	53	CH42	3/4" PVC Hose	TOILET CONTROL		
5	AM60112	Discharge Motor 12 V	54	31-307W	T-Check Valve Assy.	85	50112W	Toilet Control 12 Volt for A7 & A8
5	AM60124	Discharge Motor 24V	55	CH57	Rubber Washer	85	50124W	Toilet Control 24 Volt for A7 & A8
5	AM60132	Discharge Motor 32V	56	F106	Screw, Trilobular, #6 x 3/4 Phil Pan Hd	85	50132W	Toilet Control 32 Volt for A7 & A8
6	31-102	Motor Shaft Seal				ATMOSPHERIC(ANTI-SIPHON) VACCUM BREAKER		
7	AM110	Discharge Pump Back	57	F089	1/4-20x 2" Rnd Hd Screw (2)	98	PLAVB0-5	Atmospheric Vacuum Breaker
8	F105NP	1/4-28 Set Screw (2)	58	F035	Isolation Nut (3)	96	PLA13	1/2" NPT to 3/4 Hose Elbow
9	AM161	Grinder Impeller	59	AM165	Terminal Block Bracket	95	PLA14	1/2" MPT to 3/4" Barbed Nipple
10	AM031	Discharge Connection (set of 3 pcs)	61	F108	Screw #4 x 1 (2)	PARTS NOT SHOWN		
11	AM114	Discharge Pump O Ring	62	ETB3	Terminal Block	RTAH24DA		Power Converter For 120/240 VAC UNIT
12	AM162	Grinder Teeth	63	AM519	Intake Hose from Diaphragm Pump	ADDITIONAL ACCESSORIES AVAILABLE FROM RARITAN		
13	AM130A	Discharge Pump Body				1PCP22		C.P. Cleans Potties, 22 OZ
14	F143VT	10-32 x 1" Pan Hd S/td Screw (2)	64	1236E	Bowl Elbow	1PCHGAL		Cleans Hoses, Tanks and MSD (gal.)
		1/4-20 Nut s/n (2)	64	41-260	Bowl Elbow for Fresh Water Units	SFH		Saniflex Hose 1 1/2" (sold by foot)
16	1118	1/4" Locking Star Washer (4)	65	1236AW	Spud Assembly	163000		Seawater Inline Strainer
17	AM665W	Handle S/S w/Set Screw	66	AM600W	Flush Control & Wire Harness	TD90323		Vented Loop 38mm White
18	AM141	Discharge Cover O Ring	67	M31	1/4" Brass Flat Washer (8)	TD90319		Vented Loop 19mm White
19	AM020B	Pump Mounting Bar Bracket	68	RNI	Nylon Shoulder Washer	TD90314W		Aquavalve White with (3) TD90294 Tails
20	1119	1/4-20 x 3/4" Hex Hd Screw (2)	69	F069	1/4" Fiber Washer	AHDA1W		Internal Vented Loop
		Pump Motor *	71	HLWQB	1/4" Split Lockwasher	+ Specify Color		
22	AM140	Discharge Cover	72	HSB1	1/4-20 Brass Screw (2)	* Specify Voltage (12, 24 or 32 volt)		
23	F148VT	8-32x1/2 s/s Truss Hd Screw (8)	73	M30	1/4-20 Brass Nut (4)			
24	C254	Joker Valve	75	AM028	Bushing			
25	1222AW	90 Degree Elbow	85	501*W	Toilet Control for A7 & A8			
26	F147VT	3/8-16x 1 1/2 Rnd Hd Screw (2)	85	502*W	Toilet Control for A9			
27	1222B	Straight Discharge	OPTIONAL DEODORANT/SALT FEED PARTS LIST (ADS)					
28	F005	1/4-20 x 5/16" SS Hex SOC	78	31-301	Salt Feed Tank			
29	163000	Seawater Inline Strainer	79	31-302	Salt Feed Tank Cap			
30	AM515	Atlantes Inlet Pump Mounting Brkt	81	31-304C	Plastic Tubing Clamp			
		Plastite Screw #10 x 1/2" (4)	82	31-304W	Assembly			
32	162325	A Bearing Plate	OPTIONAL T-CHECK VALVE PARTS LIST					
33	162305	Lower Housing	54	31-307W	T-check Valve Assy.			
34	162320	Piston Seat (4)	86	31-307E	O-Ring			
35	162310	Diaphragm	88	31-308W	Siphon T Check Valve			
36	162315	Piston (4)	89	CH12	Check Ball			
38	162225	O-Ring	90	CH8	Check Valve Spring			
39	162420	Fitting Clip (3)						
41	162410	3/4" Hose Barb Straight						

Atlantes Freedom with Vortex Vac Exploded View



Atlantes Freedom with Vortex Vac Parts List

ITEM #	PART #	DESCRIPTION
1	1245+	Seat & Cover
1	AL030+	Seat & Cover (Elongated)
2	AM002W	Atlantes Bowl (White)
2	AM002AW	Atlantes Bowl (Bone)
2	AL002W	Atlantes Bowl Elongated (White)
2	AL002AW	Atlantes Bowl Elongated (Ivory)
3	M23A	#10 Lockwasher SS (5)
4	1108A	10-32 SS Nut
5	161123	Macerator Blade
6	31-102	Motor Shaft Seal
7	221110	Discharge Pump Seal Plate
8	221105	O-Ring
9	161115	Impeller
10	221115	Discharge Pump Macerator Housing
11	31-114	Lock Nut 10-32 W/Nylon
12	221012	Discharge Motor 12V
12	221024	Discharge Motor 24V
13	221125	Bowl Throat Adapter Clamp - Pump
14	AM221120	Bowl Throat Adapter
15	221126	Bowl Throat Adapter Clamp - Bowl
16	F035	Isolation Nut (2)
17	CH57	Rubber Washer (2)
19	AM021	Pump Mounting Bracket
20	221127	Discharge Motor Mounting Clamp
21	221140	Discharge Hose
22	221135	Joker Valve (2)
23	221145	Discharge Adapter Fitting
24	221146	Joker Valve Insert
25	221160	Discharge Hose Clamp (small)
26	221165	Discharge Hose Clamp (large)
27	F089	Screw: 1/4-20x 2" (2)
28	AM028	Bushing
29	1236AW	Spud Assembly

REMOTE INTAKE PUMP

30	1660*	Pump Motor *
31	F172	Plastite Screw #10 x 1/2" (4)
32	162325A	Bearing Plate
33	162305	Lower Housing
34	162320	Piston Seat (4)
35	162310	Diaphragm
36	162315	Piston (4)
37	F005	1/4-20 x 5/16" SS Hex SOC
38	162225	O-Ring
39	162420	Fitting Clip (3)
40	162135	Cone Seal (4)
41	162410	3/4" Hose Barb Straight
42	162425	O-Ring (3)
43	162415	Plug Fitting
44	162405	3/4" Hose Barb 90° Fitting
45	F162VT	Inlet Pump Mounting Bolt (4)
46	F144	#10 Washer SS Flat (4)
47	162300W	Lower Housing Assembly
48	162100W	Upper Housing Assembly
49	162200W	Middle Housing Assembly
50	1236E	Bowl Elbow
51	AM012	Nipple
52	AM011	Elbow

PRESSURIZED FRESH WATER UNITS

60	221362	Y Fitting
61	221353	Solenoid Valve 12VDC D90
51	221354	Solenoid Valve 24VDC D90
62	221365	Inlet Adapter Assembly 90 Degrees (Includes Item 63)
63	221361	Inlet Adapter Washer
64	F201	Screw: M4 x 10mm SS Pan Hd Phillips
65	PLA29	Elbow: 3/4 FPT x 1/2 Barbed
66	SF50W	SEA FRESH: Check Valve Housing

BOWL MOUNTED FLUSH HANDLE

70	AM665W	Handle SS W/Set Screw
71	AV600W	Flush Control & Wire Harness
72	ETB3	Terminal Block 3 Poles
73	F108	Screw #4 x 7/8" (2)
74	HLWQB	1/4" Split Lock Washer
75	M31	1/4" Brass Flat Washer
76	31-722	Nylon Shoulder Washer
77	F069	1/4" Fiber Washer
78	HSB1	1/4-20 Brass Screw
79	M30	1/4-20 Brass Nut

SMART TOILET CONTROL UNITS

80	STC548	Smart Toilet Control (12 & 24VDC)
81	STC545	Control Cable 7ft
82	221524	Wall Switch Cover Plate-White
82	221524A	Wall Switch Cover Plate - Ivory
83	STC543	Touch Panel W/Back Plate
84	221525	Touch Panel Gasket

MULTIFUNCTION MOMENTARY CONTROL

221153	Manual (Relay) Control
W183C	Cable for Multifunction Control
SF71	Frame, Vimar
SF74	Bezel, Vimar White
SF77	Switch Vimar

SOLENOID VALVE PRESSURIZED SEAWATER UNITS

93	CWPS12B	1/2 GC Solenoid Valve 12V
93	CWPS24B	1/2 GC Solenoid Valve 24V
93	CWPS32B	1/2 GC Solenoid Valve 32V
94	CWPSMB	Mounting Bracket for CWPS
95	PLA14	1/2" MPT to 3/4" Barbed Nipple (2)

PARTS NOT SHOWN

RTME12D	Power Converter for 120/240VAC UNIT
ADS	Deodorant System (Seawater Models)
221170	Discharge Hose Strap
221335	Hose, 1/2 inch
221340	Hose Clamps, 1/2 inch
F071	Nylon Shoulder Washer (2)
VCAP+	Vinyl Cap (2)

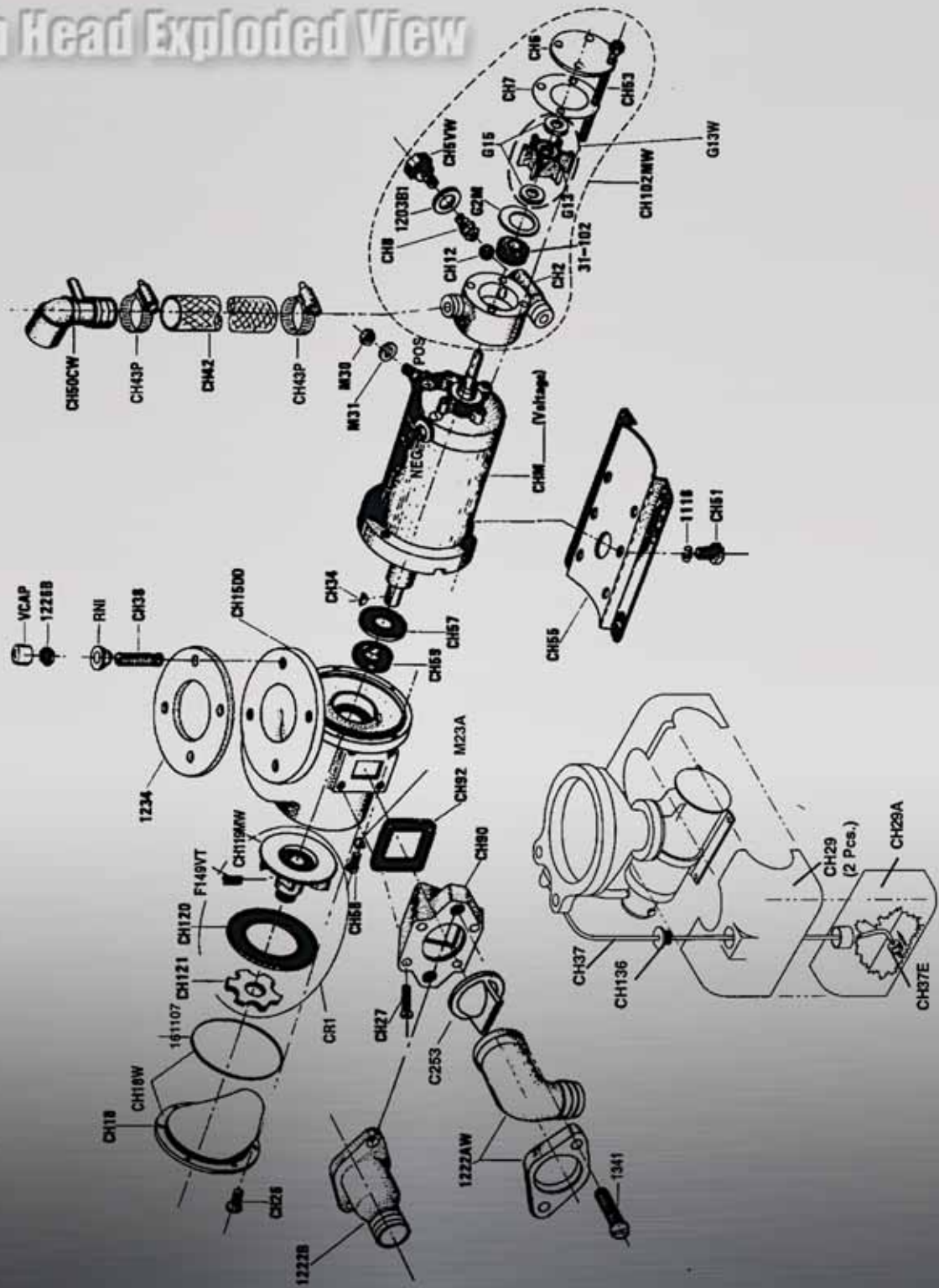
ADDITIONAL ACCESSORIES AVAILABLE FROM RARITAN

1PCP22	C.P. Cleans Potties, 22 OZ
1PCHGAL	Cleans Hoses, Tanks and MSD (gal.)
SFH	Saniflex Hose 1 1/2" (sold by foot)
163000	Seawater Inline Strainer
TD90323	Vented Loop 38mm White
TD90319	Vented Loop 19mm White
TD90314W	Aquavalve White with (3)TD90294 Tails
AHDA1W	Internal Vented Loop

+ Specify Color

* Specify Voltage (12, 24 or 32 volt)

Crown Head Exploded View



Crown Head Parts List

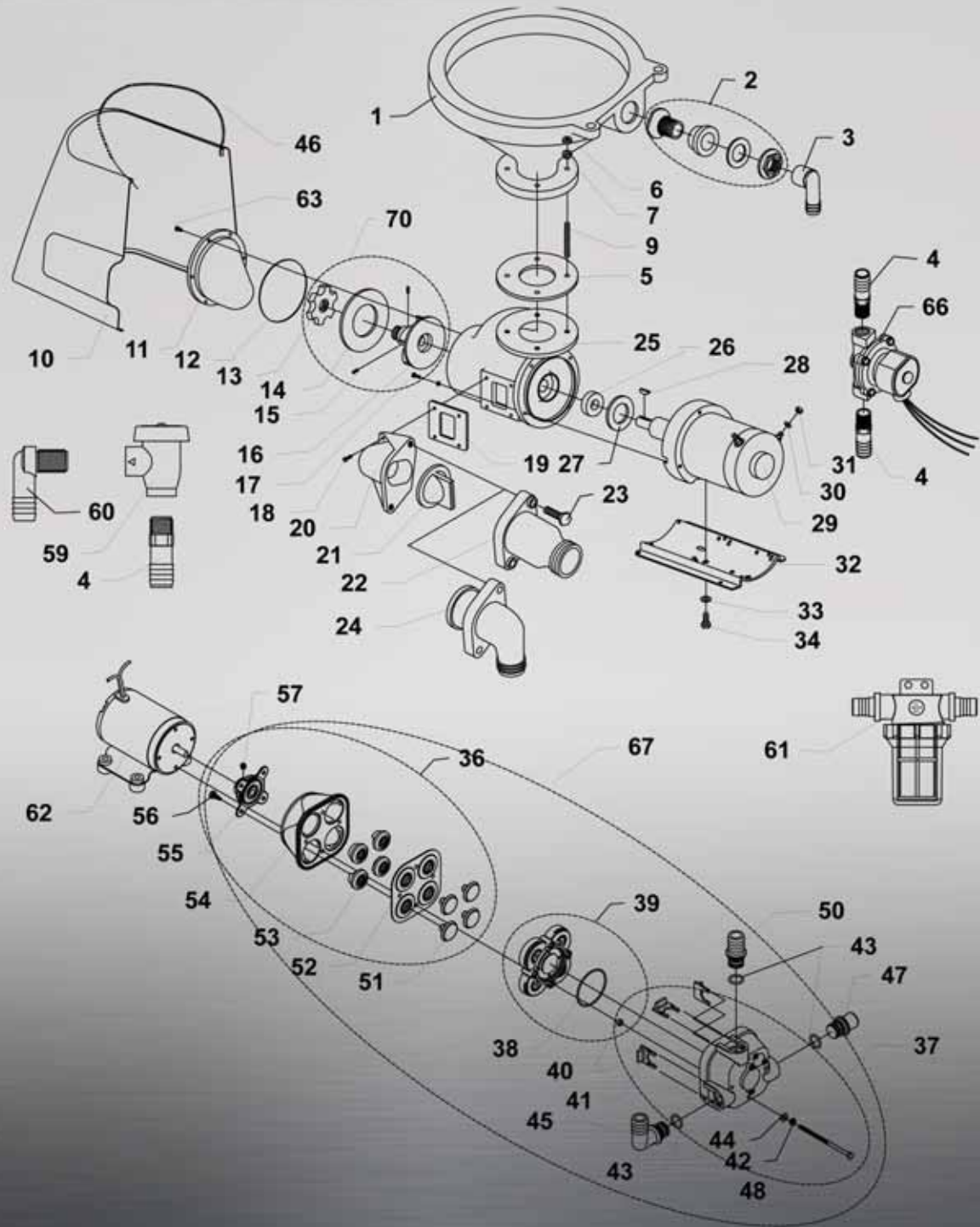
ITEM #	PART #	DESCRIPTION
1	1118	Lockwasher (4)
2	1203B1	"O" Ring
3	1222AW	Discharge Ell and Flange
4	1222B	Straight Discharge
4	1222BW	Straight Discharge Assembly (Incl. 1222B, CH90, CH92, [2]1115, C253, [4]CH27)
5	1226B	Bowl Mounting Nut (4)
6	1341	Discharge Screw (2)
7	31-102	Motor Shaft Seal
8	C253	Joker Valve
9	CH102MW	Intake Pump Assembly, Complete
10	CH119MW	Discharge Impeller Assy. (Incl. CH119M, [2]F149VT)
11	CH12	Check Ball
12	CH120	Discharge Pump Wall
13	CH121	Macerator
14	CH136	Siphon Cap for Shroud Bottle
15	CH15DD	End Bell
16	CH18W	Front Cover (w/"O" ring)
17	CH2	Pump Body (w/shaft seal)
18	CH25	Front Cover "O" Ring
19	161107	Front Cover Screw (6)
20	CH27	Mounting Screw (4)
21	CH291	Shroud (2 pcs.)
22	CH291ALM	Shroud, Bone (2 pcs.)
23	CH29A	Shroud Bottle (Concentrate Reservoir)
24	CH29B	Shroud Screw (2)
25	CH29A1W	Shroud Assembly, Complete w/bottle, Cap and Siphon
26	CH336W	Siphon Assembly, Complete (Incl. CH136, CH37, CH37E)
27	CH34	Woodruff Key
28	CH37	Siphon Tubing
29	CH37E	Siphon Check Valve
30	CH38	Bowl Stud (4)
31	CH42	Hose
32	CH43P	Hose Clamp (2)
33	CH5VW	Pump Plug, Vented(Incl. 1203B1 O Ring)
34	CH50CW	Bowl Elbow w/Siphon Intake
35	CH51	Base Screw (4)
36	CH52	Rubber Mounting Strip (2) (Not Shown)
37	CH53	Pump Mounting Screw (4)
38	CH55A	Base Plate
39	CH57	Slinger
40	CH58	End Bell Screw (4)
41	CH59	Seal with Stainless Steel Spring
42	CH6	Pump Cover Plate
43	CH7	Pump Gasket
44	CH8	Check Valve Spring
45	CH90	Discharge Adapter
46	CH92	Adapter Gasket
47	CHM*	Motor
48	F149VT	Set Screw (2)

ITEM #	PART #	DESCRIPTION
49	G13	Pump Impeller
50	G15	Impeller Washer (2)
51	G13W	Pump Impeller w/(2) G15
52	G2M	Impeller Wear Plate
53	M23A	Lockwasher (4)
54	M30	Hex Nut, Brass (2)
55	M31	Flat Washer, Brass (2)
56	RNI	Nylon Bowl Mounting Washer (4)
57	VCAP	Vinyl Cap (bowl nut cover)

MISCELLANEOUS RELATED PARTS

PART #	DESCRIPTION
1234	Bowl Gasket (fits all Raritan toilets)
1236AW	Bowl Spud Assembly
1237W	Marine-size Bowl, Round Top Rim (White only), Incl.1236AW
1238A	Seat and Cover for Marine-size Bowl (White only)
1244W	Household-style Bowl, Oval Top Rim available in White or Bone, includes
1236AW 1245	Seat and Cover for Household-Style Bowl
163000	In-Line Strainer
1PCP22	C.P., Cleans Potties, Bio-enzymatic, 22 oz.
CDS*	Continuous Duty Solenoid Relay
CHTT9	Hose Clamp for 1 1/2" I.D. Hose
CON22	Raritan Concentrate 22 oz.
CSRK	Repair Kit (Centrifugal DischargeSeries) Includes: CH25, CH92, 1234, CH12, G13, CH8, CH37E, RNI, CH120, C253, CH59, 31-102, CH7, G15, 1203B1and CH57
CDPUMPRK	Crown Head CD Series & CH11 Intake Pump Repair Kit (built before 4/95 Includes:1203B1, CH12, G13, G2M, 31-102, CH7 and G15
CDDISRK	Crown Head CD Series Discharge Repair Kit; Includes: 1234, CH120, CH57, CH92, C253, CH25 and CH59
CR1	Discharge Impeller and Macerator Assy. (incl. CH120, CH121, F149VT[2], and CH119MW)
PBS	Pushbutton Switch
RHT4	Inline Check Valve for 1 1/2" I.D. Hose
RTC*	Raritan Solid State Timer
RTCH24DA	Rectified Transformer (for 120 or 240 VAC input)
SFH	Saniflex Hose, 1 1/2" I.D. (sold by the foot)
SL	Super-Lube 1/2 oz. Tube
TD90319	Vented Loop 3/4"
TD90323	Vented Loop 1 1/2"
TD90314W	Y-Valve for 1 1/2" I.D. Hose

Crown Head II Exploded View



Crown Head II Parts List

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	1244AW	Household-Style Bowl Assembly, (Bone) includes 1236AW	44	F144	Mounting Bolt Washer (4)
1	1244W	Household-Style Bowl Assembly, (White) includes 1236AW	45	162405	3/4" Hose Barb - 90° Fitting
1	1245	Household-Style Seat and Cover (White) (Not Shown)	46	C250	Beaded Wire Tie
1	1245A	Household-Style Seat and Cover (Bone) (Not Shown)	47	162415	Plug Fitting
1	1237W	Marine-size Bowl Assembly (White) includes 236AW (Not Shown)	48	F162VT	Mounting Bolt
1	1238A	Marine-size Seat and Cover (White) (Not Shown)	50	162410	3/4" Hose Barb - Strai
2	1236AW	Bowl Spud Assembly	51	162315	Piston (4)
3	1236E	Bowl Elbow	52	162310	Diaphragm includes 162315
4	PLA14	Male Adapter 1/2 MNPTx3/4 Barb	53	162320	Piston Seat (4) includes 162315
5	1234	Bowl Gasket	54	162305	Lower Housing includes 162315
6	1226B	1/4" - 20 S/S Hex Nut (4)	55	162325A	Bearing Plate Assembly includes F005, 162315
7	RNI	Nylon Shoulder Washer (4)	56	F020	Piston Fastener (4)
9	CH38	Bowl Stud (4)	57	F005	Set Screw
10	C246	Lower Cover, Bone, Household-Style	59	PLAVB0-5	Atmospheric Vacuum Breaker
10	C247	Lower Cover, White, Household-Style	60	PLA13	Elbow, 1/2" NPT x 3/4"
11	CH18W	Front Cover w/"O" Ring	61	163000	In-line Strainer
12	CH25	Front Cover O-Ring	62	1660*	A Remote Motor
13	CH121	Macerator	63	CH26	Front Cover Screw
14	CH120	Discharge Pump Wall	67	162000W	Intake Pump Assembly includes 162100W, 162200W, 162300W
15	F149VT	Set Screw (2)		164000	Heavy Duty Push Button Switch (Not Shown)
16	CH119MW	Discharge Impeller Assy. includes CH119M,		166000	Diaphragm Intake Pump Assembly 12V includes 162100W, 162200W, 162300W and 1660*A
17	CH58	Fillister Head Screw (4) 10-32x3/4" S/S		166100	Diaphragm Intake Pump Assembly 24V includes 162100W, 162200W, 162300W and 1660*A
18	CH27	Mounting Screw (4) 10-32x5/8" S/S		166200	Diaphragm Intake Pump Assembly 32V includes 162100W, 162200W, 162300W and 1660*A
19	CH92	Square Rubber Gasket		CH52	Rubber Mounting Strip (2), (Not Shown)
20	C290	Discharge Adapter	70	CR1	Discharge Impeller and Macerator Assembly includes CH120, CH121, F149VT(2), CH119MW
21	C253	Joker Valve		F173	Screw: Plastite, #6 x 1/2 Phil Pan Head
22	1222B	Straight discharge			
23	1341	Discharge Screw (2)			
24	1222AW	90 Degree Discharge (opt.)			
25	CH15DD	End Bell			
26	CH59	Seal			
27	CH57	Rubber Slinger			
28	CH34	Woodruff Key			
29	C2M*	Crown Head II Motor, 12, 24, 32 VDC			
30	M31	#14 Brass Washer (4)			
31	M30	1/4" - 20 Brass Nut (4)			
32	CH55	Base Plate			
33	1118	Lockwasher (4)			
34	CH51	Base Mounting Screw (4)			
36	162300W	Lower Housing Assembly			
37	162100W	Upper Housing Assembly			
38	162225	O-Ring			
39	162200W	Middle Housing Assembly			
40	162135	Cone Seal			
41	162420	Fitting Clip (3)			
42	M23A	#10 Lockwasher (4)			
43	162425	Fitting O-Ring (3)			

WATER SOLENOID VALVE

66	CWPS*B	1/2" Water Solenoid Valve
	CWPSMB	Mounting Bracket for CWPS (Not Shown)

ADDITIONAL ACCESSORIES AVAILABLE

TC*+	Toilet Control (Not Shown)
RTC*	Raritime Solid State Timer with Solenoid (Not Shown)
SFH	Saniflex Hose 1 1/2 inch, White (Not Shown)
SWF100+	Flush Control (Not Shown)
TWK	Toilet Water Kit (Not Shown)
TD90323	Vented Loop 1" (Not Shown)
RTCH24DA	Rectified Transformer (for 120/240 VAC input)
TD90314W	"Y" Valve, 1 1/2 inch

* Specify Voltage
+ Specify Color



SeaEra Ordering Instructions

To find the correct part number for your application, please read the following instructions:

COLUMN 1

enter (160) = Sea Era models

COLUMN 2

enter (H) = white household size bowl

enter (M) = white marine size bowl

enter (L) = conversion kit

This allows users to replace base of electric or manual toilet for added convenience.

COLUMN 3

enter (I) = our integral pump

enter (R) = Remote Sea Water pump

This options allows users to install pump away from the Head to reduce noise levels, allows for easier access to the pump and is ideal where longer runs are required.

enter (F) = fresh water solenoid

This allows users to use the pressurized fresh water onboard to keep orders down associated with raw water intake. Features our Whisper Flush, designed for quiet operation.

COLUMN 4

enter (0) = straight discharge and 90 degree

COLUMN 5

enter (12) = 12 volts

enter (24) = 24 volts

enter (32) = 32 volts

enter (12T) = 120/240 volt hook up options

COLUMN 6

enter (03) = momentary fill/dry flush switch

Note: Only available with remote pump (R) and freshwater solenoid (F) models.

Allows users to fill, or empty bowl, and or momentary flush options depending on your requirements to minimize water usage.

We want to make sure you get the most convenience for your money. Please feel free to contact us with questions, or to review additional features available for your custom application.

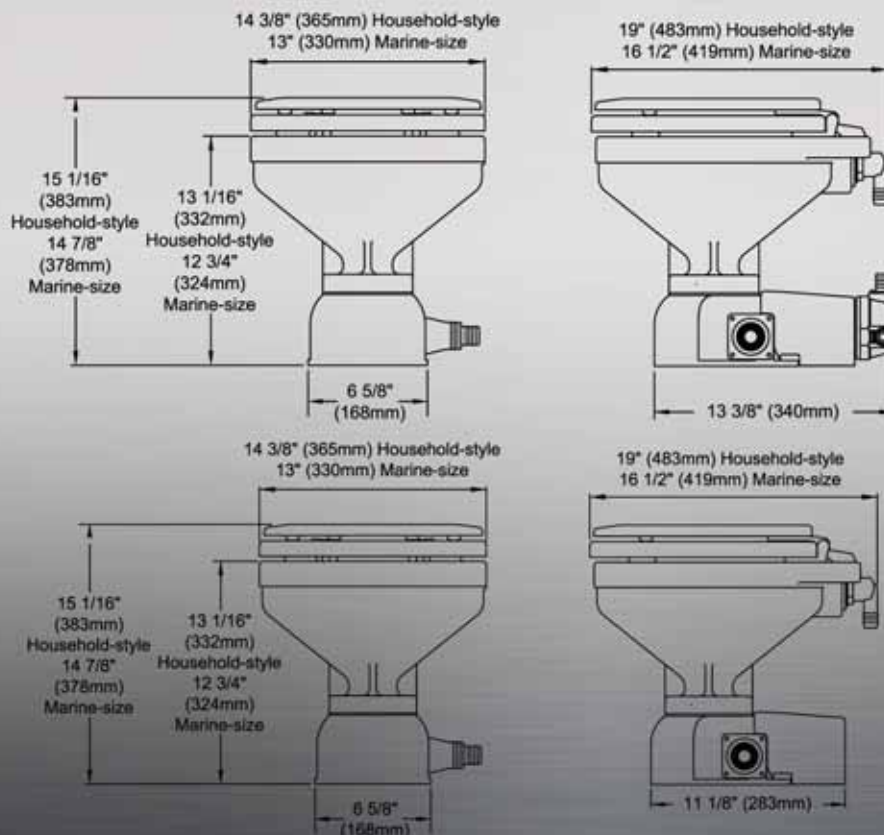
160 SeaEra	<p>H Household-size, white bowl</p> <p>M Marine-size, white bowl</p> <p>L Conversion Kit</p>	<p>I Integral pump</p> <p>R Remote Seawater Pump</p> <p>F Freshwater Solenoid</p>	<p>0 Straight & 90 Degree Discharge</p>	<p>12 Specify Voltage</p> <p>24</p> <p>32</p> <p>24T 120/240</p>	<p>03 SWF100 momentary fill/dry flush switch</p>
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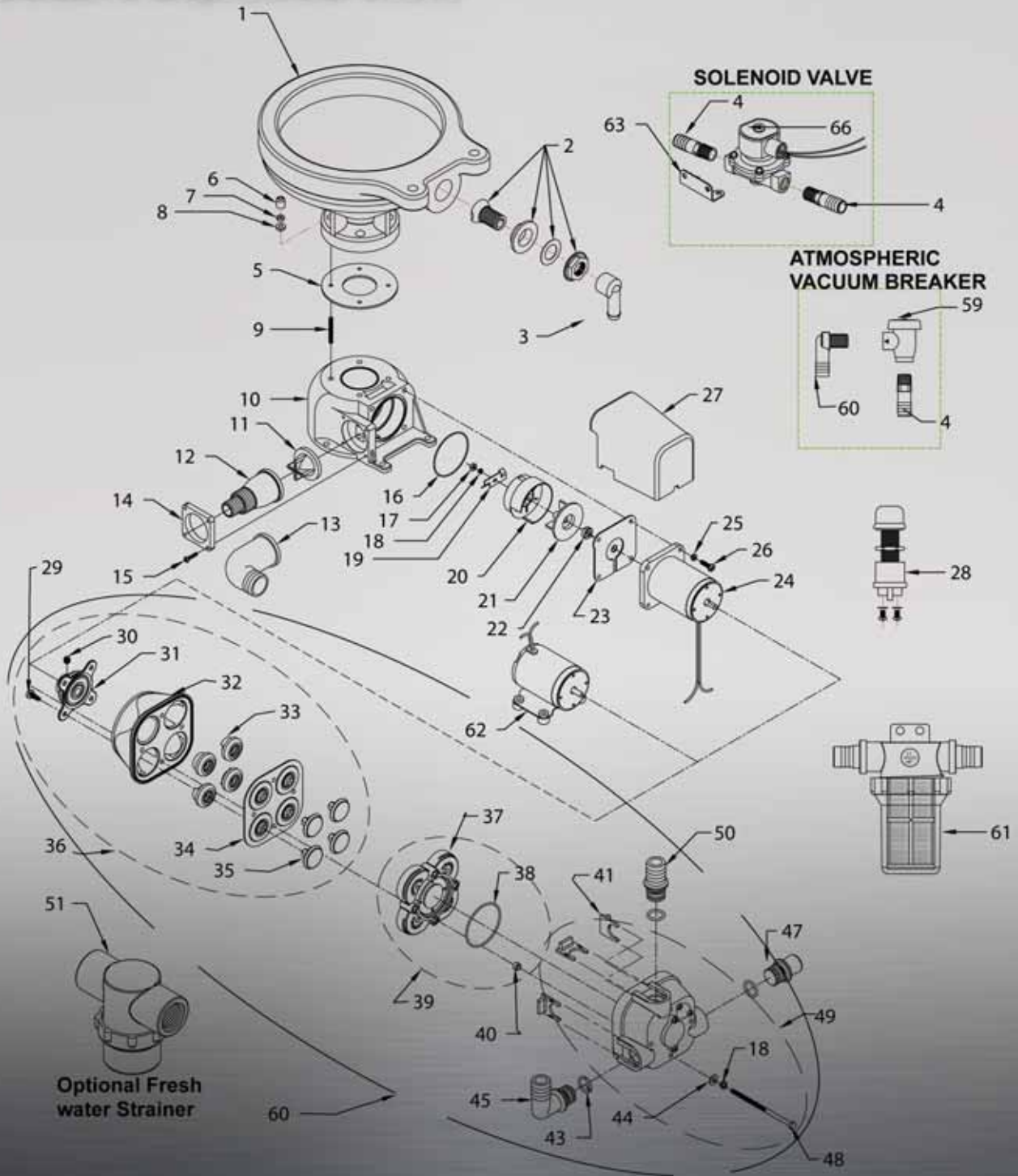
SeaEra Toilet Requirements

- Wiring:** 10 ga., will increase depending on distance from source
- Circuit:** 12V – Freshwater Model 25 amp
Intake Pump Model 25 amp
- Power:** Freshwater Model 13 amps
Intake Pump Model 23 amps
- Water Supply:** 3/4" line 3 gallons per minute, minimum pressure 5psi
- Discharge:** 1.5" ID hose required for 90 degree discharge and straight accepts either 1" or 1 1/2"
- Optional:** Wall switch control, holding tank full indicator on switch

SeaEra Dimensional Drawing



SeaEra Exploded View



SeaEra Parts List

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	1237	Marine-Size Bowl	38	162225	O-Ring
1	1244	Household-Style Bowl	39	162200W	Middle Housing Assembly
2	1236AW	Bowl Spud Assembly	40	162135	Cone Seal
3	1236E	Bowl Elbow	41	162420	Fitting Clip (3)
3	41-260	Bowl Elbow (Freshwater Models Only)	43	162425	Fitting O-Ring (4)
5	1234	Bowl Gasket	44	F144	Mounting Bolt Washer (4)
6	VCAP	White Vinyl Cap	45	162405	3/4" Hose Barb - 90° Fitting
7	1226B	1/4-20 Hex Nut (4)	47	162415	Plug Fitting
8	RNI	Shoulder Washer	48	F162VT	Mounting Bolt
9	CH38	Water Solenoid Valve Mounting Bracket	49	162100W	Upper Housing Assembly
10	161105	Base	50	162410	3/4" Hose Barb - Straight Fitting (2)
11	C254	Joker Valve	51	190601	Inline Fresh Water Strainer (optional)
12	161130	Discharge Fitting	61	163000	Inline Strainer
13	1222AW	90° Discharge Fitting	Additional Parts Included with INTEGRAL MODELS		
14	161125	Discharge Mounting Flange	27	161140	Motor Cover Integral
15	F164	Discharge Mounting Flange Fastener(4)	Additional Parts Included with REMOTE MODELS		
16	161107	Seal Plate O-Ring	27	161135	Motor Cover
17	1108A	Macerator Nut	62	1660*A	Intake Motor
18	M23A	Macerator Lockwasher (5)		166000	Remote Intake Pump, 12V DC
19	161123	Macerator Blade		166100	Remote Intake Pump, 24V DC
20	161120	Impeller/Macerator Housing		166200	Remote Intake Pump, 32V DC
21	161115	Impeller	64	162000W	Remote Intake Pump W/O Motor
22	31-102	Shaft Seal	Additional Parts Included with FRESHWATER MODELS		
23	161110	Seal Plate	4	PLA14	1/2MNPT X 3/4 Hose Barb
24	1610*	Discharge Motor	27	161135	Motor Cover
25	HW1	Mounting Screw Lockwasher (4)	59	PLAVB0-5	Atmospheric Vacuum Breaker
26	1226	Mounting Screw (4)	60	PLA13	1/2 MNPT to 3/4 Hose Barb Elbow
28	164000	Push Button Switch	63	CWPSMB	Water Solenoid Valve Mounting Bracket
29	F172	Plastite screw #10 x1/2"	66	CWPS*B	1/2" GC Solenoid Valve
30	F005	Set Screw	REPAIR KITS		
31	162325A	Bearing Plate Assembly includes #162315		DIAPUMPRK	Diaphragm Pump Repair Kit
32	162305	Lower Housing includes #162315		SEADISRK	SeaEra Discharge Repair Kit
33	162320	Piston Seat (4) includes #162315	* Specify DC Voltage (12, 24, 32)		
34	162310	Diaphragm includes #162315			
35	162315	Piston (4)			
36	162300W	Lower Housing Assembly			
37	162205	MIDDLE HOUSING			

Repair Parts

Most parts are available to be purchased individually. To simplify annual overhaul or repairs, we also provide kits that contain the most commonly ordered parts.

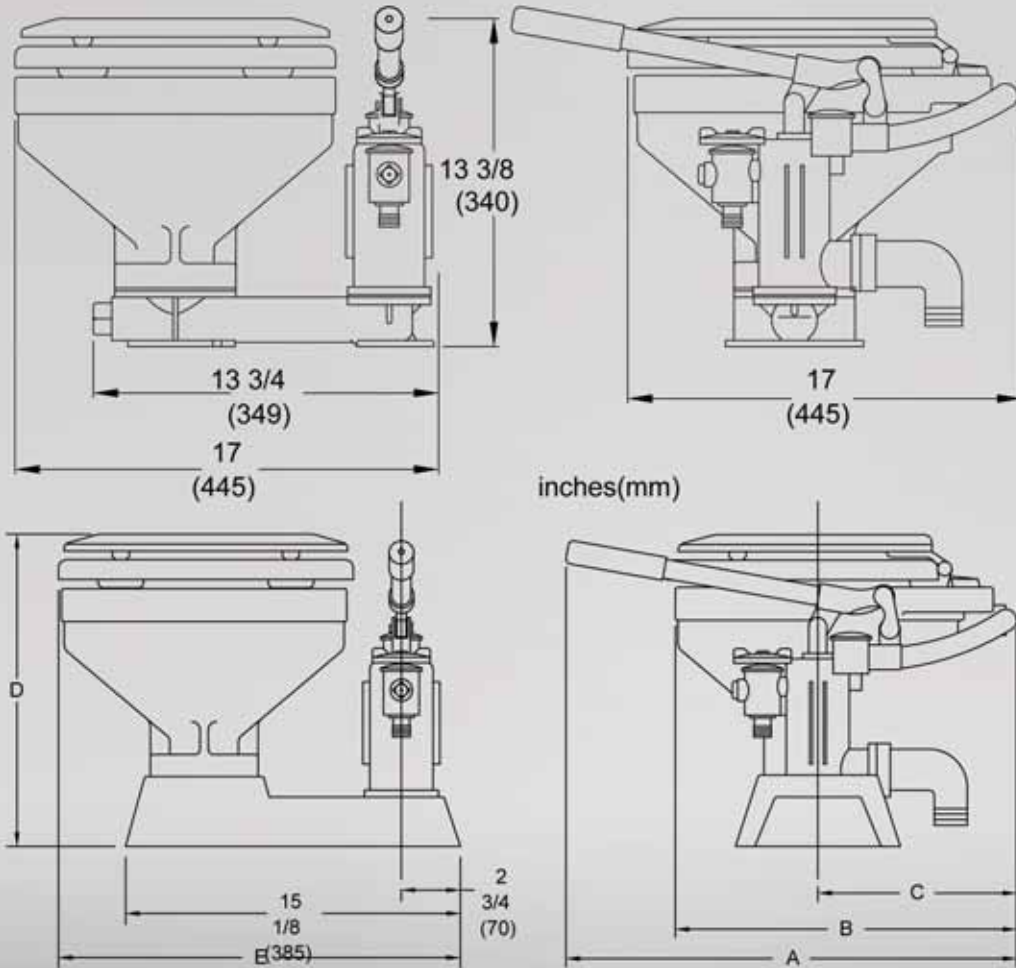
DETERMINING PROPER REPAIR KITS FOR ELECTRIC TOILETS:

Product Name	Retrofits Complete Unit	Repair Kit for Pump	Intake Pump	Discharge
Atlantes Freedom Before 4/95 inlet pump repairs contact Raritan tech support.		order intake and discharge pump kits	DIAPUMPRK	
Atlantes Pressurized Freshwater Model e.g. AF12 01/90- current		N/A	N/A	ATDISRK
Atlantes Remote or Integral Impeller Pump 01/90- 06/02		order intake and discharge pump kits	N/A	ATDISRK
Atlantes Remote or Integral Diaprahm Pump 06/02- current		order intake and discharge pump kits	DIAPUMPRK	ATDISRK
Crown Head Deep Draft(DD)- 12V Draws 50 Amps 01/67-01/87	CRI- Converts DD to CD Series Macerator	CDRK	CHPUMPRK	
Crown Head Standard_ 12V Draws 30 Apm 01-65 -01/87		CHRK	CHPUMPRK	CHDISRK
Crown Head CD Series (Centrifugal Discharge) 12V Draws 36 Amps 02/87- current		CSRK	CDPUMPRK	CDDISRK
Crown Head II Pressurised Fresh Water Model e.g. C2F12 12/90- current		N/A	N/A	CDDISRK
Crown Head II Models with SPP Intake Impeller Pump 12/90- 4/95		order intake and discharge pump kits	CDPUMPRK	CDDISRK
Crown Head II Models with AM200 Intake Impeller Pump 04/95- 06/02 Before 4/95 inlet pump repairs contact Raritan tech support.		order intake and discharge pump kits	N/A	CDDISK
Crown Head II Models with Intake Diaprahm Pump 06/02- current		order intake and discharge pump kits	DIAPUMPRK	CDDISRK
Sea Era All Models			DIAPUMPRK	SEADISRK
Marine Elegance All Models			DIAPUMPRK	MERK

LIST OF PARTS CONTAINED IN ELECTRIC TOILET REPAIR KITS:

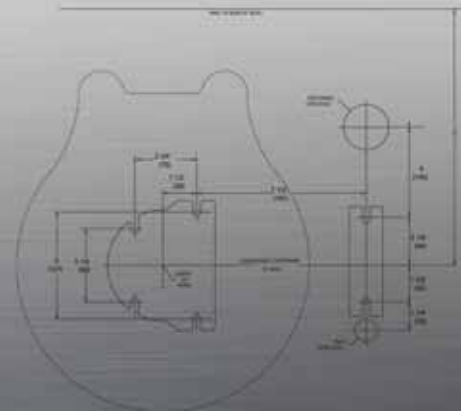
ATDISRK	ATLANTES DISCHARGE PUMP KIT	QTY
31-102	MOTOR SHAFT SEAL	1
AM031	2X2 PVC CONNECTION	1
AM114	DISCHG. PUMP O-RING	1
AM141	O-RING	1
C254	C254 JOKER VALVE	1
SL1CC	SUPER LUBE: 1 CC PACKET	2
VT	VIBRA-TITE PACKETS	2
ATPUMPRK	ATLANTES & CHII (POST 4/95)	QTY
31-102	MOTOR SHAFT SEAL	1
31-307E	O-RING-T-CHECK ASSY/RCV	1
AM220	INLET PUMP IMPELLER	1
AM231	ATLANTES INLET PUMP FRONT	1
AM514	O-RING	1
CH12	CHECK BALL: 5/8	1
G15	TEFLON IMPELLER WASHER	2
G2AS	BRASS WEAR PLATE	1
SL1CC	SUPER LUBE: 1 CC PACKET	4
CDDISRK	CROWN HD. CD SERIES DISCH	QTY
1234	BOWL GASKET WHITE	1
C253	C253 JOKER VALVE RED	1
CH120	DISCHG. PUMP WALL, BLACK	1
CH25	CH: FRONT COVER O-RING	1
CH57	RUBBER SLINGER	1
CH59	SEAL: 316 S/S SPRING	1
CH92	SQUARE RUBBER GASKET	1
SL1CC	SUPER LUBE: 1 CC PACKET	2
CDPUMPRK	CROWN HD. CD SERIES	QTY
1203B1	PH: INLET VALVE O-RING	1
31-102	MOTOR SHAFT SEAL	1
CH12	CHECK BALL: 5/8	1
CH7	PUMP GASKET	1
G13	G13W PUMP IMPELLER	1
G15	TEFLON IMPELLER WASHER	2
G2M	WEAR PLATE	1
SL1CC	SUPER LUBE: 1 CC PACKET	2
CHDISRK	CROWN HD. (PRE 10/87)	QTY
1234	BOWL GASKET WHITE	1
C253	C253 JOKER VALVE RED	1
CH11 17W	FLAPPER VALVE ASSY. STD	1
CH25	CH: FRONT COVER O-RING	1
CH57	RUBBER SLINGER	1
CH59	SEAL: 316 S/S SPRING	1
CH91	ROUND RUBBER GASKET	1
CH92	SQUARE RUBBER GASKET	1
M13	O-RING	2
CHPUMPRK	CROWN HD. (PRE 10/87), GM	QTY
CH11	PUMP SHAFT SEAL	1
CH12	CHECK BALL: 5/8	1
CH7A	PUMP GASKET	1
G13	G13W PUMP IMPELLER	1
G15	TEFLON IMPELLER WASHER	2
G2AS	BRASS WEAR PLATE	1
G4	PLUG WASHER	1
SL1CC	SUPER LUBE: 1 CC PACKET	2
DIAPUMPRK	DIAPRAGHM PUMP KIT	QTY
162200W	MIDDLE HOUSING	1
162310	DIAPHRAGM	1
162315	PISTON	4
162425	O-RING	3
F172	SCREW: 10 X 1/2	4
SEADISK	SEAERA DISCHARGE KIT	QTY
1234	BOWL GASKET WHITE	1
161107	O-RING	1
31-102	MOTOR SHAFT SEAL	1
C254	C254 JOKER VALVE	1
RNI	NYLON SHOULDER WASHER	4
SL1CC	SUPER LUBE: 1 CC PACKET	1
VCAP	VINYL CAP	4
MERK	MARINE ELEGANCE DISCHARGE KIT	QTY
221105	O-RING	1
221135	JOKER VALVE	2
31-102	MOTOR SHAFT SEAL	1

PHI and PHEII Dimensional Drawings

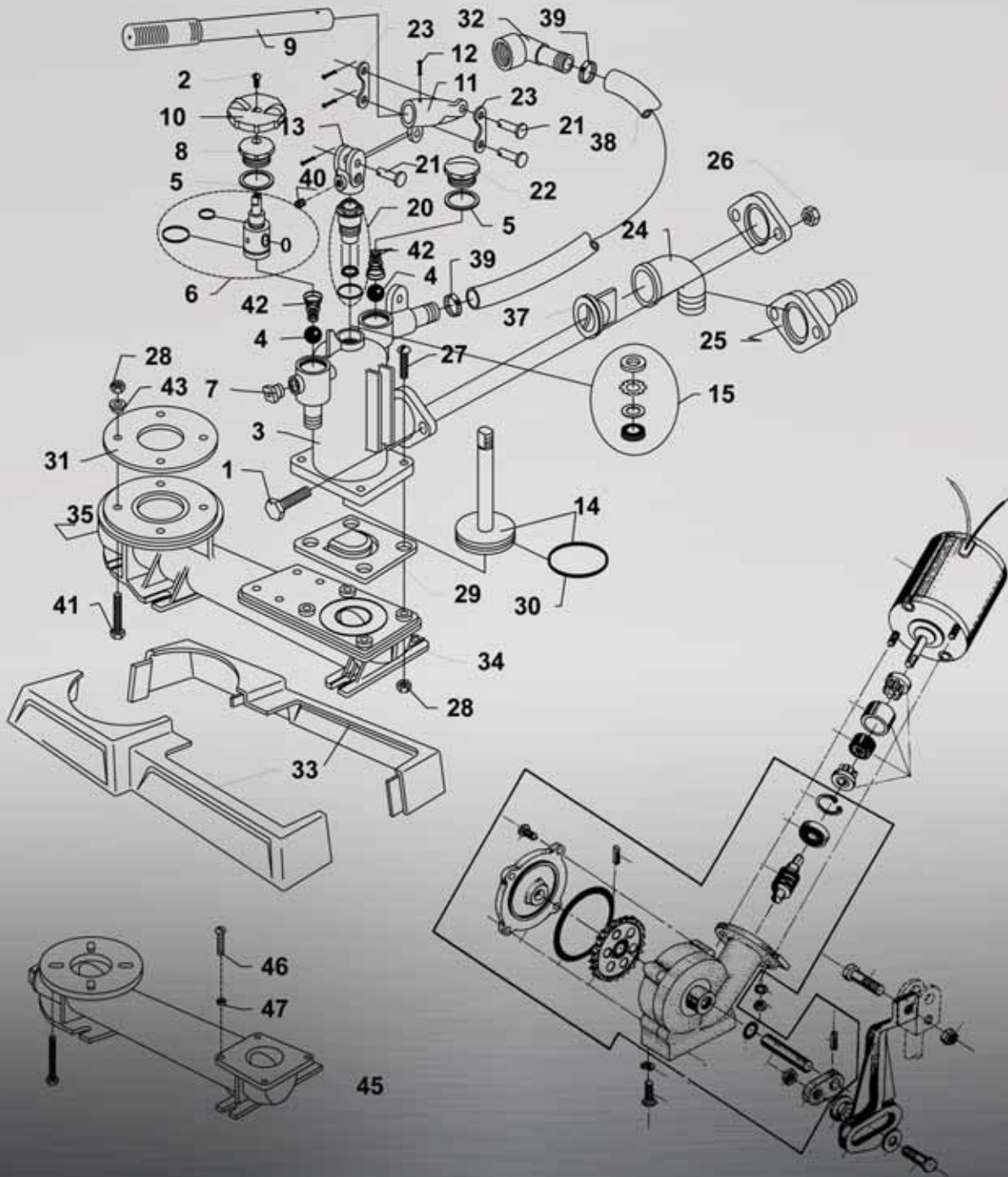


BOWL TYPE	A	B	C	D	E
MARINE	20 (588)	$17 \frac{3}{8}$ (442)	$10 \frac{1}{2}$ (267)	$14 \frac{1}{4}$ (362)	18 (458)
HOUSE-HOLD	$22 \frac{3}{4}$ (578)	$20 \frac{3}{8}$ (518)	$11 \frac{3}{4}$ (300)	$14 \frac{1}{2}$ (368)	$18 \frac{1}{4}$ (464)

INCHES
(MM)



PHII and PHC Exploded View



PHII and PHEII Parts List

ITEM #	PART #	DESCRIPTION
1	1115	3/8"-16 x 1 1/2" Hex Head S/S Bolt(2)
2	1124	1/4"- 20 x 1/2" R.H. Machine Screw
3	1200CW	Pump Housing
4	1201	Intake and Discharge Valve Ball (2)
5	1202	Intake and Discharge Valve Gasket (2)
6	1203BW	Intake Valve Body w/"O" Rings (1203B, 1203B1, 1203B2, 1203B3)
7	1203W	Air Valve Assembly
8	1204B	Intake Valve Cap
9	1206W	Handle
10	1209BW	Valve Handle
11	1210	Handle Socket
12	1210A	Cotter Pin (4)
13	1211PL	Piston Rod Yoke
14	1212W	Piston Rod Assembly w/"O" Ring (1232MS)
15	1213W	Piston Rod Seal Assembly, Pre-6/92, (Incl. 1213A, B, C, D)
	1213A	U Cup Seal (Pre-6/92)
	1213B	Delrin Washer (Pre-6/92)
	1213C	Snap Ring (Pre-6/92)
	1213D	White Neoprene Washer (Pre-6/92)
20	1214W	Piston Shaft Seal Cartridge Assy (1214, 1214A, 1214B) Fits pumps mfg. after 6/92
21	1216	Clevis Pin (3)
22	1217	Discharge Valve Cap
23	1218	Fulcrum Link (2)
24	1222AW	90° Discharge w/Flange (Std.)
25	1222B	Straight Discharge (Opt.)
26	1223B	Flange Nut 3/8"-16 S/S (2)
27	1226	Housing Screw 1/4"-20 x 1" S/S (4)
28	1226B Nut	1/4"-20 S/S (8)
29	1228CW	Flapper Valve Assembly (1/2" Holes)
30	1232MS	Piston "O" Ring
31	1234	Bowl Gasket
32	1236E	Bowl Elbow
33	1246W	Base Cover (2 pcs.)
34	1248W	Base w/Plug
35	1249	Base Plug
	1250W	Base and Cover Assy.(1246W and 1248W)
37	C253	Joker Valve
38	CH42	Hose (1" I.D.)
39	CH43P	Hose Clamp (2)
40	F005	1/4"- 20 x 5/16" S/S Socket Set Screw
41	F081	Bowl Bolt 1/4"-20 x 2 S/S Hex head
42	LWS	Intake and Discharge Valve Spring (2)
43	RNI	Nylon Shoulder Washer (4)

PARTS FOR ELECTRIC DRIVE

1100W	Gear Box Housing Assembly
1102	Worm
1104	Ball Bearing
1105	Snap Ring
1106AS	Rubber Connection w/Sleeve

ITEM #	PART #	DESCRIPTION
	1106W	Coupling w/Sleeve, Complete
	1108A	Motor Mounting Nut (2)
	1109*	Motor (12, 24V DC)
	1110	O Ring
	1112	Link
	1113	Link Pin, Worm Gear Pin
	1115	3/8" - 16 x 1 1/2" Hex Head S/S Bolt
	1115A	3/8" - 16 Hex Jam Nut S/S
	1116BW	Connecting Rod Assy. (1116B,1114B,1114D)
	1117B	Crank Bolt
	1118	Lock Washer (4)
	1119/1119A	Hex Head Screw (4)
	1120W	Worm Gear Assy.(1111, 1113, 1120)
	1122	O Ring
	1123	Gear Box Cover
	1124	1/4"- 20 x 1/2" R.H. Machine Screw(4)
	M23A	#10 Lockwasher S/S (2)

PHC PARTS

46	1226A	Housing Screw 1/4"-20 x 1 1/4" S/S (4)
47	1226C	Plastic Spacer Washer (4)
45	1301PW	Toilet Base Assembly (1301P, 1343)
41	F081	Bowl Bolt 1/4"- 20 x 2" S/S Hex head

BOWL & SEAT

	1236AW	Spud Assy.
	1237W	Marine-size Bowl Assy.
	1244W	White Household-Style Bowl Assy.
	1238A	Marine-Size Seat & Cover
	1245	Household-Style Seat & Cover
	VCAP	Vinyl Cap(4)

OVERHAUL KITS

	PHRKII	PHII&PHEII-U-Cup Seal (mfg.before6/92)
	PHRKIIC	PHII&PHEII-Cartridge Seal (mfg.after 6/92)
	PHIIPUMP	PHII Pump Replacement Assembly

CONVERSION KITS

	PHECKII*	Conversion Kit from Manual to Electric
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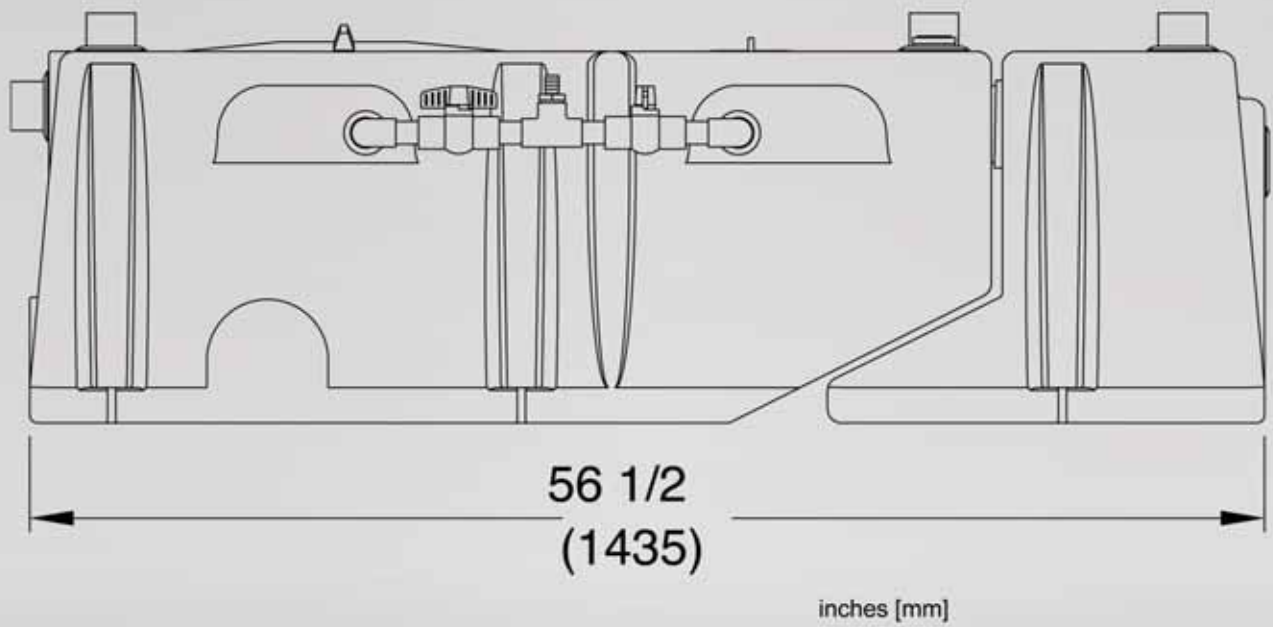
RARITAN INSTALLATION ACCESSORIES

	163000	In-Line Strainer
	164000	Push Button Switch
	1PCP22	C.P., Cleans Potties, Bio-Enzymatic, 22 oz.
	CHTII	Compact Holding Tank - 5 gallon
	CON22	Concentrate 22 oz. Bottle
	SFH	Saniflex Hose (sold by the foot)
	SL1CC	Super Lube Tube
	TWK	Toilet Water Marine Head Disinfectant Kit
	TD90319	3/4 Vented Loop 3/4"
	TD90323	Vented Loop 1 1/2"
	TD90314W	Y Valve

*Specify Voltage



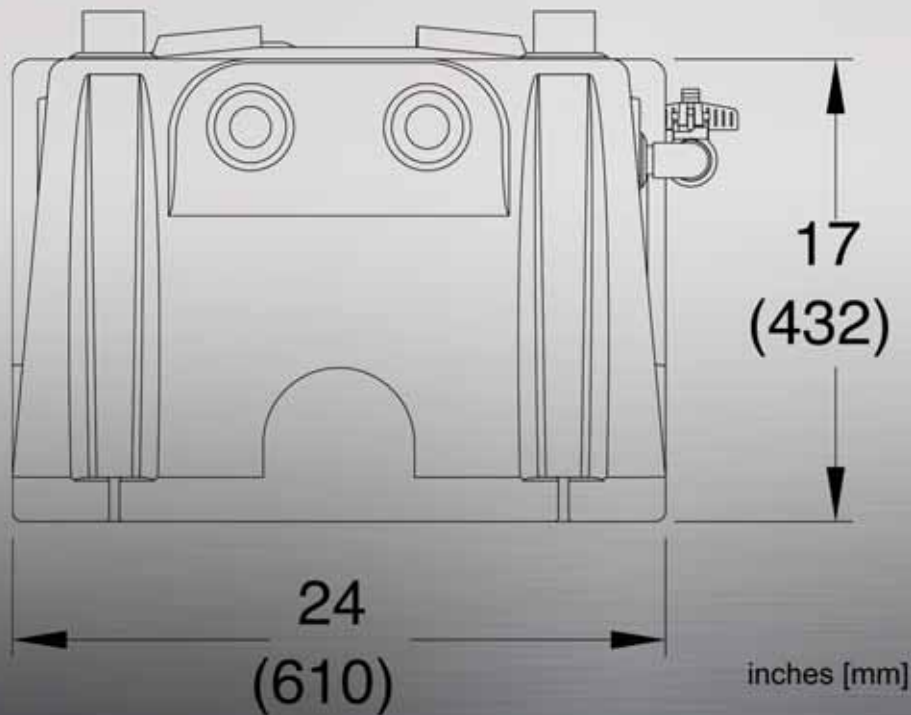
ManaGerm Dimensional Drawing



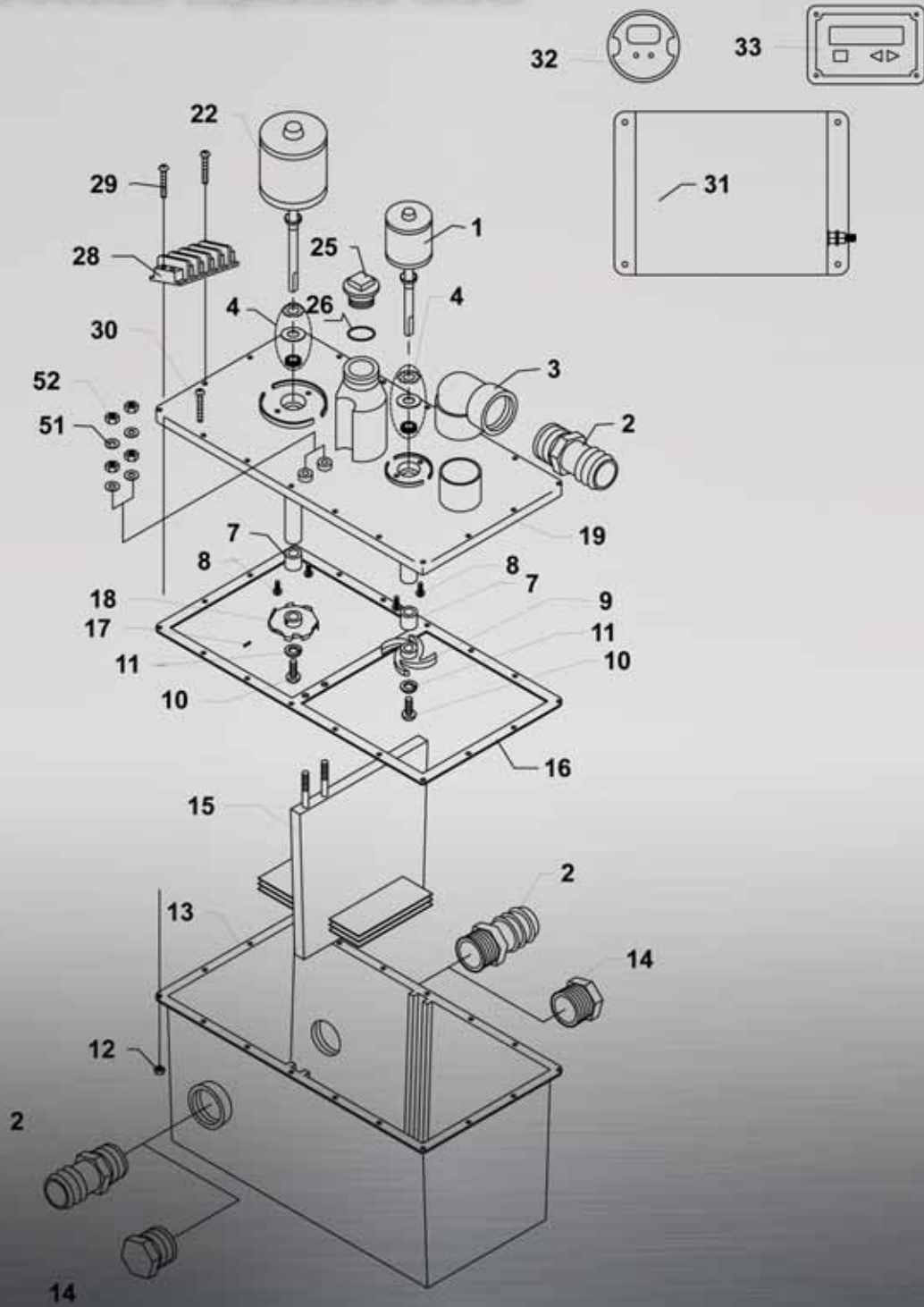
ManaGerm Parts List

PART #	DESCRIPTION
640101	Primary Treatment Tank Assembly
640102	Manway Lid, 16" 640103Ring/C Gasket,16"
640104	Manway Lid, 8" 640105Ring/C Gasket, 8"
640111	Filter Brush (3) - [Not Shown]
F171	Screw, #8-32 x 3/4" Plastite, 18-8 Black
640116	Dispenser
PLCF1-5	1½" Flex Coupling
PLCAP3-0W	Dispenser Cap, w/"O" Ring
640201	Secondary Tank Assembly
1PKO22	K.O. - Kills Odor, 22 oz.
640121	Startup Enzymes, 12-B Count Sewage Enzyme, 3 oz.
6401120	Air Pump, 120 VAC
640143	Air Hose, Clear PVC, 5/8" I.D. x 3/4" O.D.
640205	Bio-Sanitizer Tablets (Not Shown)
640130	Air Pump Filter
640135	Air Pump Repair Kit

ManaGerm Dimensional Drawing



Electroscan Exploded View



Electroscan Parts List

ITEM #	PART #	DESCRIPTION
1	32-102AW	Mixer Motor 2 1/2" Dia. 12 VDC
1	33-102AW	Mixer Motor 2 1/2" Dia. 24 VDC
1	34-102AW	Mixer Motor 2 1/2" Dia. 32 VDC
2	31-121	Hose Fitting (2)
3	31-120	Discharge Elbow 90°
7	31-103	Motor Shaft Bushing (2)
8	31-106	10-32x7/8"RHMS,S/S (4)
9	31-109	Mixer Impeller
10	31-110-1	Impeller Bolt, 12-24x5/8", S/S (2)
11	31-110-2	Impeller Lock Washer, #12, S/S (2)
12	31-114	Cover Hold Down Nut, 10-32 (18)
13	31-115	Treatment Tank
14	31-122	Intake Plug
15	32-5000	Electrode Pack 12 VDC
15	33-5000	Electrode Pack 24 VDC
15	34-5000	Electrode Pack 32 VDC
16	31-112	Cover Gasket
17	31-108	Macerator Set Screw, 8-32x3/16", S/S
18	31-107	Macerator Impeller
19	31-101W	Treatment Cover
22	32-101AW	Macerator Motor 3" Dia. 12 VDC
22	33-101AW	Macerator Motor 3" Dia. 24 VDC
22	34-101AW	Macerator Motor 3" Dia. 32 VDC
25	31-104CW	Crossover Plug with O-Ring(26)
26	31-105	O-Ring
28	ETB2	Terminal Block
29	31-113-2	Terminal Block Bolt (2)
30	31-134	Cover Hold Down Screw 10-32 x 1 Hex(16)
51	M31	Electrode #14 Brass Flat Washer (4)
52	M30	Electrode Nut 1/4-20 Brass (4)

SALT FEED SYSTEM (Not Shown)

- 31-3001 Salt Tank Unit Complete, Two Gal. (Not Shown)
- 31-3002 Four Gal. Salt Feed Tank (Not Shown)
- 32-3003 Four Gal. Salt Feed Tank w/12 Volt Pump (Not Shown)
- 33-3003 Four Gal. Salt Feed Tank w/24 Volt Pump (Not Shown)

ITEM #	PART #	DESCRIPTION
	32-7000	12 V DC Treatment Unit - No Control Unit, System Status Panel or LCD Display
	33-7000	24 V DC Treatment Unit - No Control Unit, System Status Panel or LCD Display
	34-7000	32 V DC Treatment Unit - No Control Unit, System Status Panel or LCD Display

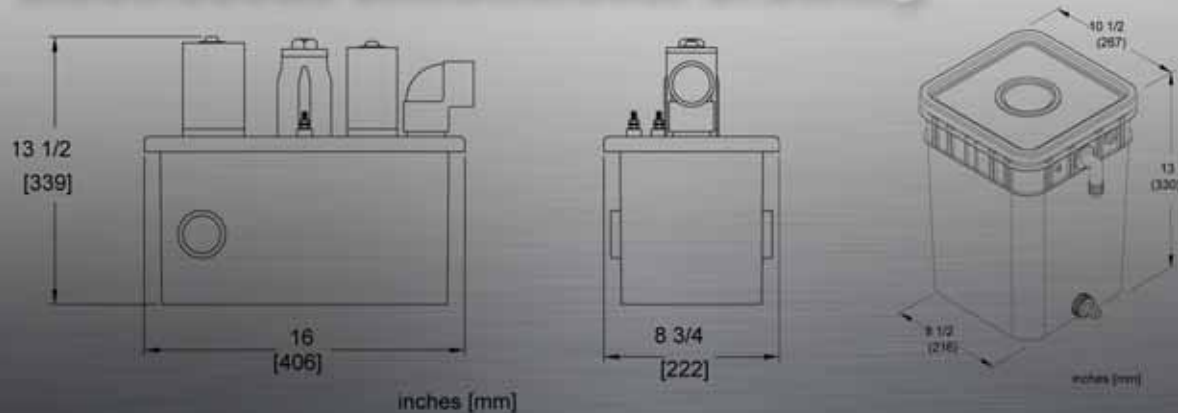
CONTROL PARTS

	31-618	Cable for LCD & System Status Panel (Not Shown)
33	31-702	LCD Display
32	31-705	System Status Panel
31	32-700	Control Unit 12V
31	33-700	Control Unit 24V
31	34-700	Control Unit 32V
	WAES01T	Wire Harness (Not Shown)
	31-111	Cable Clamp 1/2 x 1/2
	31-717	Insulating Bushing (4)
	ETP1	Terminal Protector Red
	F110	Screw 6 x 1/2 Phil Pad HD (4) to mount Display and Start/Stop button

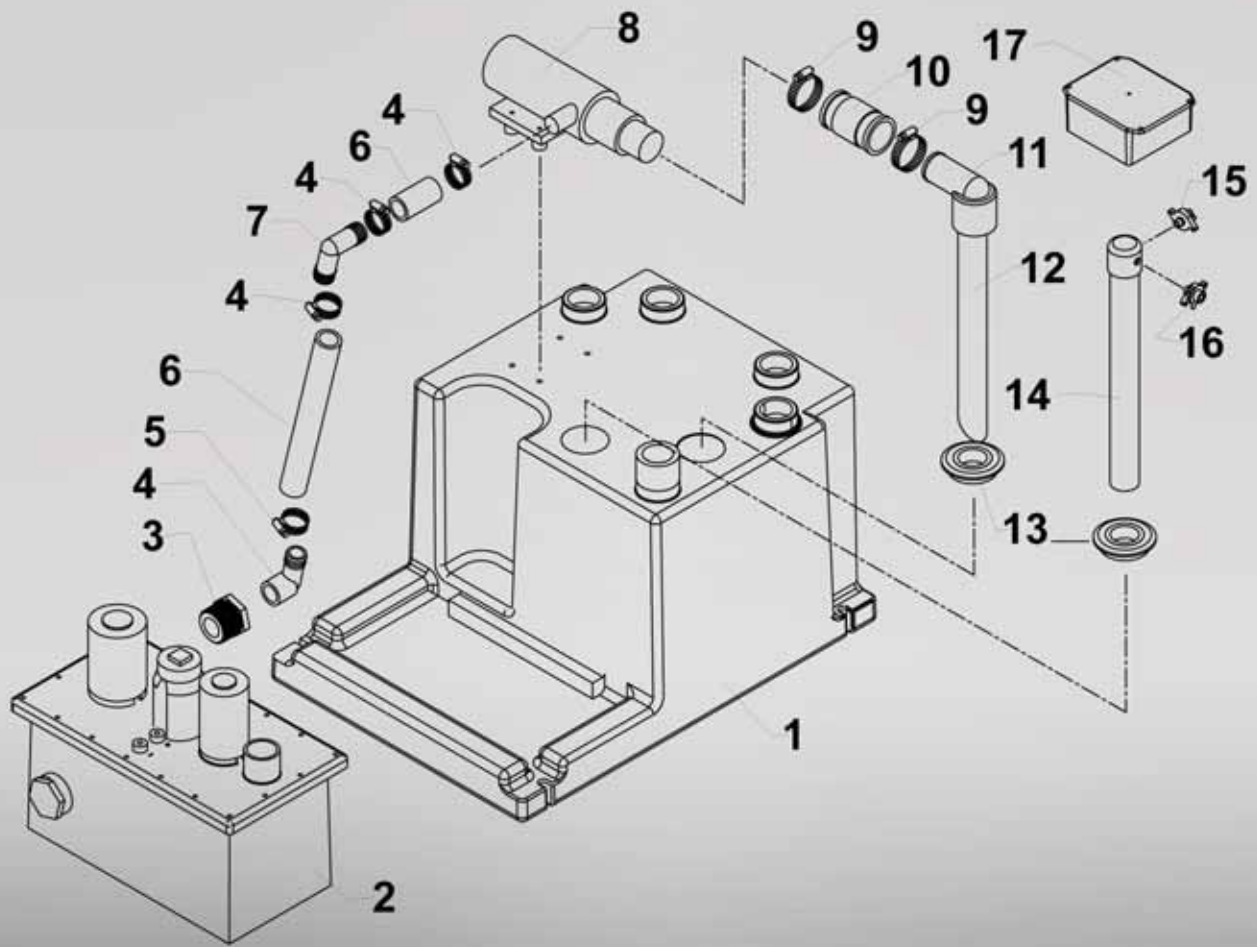
4 ESTRK Repair KIT includes following parts:

	31-102	Motor Shaft Seal (2)
	31-102-1	Macerator Seal Washer
	31-102-2	Macerator Retaining Ring
	31-102-3	Mixer Seal Washer
	31-102-4	Mixer Retaining Ring
7	31-103	Motor Shaft Bushing (2)
26	31-105	O-Ring
8	31-106	10-32x7/8"RHMS,S/S (4)
16	31-112	Cover Gasket
29	31-113-2	Terminal Block Bolt (4)
12	31-114	Cover Hold Down Nut, 10-32 (4)

Electroscan Dimensional Drawing



Hold n' Treat Exploded View

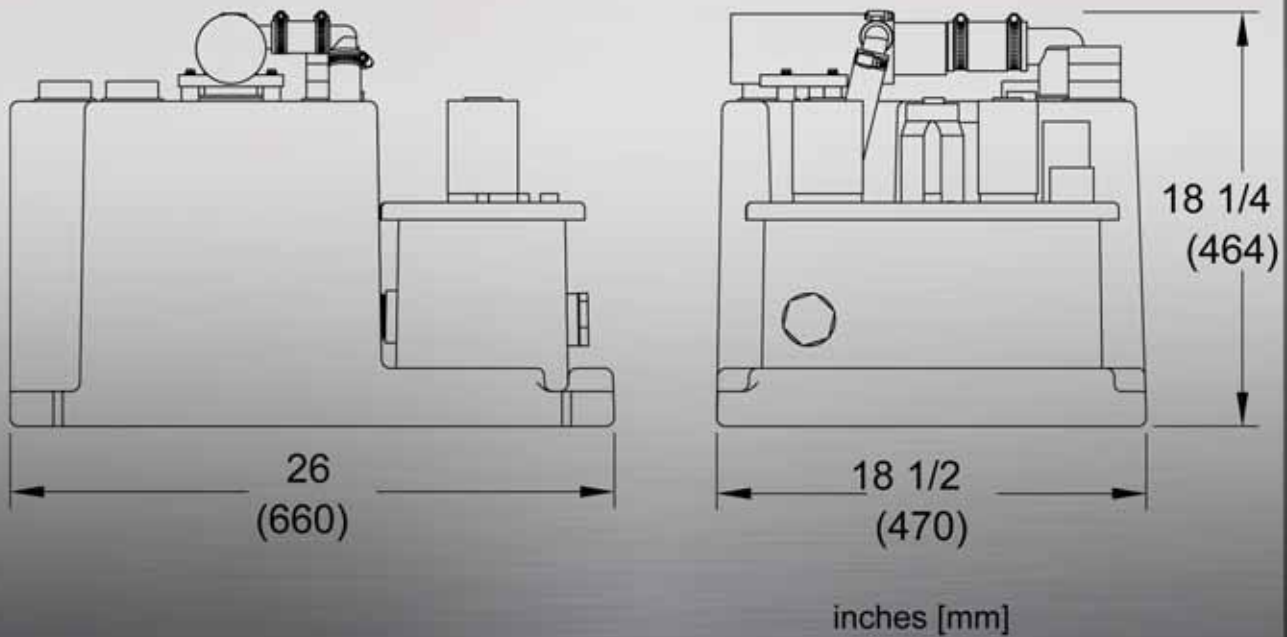


Hold n' Treat Parts List

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	21T15	Holding Tank, 15 Gallons	15	21P15SH	Sensor High Level
2	EST *	Electro Scan, xx voltage	16	21P15SL	Sensor Low Level
3	PLB1-54P	1 1/2" X 1" bushing, MIPT X FIPT	17	ETB4	Terminal Block (Not Shown)
4	1242	# 14 Hose Clamps for 1" Hose	17	21PCOVER1	Cover for Sensor
4	PLEA91-0P	1" Elbow, Combo, INSERT X MIPT		214*A	Macerator Pump Relay (Not Shown)
6	1326	1" Hose		EFH01	In Line Fuse Holder
8	21P*P	Macerator Pump		EF5	5 amp Fuse
10	PLCF1-2EP	Coupling Flex 1 1/4" EPDM		EF30FA	30 AMP, ATC, Fuse
12	21PDIP1	Dip Tube Assembly			
13	640107	1 1/2" Seal			
14	21P15S	Sensor Tube Assembly			

*Specify Voltage

Hold n' Treat Dimensional Drawing





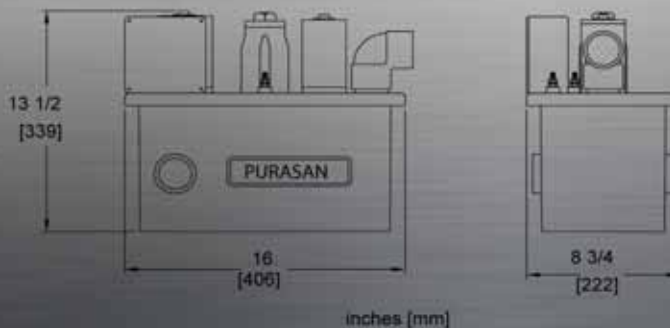
Purasan Parts List

ITEM #	PART #	DESCRIPTION
1	32-102AW	Mixer Motor 2 1/2" Dia. 12 V DC
1	33-102AW	Mixer Motor 2 1/2" Dia. 24 V DC
1	34-102AW	Mixer Motor 2 1/2" Dia. 32 V DC
2	31-121	Hose Fitting (2)
3	31-120	Discharge Elbow 90°
6	31-134	Cover Hold down Bolt, 10-32 x 1", S/S (18)
7	31-103	Motor Shaft Bushing (2)
8	31-106	Motor Hold down Bolt, 10-32x7/8", S/S (4)
9	31-109	Mixer Impeller
10	31-110-1	Impeller Bolt, 12-24 x 5/8", S/S (2)
11	31-110-2	Impeller Lock Washer, #12, S/S (2)
12	31-114	Cover Hold down Nut, 10-32 (18)
13	31-115	Treatment Tank
14	31-122	Intake Plug
15	41-102	Tank Divider
16	31-112	Cover Gasket
17	31-108	Macerator Set Screw
18	31-107	Macerator Impeller
19	31-101W	Treatment Cover
22	33-101AW	Macerator Motor 12 V DC
22	34-101AW	Macerator Motor 24, 32 V DC
23	31-305	1/4" I.D. Tubing
24	41-115	Union Tee 1/4" Barbed
25	31-104CW	Crossover Plug with O-Ring (26)
26	31-105	O-Ring
28	41-130	Dispenser Body (PVC)
29	41-135	Cartridge (refill) PURASAN Tablets
		Note: Cartridge must be shipped in a separate container, call 856-825-4900.
31	RWS5	O Ring
32	41-131	Dispenser Cap
34	31-307E	O Ring
39	41-350	Switch Panel Complete
40	41-355	Control Cable
41	31-304C	Flow Metering Clamp
42	32-218	Fuse: F1, MDL 6 1/4 (12 V DC, 1 Req'd.)
	42-220	Fuse: F2, MDL 12 (12 V DC, 1 Req'd.)
	32-218	Fuse: F1/F2, MDL 6 1/4 (24 V DC, 2 Req'd)

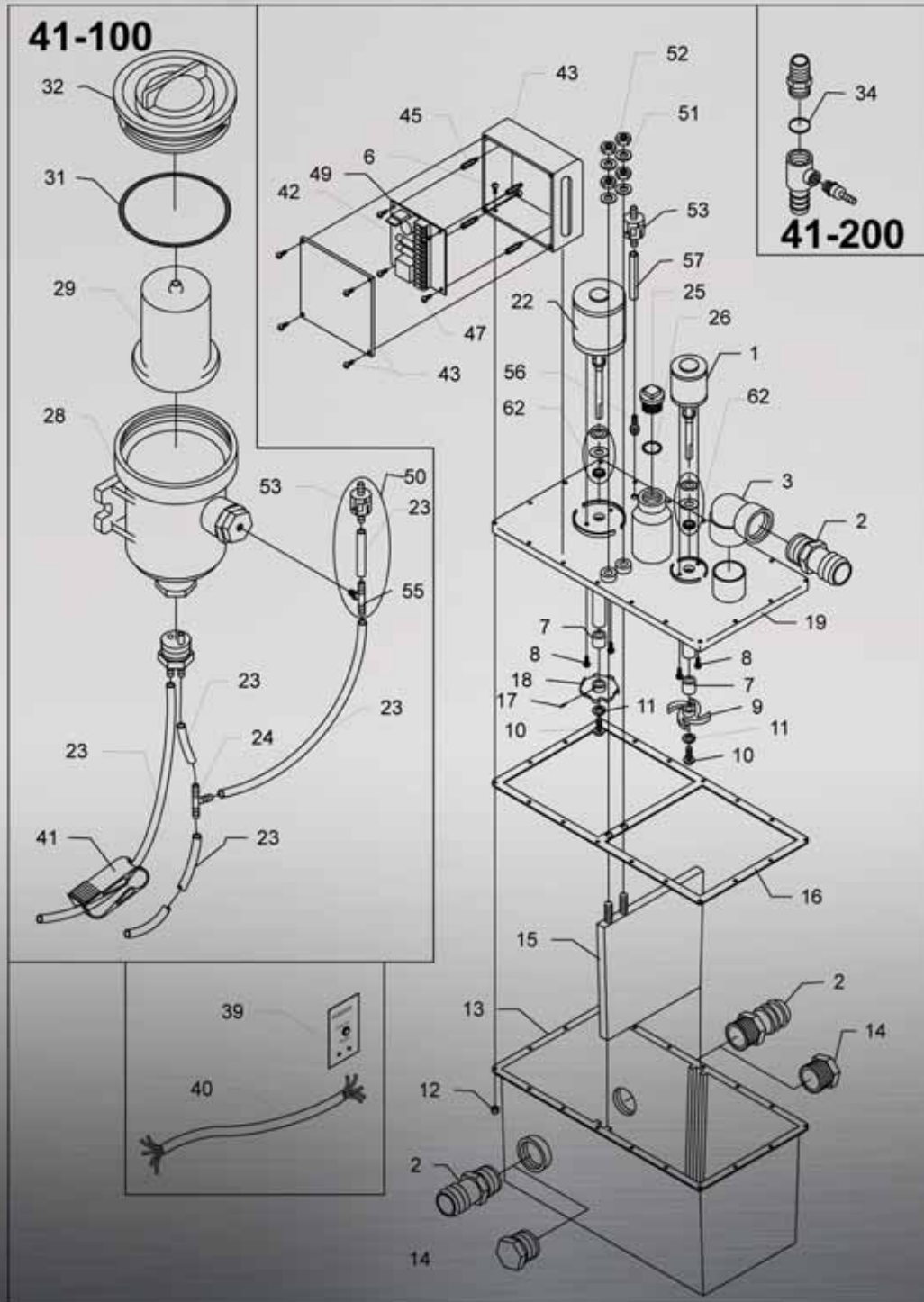
ITEM #	PART #	DESCRIPTION
	34-218	Fuse: F1/F2, MDL 5 (32 V DC, 2 Req'd.)
43	41-301	Control Box w/Cover and Screws
45	F41-312	Standoff (4)
47	CH46VT	Circuit Board Mounting Screw (4)
49	42-303	Circuit Board, 12 V DC
	43-303	Circuit Board, 24 V DC
	44-303	Circuit Board, 32 V DC
	42-300	Electronic Control Complete*, 12 V DC
	43-300	Electronic Control*, 24 V DC
	44-300	Electronic Control*, 32 V DC *Incl. #43, 45, 47, 49
50	41-110	Vent Kit for Tablet Dispenser (Incl. #53, 23, & 55)
51	M31	#14 Brass Flat Washer (4)
52	M30	1/4"-20 Brass Nut (4)
	41-100	Tablet Dispenser Complete (less cartridge)
	41-200	T-Fitting (Incl.34)
	42-1000	Treatment Unit Complete 12 V DC
	43-1000	Treatment Unit Complete 24 V DC
	44-1000	Treatment Unit Complete 32 V DC
	CDS*	Continuous Duty Solenoid
	PSTDC03	Purasan Dual Control
53	41-111	Check Valve
55	41-106	T Fitting
56	31-325	Adapter
57	31-319	3/8" x 1 3/4" Tubing
62	PSTRK	Purasan Repair Kit includes following:
	31-102	Motor Shaft Seal (2)
	31-102-1	Macerator Seal Washer
	31-102-2	Macerator Retaining Ring
	31-102-3	Mixer Seal Washer
	31-102-4	Mixer Retaining Ring
	31-103	Motor Shaft Bushing (2)
	31-105	O-Ring
	31-106	10-32x7/8"RHMS,S/S (4)
	31-112	Cover Gasket

Other Parts (Not Shown)
 Pressurized Kit Part # 4*-254W
 Pump Kit Part # 41-253W

Purasan Exploded View



Purasan Exploded View





CONSUMER FEEDBACK SOLIDIFIES MARINE TOILET AS A TOP CHOICE

An award-winning marine toilet, the Marine Elegance® from Raritan is offered in an array of sizes and shapes, flush water alternatives and control options, ranging from a simple pushbutton switch to a sophisticated programmable electronic SmartSwitch. It can include a patented, switchable SeaFresh™ water configuration, a tall or short bowl and even a slanted or straight back. Although the Marine Elegance pushbutton model was selected as a Best Choice by Practical Sailor in recent tests, Raritan's most important recommendations come directly from its customers no matter which model or options they choose.

Cameron Hancock of Ontario, Canada says, *"A nicer toilet, the Elegance is a full one-piece unit that looks and feels like home. It's less expensive and draws lower power, we used an ammeter to test it."*

Offering a sleek, vitreous china bowl and full-size toilet seat, the Marine Elegance delivers a streamlined presentation and is easy to clean. Featuring Vortex-Vac® Flush technology, it provides quiet, efficient flushing action and performs at a noise level of less than 63 decibels, about the same as conversational speech.

Making installations in tight spaces possible, the incredibly compact head has a simplified mounting system.

Bob Benton of Palm Coast, Florida purchased a Marine Elegance head and installed it on his 1987 Carver Voyager. *"Installation was so easy even I could do it,"* said Benton. *"The instructions were clear and concise and everything worked and fit exactly as it should. The enclosed templates and mounting brackets made drilling holes and mounting the head very easy."*

"My boat is fairly small and therefore my fresh water tank is quite small, making water conservation very important to me," continued Benton. *"The Elegance uses so little water to flush, it's almost negligible, thanks to the programmed Smart Switch control."*

The powerful head can pump an amazing 10' vertically and 100' horizontally. A built-in shredder with stainless steel blades breaks waste up into small particles to reduce clogs.

"We converted from the Vacuum-based system to the freshwater 4-button controlled model," said Bill Lentz, who owns Wireless One, a 1993 40' Mainship sedan bridge. *"It has been over two seasons and we've never had the head clog or backup. We actually believe the unit could chew up and spit out a golf ball in pieces."*

Raritan's Marine Elegance SeaFresh configuration enables users to flush with seawater to conserve onboard water, rinse the bowl with fresh before leaving the boat for a few days or when traveling in areas where outside water may be contaminated.



Contact Raritan
530 Orange Street
Millville, NJ 08332
856-825-4900
Fax: 856-825-4409
info@raritaneng.com
www.raritaneng.com



INNOVATIVE Y-VALVE CONTROLS DISCHARGE BETTER

Protecting the environment includes following mandated waste discharge regulations. To better divert effluent to a holding tank for later discharge, the most dependable name on the water, Raritan, now offers the Tru-Design™ Electronic Aquavalve™. The most versatile diverter valve on the market, Aquavalve can be integrated into a vessel's electronic system to give owners full, electronic control from one location.

An excellent choice for modern boats, it's ideal for use in applications where remote push-button diversion and control of discharge flow is needed. Owners can now operate the diverting valve from a control panel with the push of a button. The control panel also has a Holding Tank Lock feature, which when paired with responsible holding tank use helps prevent accidental discharge.

LEDs on the control panel clearly denote whether the valve is in the Holding Tank or Overboard position and show which valve port is closed. If the valve is jammed, two LEDs flash. Owners can easily disassemble the unit, even while out on the water, to remove clogs or other foreign objects.

The lightweight Tru-Design Aquavalve is molded from a glass-reinforced nylon composite, resulting in dramatic strength, stiffness, toughness and dimensional stability. Its stainless steel fasteners will not deteriorate in salt-laden air. Both the Aquavalve and control panel are IP55-rated, so they're dust and spray proof.

The Aquavalve is pressure-tested to ensure quality and safety in terms of sealing and operation and its silicon seal offers good wear resistance. To keep the seal moving and lubricated, AquaValve features auto-rotate which enables the valve to automatically rotate to the unused port and back upon receiving vessel power. With a composite spanner included, owners can avoid using pipe wrenches that gouge the fitting, facilitating access in tight places.

To suit existing installations, Aquavalve is offered in 12 or 24V models. With a range of straight, 90° and 120° connections and two seal options, plumbing in confined spaces is made easy. It can be wired into almost any control system for seamless integration as an OEM product.

The Electronic Aquavalve comes with a control panel, spanner and comprehensive installation and operation instructions. Fittings are purchased separately to accommodate the large variety of plumbing configurations found in marine sanitation applications.

Contact Raritan
530 Orange Street
Millville, NJ 08332
856-825-4900
Fax: 856-825-4409
info@raritaneng.com
www.raritaneng.com





NEW RETRACTABLE HANDLE CREATES POWERFUL PUMPING

The most dependable name on the water, Raritan, offers a new feature on its PHII and PHC manual toilets setting it apart from the competition. The new retractable handle now enables owners to install the toilet in confined areas more easily.

Much simpler and cleaner than knob pumping, lever handle pumping also results in more powerful flushing action.

Constructed from Celcon-engineered plastic, the retractable handle is tough and will not break. Its low friction makes for easier pumping.

The PHII and PHC offer long-term reliability with ¼ turn dry pump valves and O-ring seals. An air vent reduces back pressure for trouble-free pumping in the “dry” position. Utilizing precision ground rubber balls for more reliable performance, the raw water inlet and outlet valves can lift incoming flush water 4’.

With a 66% bigger piston than competitors, users can clear the bowl quicker. The double-action piston pump simultaneously draws new flush water as it discharges the wastewater.

Both toilets offer a simple design for economical, trouble-free and quiet operation. Easy to rebuild, they’re designed for years of service. Standard and household-size bowls are available for both models.

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RARITAN NOW OFFERS THE SANI-FLEX HOSE

Boat owners looking for a one-stop-shop for all their sanitation needs can set their sights on Raritan. The company now offers the highest quality marine sanitation hose, SANI/FLEX.

Constructed from Butyl rubber, it has the lowest odor permeation level, not found in other rubber or PVC material hoses. Extremely flexible for easy installation, it supplies a low-bend radius up to one time its diameter.

Designed as a sewage pipe for marine toilets, its main advantage is to avoid the spreading of odors from the head's discharge. The SANI/FLEX hose is white, odor-free and constructed from anti-bacterial, vanilla-scented rubber that's abrasion, ozone and seawater resistant. Smooth covered and without any ridges, this hose easily slides over fittings.

It's reinforced with a double-steel wire helix and high-strength synthetic textile yarn. SANI/FLEX works with temperatures between -40°F to 248°F. It comes with a five-year warranty.

Raritan produces superior marine toilets, waste treatment systems, water heaters and icemakers. The company is headquartered in Millville, New Jersey, USA, with an office in Ft. Lauderdale, Florida.

Contact Raritan
530 Orange Street
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info@raritaneng.com
www.raritaneng.com



Raritan Engineering Company, Inc.

530 Orange Street
Millville, NJ 08332
Ph: 856-825-4900

3101 SW Second Avenue
Ft. Lauderdale, FL 33315
Ph: 954-525-0378

www.RaritanEng.com

