



Serving the Marine industry for over 50 Years.



## TO OUR CUSTOMERS, TRADING PARTNERS AND FRIENDS,

*Raritan customers like to ask questions and they range from the simple to the very complex. The challenge in this catalog is to present enough information to shed light on the simple yet still offer a path to understanding the complex. We show our product line in a simplified fashion and suggest where to seek additional information from our website or customer service personnel. To print a catalog containing 57 years' worth of revisions to the PH manual would have been cumbersome and not of much interest to someone who is just buying their first PH. For those unfamiliar, the PH was the manual Marine head on which Raritan Engineering Company, Inc. was started in 1958.*

*Whether you are seeing this catalog in booklet format or seeing a virtual copy on our website, it's helpful to know the additional information on products and parts are available on the website. If you cannot find what you want, please call our customer service representatives and they can help you find what you need. As a company we believe you should be able to get the information necessary to use and maintain your Raritan product. We go to great lengths to ensure that you can get that information. Our employees are our greatest asset and they know that outstanding customer service is what keeps customers coming back.*

*In the past year we have made an effort to update the Marine head and we have designed slow close seats for both Marine size bowls and Household size bowls with special feature of stoppers that prevents seats from sliding sideways. Because the Marine environment is harsh, fasteners tend to corrode. There are no exposed fasteners to corrode on our slow close seats. It may seem like a simple thing but boat owners who have struggled to keep seats functional and clean will recognize the importance of such a simple thing.*

*We have also made improvements to our PH head, now dubbed the PH SUPERFLUSH. Changes have been made to allow direct and fast replacement of competitors' heads to provide effortless pumping. This is an example of our efforts at continuous improvement that is driven by customer requests.*

*Don't overlook plumbing fittings and valves from our partner Tru-Design. These fittings are extremely cost-effective, durable and can be installed to meet ABYC standards.*

*We have made a number of improvements to other Raritan products. Our 87 Ice maker for example has several improvements. Fresh head has been improved to make it more reliable and operation more intuitive. PSTEX (Purasan) system now has substantial improvements as a result of the growing number of applications and the feedback users have provided us.*

*We welcome any suggestions you may have for product improvements and for the support we provide for our products.*

*Wishing you wonderful boating seasons in coming years,*



Arthur J. "Bret" Bretnall, Jr.  
President





<b>MANUAL TOILETS</b>	<b>PG.4</b>
<b>ELECTRIC TOILETS</b>	<b>PG.10</b>
<b>WASTE TREATMENT SYSTEMS</b>	<b>PG. 18</b>
<b>MACERATOR PUMP</b>	<b>PG. 24</b>
<b>MARINE COMPOSITE FITTINGS</b>	<b>PG. 26</b>
<b>NAVIGATIONAL AIDS</b>	<b>PG. 28</b>
<b>TANK MONITORS</b>	<b>PG. 29</b>
<b>ICE MAKERS</b>	<b>PG. 30</b>
<b>WATER HEATERS</b>	<b>PG. 32</b>
<b>STRAINERS</b>	<b>PG. 34</b>
<b>CLEANING AND MAINTENANCE</b>	<b>PG. 35</b>



## PH SUPERFLUSH

**NEW!**

As a premier manufacturer of marine products, Raritan Engineering Co. Inc, is proud to introduce its latest product offering, the PH SuperFlush. Our latest configuration helps customers easily switch from competitive models and begin taking advantage of the robust and dependable design of our world renowned PHII pump. Every unit is individually assembled and tested by hand in the USA.

- Upgrading to PH SuperFlush is fast and easy! Mounting base configuration matches the bolt pattern used on most competitive toilets.
- Clear the bowl with less strokes! Our robust double-action piston pump is 66% larger than competitive models making its use quick, easy and efficient.
- Trouble free operation! Proprietary full size 1½" joker valve is specially designed to maintain pump performance.



Additional benefits include:

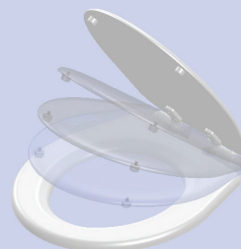
- Effortless Pumping! Powerful telescopic lever style handle makes pumping a breeze, even in the most challenging plumbing installations.
- Superior strength! Our engineered polymer pump construction is the strongest on the market.
- Slow close seats! Prevents annoying seat slamming and includes a unique feature that locks the seat in place while boat is rocking.

All units have a dry flush option and may be mounted above or below the waterline. Reversible pump mounting available for left hand operation. Available in both Marine and Household bowl sizes.

Prefer to use your old bowl and seat?  
Retrofits are available – see reverse for part# details.

Most items are in stock and available to ship within 24 hours.

### ***NEW! Slow close seat design***

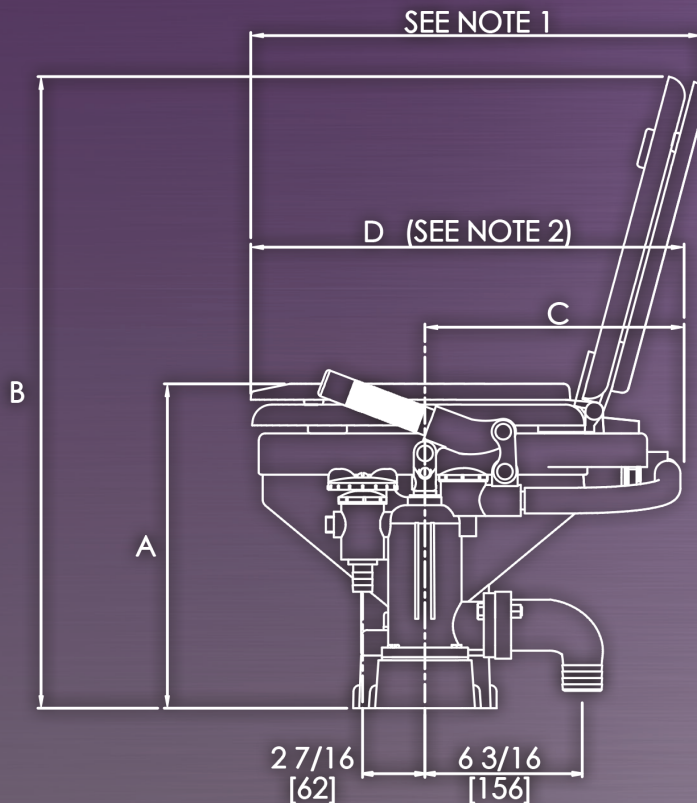


*Seat locks in place while boat is rocking.*

***No more slamming seats!***

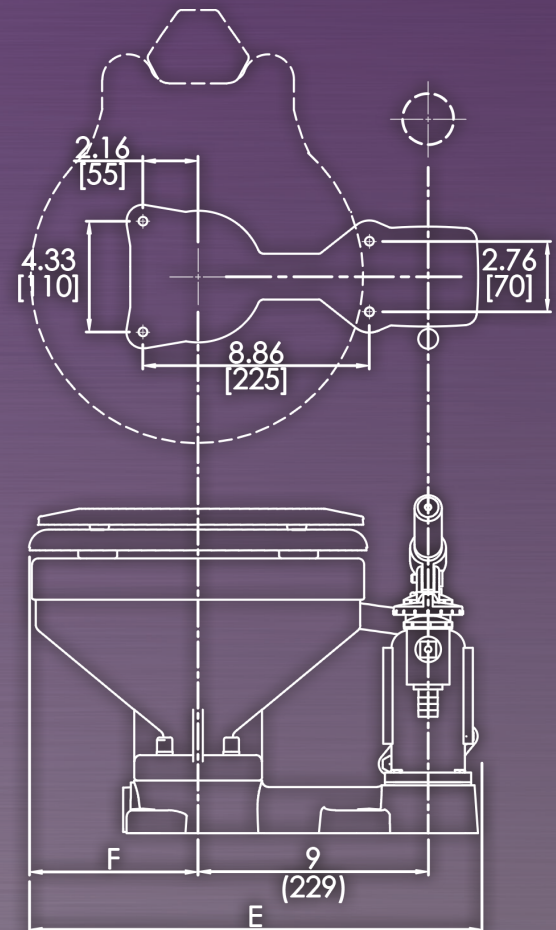


## DRAWINGS:



BOWL TYPE	A	B	C	D	E	F
MARINE	13 (330)	24 3/4 (629)	10 3/8 (264)	17 1/4 (438)	17 3/4 (451)	6 1/2 (165)
HOUSEHOLD	13 1/8 (334)	27 7/8 (708)	11 1/2 (292)	20 (508)	18 1/4 (464)	7 (179)

INCHES (MM)



### NOTE:

1. THE SEAT WILL OPEN WITHIN THE DEPTH OF THE BOWL (D), HOWEVER, IT MAY BE DESIRABLE TO INCREASE THIS ANGLE BY ALLOWING MORE ROOM AT THE BACK OF THE BOWL FOR THE SEAT TO OPEN.
2. MARINE STYLE BOWL, D DIMENSION IS 17 3/8 [442MM] WITH HANDLE EXTENDED.
3. DIMENSIONS ARE FOR REFERENCE AS VITREOUS CHINA DIMENSIONS MAY VARY +/- 5%.

## PLUMBING:

Maximum Lift	4' (1.2m)
Max Discharge Loop Height	15' (4.6m)
Inlet Port Size	3/4"
Discharge Port Size	1 1/2"

## ORDERING INFO:

- P101 = Marine size bowl and slow close seat  
P102 = Household size bowl and slow close seat  
P103 = Lower base assembly, pump and base ONLY



## FRESH HEAD

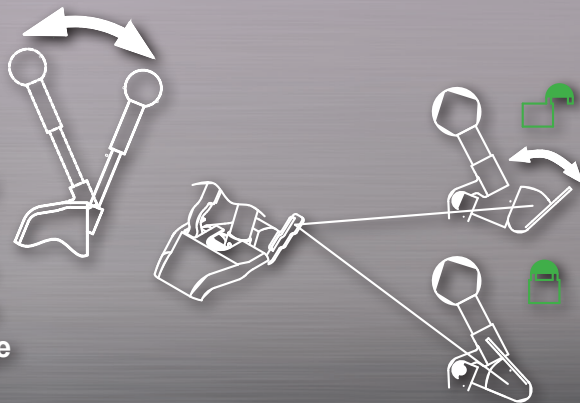
### TIRED OF ROTTEN EGG SMELL OR USING YOUR SHOWER HEAD TO FLUSH THE TOILET?

- *The first manual marine toilet to utilize pressurized fresh water – eliminates calcium deposits in discharge hose*
- *Footprint is a direct replacement for competitive models*
- *No Thru Hulls necessary when installed with a holding tank*
- *Low water use toilet*
- *Available as left hand side pump*
- *PHII toilets can be retrofitted by purchasing the retro-fit pump #2500RFK*

**NEW!**



With a diaphragm type pump and telescopic handle, flushing is extremely easy. Owners choose how much water to use. A lever allows water into the bowl to pre-wet it for a better flush. A built-in freshwater backflow prevention includes a vacuum break. A lock-out feature stops backflow coming in through the discharge when not in use.

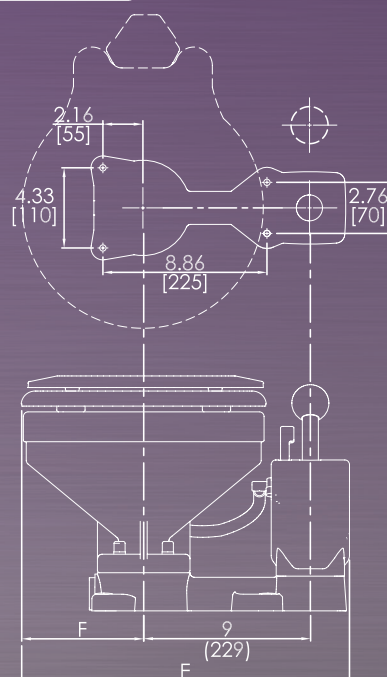
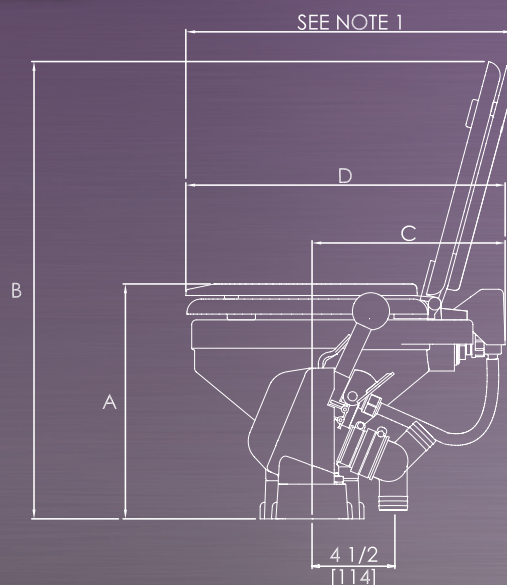




## PLUMBING :

	Pump Model
Max Discharge Loop Height	15' (4.6m)
Minimum Pressure/Flow (inlet water)	3 GPM (11L) @ 10 psi (.69 bar)
Maximum Pressure (inlet water)	15 psi (10.3 bar)
Inlet Port Size	1/2"
Discharge Port Size	1 1/2"

## DRAWINGS:



BOWL TYPE	A	B	C	D	E	F
MARINE	13 (330)	24 3/4 (629)	10 3/8 (264)	17 1/4 (438)	17 3/4 (451)	6 1/2 (165)
HOUSEHOLD	13 1/8 (334)	27 7/8 (708)	11 1/2 (292)	20 (508)	18 1/4 (464)	7 (179)

INCHES  
(MM)

### NOTE:

1. THE SEAT WILL OPEN WITHIN THE DEPTH OF THE BOWL (D). HOWEVER, IT MAY BE DESIRABLE TO INCREASE THIS ANGLE BY ALLOWING MORE ROOM AT THE BACK OF THE BOWL FOR THE SEAT TO OPEN.
2. DIMENSIONS ARE FOR REFERENCE AS VITREOUS CHINA DIMENSIONS MAY VARY +/- 5%.

## ORDERING:

Sample part #25M00 = Fresh Head with marine size bowl, right hand operation

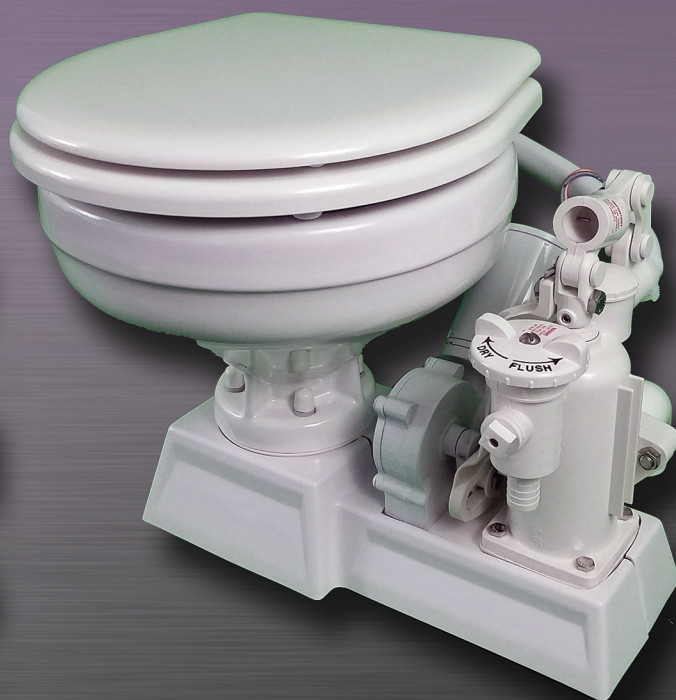
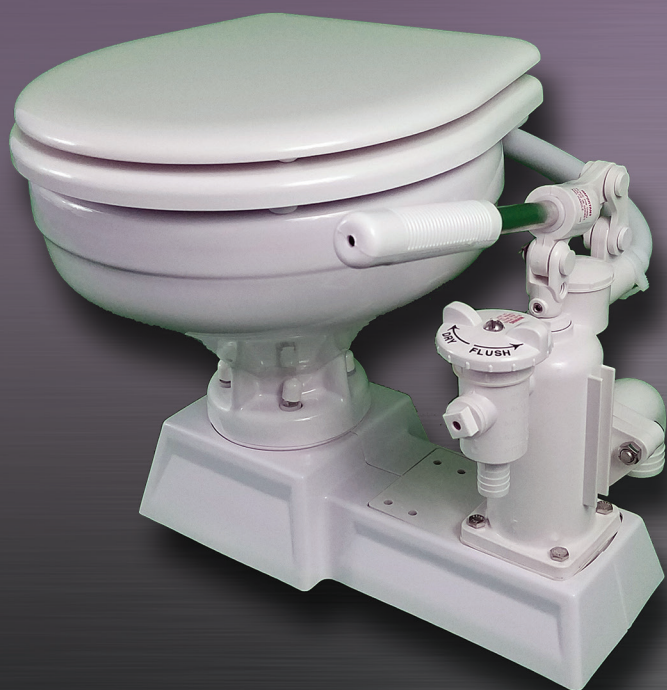
Model	Bowl Size	Pump Location
25 Fresh Head	M Marine	00 Right Hand Operation
	H Household	00L Left Hand Operation



## PHII and PHEII

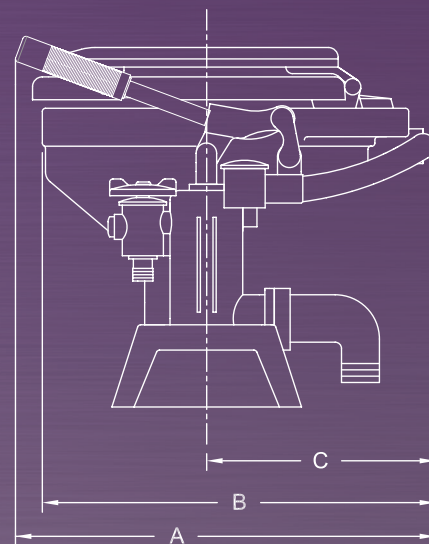
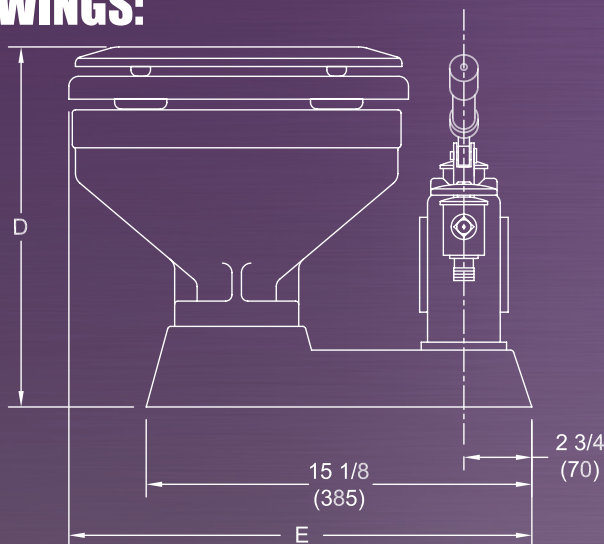
*The most recognized and reliable manual toilets in the world. This manual design PHII is also available as our PHEII electric model.*

- *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*
- *NEW retractable handle*





## DRAWINGS:



BOWL TYPE	A	B	C	D	E
MARINE	17 3/8 (442)	17 (432)	10 (254)	14 1/4 (362)	18 (458)
HOUSEHOLD	NA (SEE B)	20 (508)	11 1/2 (292)	14 1/2 (368)	18 1/4 (464)

inch  
(mm)

## PLUMBING:

Maximum Lift	4' (1.2m)
Max Discharge Loop Height	15' (4.6m)
Inlet Port Size	3/4"
Discharge Port Size	1 1/2"

## ORDERING INFO:

Sample part # PHII - Manual toilet, marine size bowl, second generation

Model	Operation	Bowl Size	Version	Voltage
PH	Manual	Marine	II Second Generation	12 12 V DC
	E Electric	HB Household		24 24 V DC
		CK Conversion Kit		



## MARINE Elegance™

*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*

*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.*

BIDET OPTION



STANDARD



### FLUSH CONTROL:



Smart Toilet Control -  
Timed flush for Normal  
and Water Saver modes  
Momentary operation  
to wet or empty the bowl.



Multifunction Momentary -  
Provides 3 momentary  
operations:  
Fill, Empty and Flush.



Momentary Push Button -  
Simplest and  
most economical

### Optional:



Sea/Fresh Selector-  
Allows user to select  
from either on board  
freshwater or raw water.  
\*Flush Control required

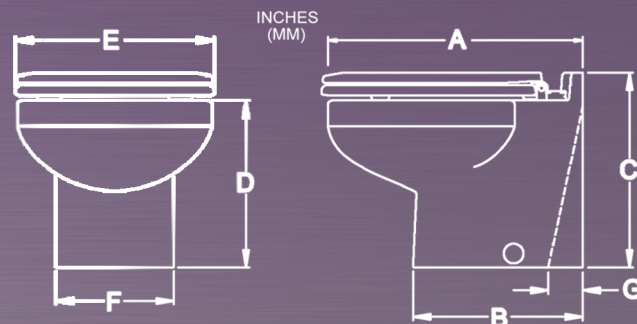


## PLUMBING:

	Pump Model	Pressurized Water Model
Maximum Lift (suction)	4' (122 cm)	
Max Discharge Loop Height	10' (3.0 m)	10' (3.0 m)
Minimum Pressure/Flow (inlet water)		3.5 gpm (13.2L) @ 10 psi (.69 bar)
Maximum Pressure (inlet water)		150 psi (10.3 bar)
Inlet Port Size	3/4"	1/2"
Discharge Port Size	1" or 1 1/2"	1" or 1 1/2"

## DRAWINGS:

BOWL TYPE	A	B	C	D	E	F	G
ME ANGLED 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 ANGLED 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



## ORDERING:

Sample Part Number #220HF012 = NOTE: Marine Elegance standard with angled back and pressurized fresh water in 12V with Smart Toilet Control  
For bidet option, contact Raritan.

Model	Bowl Height	Bowl Type	Color	Bowl Size	Water Source	Voltage	Control
2 - Elegance	2 - Standard	0 - Angled	White (STD)	H - Household	F - Pressurized Fresh Water	012 - 12V	Smart Switch (STD)
	3 - Tall	1 - Straight	A - Bone		R - Remote Intake Pump	024 - 24V	01 - Multifunction
					S - SeaFresh	012T - 120/240V	02 - Push Button

## ELECTRICAL:

	Pump Model	Pressurized Water Model
Amps Draw (12V/24V)	28/15	18/10
Circuit Breaker Size Amps (12V/24V)	30/20	25/15



## Atlantes Freedom<sup>TM</sup> with Vortex-Vac

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
- 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

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



### FLUSH CONTROL:



Smart Toilet Control -  
Timed flush for Normal  
and Water Saver modes  
Momentary operation  
to wet or empty the bowl.



Multifunction Momentary -  
Provides 3 momentary  
operations:  
Fill, Empty and Flush.



Handle Flush -  
Pull forward to flush,  
push backwards  
to empty.

### Optional:



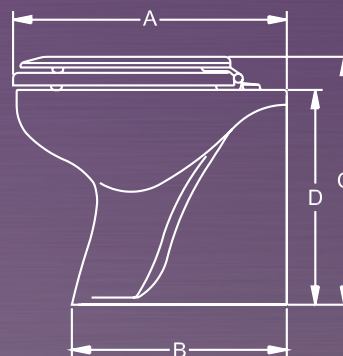
Sea/Fresh Selector-  
Allows user to select  
from either on board  
freshwater or raw water.  
\*Flush Control required



## DRAWINGS:

 inch  
(mm)

BOWL TYPE	A	B	C	D	E	F
STANDARD	19 1/4 (489)	15 (381)	17 (432)	15 (381)	14 3/8 (365)	14 (355)
ELONGATED	21 1/2 (545)	18 1/4 (465)	17 (432)	15 (381)	14 1/8 (359)	14 (355)



## PLUMBING:

	Pump Model	Pressurized Water Model
Maximum Lift (suction)	4' (122 cm)	
Max Discharge Loop Height	10' (3.0 m)	10' (3.0 m)
Minimum Pressure/Flow (inlet water)		3.5 gpm (13.2L) @ 10 psi (.69 bar)
Maximum Pressure (inlet water)		150 psi (10.3 bar)
Inlet Port Size	3/4"	1/2"
Discharge Port Size	1" or 1 1/2"	1" or 1 1/2"

## ORDERING INFO:

Sample Part Number # AVHWF01201= Household, white, Freshwater, thru floor, 12V, Smart Toilet Control

Model	Bowl	Color	Flush Water	Voltage	Control
AV Atlantes Freedom with Vortex Vac	H - Household	W - White	F - Freshwater Solenoid	012 - 12 V DC	01 - Smart Toilet Control (STC)
	L - Elongated	A - Almond	R - Remote Intake Pump	024 - 24 V DC	02 - Handle - Momentary
			S - Sea/Fresh	012T - 120/240 AC	03 - Handle - Timed (STC)
					04 - MultiFunction Momentary

## ELECTRICAL:

Units Voltage	Intake Pump Models Amp. Draw	Freshwater Solenoid Model Amp. Draw
12 VDC	20	11
24 VDC	10	5.5



## SeaEra™

*All in one powerful flush design locates the raw water and macerator pumps in a single, convenient location making installations quick and easy.*

- *Dual shafted motor separates intake and discharge functions providing a clean, reliable flush*
- *Self priming raw water intake pump can run dry without damage. No rubber impeller to burn out.*
- *Bowl can be rotated 90 degrees making it ideal for areas with limited space*
- *Slow close seat eliminates annoying slamming*
- *Low water usage - as little as 1 quart per flush*
- *Stainless steel macerating blade*
- *Full size joker valve reduces clogs*
- *Heavy duty momentary push button switch included*
- *90 degree and straight discharge fitting included*
- *Available in marine and household bowl sizes*
- *Two year warranty*



Bowl turned 90 degrees

## 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*
- *Intake pumps can be run dry without damage*





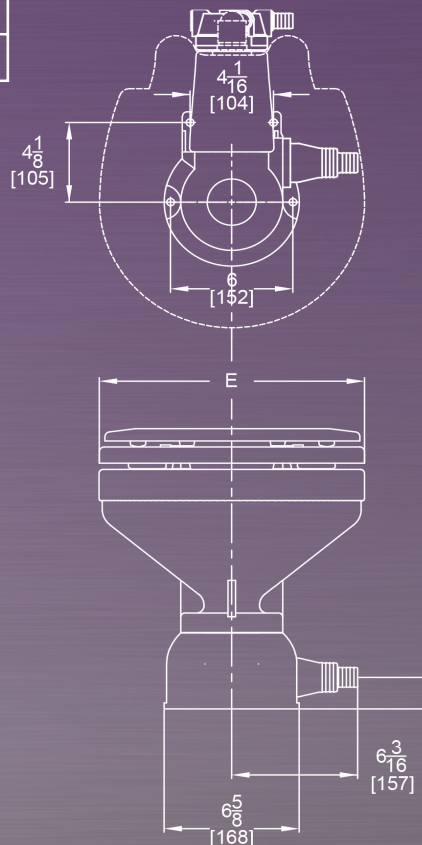
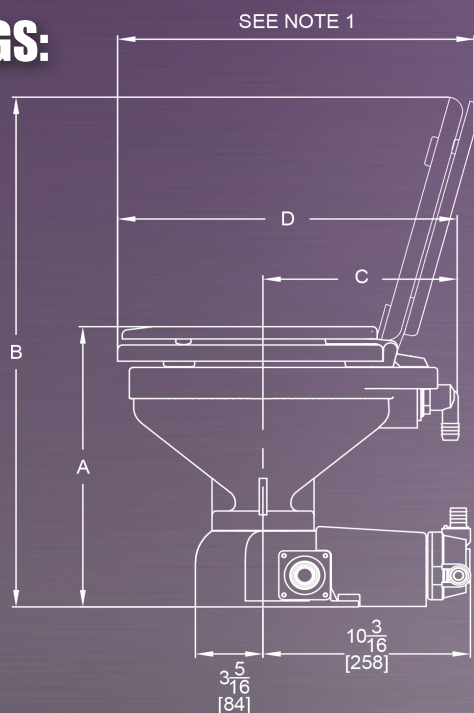
## PLUMBING:

	Pump Model
Maximum Lift (suction)	4' (122 cm)
Max Discharge Loop Height	9' (274 cm) Vert./ 50' (15.2 m) Horiz.
Minimum Pressure/Flow (pressurized water)	
Inlet Port Size	3/4"
Discharge Port Size	1" or 1 1/2" Straight 1 1/2" 90°

## ELECTRICAL:

Amps Draw (12/24V)	23/12.5
Circuit Breaker Size Amps (12/24/32 V)	25/15/15
Integral Model Amps (12/24/32 V)	18/10/7.5

## DRAWINGS:



BOWL TYPE	A	B	C	D	E
MARINE	14 1/2 (368)	26 1/2 (673)	10 3/8 (264)	17 1/4 (438)	13 (330)
HOUSEHOLD	14 7/8 (378)	29 5/8 (752)	11 1/2 (292)	20 (508)	14 3/8 (365)

INCHES  
(MM)

NOTE:  
 1. THE SEAT WILL OPEN WITHIN THE DEPTH OF THE BOWL (D), HOWEVER, IT MAY BE DESIRABLE TO INCREASE THIS ANGLE BY ALLOWING MORE ROOM AT THE BACK OF THE BOWL FOR THE SEAT TO OPEN.  
 2. DIMENSIONS ARE FOR REFERENCE AS VITREOUS CHINA DIMENSIONS MAY VARY +/- 5%.

## ORDERING INFO:

Sample Part Number # 160MF012 = Marine size white bowl, pressurized fresh water, 12V, STC Control

Model	Bowl	Intake Water	Discharge Fitting	Voltage
160 Sea Era	L - Lower Base Conversion	I - Integral Intake Pump	0 - Straight and 90° both included	12 - 12 V DC
	M - Marine Bowl			24 - 24 V DC
	H - Household Bowl			12T - 120/240 AC



## SEA ERA QC

*Straightforward design allows for a simple installation and quiet flush. Flush control options give users precise control over water usage.*

### Freshwater Solenoid Model

**(162MF\* or 162HF\*)**

- Less maintenance & odors than raw water models
- Connects to vessel's existing pressurized system
- Built in water valve and vacuum breaker allows for easy installation

**Fresh Water Model**



### Remote Seawater Pump Model

**(162MR\* or 162HR\*)**

- Self priming diaphragm pump can run dry without damage. No rubber impeller to burn out.
- Remote seawater pumps allow for easy access and a more flexible installation.

**Remote Raw Water Model**



**Remote Pump**



### Both Models:

- Designed for quiet operation
- Slow close seat eliminates annoying slamming
- Low water usage - as little as 2 pints per flush
- Bowl can be rotated 90 degrees making it ideal for areas with limited space
- Stainless steel macerator blade
- Full size joker valve reduces clogs
- 90 degree and straight discharge fitting included
- Available in marine and household bowl sizes
- Available with Smart Toilet Control - Maximizes flush efficiency with low water consumption and noise levels
- Easily adapts to our SeaFresh model allowing the user to select between raw or freshwater
- Two year warranty

### Flush Control:



Smart Toilet Control -  
Timed flush for Normal  
and Water Saver modes  
Momentary operation  
to wet or empty the bowl.



Multifunction Momentary -  
Provides 3 momentary  
operations:  
Fill, Empty and Flush.



Momentary Push Button -  
Simplest and  
most economical

### Optional:



Sea/Fresh Selector-  
Allows user to select  
from either on board  
freshwater or raw water.  
\*Flush Control required



## ELECTRICAL:

Amps Draw (12/24V)	23/12.5	13/7.5
Circuit Breaker Size Amps (12/24V)	25/15	25/15

## PLUMBING :

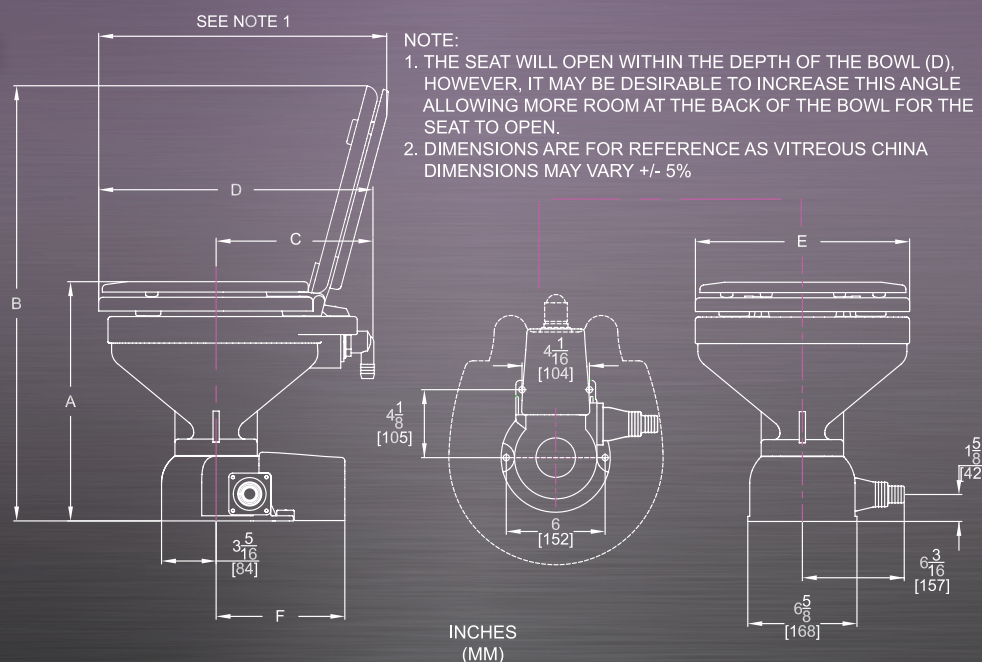
	Pump Model	Pressurized Water Model
Maximum Lift (suction)	4' (122 cm)	
Max Discharge Loop Height	9' (274 cm) Vertical / 50' (15.2 m) Horizontal	9' (274 cm) Vertical/ 50' (15.2 m) Horizontal
Minimum Pressure/Flow (pressurized water)		3.5 gpm @ 10 psi
Inlet Port Size	3/4"	1/2"
Discharge Port Size	1" or 1 1/2" Straight 1 1/2" 90°	1" or 1 1/2" Straight 1 1/2" 90 Degree

## ORDERING INFO:

Sample Part Number # 162MF012 = Marine size white bowl, pressurized fresh water, 12V, STC Control

Model	Bowl	Intake Water	Discharge Fitting	Voltage	Control
162 Sea Era	L - Lower Base Conversion	F - Pressurized Fresh Water	0 - Straight and 90° both included	12 - 12 V DC	None - Smart Toilet Control (STC)
	M - Marine Bowl	R - Remote Raw Water Pump		24 - 24 V DC	01 - Multifunction Momentary Control
	H - Household Bowl	S - Sea Fresh		12T - 120/240 AC	02 - Push Button Control

## DRAWINGS:



BOWL TYPE	A	B	C	D	E	INTAKE	F
MARINE	14 1/2 (368)	26 1/2 (673)	10 3/8 (264)	17 1/4 (438)	13 (330)	PRESSURIZED FRESH WATER	8 7/8 (225)
HOUSEHOLD	14 7/8 (378)	29 5/8 (752)	11 1/2 (292)	20 (508)	14 3/8 (365)	REMOTE PUMP	7 13/16 (199)



## **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!**

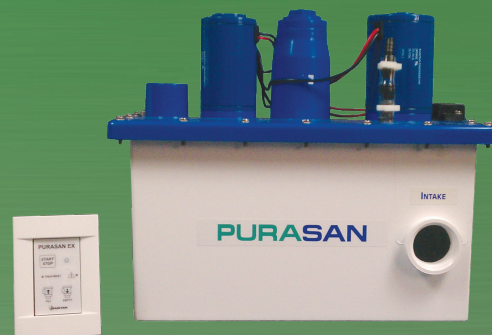


# PurasanEX™

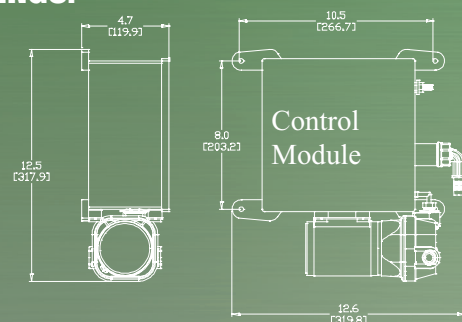
*Improved design for all toilets and salt, fresh, or brackish water. Onboard sewage treatment device legal for use in any area not considered a Federal NDZ. Neutralizes waste, making it sanitary and safe for boaters and marine life.*

## Benefits

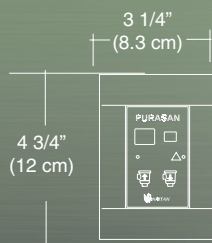
- New Control indicates when tablets are empty
- Dispenser can be mounted at any height
- Solution drains with air pump, lengthening tablet life
- No metering valve to control water, now fully programmable
- New tablet packaging eliminates hazmat fees



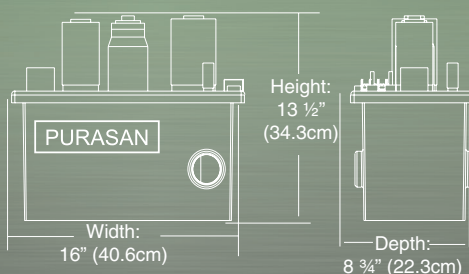
## DRAWINGS:



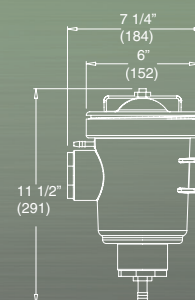
### SWITCH PANEL DIMENSIONS



### TREATMENT UNIT DIMENSIONS



### TABLET DISPENSER DIMENSIONS



## CONVERSIONS

### Wire - AWG to mm<sup>2</sup>

AWG	16	14	12	10	8	6	4	2
mm <sup>2</sup>	1.5	2.5	4.0	6.0	10.0	16.0	25.0	35.0

### Feet to Meters

Feet	10	15	20	25	30	40	50
Meter	3.1	4.6	6.1	7.6	9.2	12.2	15.2

## PLUMBING:

Inlet / Outlet	1 1/2" / 1 1/2"
Maximum Flush Volume	1 1/2 gallons (5.7 L)

## ELECTRICAL:

Amps Draw (12/24V)	10/8
Circuit Breaker Size Amps (12/24 V)	20/15

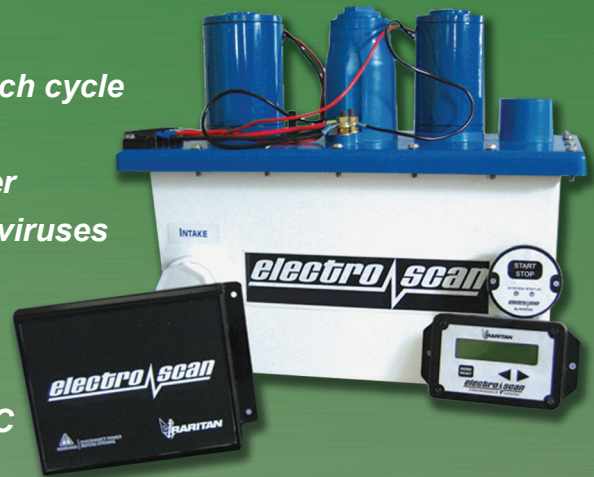
## ORDERING INFO:

MODEL	DESCRIPTION
PST12EX	PurasanEX, 12V, Type I MSD
PST24EX	PurasanEX, 24V, Type I MSD
41-135A	Replacement Purasan Tablets

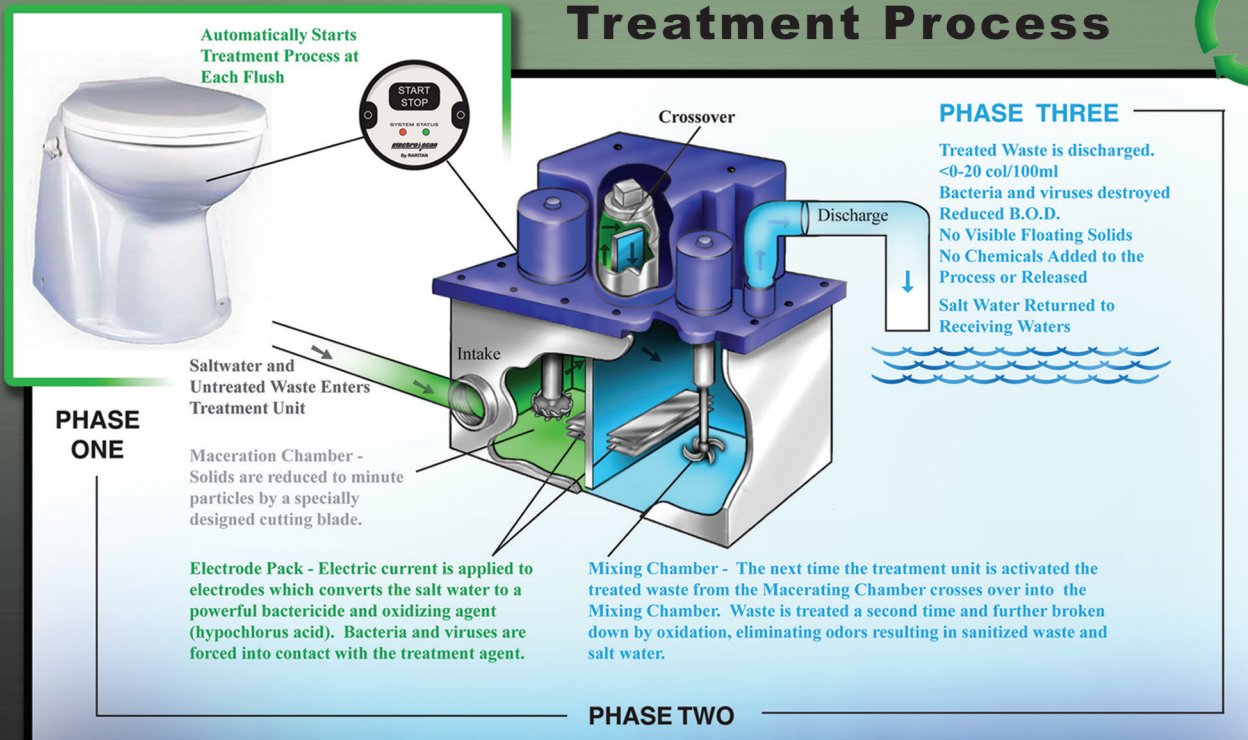
Available in 12 or 24 V DC.



- 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 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

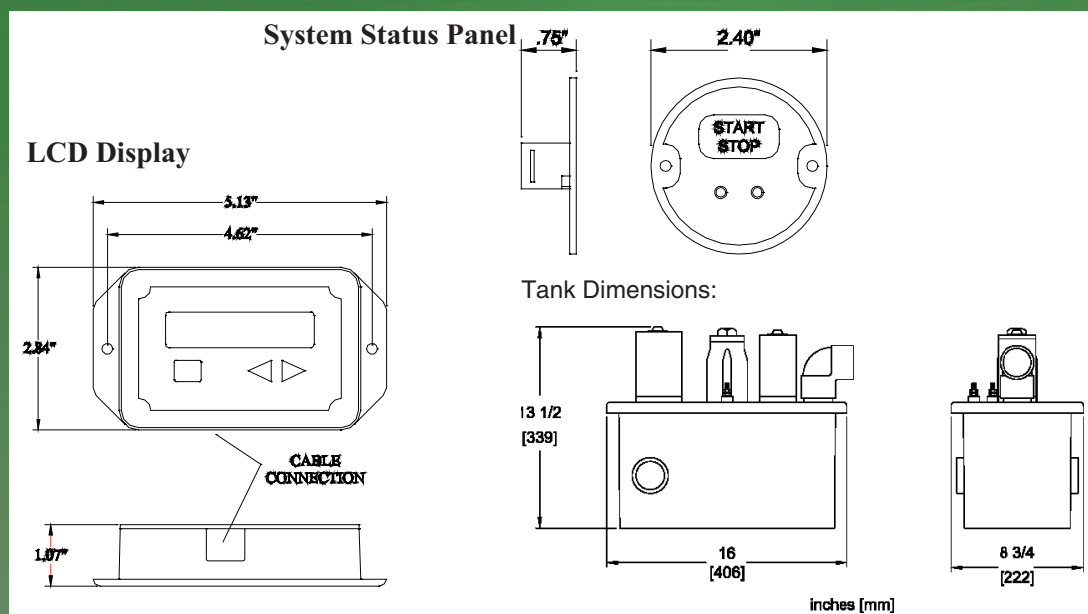


## Treatment Process





## DRAWINGS:



## PLUMBING:

Inlet / Outlet	1 1/2" / 1 1/2"
Maximum Flush Volume	1 1/2 gallon (5.71)
Minimum Water Temp	50° F (10° C)

Sea water salinity or salt feed system needed.

## ORDERING INFO:

### MODEL

**EST12**

**ESTDC**

**31-3005**

**32-3005**

**32-700RFK**

### DESCRIPTION

Electro Scan, Type I MSD, 12V

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

## ELECTRICAL:

Amps Draw (12/24/32 V)	37/27/25
Circuit Breaker Size Amps (12/24/32 V)	60/50/50

## ManaGerm™

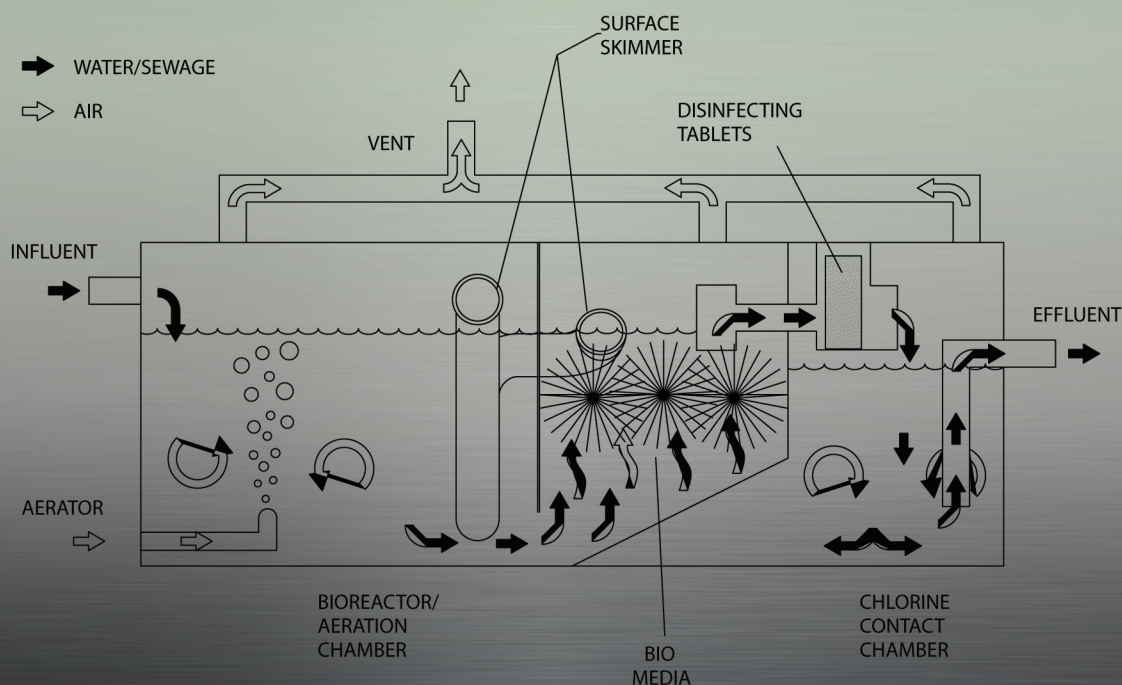
Complete onboard biological waste treatment system for up to 12 persons per day. Treats sewage biologically using air, water, and natural occurring bacteria.



- 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
<b>6400121</b>	Managerm 120V AC Approximate Shipping weight: 172lbs (45 kg)
<b>6400121B</b>	Managerm for below water line Installation
<b>6400122</b>	Managerm 240V AC

Dimensions: 56 ½" (143.5 CM) long x 24" (61cm) wide x 17" (43.2 cm) high





## 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	DESCRIPTION
<b>21SR1512</b>	Hold N' Treat system complete with Electroscan
<b>21SRP1512</b>	Hold N' Treat system complete with Purasan 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



## 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 (AVAILABLE IN 50' OR 100' ROLLS)
<b>SFH</b>	Saniflex Hose 1 1/2" Diameter (sold by the foot)
<b>SFH1</b>	Saniflex Hose 1" Diameter (sold by the foot)





## MACERATOR PUMP

**NEW!**

### FEATURES OF THE RARITAN MACERATOR THAT SEPARATE IT FROM THE COMPETITION!

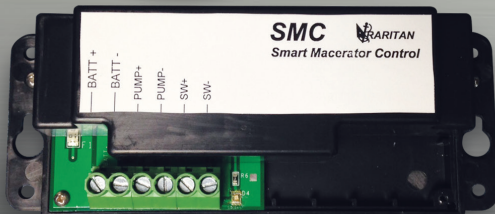
*Optional Waste Valve Assembly isolates the waste matter from the pump during maintenance. This new feature allows you to remove the pump without disconnecting plumbing.*

- All stainless steel bolts to avoid corrosion problems
- Spring loaded Viton shaft seal is used to prevent premature leaks
- Our proprietary rubber impeller compound allows longer dry running time
- Macerator pump housing can be rotated in increments of 90 degrees to allow for left, right, or top discharge
- Same footprint as most competitive models



### ALSO AVAILABLE SMART MACERATOR CONTROL

**NEW!**



### MONITORS MOTOR AND PUMP TO PREVENT DRY RUN AND OVERLOAD

*SMC control has following features:*

- Control will automatically shut down pump if unit does not prime or runs dry.
- SMC control can be reset by turning off and on switch. Power need not be turned off.
- If power is not turned off to the control, control will jog macerator pump for few milliseconds every seven days to prevent binding of impeller.
- If pump draws more than 20 amps, control will shut down pump.



## SPECIFICATIONS:

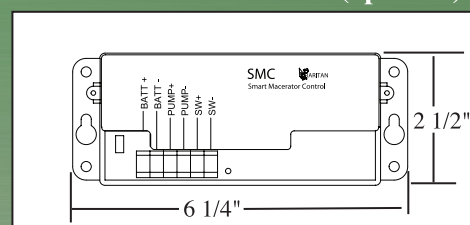
Pump::	Self priming Flexible rubber impeller with Stainless steel wear plate
Impeller:	Raritan Nitrile compound with wax
Blade:	Stainless steel double cut
Seal:	Viton Lip with 316 SS spring & case
Motor:	Permanent magnet type, fully enclosed, stainless steel shaft, thermal protection for overload, Powder coated housing with sealed ball bearing
Ports:	Inlet: 1-1/2" hose barb & 1-1/2" NPT Male Outlet: 3/4" MNPT
Lead wires:	14 GA, Red and black
Fuse:	See wire size chart
Duty Cycle:	Intermittent duty only
Dimensions:	See drawing
Weight:	5 lbs.
Approvals:	Ignition protected, ISO 8846, CE compliant available

### HEAD VS FLOW RATES

Head Ft [m]	Flow gpm[lpm]	Max DC Amps	
		12V	24V
0 [0]	11[42]	10.9	5.4
5 [1.5]	10.1[38]	11.1	5.6
10 [3]	9[34]	11.4	5.8
15 [4.6]	7.7[29]	11.8	5.9
20 [6.1]	6.4 [24]	12.3	6.2

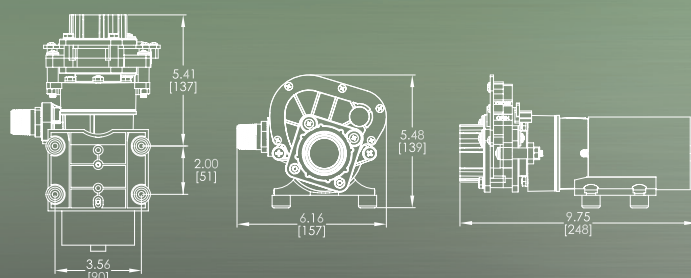
Maximum Operating Head = 30 feet

### Smart Macerator control (optional)

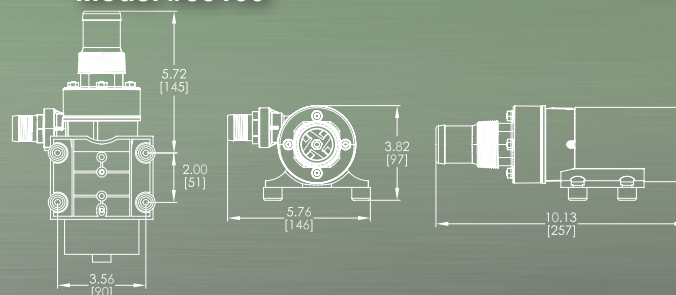


## DRAWINGS:

Model #53101



Model #53100



## ORDERING:

Sample part # 5310112 = Raritan macerator with wastewater valve in 12V DC.

Model	Discharge Adapter	Voltage
53 Raritan Macerator	100 Barb Fitting	12 12 V DC
	101 Wastewater Valve	24 24 V DC

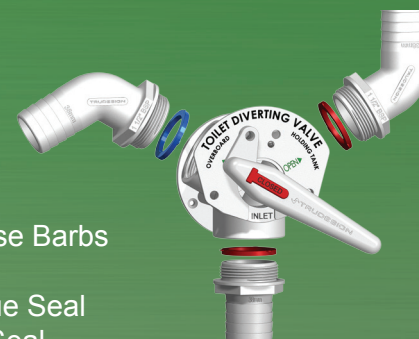


# MARINE COMPOSITE FITTINGS

Exclusively distributed in the U.S by  **RARITAN**  
The Most Dependable Name on the Water.

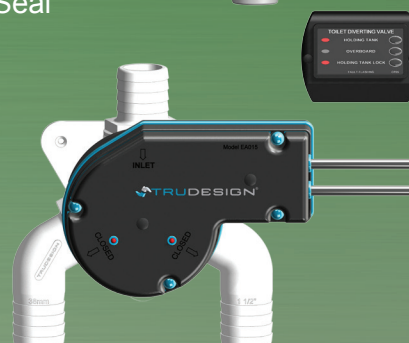
The most versatile Y-Valve on the market. Fittings are available in 90 and 120 degree as well as 1" and 1 1/2" hose barbs. Simply changing seals change hose barb orientation.

- 90314 Y Valve no tail pieces
- 90941 Y Valve Kit\* - Aquavalve incl 3x Straight 1 1/2" Hose Barbs
- 90942 Y Valve Kit\* - Aquavalve incl 2x 120° & 1x Straight 1 1/2" Hose Barbs
- 90541 Y Valve (Aquavalve) Hose Barb 1 1/2" x 1 1/2"
- 90298 Y Valve (Aquavalve) Hose Barb 120° 1 1/2" x 1 1/2" - incl Blue Seal
- 90299 Y Valve (Aquavalve) Hose Barb 90° 1 1/2" x 1 1/2" - incl Blue Seal



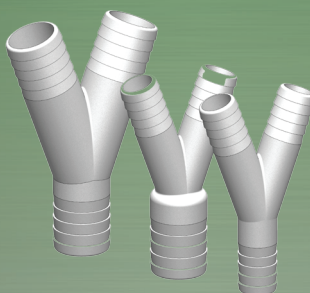
## AQUAVALVE

- 90344 Y Valve (Aquavalve) - Electronic 12V EA015 & CP05
- 90346 Y Valve (Aquavalve) - Electronic 24V EA015 & CP05



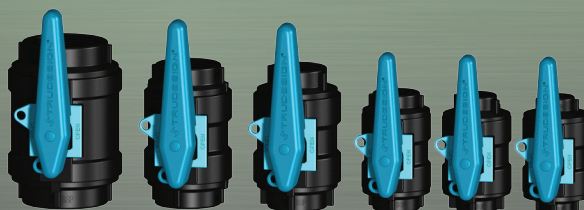
## Y PIECE HOSE BARB ADAPTERS

- 90792 Y Piece 3/4"
- 90791 Y Piece 3/4"-3/4"-1"
- 90617 Y Piece 1"
- 90618 Y Piece 1"-1"-1 1/2"
- 90809 Y Piece 1 1/4"
- 90619 Y Piece 1 1/2"



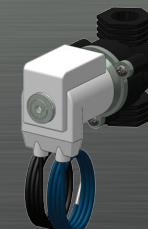
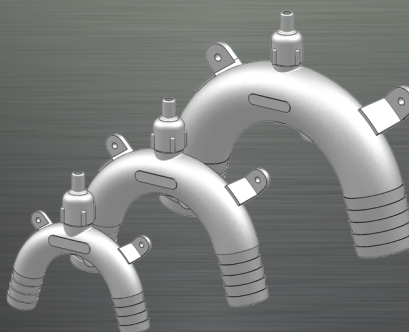
## BALL VALVES/SEACOCKS

- 90659 Ball Valve 1/2" NPS
- 90660 Ball Valve 3/4" NPS
- 90661 Ball Valve 1" NPS
- 90662 Ball Valve 1 1/4" NPS
- 90663 Ball Valve 1 1/2" NPS
- 90664 Ball Valve 2" NPS



## VENTED LOOPS

- 90319 Vented Loop 19mm (3/4")
- 90321 Vented Loop 25mm (1")
- 90323 Vented Loop 38mm (1 1/2")
- 90325 Spare Parts Vented Loop
- 90467 Solenoid Valve 12V DC
- 90534 Solenoid Valve 24V DC



Solenoid Valve



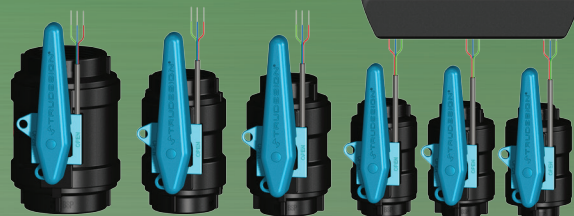
## THRU-HULL & SEACOCK ASSY - ABYC H-27 COMPLIANT

- 90943 Seacock Assembly 1/2" - Incl Thru-hull, Load Bearing Collar, Ball Valve & Straight Hose Barb
- 90944 Seacock Assembly 3/4" - Incl Thru-hull, Load Bearing Collar, Ball Valve & Straight Hose Barb
- 90945 Seacock Assembly 1" - Incl Thru-hull, Load Bearing Collar, Ball Valve & Straight Hose Barb
- 90946 Seacock Assembly 1 1/2" - Incl Thru-hull, Load Bearing Collar, Ball Valve & Straight Hose Barb
- 90947 Seacock Assembly 2" - Incl Thru-hull, Load Bearing Collar, Ball Valve & Straight Hose Barb



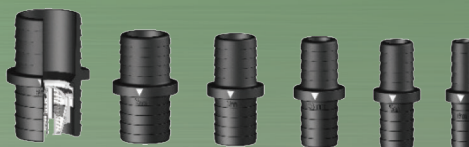
## BALL VALVES / SEACOCKS - POSITION MONITORED

- 90653 Ball Valve Position Monitored 1/2" NPS
- 90654 Ball Valve Position Monitored 3/4" NPS
- 90655 Ball Valve Position Monitored 1" NPS
- 90656 Ball Valve Position Monitored 1 1/4" NPS
- 90657 Ball Valve Position Monitored 1 1/2" NPS
- 90658 Ball Valve Position Monitored 2" NPS
- 90412 Ball Valve Display Panel



## CHECK VALVES

- 90845 Check Valve 3/4"
- 90846 Check Valve 1"
- 90950 Check Valve 1 1/8"
- 90847 Check Valve 1 1/4"
- 90848 Check Valve 1 1/2"
- 90849 Check Valve 2"



## ADDITIONAL TruDesign PARTS AVAILABLE FROM RARITAN



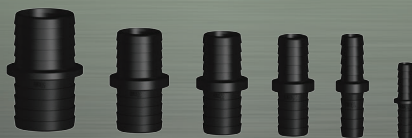
THRU-HULL WITH HOSE BARB  
(FOR ABOVE WATERLINE)



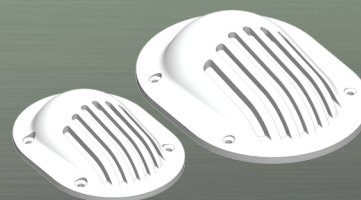
THRU-HULL FITTINGS &  
ACCESSORIES



HOSE BARB TO HOSE BARB  
90° ELBOW ADAPTER



HOSE BARB TO HOSE BARB  
STRAIGHT ADAPTER



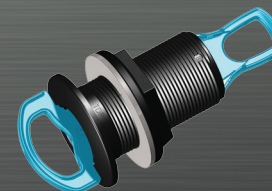
SCOOP STRAINERS



HOSE BARB STRAIGHT  
MALE THREADED



T - PIECE / MANIFOLD



THRU-HULL INSTALLATION TOOL



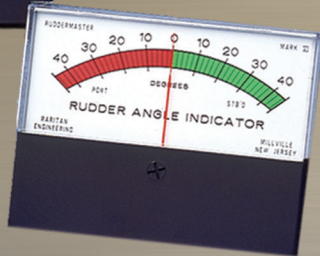
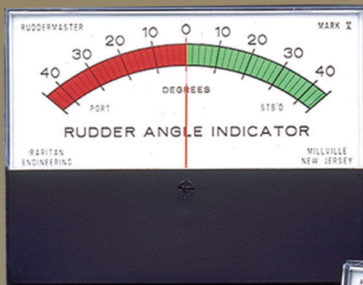
## Rudder Master

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)

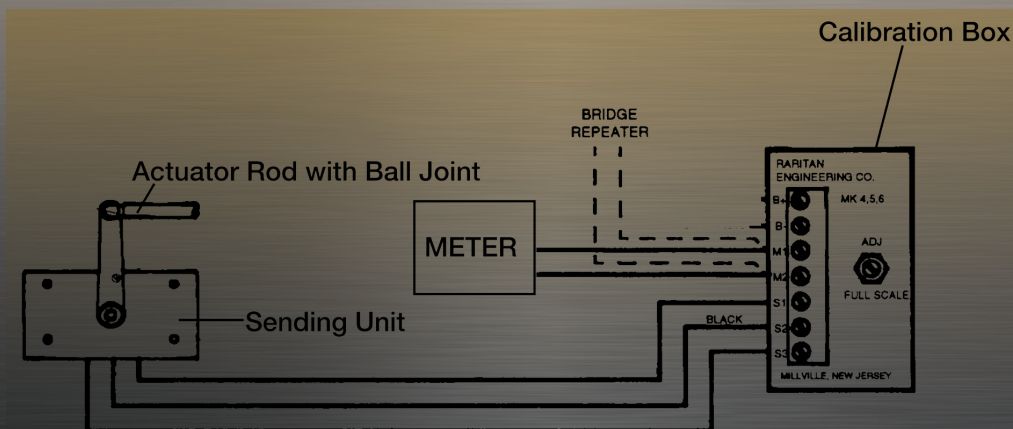


## MK5 and MK6 Models

- 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.



## 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 #

**15100\***

### DESCRIPTION

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)*



## Icerette

AUTOMATIC ICE CUBE MAKER

**THE ONLY MARINE ICE MAKER SPECIFICALLY DESIGNED AND BUILT FOR THE RIGORS OF THE MARINE ENVIRONMENT.**

### FEATURES INCLUDE:

- *Improved controls for more efficient operation.*
- *Cabinet and door built to last in harsh marine environments.*
- *Removable ice bucket.*
- *Corrosion resistant marine grade hardware, fittings and fasteners.*
- *Positive catch door latch keeps door closed. This allows maximum ice production, while keeping harmful bacteria and molds out.*
- *Built in door prop lets you manual defrost or air dry your unit when power is off.*
- *Produces up to 21 lbs of ice every day using only 2-3/4 gallons of water. Stores up to 11 lbs of crescent ice (1/2" W x 3/4" H x 2-1/2" L).*
- *Backed by Raritan's One Year Limited Warranty and legendary technical support team.*
- *All units meet CE, 115V units UL and cUL listed.*



### EASY INSTALLATION:

- *No drain required makes it easy and inexpensive to install.*
- *Only requires a 1/4" outside diameter water line.*
- *Does not require additional hinge clearance for door swing.*
- *Includes flange.*
- *No additional side space required for ventilation.*
- *230 volt model available.*



## SPECIFICATIONS:

Water Pressure Operating Range 20-120

All ventilation from front, limited vent in back of unit. No additional clearance required around the sides.

Adjustable rubber leveling feet

Water supply inlet size 1/4" OD and requires 3/4" space behind the unit for clearance

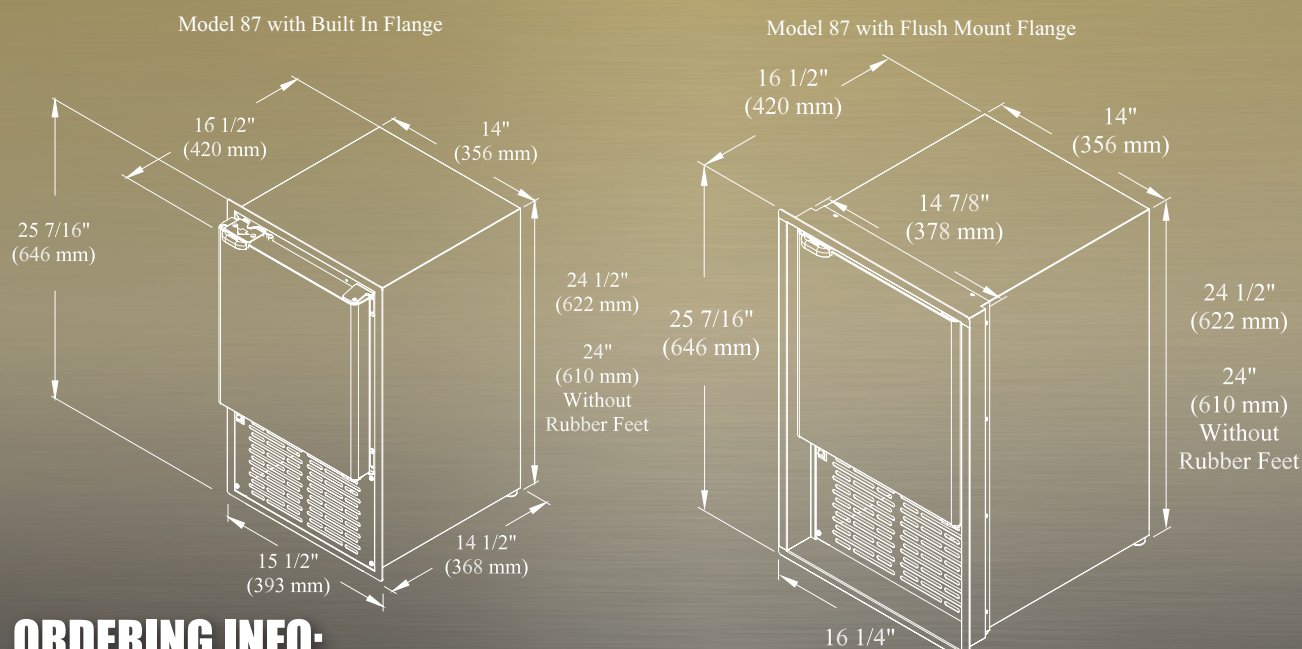
Water supply inlet located in lower right of rear opposite of the power cord

Net Weight 51 lbs / 23 kg

## ELECTRICAL:

Electrical Requirements	115V/60Hz with USA plug	230V/50Hz with euro plug
Volt Range	104V~127V	220V~240V
Maximum Amp Fuse	15 amps	10 amps

## DRAWINGS:



## ORDERING INFO:

Sample part # 87B515-1 = Model 87 with built in flange 115V AC

Model	Flange Style	Voltage
87 Raritan Icer-Ette	B515 Built-In Flange	-1 115 V DC
	E515 Flush Mount Flange	-2 220 V AC

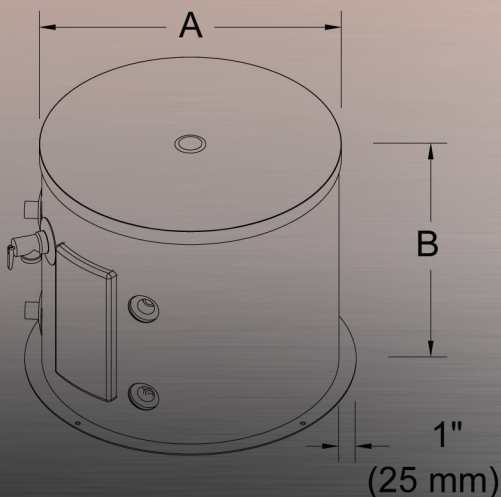


## 1700 Series Water Heater

*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.*



## ELECTRICAL:

*Recovery Rate 13 gallons per hour*

*Amps: 10(120V AC), 5(240V AC) or 18(240V AC) for Model 17200203*

*Thermostat: Adjustable, factory set to 120°*

## PLUMBING:

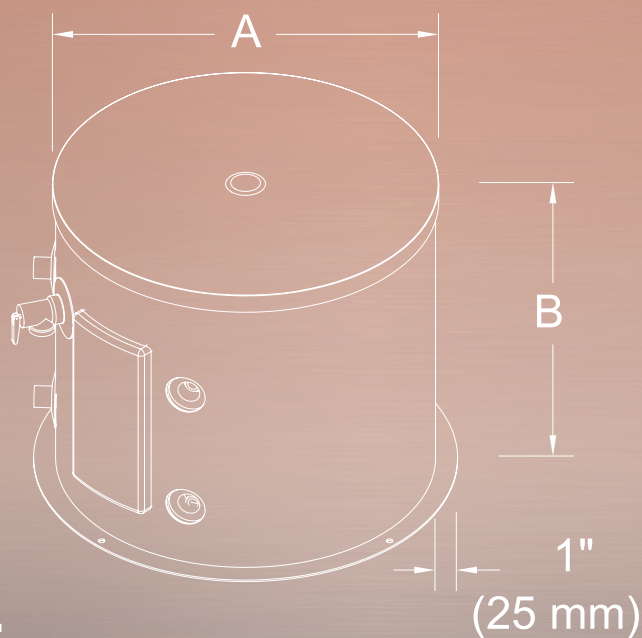
*Tank rated at 150psi*

*Maximum pressure with 75psi temperature and pressure relief valve ---50psi*

*100psi temperature and pressure relief valve available as option.*

*Anode: Magnesium - integral with hot water outlet*

## DRAWINGS:



## ORDERING INFO:

Sample part # 17120101 - Water Heater, 12 Gallon, No Heat Exchanger, 115V, GAZ Fittings

Model	Operation	Exchanger	Voltage	Fittings
17 Water Heater	06 6 Gallon	0 No Heat Exchanger	1 115V	Standard NPT Fittings
	12 12 Gallon	1 Heat Exchanger	2 220V	01 GAZ Fittings
	20 20 Gallon			02 Metric Fittings

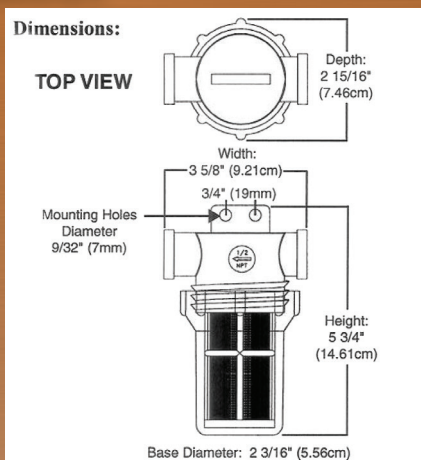


## In-Line Raw Water Strainer

*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 & 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

**Max. Working Pressure:**  
5 psi (34.5 kPa)

**Dimensions:**  
9 3/4" (24.8cm) high and 7 1/4" (18.4cm) wide (mounting bracket to discharge fitting)

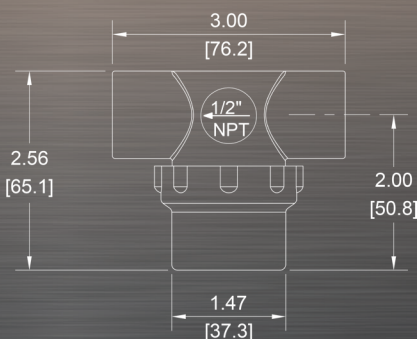


## In-Line Fresh Water Strainer

*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
- 50 mesh plastic removable filter for easy cleaning
- Reduces toilet odors & maintenance

PART#	DESCRIPTION
190601	In-Line Fresh Water Strainer





## 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 #**  
**1PKO22**  
**1PKOGAL**

#### DESCRIPTION

K.O. Kills Odors! Bioactive treatment 22 oz. (.65 liters)  
K.O. Kills Odors! Bioactive treatment 1 gal. (3.79 liters)

### C.P. CLEANS POTTIES!

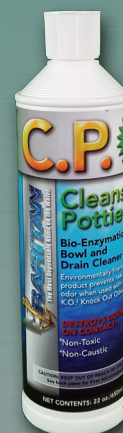
*C.P. eliminates the worst raw odors from the intake line without brushing. The only toilet bowl cleaner Raritan recommends for Raritan toilets. C.P. is the only bowl cleaner that can be combined with K.O.*

- 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
- A safe, non-chemical, non-polluting product destroys odors on contact
- Can also be used to clean sinks, showers and basins

**PART #**  
**1PCP22**

#### DESCRIPTION

C.P. Cleans Potties! Bioenzymatic 22oz. (.65 liters)



### K.O.2 KNOCK OUT ODORS KIT

*Specifically designed to release bio-enzymes with each flush to eliminate odor causing bacteria from outside water sources. Kit treats the entire system from incoming water to the holding tank in eliminating odors.*

- No more rotten egg smell
- Non toxic
- Non polluting
- Eliminates odors at their source

**PART #**  
**KO2**

#### DESCRIPTION

Kills Odor Kit



## Raritan Non-Organics

### 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 #**  
**1PCHGAL**

#### DESCRIPTION

Cleans hoses and MSDs





**The Most Dependable Name on the Water.**

**Raritan Engineering Company, Inc.**

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