



# RARITAN

The Most Dependable Name on the Water.



Serving the Marine industry 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.

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

- To complete our sanitation line, Raritan developed a unique macerator pump that allows for “No Mess” maintenance. In addition to the unique valve, we have improved the pump material and the impeller to allow dry running three times longer than the competition. We use a spring loaded Viton seal and all Stainless Steel bolts. An optional Smart Macerator Control (SMC) is available to automatically shut the pump off if it senses dry running.
- We have just introduced a modern looking Icemaker, while eliminating the ability to change the panel on the face of the unit. We felt a more updated look and full stainless steel unit was more appropriate in today’s market. Functionally it is still the only unit designed to be installed in the rigors of the marine environment.
- The first manual toilet to utilize onboard fresh water was introduced this year with great success. Many customers have rigged up ways to allow fresh water to drain from their sink so they can avoid the raw water odors. Raritan is proud to have developed the first manually operated toilet that directly attaches to the onboard fresh water supply.
- The SeaEra was revamped for the remote intake pump and fresh water models reducing costs and allowing for even simpler installation.

Best wishes for an enjoyable boating season,

Arthur J. “Bret” Bretnall, Jr.  
President

**NEW PRODUCTS**

**MACERATOR**

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# MACERATOR PUMP

## 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



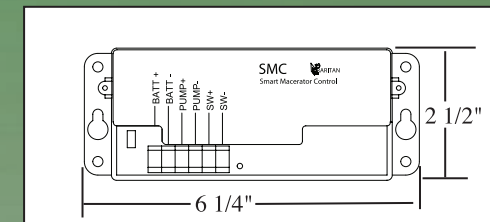
## SPECIFICATIONS:

- 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

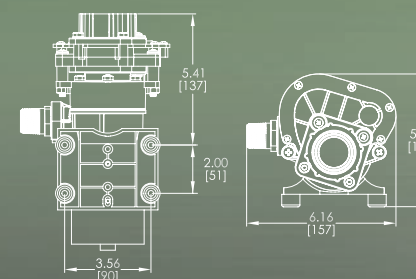
Maximum Operating Head = 30 feet

### Smart Macerator control (optional)

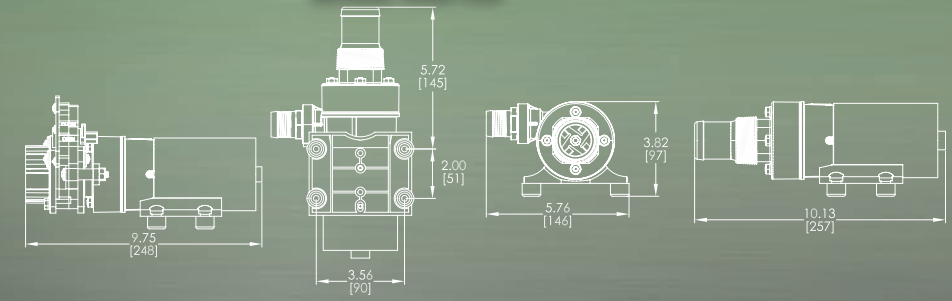


## DRAWINGS:

Model #53101



Model #53100

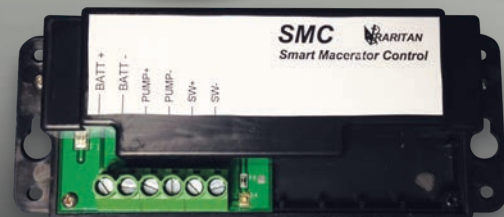


## ORDERING:

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

## ALSO AVAILABLE SMART MACERATOR CONTROL



### 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.

# Icerette

AUTOMATIC ICE CUBE MAKER

**NEW!**



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 of 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.

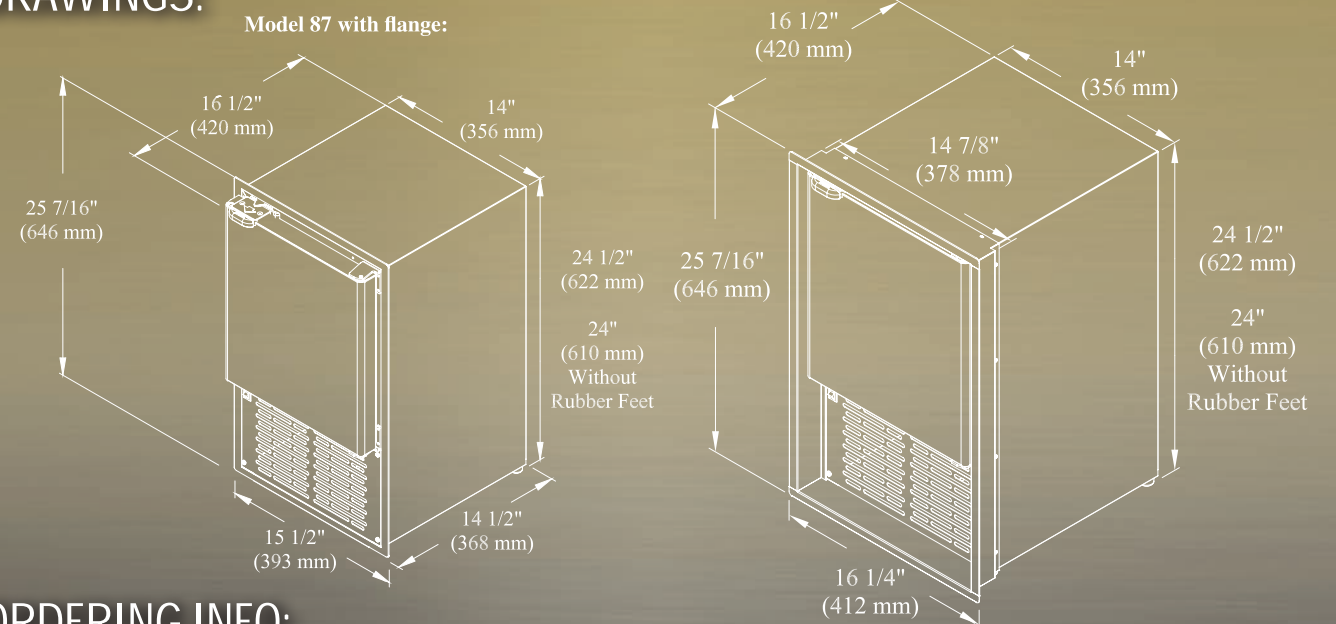
### SPECIFICATIONS:

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

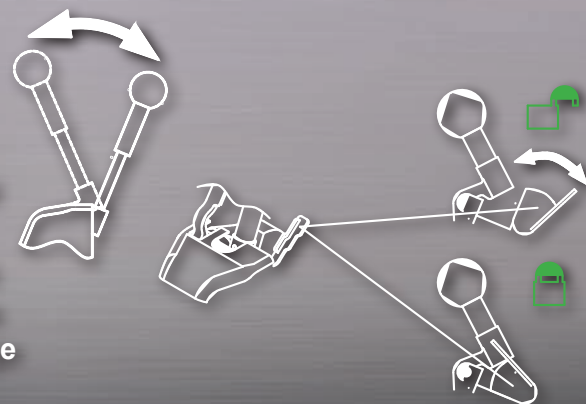
# FRESH HEAD

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

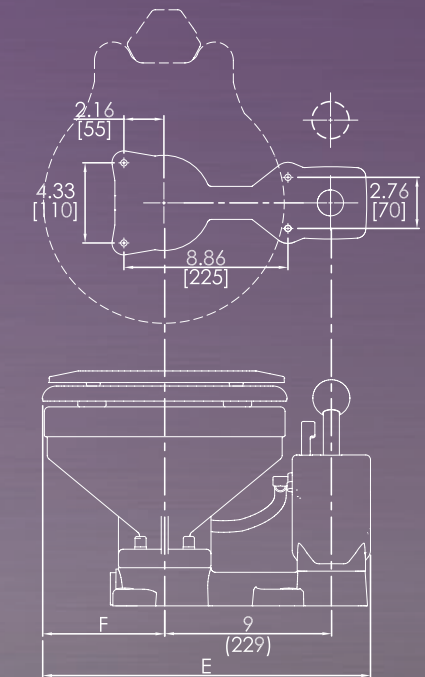
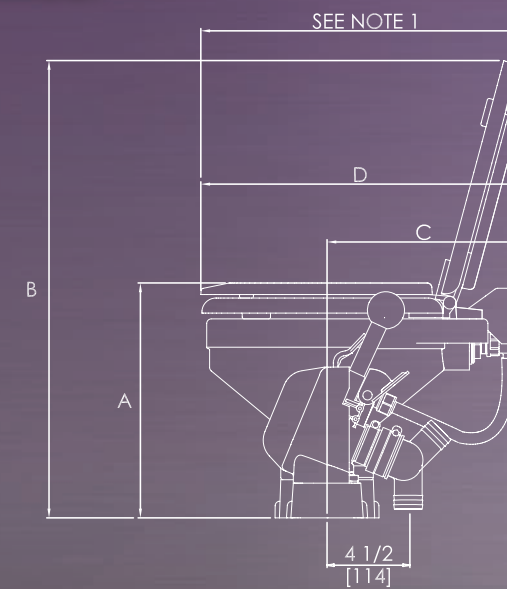
With a diaphragm type pump and telescopic handle, flushing is extremely easy. Owners choose how much water to use. A lever allows water into the bowl to pre-wet it for a better flush. A built-in freshwater backflow prevention includes a vacuum break. A lock-out feature stops backflow coming in through 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

# SEA ERA QC

New straightforward design allows the simplest of installation while providing top of the line controls.

## Freshwater Solenoid Model (162MF\* or 162HF\*)

- **Less maintenance & odors than raw water models**
- **Connects to vessel's existing pressurized system**
- **Easy installation with integral vacuum breaker**
- **Designed for quiet operation**
- **Low power consumption**



## Remote Intake Pump Model (162MR\* or 162HR\*)

- **Reduces noise levels**
- **Easier access to intake pump, more flexible installation when long runs are required**



### Both Models:

- **Available with Smart Toilet Control - Maximizes flush efficiency with low water consumption and noise levels**
- **Uses as little as 2 pints of water per flush**
- **Easily adapts to our SeaFresh model allowing the user to select between raw or freshwater**
- **Base rotates 90 degrees for installation in tight areas**
- **Available for 12V, 24V DC or 120/240V AC**

### Controls:



**Smart Toilet Control** - Ultimate control over intake and discharge water. Timed flush when using water saver or normal flush cycle.

**Multifunction Momentary** - Allows independent operation of intake or discharge no timed flush.

**Momentary Push Button** - Most economical

**Sea/Fresh Selector** - Allows user to select Fresh or Sea (raw) water for flushing the toilet.  
*\*Toilet is activated by one of the controls.*

### ELECTRICAL:

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

### PLUMBING:

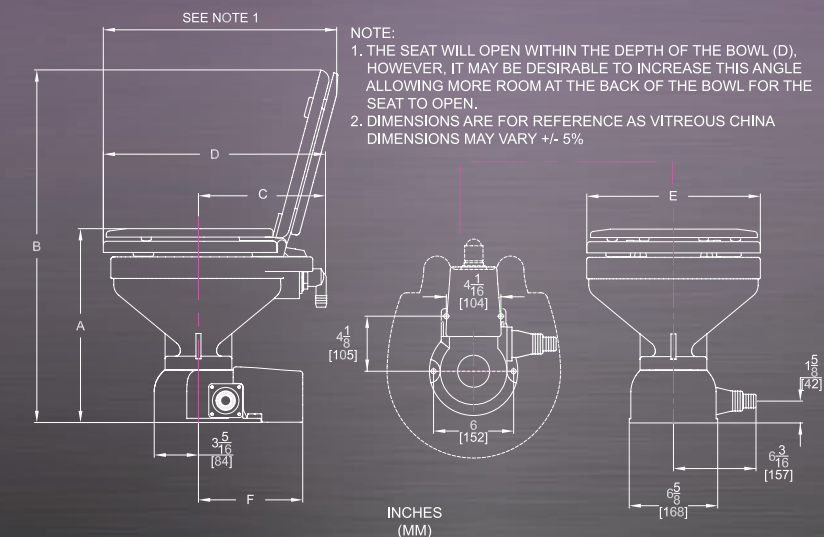
	Pump Model	Pressurized Water Model
Maximum Lift (suction)	4' (122 cm)	
Max Discharge Loop Height	9' (274 cm) Vertical / 50' (15.2 m) Horizontal	9' (274 cm) Vertical/ 50' (15.2 m) Horizontal
Minimum Pressure/Flow (pressurized water)		3.5 gpm @ 10 psi
Inlet Port Size	3/4"	1/2"
Discharge Port Size	1" or 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	32 - 32 V DC	02 - Push Button Control	
				12T - 120/240 AC	

### 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)

# SeaEra™

Integral intake models only

- Self-priming pump can run dry
- Separation of intake and discharge means dirty water cannot enter bowl if seal fails
- Bowl can be rotated 90 degrees for mounting in confined spaces



All SeaEra and SeaEra QC Models:

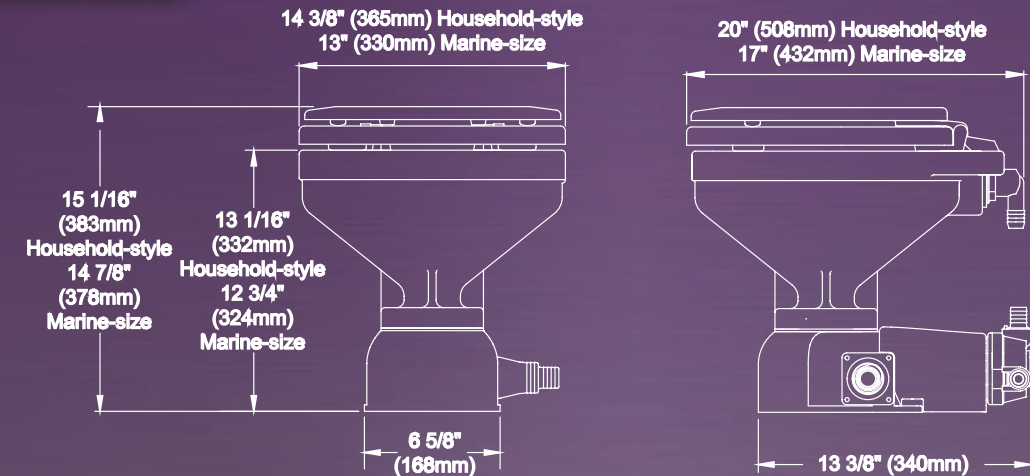
- Powerful flushing action with advanced design features
- An excellent replacement for less durable, non-Raritan units
- Low water usage as little as 1 quart (1 litre)
- Full size joker valve reduces clogs
- Stainless steel macerating blade
- Household or marine size bowls available
- Two year warranty
- Both 90 degree and straight discharge included

# 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
- Two year warranty
- Both 90 degree and straight discharge included



## DRAWINGS:



## PLUMBING:

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

## 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

## 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

# 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



BIDET OPTION



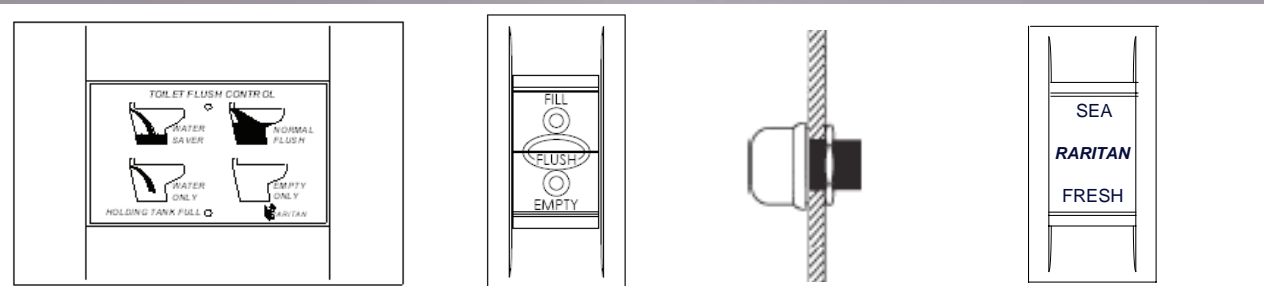
STANDARD

TALL

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

## CONTROLS:



Smart Toilet Control - Ultimate control over intake and discharge water. Timed flush when using water saver or normal flush cycle.

Multifunction Momentary - Allows independent operation of intake or discharge no timed flush.

Momentary Push Button - Most economical

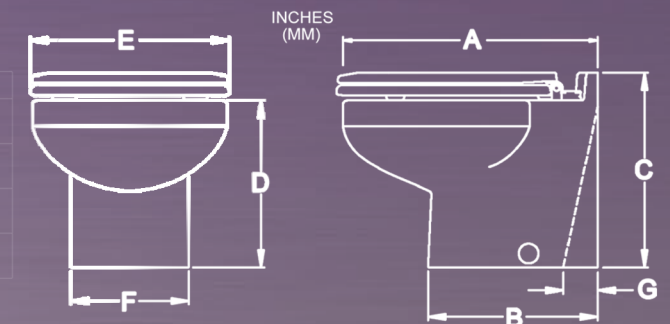
Sea/Fresh Selector - Allows user to select Fresh or Sea (raw) water for flushing the toilet. \*Toilet is activated by one of the controls.

## 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 # = NOTE: sample part number and how do we add the bidet to this chart?

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™ with Vortex-Vac

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

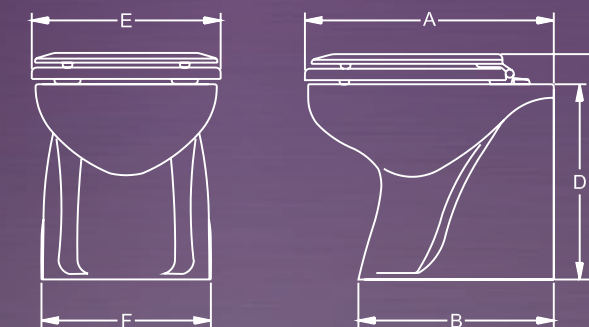
The Atlantes Freedom toilet features:

- 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



## 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

## CONTROLS:



Smart Toilet Control - Ultimate control over intake and discharge water. Timed flush when using water saver or normal flush cycle.



Multifunction Momentary - Allows independent operation of intake or discharge no timed flush.



Handle Flush - Most economical



Sea/Fresh Selector - User can select either Sea or Fresh water before flushing the toilet with one of the controls to the left. \*Toilet is activated by one of the controls.

## ELECTRICAL:

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

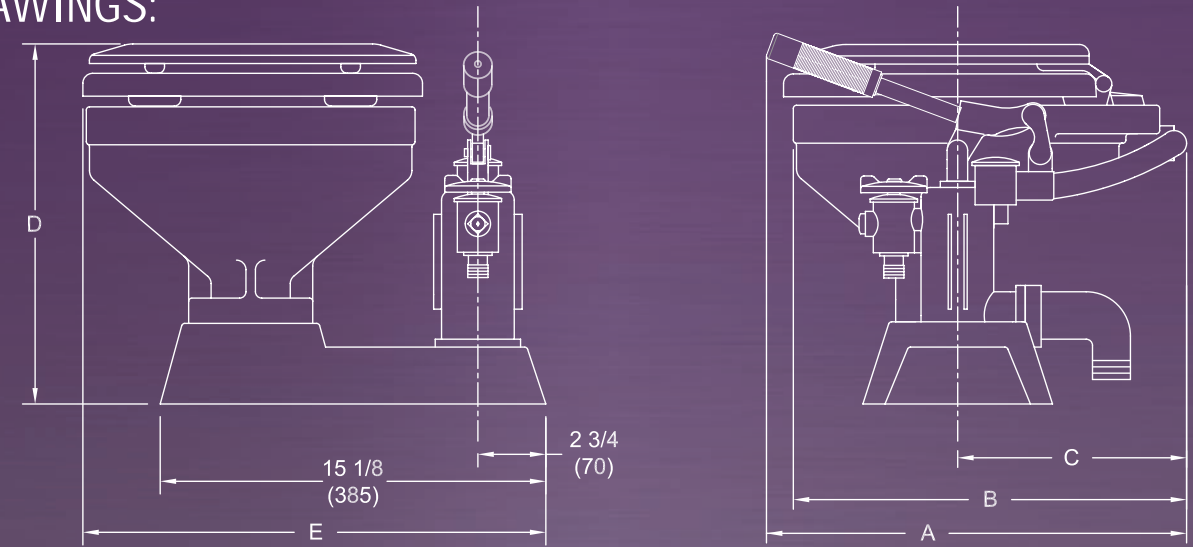
# PHII and PHEII

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)

## 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		

# 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



Part #	Description
PHC	PHII Pump, Compact II Base, marine size bowl
PHHBC	PHII Pump, Compact II Base, household size bowl

## 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		

## Repair Parts



## 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!**

## 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
21SR1512	Hold N' Treat system complete with Electroscan
21SRP1512	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

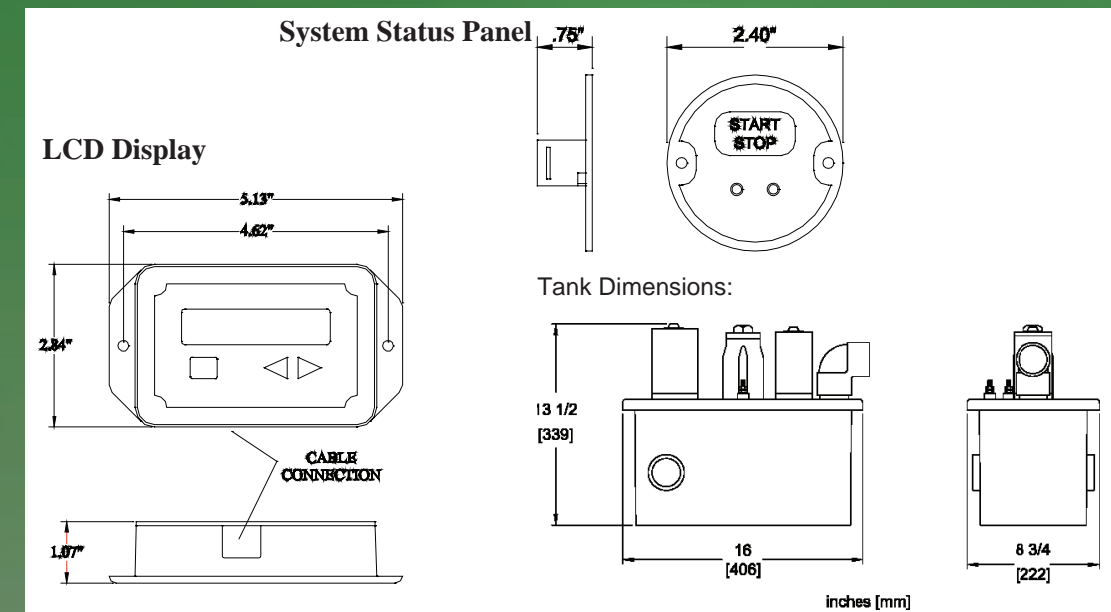


# electro scan

- 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 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



## 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.

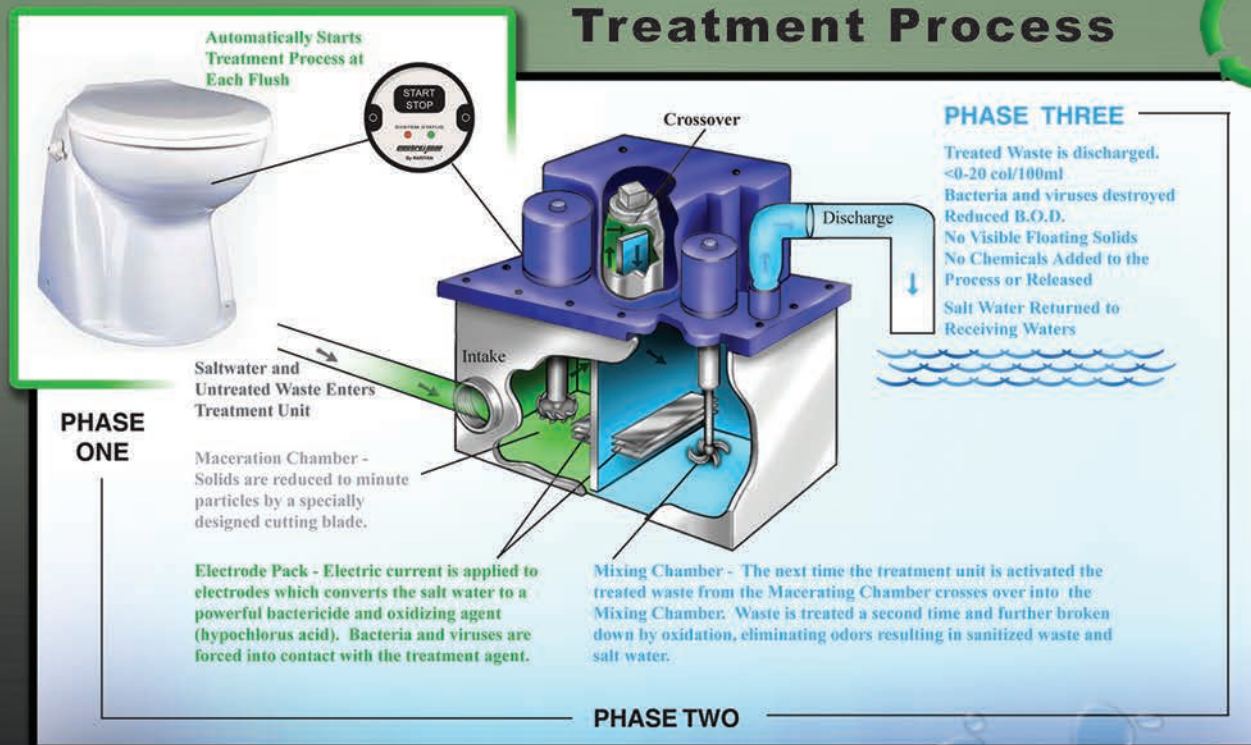
## ORDERING INFO:

MODEL	DESCRIPTION
EST12	Electro Scan, Type I MSD, 12V
ESTDC	Electro Scan Dual Control
31-3005	Four Gallon Salt Feed Unit Complete
32-3005	Four Gallon Salt Feed Tank w/pump, 12V
32-700RFK	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

## Treatment Process

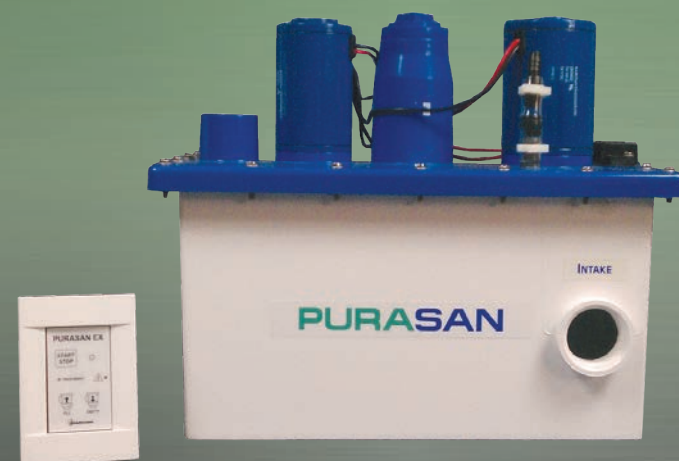


# PurasanEX™

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

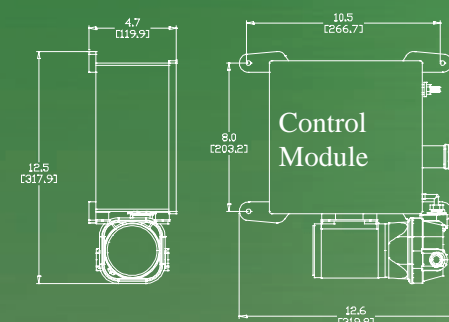
- U. S. Coast Guard approved Type I Marine Sanitation Device for vessels up to 65 feet in length - can be used with most marine toilets
- Treats waste in fresh, salt and brackish water applications
- Electronically controlled, two minute treatment cycle
- One PurasanEX can be installed with two toilets
- Low power consumption
- Neutralizes bacteria in wastewater
- Quiet operation
- Easy to clean and maintain
- Alleviates need for holding tanks
- Each unit is assembled by hand, individually tested and backed by Raritan's one year Limited Warranty and legendary technical support team



## Improvements

- 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:



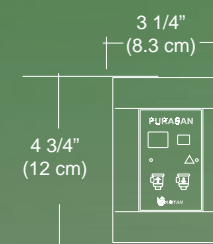
## CONVERSIONS

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

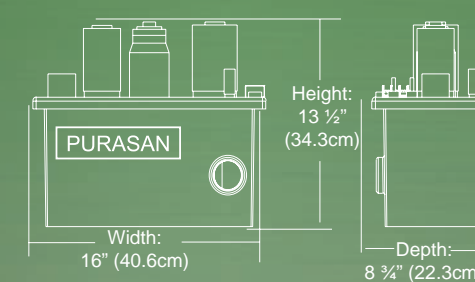
  

Feet to Meters							
Feet	10	15	20	25	30	40	50
Meter	3.1	4.6	6.1	7.6	9.2	12.2	15.2

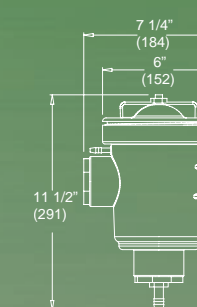
### SWITCH PANEL DIMENSIONS



### TREATMENT UNIT DIMENSIONS



### TABLET DISPENSER DIMENSIONS



## PLUMBING:

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

## 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.

## ELECTRICAL:

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

# ManaGerm™

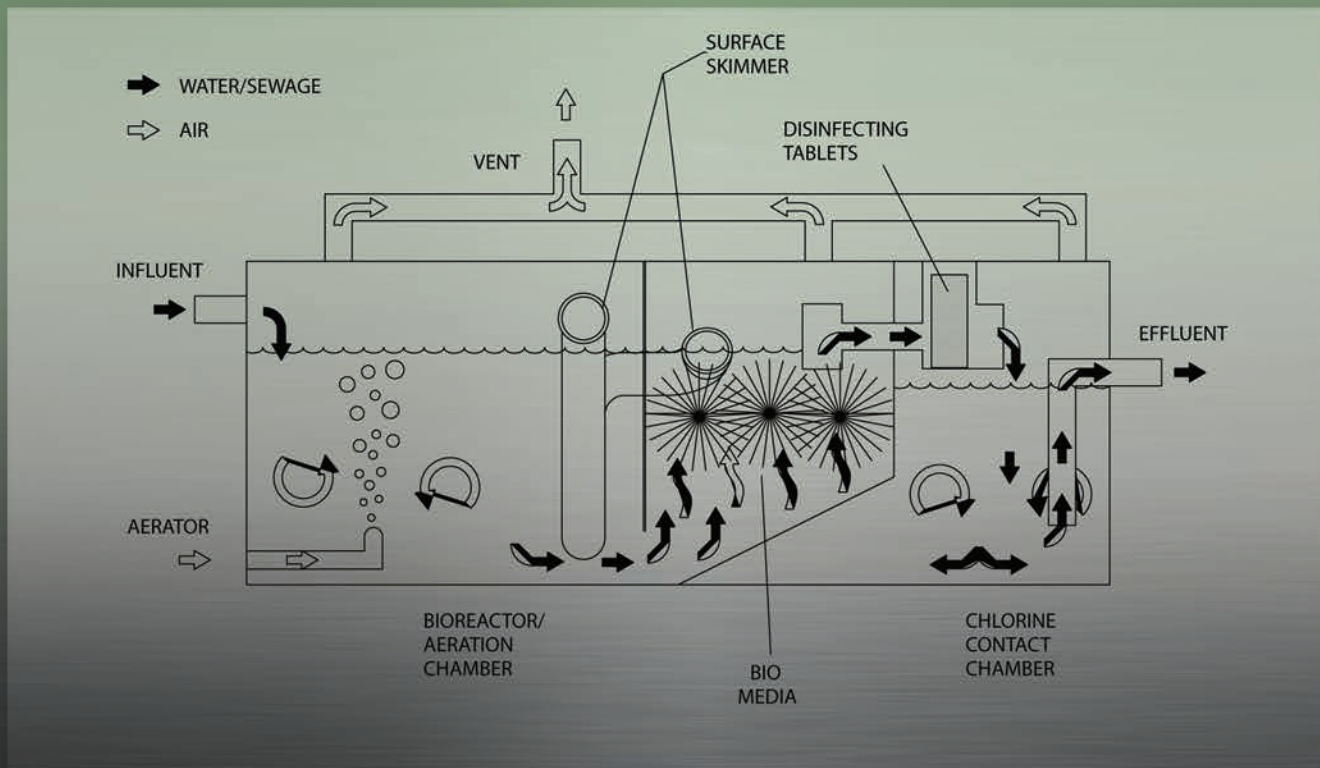
Complete onboard biological waste treatment system for up to 12 persons per day. Treats sewage biologically using air, water, and natural occurring bacteria.



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



## 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

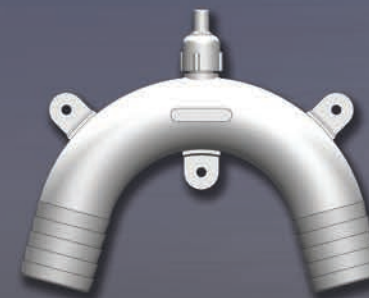
PART #	DESCRIPTION
SFH	Saniflex Hose 1 1/2" Diameter (sold by the foot)
SFH1	Saniflex Hose 1" Diameter (sold by the foot)



## 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
RCV75	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

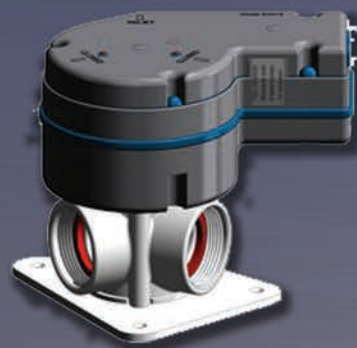


## Manual Aquavalue

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 #	DESCRIPTION
TD90314	Y-valve no tail pieces
TD90314W	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 #	DESCRIPTION
TD90344	12V Y-valve
TD90346	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 #	DESCRIPTION
TD90294	1 1/2" (38mm) straight
TD90298	1 1/2" (38mm) 120 degree
TD90299	1 1/2" (38mm) 90 degree

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



PART #	DESCRIPTION
TD90648	3/4" NPS Ball Valve
TD90651	1 1/2" NPS Ball Valve

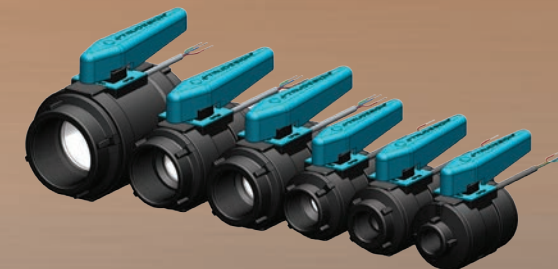
## Position Monitored Ball Valves

Designed and made in New Zealand for use in marine applications above and below the water line. Our Ball Valves are IMCI approved to ISO standard 9093-2, and are ideal for controlling and monitoring inlet and outlet water requirements.



Position Monitoring allows remote monitoring of Ball Valve Position. The Position Monitoring circuit can also be used as part of an engine or generator start interlock to ensure these don't start without cooling water available.

PART #	DESCRIPTION
TD90657	1 1/2" NPS Ball Valve w/Position Monitoring
TD90654	3/4" NPS Ball Valve w/Position Monitoring
TD90412	Panel Display for Ball Valves

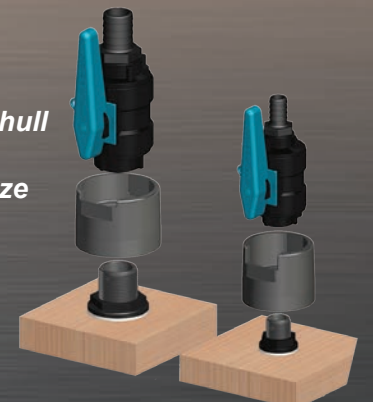


## Seacocks

Tru-Design glass-reinforced nylon composite thru-hull fittings and ball valves now meet or exceed ABYC H-27 and ISO 9093-2 requirements by utilizing a Load Bearing Collar from Raritan. Offering ease of installation and uncompromising strength, they're designed for experienced boatbuilders who don't want to drill additional holes in their hulls, or deal with the hassles of bonding or gluing a thru-hull fitting into place.

- Eliminates problems such as corrosion and electrolysis
- Load is spread evenly not requiring any gluing or fasteners to the hull
- Can be retrofitted to existing thru-hull assemblies
- Designed for long-term use since their PTFE ball & seals won't seize

PART #	DESCRIPTION
TD9341	Seacock Assembly 3/4"
TD9151	Seacock Assembly 1 1/2"





## 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

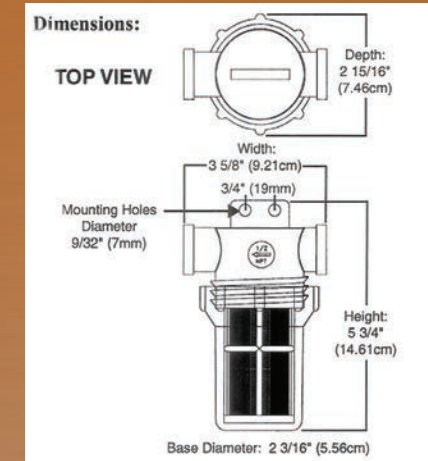
Note: NOT for use with metal tanks or fuel tanks.

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)

## 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 & 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	Max. Working Pressure:
RWS	Raw Water Strainer	5 psi (34.5 kPa)
RWS5B	Basket	Dimensions: 9 3/4" (24.8cm) high and 7 1/4" (18.4cm) wide (mounting bracket to discharge fitting)
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



## 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
- 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)

## 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 #	DESCRIPTION
K02	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 #	DESCRIPTION
1PCHGAL	Cleans hoses and MSDs

### C.U. CLEANS UP!

- Removes dirt, grime, mildew and exhaust stains
- Cleans up bird and spider droppings
- Non-polluting
- Safe on any colorfast surface



PART #	DESCRIPTION
1PCU22	Cleans Up!

### B.C. BILGE CLEANER!

- Emulsifies grease, oil and sludge
- Removes slime, dirt, bacteria, fungi and molds
- Non-polluting and safe on any surface



PART #	DESCRIPTION
1PBC22	Bilge Cleaner

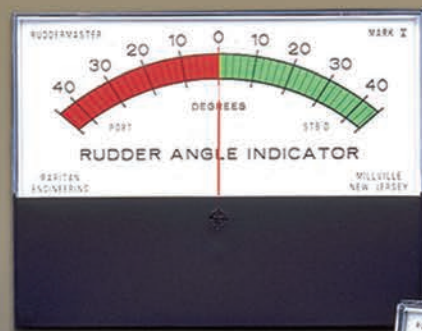
## Rudder Master

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 #.

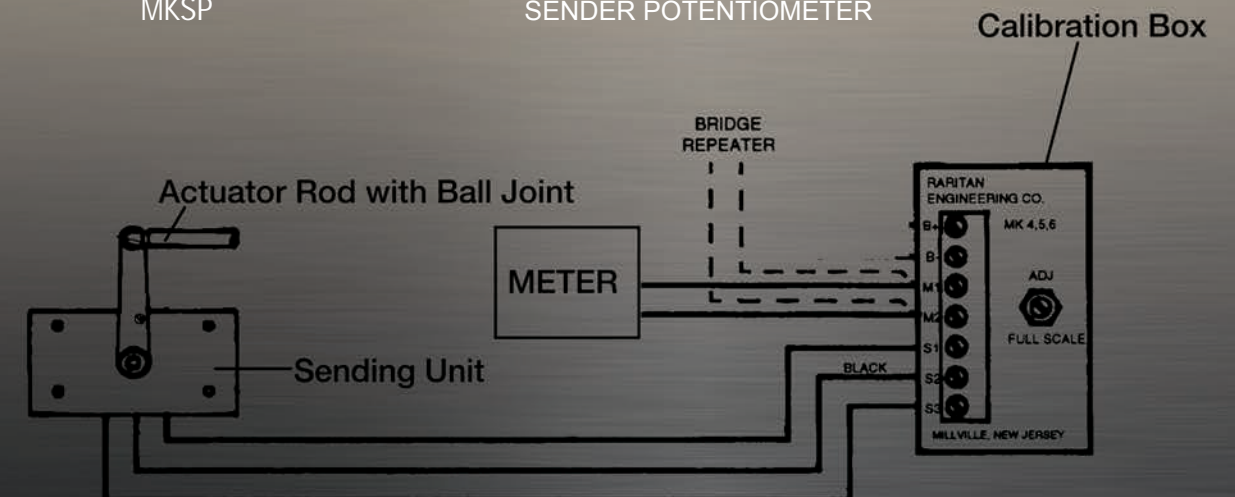
Example: MK5-60

\* 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.



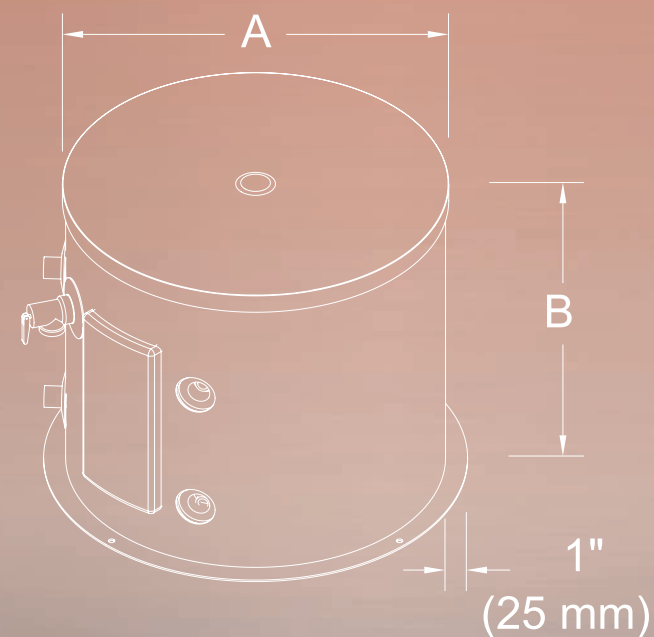
### ELECTRICAL:

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 rate at 150psi  
 With Temperature and Pressure Relief valve installed 50psi  
 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

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



**Raritan Engineering Company, Inc.**

