

# COMPACT II MARINE TOILET

## Installation & Maintenance Instructions

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

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



**WARNING:** **Hazard of Flooding** - Any installation made below the waterline must have vented loops positioned properly and all hose connections should be double-clamped. Both intake and discharge seacocks should always be in the closed position when the toilet is not in use. Failure to do so may result in flooding, property damage and loss of life.



### INTRODUCTION

The **Compact II** marine toilet uses a vertically mounted double-action piston type pump that can be changed from right hand to left hand operation. It's size and simple installation make it ideal for small areas. Space requirements are:

Height 13 3/4" (34.9cm), Width 17 1/2" (44.5cm) and Depth: 16 1/2" (41.9cm)

The **Compact II** is suitable for use with Raritan's Lectra/San®, a U.S. Coast Guard certified Type I flow-thru Marine Sanitation Device (MSD) and/or holding tank installations.

### OPERATION

1. It is advisable to flush the toilet briefly before using, to minimize staining of the bowl. With the shutoff lever in the **wet bowl** (forward) position, pump the handle up and down. This will allow water to be pumped into the bowl and forced through the discharge at the base of the pump.
2. The pump is designed to pump *in* rinse water and pump *out* waste water at the same time. If the water level in the bowl rises, move the shutoff handle to the **dry bowl** (back) position, then pump for several strokes. After doing this, flush the toilet several strokes with the intake valve in the wet bowl position to clear all lines.

**Changing the water height in the bowl:** Some boaters prefer to have the bowl retain some water after flushing. Others prefer that practically all water be pumped out so it will not splash when heeled over. Very little water will remain in the bowl under

normal conditions unless a vented loop is installed in the discharge line (Figures #1 and 2).

**CAUTIONS:** **Hard objects or stringy substances (paper towels, feminine hygiene products, filter tip cigarettes, etc.) thrown into the toilet will cause damage. These objects MUST NOT BE PLACED IN THE TOILET.**

### INSTALLATION

The **Compact II** marine toilet can be installed above or below the water line. However, for mounting at or below the water line **vented loops must be installed as shown in Figure #1 and 2 to prevent back siphoning.** All thru-hull fittings should include readily accessible seacocks for safety and to simplify maintenance. (This recommendation is made by marine underwriters for all installations.)

1. Mount unit securely on a flat solid deck using stainless steel bolts backed up with nuts and large washers or lag screws long enough not to pull out.
2. Use 3/4" I.D. reinforced hose for intake connections and 1 1/2" I.D. sanitation hose (#SH available from Raritan) for the discharge.

### SUGGESTIONS:

- A. The use of a Raw Water Strainer (#RWS), on the inlet line, is advised when in areas that contain debris or eel grass. This will also help keep odors down and prevent clogging.
- B. Intake and discharge thru-hull fittings (if used) should be as far apart as practical, preferably on

opposite sides of the keel. This will help to minimize the possibility for discharge water being drawn back into the intake.

## MAINTENANCE

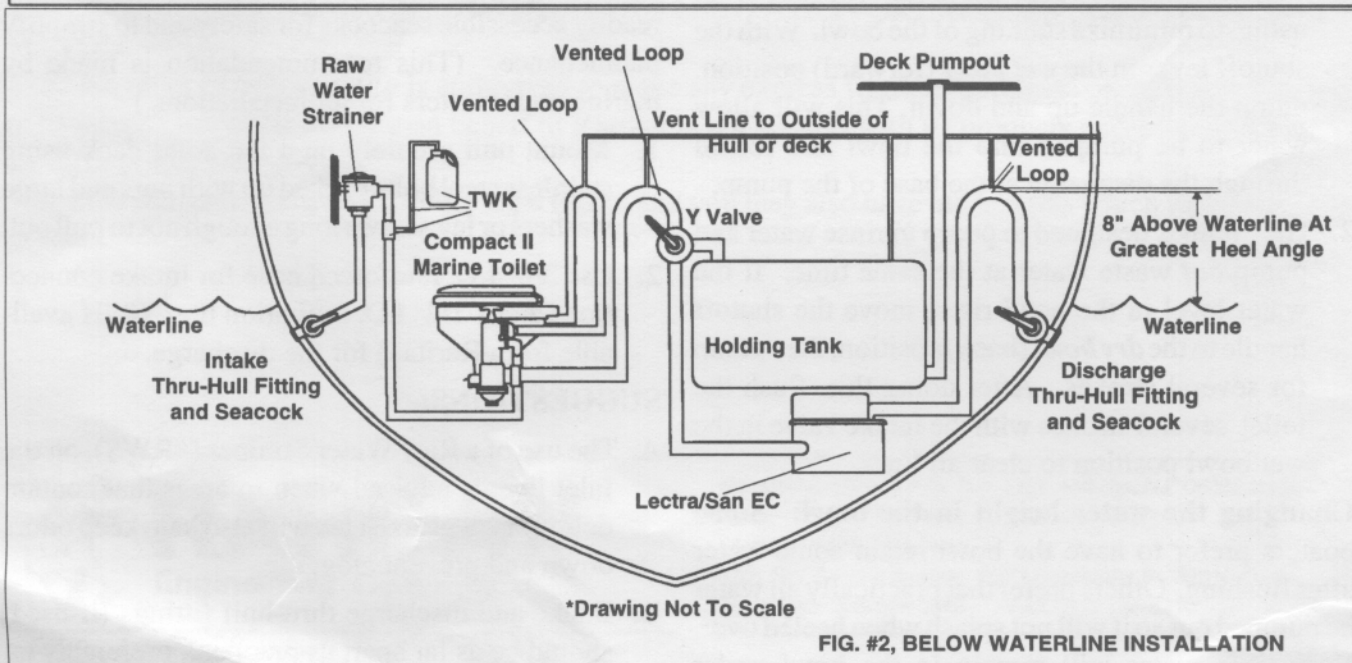
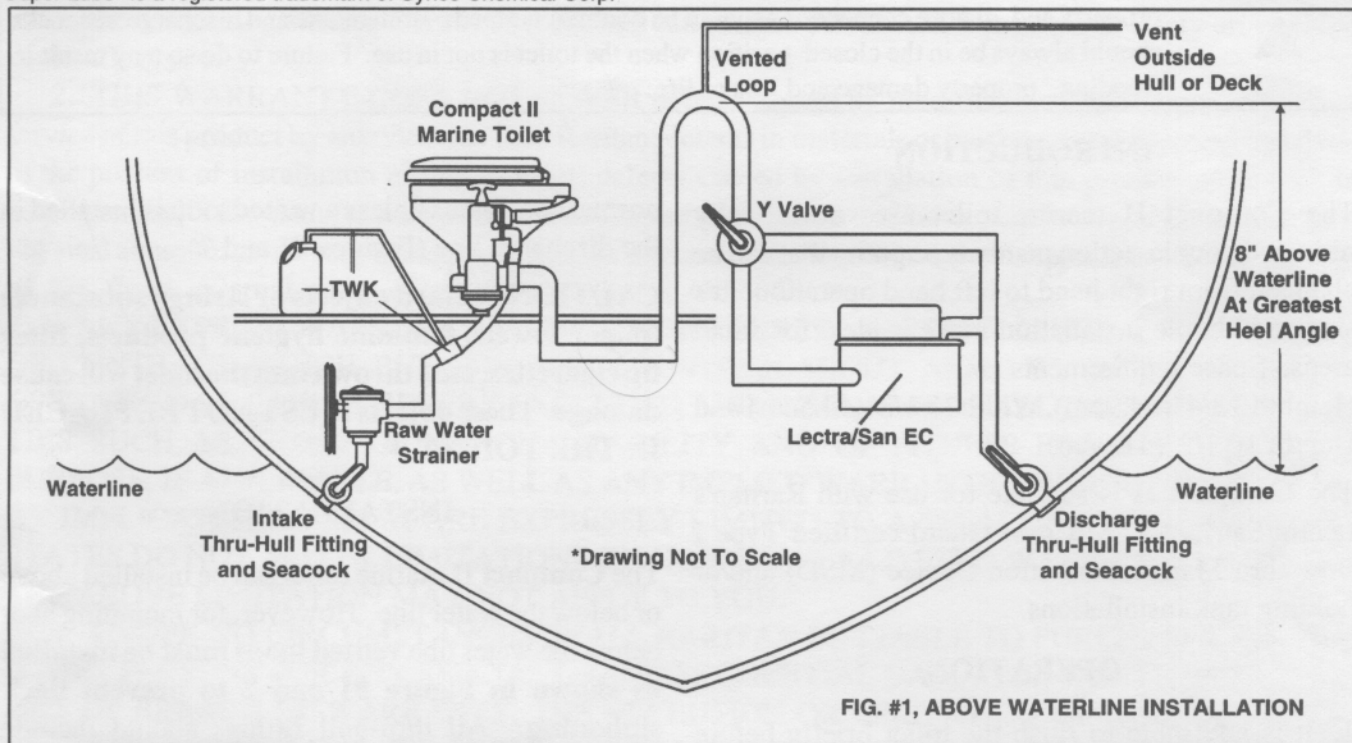
With normal use no regular maintenance is required other than inspection. Non-abrasive cleaners such as Bon Ami® will keep the bowl clean. Introducing Raritan Concentrate into the flush water through a

Bon Ami® is a registered trademark of Faultless Starch/Bon Ami Co. Super Lube® is a registered trademark of Synco Chemical Corp.

Toilet Water Kit (#TWK) will deodorize and lubricate the unit.

A little Super Lube® (#SL) applied to the piston rod will prolong the life of the U-Cup seal. This should be done every spring and fall or more regularly if the head is used frequently.

**CAUTIONS:** Using improper deodorants or cleaners can result in damage to rubber and plastic parts. **DO NOT USE** pine oil, formaldehyde, chlorine or solvent based products.





Before attempting repairs, refer to the Troubleshooting section of this manual.

## STORAGE

### Short Term Storage

If the toilet is not going to be used for up to one week, flush the toilet several strokes with the intake valve in the *wet bowl* position to clear all lines.

### Long Term Storage

If the toilet is not going to be used for over a week, follow the short term storage, then switch to the *dry bowl* position and purge the toilet with two gallons of fresh water added to the bowl.

### Winterization

Improper winter lay up is a major cause of marine toilet failures.

1. Close the intake and discharge seacock and leave turned off until recommissioning boat.
2. Disconnect and drain the intake and discharge hoses. Winterize seacocks. (TIP: Have two small containers handy to collect excess water.) After disconnecting main hoses attach a short piece of hose to both the intake and discharge fittings.
3. Pour about one quart of permanent automotive antifreeze (pure ethylene glycol) into one of the containers. Place intake hose in this container. Place empty container under discharge. Pump toilet until antifreeze has circulated and is being discharged.
4. Allow antifreeze to remain in the toilet until recommissioning. This method will protect both the intake and discharge sides of the pump. Pouring antifreeze into bowl will only protect the discharge side of the toilet.

**CAUTION: DO NOT WINTERIZE WITH ALCOHOL, KEROSENE, OR NON-TOXIC ANTIFREEZE.**

## RECOMMISSIONING

1. When danger of freezing has passed, reconnect hoses and open both seacocks. Flush out the antifreeze, be sure both seacocks are in the open position. Be sure to dispose of antifreeze in accordance with local, state and federal regulations. Follow "Operation" instructions.
2. Apply a little Super Lube® (#SL) to the piston rod, as described under "Maintenance".

**NOTE: Holding tanks and treatment systems will have to be independently winterized, stored and recommissioned, see manufacturer's instructions.**

## TROUBLESHOOTING

Before attempting repairs be sure you have studied this manual and parts list thoroughly and have checked the terms of the Limited Warranty.

If you have questions please contact our Customer Service Department in either Millville, NJ or Ft. Lauderdale, FL.

**CAUTION: Before working on toilet or whenever leaving the boat unattended be sure that both intake and discharge seacocks are closed.**

**Ordering replacement parts:** Special kits containing the parts normally required to maintain and repair each unit are available, by ordering part #CPRKII. In addition, parts for your toilet may be ordered through your dealer or direct from the factory. To speed delivery, please specify the part number and description listed.

Units requiring extensive repairs may be returned to the Millville, N.J. or Fort Lauderdale, FL. office. Instructions, including name, address and phone number **MUST** accompany returned units to ensure proper handling.

## SPECIFICATIONS

Space Requirements: height 13 3/4" (34.9cm), width 17 1/2" (44.5cm) and depth 16 1/2" (41.9cm)  
Manually Flushed Toilet: salt water or fresh water  
Fitting Sizes: 3/4" intake and 1 1/2" discharge

Maximum Intake Hose Lift: 36" (1m)  
Maximum Intake Hose Length: 15' (4.6m)  
Maximum Discharge Hose Lift: 5' (1.5m)  
Maximum Discharge Hose Length: 15' (4.6m)

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
A. Water accumulates in the bowl faster than it pumps out.	A1. Lodged debris A2. Flapper not seating properly A3. Joker Valve not closing A4. Holding Tank is pressurized.	A1. Clear any lodged debris. See #2 under "Operation". A2. Housing bolts (1226) may be too tight and distorting the flapper. Loosen them slightly. If the flapper is worn or swollen replace it. Be sure improper cleaners are not being used. A3. Check Joker Valve for wear and debris. Clean or replace. A4. Clogged holding tank or loop vent; clean vent.
B. Water rises in the bowl when the boat is at dockside.	B1. Discharge Joker Valve leaking (backflow) B2. Intake Shutoff Valve leaking	B1. If leaking stops when discharge seacock is closed, clean or replace the joker valve. If leaking continues make sure the vented loops are installed properly and vents are functional. B2. Make sure no trash is in the intake shutoff valve, clean or replace as necessary. Install vented loop (see Fig. #1).
C. Intake water flow is poor and/or water builds up in the bowl.	C1. Intake line clogged C2. Scored pump housing or worn piston "O" ring	C1. Clear intake line, check for build up in hose. C2. If pump housing is scored both housing and "O" ring must be replaced. If "O" ring is worn, replace it.
D. Leak around piston shaft	D1. Seal leaking	D1. Replace piston rod seal. DO NOT grab piston rod with pliers. Remove the pump, use socket wrench on raised hex on bottom of piston to remove handle. Then remove cartridge and replace seal.
E. A persistent and obnoxious odor comes from the toilet bowl	E1. Eel grass lodged in bowl E2. Foul intake water E3. Full holding tank E4. Worn piston "O" ring E5. Discharge line clogged E6. Improper or worn discharge hose	E1. Connect a garden hose to the spud at the back of the bowl and flush it out under pressure. E2. Add a Raritan TWK to deodorize intake water. E3. Empty Holding tank, be sure vent is clean and functional. E4. If the Piston "O" ring is worn, replace it. E5. Clear any debris lodged in discharge. E6. If hose has foul odor, replace with proper sanitation hose.

## PARTS FOR COMPACT II MARINE TOILETS

Part No.	Part Name
1115	Discharge Bolt (2)
1222AW	90° Discharge Ell & Flange
1222B	Discharge Fitting - Straight (Optional, not shown)
1223B	Discharge Nut (2)
1226	Housing Screws (4) 1/4 - 20 x 1" (SS)
1226B	1/4 - 20 Nut, Stainless Steel (8)
1226C	Plastic Spacer Washer (4)
1228CW	Flapper Valve Assembly
1301W	Toilet Base Assembly (1301 & 1343)
1316MS	Piston "O" Ring
1343	Plastic Drain Plug, 1½" NPT
1346	Check Valve Housing
1347	Separator Plate
1348	Cam
1349	Shutoff Handle
1350	Check Valve Rubber Blank
1350W	Check Valve Assembly (1350,1351,1352)
1351	Flapper Weight #1 (7/8" Dia.)
1352	Flapper Weight #2 (1" Dia.)
1353	Piston Rod Bumper Washer (2)
1354	Flushing Handle
1355	Pump Housing, Compact II
1356	Seal Cartridge
1357	U-Cup Seal (2)

Part No.	Part Name
1359	Piston
1359W	Piston Rod Assy. (incl.1316,1353&1359)
C253	Joker Valve
CH42	Hose (3/4" I.D.)
CH43P	Hose Clamp, Nylon (2)
CPRKII	Compact II Repair Kit
F020	#10 Self-Tapping Screw (6)

### MAJOR SUBASSEMBLIES

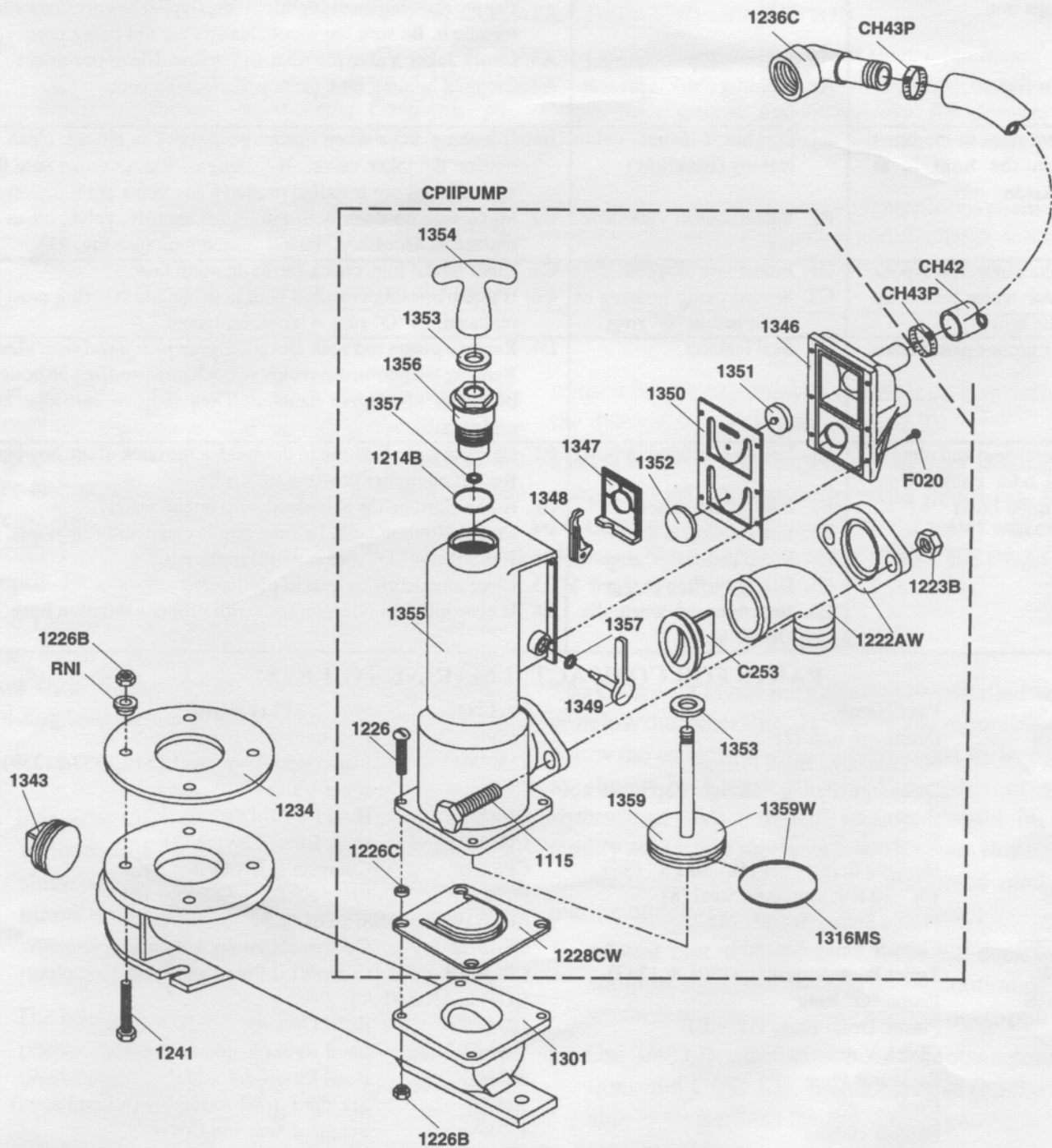
CPIIPUMP	Compact II Pump Assy. Complete
CPLBAII	Compact II Pump and Base, Complete

### BOWL AND SEAT

1234	Bowl Gasket
1236AW	Spud Assy.(supplied w/bowls)
1236C	Bowl Elbow 3/4 x 3/4"
1237W	Standard Bowl Assembly (w/spud assy.)
1238A	Standard Seat and Cover
1241	Bowl Bolt (4)
RNI	Shoulder Washer (4)
TWK	Raritan Toilet Water Kit. Allows Raritan "Concentrate" to be metered into the flush water.
CON	Raritan "Concentrate" head deodorant and lubricant. Used with TWK. Replacement carton of 12 2oz. vials.
SH	1 1/2" I.D. Sanitation Hose



# EXPLODED PARTS VIEW, COMPACT II MARINE TOILET



## LIMITED WARRANTY

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

1. TO OBTAIN WARRANTY SERVICE, Consumer must deliver the product prepaid, together with a detailed description of the problem, to Raritan at 530 Orange St., Millville, N.J. 08332, or 3101 SW 2nd ave Ft. Lauderdale, FL 33315. When requesting warranty service, purchaser must present a sales slip or other document which establishes proof of purchase. THE RETURN OF THE OWNER REGISTRATION CARD IS NOT A CONDITION PRECEDENT OF WARRANTY COVERAGE. However, please complete and return the owner Registration Card so that Raritan can contact you should a question of safety arise which could affect you.

2. THIS WARRANTY DOES NOT COVER defects caused by modifications, alterations, repairs or service of this product by anyone other than Raritan; defects in materials or workmanship supplied by others in the process of installation of this product; defects caused by installation of this product other than in accordance with the manufacturer's recommended installation instructions or standard industry procedures; physical abuse to, or misuse of, this product. This warranty also does not cover damages to equipment caused by fire, flood, external water, excessive corrosion or Act of God.

3. ANY EXPRESS WARRANTY NOT PROVIDED HEREIN, AND ANY REMEDY FOR BREACH OF CONTRACT WHICH BUT FOR THIS PROVISION MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, IS HEREBY EXCLUDED AND DISCLAIMED. ALL IMPLIED WARRANTIES SUCH AS THOSE OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, IF APPLICABLE, AS WELL AS ANY IMPLIED WARRANTIES WHICH MIGHT ARISE BY IMPLICATION OF LAW, ARE EXPRESSLY LIMITED TO A TERM OF ONE YEAR. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG A LIMITED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

4. UNDER NO CIRCUMSTANCES SHALL RARITAN BE LIABLE TO PURCHASER OR ANY OTHER PERSONS FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES, WHETHER ARISING OUT OF BREACH OF WARRANTY, THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

5. No other person or entity is authorized to make any express warranty, promise or affirmation of fact or to assume any other liability on behalf of Raritan in connection with its products except as specifically set forth in this warranty.

6. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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