TREATMENT PLANT APPROVAL 31/2023
Plumbing and Drainage Regulation 2019, part 4.

Approval

1. The **RWT10-2** ("the System") described in the Specifications and Drawings in the attached Schedule and manufactured by **Rivatec Environmental** (ABN 19 099 003 737) ("the manufacturer") has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code).

2. Approval is granted for the system as an **advanced secondary** quality wastewater treatment system, subject to compliance by the manufacturer with the requirements of the *Plumbing and Drainage Regulation 2019*, part 4 and the conditions of approval detailed below.

3. This approval, the conditions of approval and the Schedule comprise the entire Chief Executive Approval document.

4. Any modification by the manufacturer to the design, drawings or specifications scheduled to this approval must be approved by the Chief Executive.

Conditions of approval

5. The manufacture, installation, operation, service, and maintenance of the systems must be in conformity with the conditions of this Treatment Plant Approval (TPA).

6. The system when tested by a certification accreditation body in accordance with AS1546.3:2017 was found to comply with the **advanced secondary** 10 Equivalent Person (EP)/1500L level criteria and must continue to meet the following requirements:

Table 2.1 (Abrev) AS1546.3:2017 Advanced secondary effluent compliance criteria for an STS

Parameter	Advanced secondary effluent	
	90% of Samples	Maximum
Five-day Eiological Oxygen Demand (BOD^5)	≤ 10 mg/L	20 mg/L
Total Suspended Solids (TSS)	≤ 10 mg/L	20 mg/L
*Escherichia coli (E. coli)**	≤ 10 cfu/100 mL	30 cfu/100 mL
Free Available Chlorine (FAC)Þ	Minimum 0.5 mg/L†	N/A
Turbidity §	N/A	10 NTU

* Where disinfection is required
Þ Where chlorine disinfection is required
† Minimum level, not 90% of samples
§ Where UV light is used for disinfection

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Queensland Government

7. Each system must be serviced in accordance with the accreditation certificate issued by Global Certification Pty Ltd (certificate number 564) on 6 May 2020, and details supplied in the owner's operation and maintenance manual.

8. Each system must be supplied with —

   a. a copy of this Treatment Plant Approval document.
   b. details of the system.
   c. instructions for authorised persons for its installation.
   d. a copy of the owner's manual to be given to the owner at the time of installation.
   e. detailed instructions for authorised service personal for its operation and maintenance.

9. At each anniversary of the Treatment Plant Approval date, the supplier must submit to the Chief Executive a list of all systems installed in Queensland during the previous 12 months. Where the Chief Executive is notified of any system failures the Chief Executive may randomly select several installed systems for audit. The Chief Executive will notify the supplier's nominated National Association of Testing Authorities (NATA) accredited laboratory which systems are to be audited for BOD^5 and TSS. The sampling and testing of the selected systems, if required, is to be done at the supplier's expense. The following results must be reported to the Chief Executive;

   a. Address of premises.
   b. Date inspected and sampled.
   c. Sample identification number.
   d. BOD^5 for influent and effluent.
   e. TSS for influent and effluent.

10. The Chief Executive may, by written notice, cancel this approval if the manufacturer/supplier fails —

    a. to comply with one or more of the conditions of approval, or
    b. within 30 days, to remedy a breach, for which a written notice been given by the Chief Executive.

11. This approval may only be assigned with the prior written consent of the Chief Executive.

12. This approval expires on 20 December 2028 unless cancelled earlier in accordance with paragraph 10 above.

Anne Neuendorf

Executive Director
Building, Policy
Date approved: 20 December 2023

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53 Albert Street Brisbane
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Telephone +61 7 3008 2557
Website www.hpw.qld.gov.au
ABN 61 331 950 314

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SCHEDULE

RWT10-2

Attachment 1 – Rivatec RWT10-2 - CAB Certificate 564
Attachment 2 – Rivatec RWT10-2 - Owner's Manual
Attachment 3 – Rivatec RWT10-2 - Schematic diagrams

PRODUCT CERTIFICATE OF REGISTRATION

Global Certification Pty Ltd

Number 564

Product Performance Testing

AS 1546.3:2017

Advanced Secondary 10EP Level

Issued to

Rivatec Environmental Pty Ltd

6 Marklea Close, Tuggerah, NSW 2259

Certification Date: - 6/05/2020 **Expiry Date: - 5/05/2025**

Product Certified:

Model	Disinfection	Average Results over the Test Period	Servicing Frequency	Discharge	Manufactured and assembled
Rivatec RWT10-2	Yes	TSS 7.18 mg/l BOD_5 <2 mg/l Total Nitrogen 31.62 mg/l Phosphorus 11.61 mg/l Turbidity 10.22 NTU E coli <1CFU/100ml	3 Monthly Service 3.2 yearly sedimentation pump out or as required	Pumped via disinfection/pump chamber with chlorine dispenser	Manufactured at 5 Marklea Close Tuggerah, NSW 2258 Assembled: at 6 Marklea Close, Tuggerah, NSW 2259
The system took 4 weeks to meet the advanced secondary standard.					

NACE CODES: 3700

This Certificate of Conformance to the Product Certificate Scheme remains the property of Global Certification Pty. Ltd. and is granted subject to the terms and conditions of the Contract Application, in respect of the Product certified on this page and the attached schedule to the Certification of Conformance, bearing the same number as this certificate.

Date of Issue: 6th May 2020

Bruce Smith Director

JAS-ANZ

www.jas-anz.com.au/register

Signed for and on behalf of Global Certification Pty Ltd
PO Box 195, Morayfield QLD 4506

Date of Issue
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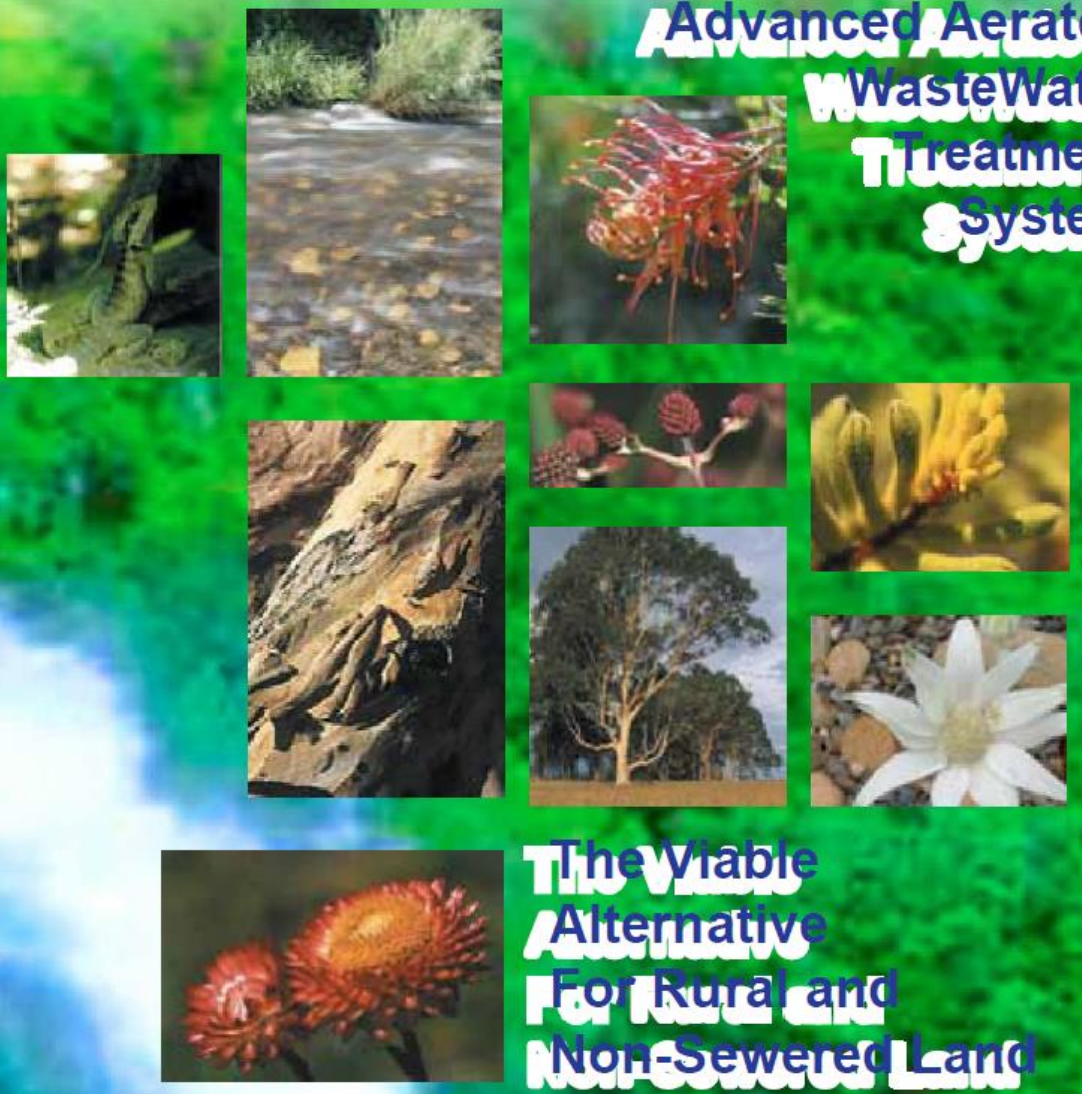
Rivatec Environmental RWT10-2 Installation & Owners Manual

Advanced Aerated WasteWater Treatment System



The Viable Alternative For Rural and Non-Sewered Land

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Introduction

About 20% of Australian homes are not connected to central sewers i.e. treatment of wastewater occurs on-site. It is important to realise that on-site waste water systems require regular inspection and maintenance to ensure that they function effectively. Your RWT10-2 has been tested and accredited by the NSW Department of Health and the system must be operating correctly to ensure that the health of your family and the community are protected at all times.

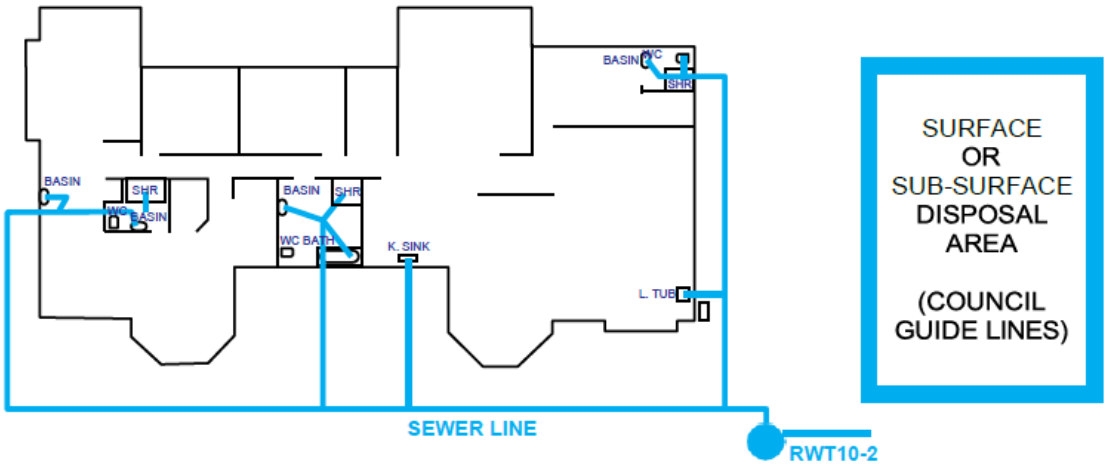
Rivatec Environmental / Agents have a 24 hour maintenance service and offers full system monitoring management for your peace of mind. It is important that you have signed a contract for the ongoing maintenance of your system. This will ensure that your system continues to operate as designed and will continue to function correctly in the long term. Generally speaking the RWT10-2 is automatic in operation and requires very little owner intervention. It is useful however for you to familiarise yourself with the system so that you understand the general operation of the unit. If you have any questions please don't hesitate to contact:

Rivatec Environmental's Experience

Rivatec Environmental systems evolved over 40 years ago in a small factory in Newcastle, NSW, manufacturing concrete septic tanks. In the early 1980's, the company saw the need to develop an advanced septic tank that would be more environmentally friendly and recycle treated waste water.

In the 1980's, the first aerated septic system, was approved for above ground irrigation by the NSW Department of Health. This was a major break through, since the, Rivatec Environmental has made continual improvements and in April 2000, the standard Rivatec Environemental (RWT10-2) was accredited by the NSW Department of Health (AWTS044).

RWT10-2
ALL HOUSE HOLD WASTE FLOW'S DOWN TO BE TREATED THE "RIVATEC ENVIRONMENTAL ES10PC " TREATMENT SYSTEM



AFTER THE WASTEWATER HAS GONE THROUGH THE TREATMENT PROCESS THE WATER IS THEN SPRAY IRRIGATED OR PUMPED TO SUBSURFACE DISPOSAL ALL HOUSE HOLD WASTE FLOWS DOWN TO BE TREATED BY THE "RIVATEC ENVIRONMENTAL RWT10" TREATMENT SYSTEM

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Operation

The Rivatec Environmental RWT10-2 system treats waste water on-site to Advance secondary levels far in advance of older style septic tanks. In technical terms the RWT10-2 has been designed to process waste water to achieve typically 95% reduction in suspended solids (TSS) and biological oxygen demand (BOD^5). The treated effluent is clear, odourless and can be reused on site (subject to council approval).

The Rivatec Environmental RWT10-2 is a compact sewage treatment system housed in a single tank. It is intended to treat domestic waste water from single households (with adequate capacity to treat waste water) up to 10 people. The tank is connected to the household plumbing system and requires electrical power to be supplied for the air blower and electronic alarm/control unit (and if, necessary, the irrigation and other pumps).

The RWT10-2 is an Advance aerated septic tank system which uses totally natural biological processes to treat the waste water. It consists of a set of 7 chambers which perform various treatment processes on the waste stream.

Rivatec Environmental systems are manufactured by Rivatec Environmental and transported direct to site. Once installation is complete, Rivatec Environmental / Agent will commission the system and issue a certificate of compliance.

Water first enters the primary pre-treatment chamber where large organic and inorganic solids settle to the bottom and fats and certain other floating matter forms a scum layer on top of the liquid in the chamber. A sludge layer builds up in the chamber and a fermentation process takes place i.e. anaerobic bacteria digest the sludge and break down some of the organic matter.

Fluid is decanted from the buffer pre-treatment chamber through a baffle to eliminate the passage of grease and floating matter. Whenever more liquid enters the pre-treatment chamber, waste water flows by a Air Lift displacement into a second primary chamber, then into a aeration chamber. In this chamber air is introduced through fine diffusers which serve to stir the contents of the tank and some air dissolves to provide air for the aerobic bacteria to survive. These bacteria form as a biofilm on the submerged media and float in the solution. Aerobic bacteria are faster acting than their anaerobic cousins and the effluent is converted into clean, clear water through aerobic digestion.

Liquid from the aeration chamber flows into the clarifier where the solution stands still to enable any suspended particles to settle to the bottom. Periodically the accumulated sludge is returned to the primary treatment chamber to ensure more complete digestion. A surface skimmer returns any floating material back to the aeration chamber.

Treated water then flows though a chamber where it is disinfected with chlorine, if necessary, and then passes into the final irrigation chamber. At this point treated waste water is automatically and silently discharged into the land application system or predefined outlets. Land application systems vary according to individual situations and can be in the form of surface sprinklers, subsurface irrigation, sand filters or other innovative systems.

Once the choice is made to use the Rivatec Environmental system, Rivatec Environmental / Agent can arrange for further site evaluations, soil and geo-tech reports to be conducted and will take care of all necessary paperwork to submit the application to the local authority.

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Products

Rivatec Environmental / Agents installs and manages a full range of on-site waste water treatment systems including;

- **Advance Aerated secondary treatment**
- **Pump out collection wells**
- **Sand filters**
- **Mound systems**
- **Innovative surface and subsurface disposal systems**

Rivatec's Environmental has Agents that regularly service nearly 5,000 systems in NSW.

Applications include;

- **Domestic dwellings**
- **Schools, commercial offices, resorts, vineyards and other specialised situations**
- **Village scale systems**

Rivatec Environmental's Reliability and Cost Effective Systems

The RWT10-2 system treats waste water on-site to Advance secondary levels far in advanced of those achieved with older style septic tanks. The system features unique surge reduction and advanced aeration to ensure treatment that exceeds the requirements of Australian standards AS1546.3.2017 and AS1547.2000.

The advantages of the remarkably simple process of the RWT10-2 system are how well it works and how little maintenance is required.

The treated water is clear, odourless and can be reused on-site (subject to local authority approval) for applications such as watering the gardens and lawn.

Rivatec Environmental systems are modular, scalable systems, manufactured by Rivatec Environmental and delivered as a complete package for installation on-site. The RWT10-2 model is housed in a single concrete tank, with adequate capacity to treat waste water for up to 10 persons.

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Accredited Performance

Rivatec Environmental standard RWT10-2 system has been designed to achieve a 95% reduction in BOD^5 and suspended solids. Additional sterilisation (chlorination) reduces the faecal coliforms to virtually zero.

The RWT10-2 system is accredited by the NSW Department of Health (approval #AWTS009) and has been designed to conform to Australian standards (Global Certification Licence No: 564) as 1546.3.2017 and as1547.2000.

The Excellent Customer Service

Rivatec Environmental customer service never ends. From initial contact, trained consultants advise of the waste water treatment systems best suited to the area and the customers specific needs. Quotations and site inspections are available without obligation and consultants can also offer advice on excavation, electrical and plumbing requirements.

Treated Water Quality

BOD^5	10 mg/Litre or less
Suspended solids	10 mg/Litre or less
Faecal coliforms	10 cfu/100mL or less
Free residual chlorine	min 0.5 mg/Litre
Total Nitrogen	
Total phosphorus	

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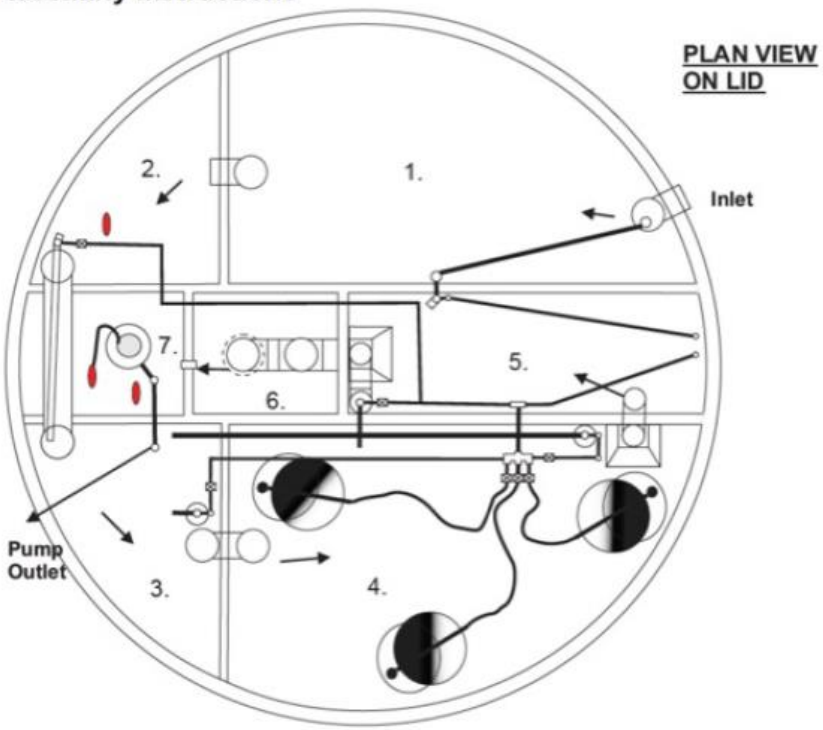
LEGEND

1. 1st Primary Treatment
2. Buffer Chamber
3. 2nd Primary Treatment
4. Aeration
5. Clarifier
6. Chlorinator
7. Chlorine Retention
8. Pump well

Rivatec Environmental – Model RWT10-2
TANK SPECIFICATION

Assembly Instructions



EFFLUENT CHAMBER SIDE VIEW:
CHAMBER 1 - 2 - 3 - 4 - 5 - 6 - 7
WATER LEVEL HEIGHTS FORM THE BASE:

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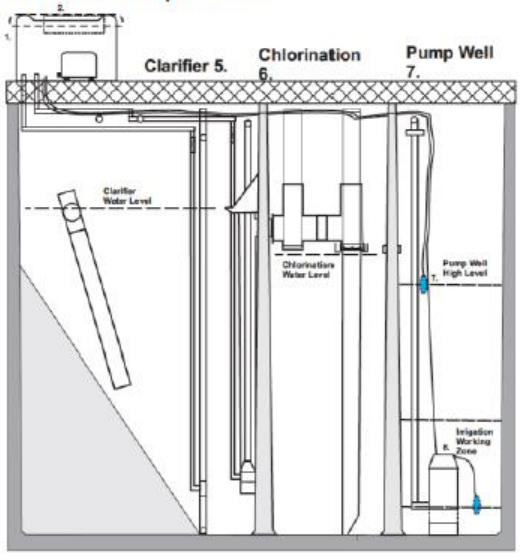
NOTE:

All tanks to comply with AS 1546 code for small septic tanks.



All PVC fittings to comply with AS 1477.

Tank Volumes:

Primary treatment (anaerobic) chamber	1800 L
Buffer chamber	600 L
Primary treatment (anaerobic) chamber	700 L
.Aeration (aerobic) chsmber.	2650 L
Chlorine retention	165 L
Pump well	165 L
Emergency reserve capacity	1000 L

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Tank Delivery and Installation Instructions

- Tank deliveries are done using our crane truck in most deliveries the truck can backup to the excavation and drop the tank in. Make sure to site is fairly level.

- Make sure there is good access to the site
  - approximate 5m under power lines when unloading the tank.
  - minimum 3m gap between the gate.
  - site conditions should be dry and firm under foot.

- When organising to do the excavation you have to make allowances for the length and width of the truck.

- Allow 3m either side of the truck to put the outriggers out for the crane and to be able to swing the tank around to place it in the 3m hole.

- When excavating the hole make sure the dirt is piled up to the side or an opposite end to where the truck will be backing to.

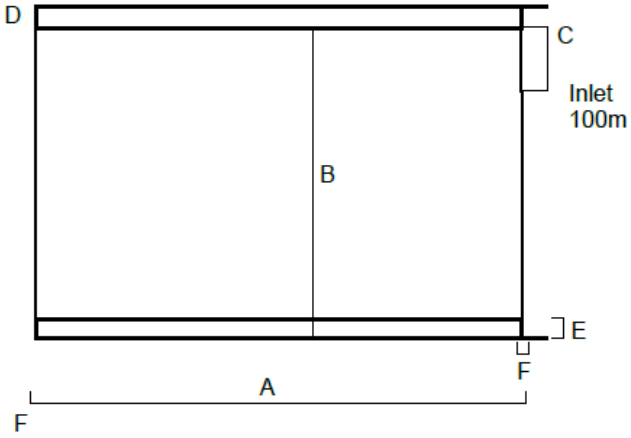
- Allow 2m from the back of the truck to the excavation and another 2m to the centre of the hole.

Rivatec
Environmental

Tank Manufacturer:
Central Coast Septics P/L Single Tank Collection Well / Lid AS/NZS 1546.1
Specifications
Base: 80mm Thick reinforced with one layer of F72 reinforced complying to AS 3600.
LID: 80mm thick reinforced with F82 bottom plus Y72 trimmer bars sitting ont op of f82 This lid has not been designed to carry fill or pedestrian traffic.
Concrete Cover: As per AS/NZS 1546.1 minimum concrete cover is to be 20mm,

INSTALLATION

NOTE that the tank is to be found on a bed of uniformly compacted and levelled sand at least 100mm thick



CAPACITY	A	B	C	D	E	F
7,100LT	2500MM	2200MM	550	80	80	80

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Rivatec Environmental
Model RWT10-2
Tank Installation - Customer Liaison

(Prior to Tank Installation)

- **Liaison with Customer**

  Constant communication with the customer is vital. Communication breakdowns can prove costly and with little effort can be avoided. Imagine the cost of returning to site to remove a tank, fill the hold and start again in another location. Liaison with the customer at strategic points in the process can avoid these problems and forge good relationship with customer.

- **Coordinate excavation date and time with customer**

  Arrange a time and arrive on time. Good service is prompt and professional.

- **Request the preferred site be marked with stakes**

  If the customer thinks they will be late ask them to mark the desired tank location (and an alternative where appropriate) so the excavator can commence work on time. This simple request can save time (and money) if the customer happens to arrive late. Your excavator will be able to commence work immediately.

- **Discuss tank site with the customer**

  The customer will inform you of their desired location of the tank. Where necessary, have the customer provide detail for an alternative site. Never arbitrarily change the location without reference to the customer. They may have plans for a garage, pool etc and you may find yourself having to redo the entire job. This behaviour will also adversely affect your ongoing relationship with the customer.

  

  Advise the customer of additional plumbing and electrical cost they will incur for a tank location that is a great distance from dwelling. The minimum allowable tank distance is 1.5 metres from the dwelling.

  An alternative site may be necessary due to unforeseen obstacles (rock) that may be struck. If this is the case then a rock Breaker may need to be called in. How ever the Excavator is able to effectively tackle more than 90°/o of all jobs.

- **Confirm the customers requirements regarding the soil**

  Only spread the soil if requested by the customer

- **Ensure a minimum fall of 1:60 exists**

  Take levels to ensure the minimum fall of 1 :60 exists. If the preferred site cannot be changed then plan to dig deeper and place a riser on the tank.

- **Extra Work**

  Occasionally the customer will request extra work to be completed whilst the excavator is on site. This work must first be cleared by you.

- **Advise owner of their responsibilities**

  Refer to owner responsibility instruction sheet.

Rivatec Environmental
Model RWT10-2
Tank Hole Excavation - Owner Responsibility

- **Good Access**

  Must be available for a large truck to unload very close to the hole. Surplus soil should not be· piled where truck will manoeuvre Site should be quite level for unloading The ground near unloading site should be firm and dry to take the truckload Tank hole base must be level and the depth and clearance correct.

- **Hole**

  The overall depth of the tank hole is determined by the invert of the inlet drains. Standard tank depth only is indicated on the plan. Extra risers I extensions may be required to raise the lids above finished ground level. This will incur additional charges

- **Water**

  Must be available to fill the tank immediately after installation to avoid possible flotation- 4000 litres minimum. For heavy clay soils 6000 litres minimum.

  Filing must be completed as per the standard procedure to avoid damage to the insert or baffles.

- **Note**

  Any damage to drives, paths, underground or aerial services etc are not the responsibility of the drivers or suppliers.

  Every effort and care will be taken by the driver to have the tanks installed into the hole.

  Our offer to install the tank into the hole is not subject to any deductions, charges or costs incurred by the purchaser for any delays or failure to install by the supplier. i.e. breakdown, inclement weather etc.

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Rivatec Environmental
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Tank Installation and Excavation

- **Arrive at Site**

  Arrive on time

- **Liaison with customer**

  Discuss tank position. If customer is not present locate tank positional markers (stakes and sign) Ensure a minimum of 1:60 fall

  If alternative site selected is a great distance from dwelling - advise that their drainage and electrical charges will be increased.

- **Ascertain location of telephone and electrical service**

  Ask customer
  Visual check or ask electrician
  Telstra can provide this information if unsure

- **Advise customer to fill tank on completion**

  Advise owner of tank filling procedure.
  Tank to be filled immediately after installation 40001itres minimum (half fill tank) In heavy clay areas 6000 litres minimum

- **Dig the hole**

  Refer excavation detail sheet

- **Measure hole depth and width**
- **Ensure the hole base is level**

  Use a shovel
  If water charged ground no need to level as the mud will settle evenly. If rock or shale fill with minimum 100mm sand and level

- **Lower tank into ground**

  Use regulation lifting bars
  Check to ensure the tank is level in the ground
  If is is not - remove it from hole and level the base

- **Seal the lifting holes**

  Use megapoxy or 100mm pvc glued cap
  Mix the megapoxy on flat plastic or metal sheet
  Place the sheet over outer side of hole as you fill with the megapoxy

- **Spread soil**

  As per customer request only

- **Advise head office that tank is in ground and sealed**

  Important for job records

- **Advise owner/builder that system is ready for power and drains to be connected.**

Rivatec Environmental
Model RWT10-2
Water Filling Instructions

1. Remove manhole lids

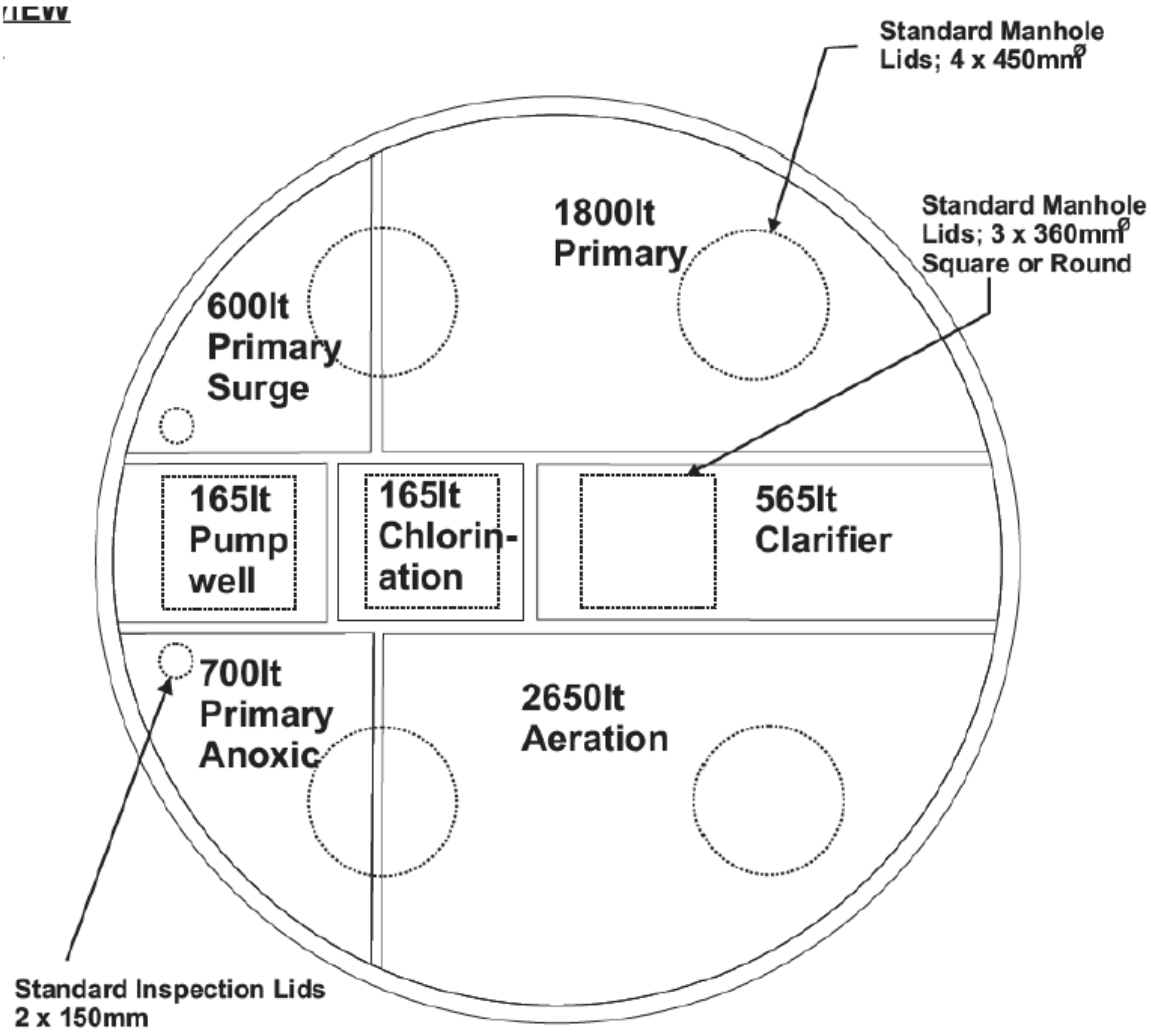
2. Fill each of the five sections with approximately 1 metre of water.

3. Top each section up to approximately 1.metre of water

4. Replace manhole lids

Note
Total water requirement approximately 60001itres.

IMPORTANT
TANKS SHOULD BE FILLED IMMEDIATELY AFTER INSTALLATION TO PREVENT FLOATATION PROBLEMS



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Control Panel & Alarm

Operation of the RWT10-2 is automatic and controlled within the tank using solid state microelectronics. The only user interface is the alarm indicator plate which is usually mounted inside the home in locations such as the laundry, garage, electrical meter box.

Normally the GREEN LED glows to indicate that power is connected to the tank and that it is operating normally. Sensors inside the RWT10-2 continually monitor the air pressure and the water level. Should either of these exceed the preset levels the RED LED (AIR) or YELLOW LED (WATER) will glow on the controller and a buzzer will sound. Whenever this happens you should contact your service agent. for instructions. Pressing the MUTE switch will silence the buzzer although the RED LED will remain on. The alarm will reset as soon as the fault conditions have been rectified.

RWT10-2 CONTROLLER INSTALLATION & OPERATION GUIDE
Refer to attached wiring and circuit diagram when installing the controller. All electrical work must be carried out as per AS/NZ 3000:2007 and any other regulatory or site requirements. The controller is to be earthed at the distribution board supplying this controller.
The controller is designed for a maximum current draw of 6A at 230V.
The controller has been per wired, follow the instructions below, however, at all times ensure the instructions are safe to follow.

1. Remove the lid of the controller. The printed circuit board is attached to the lid. Take care to ensure no moisture or damage occurs to the printed circuit board while the lid is open.
2. Connect the Dose High Level Float to the terminal labelled 'Dose High Level'
3. Connect the Irrigation High Level Float to the terminal labelled 'Irr High Level'
4. Connect Air Blower's air hose (6mm) to the bottom Pressure Switch hose tail

NB; Irrigation High Level input are connected to Dual layer terminals. The floats are not polarity sensitive.

5. Connect the cable labelled 'Sludge Vlv' to their respective terminals on the Sludge Valve

NB: All Valves are connected to Dual layer terminals, with the base of each terminal being the OV common, and top being 12VDCsupply.
Pumps/Blower:

6. Connect the cable labelled 'I.P.' to its respective pump 'Irrigation Pump'
7. Connect the cable labelled 'A.B.' to its respective blower 'Aeration Blower'

Battery:

8. Connect the cable labelled 'Batt +/-' to their respective terminals on the battery

SMS Unit:

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Control Panel & Alarm

13. Connect the blue cable labelled 'Ezy +/-' to their respective terminals (+=1; -=2) on **the Ezy Switch**

14. Connect the blue cable labelled 'BMS +/-' to their respective terminals (+=3; -=4) on the Ezy Switch

15. Connect the blue cable labelled 'PF +/-' to their respective terminals (+=5; -=6) on the Ezy Switch

16. Insert SIM card into SMS-2 Telemetry Unit.

Mains Power:

17. Connect the white cable labelled 'Mains' to its power source (240V)

Once the controller is tested for safety, power up the plant. There are some settings that will need to be changed. Instructions on how to enter these parameters are below (SMS Unit)

18. The LED will fast flash until it finds the network; it will then slow flash (every 3 seconds) which indicated it has found the network and ready to go.

19. Enter the Sim card cell number into your phone under the name (RWT10 - Test Unit)

20. Then send the following text to the unit's cell number: Set User

21. The unit will respond with: Your number has been added to the user list

NB: Refer to SMS-2 installation manual for adding an Administrator

NOTE:

1. Should the High Dosing Level Alarm activate (UP) the dosing times are overridden until the High Dosing Level Alarm deactivates (down)

2. The Dosing Cycles are continuously counted irrespective of the time of day. The cycle count starts when the controller is turned on. The Sludge Delay Time (00:05; HH:MM) starts when the allotted (6) dosing cycles finish.

3. If you receive a text from the unit 'You are not authorised to use this device' send a text to the unit's cell number 'Back Door 123456' this will do a factory reset. Then go to number 20 above.

Wire colours in this controller are:

- _230V – red
- _Neutral – black
- _12VDC – white
- _OVDC/control - purple

Control Panel & Alarm

RWT10-2 APP INSTRUCTIONS

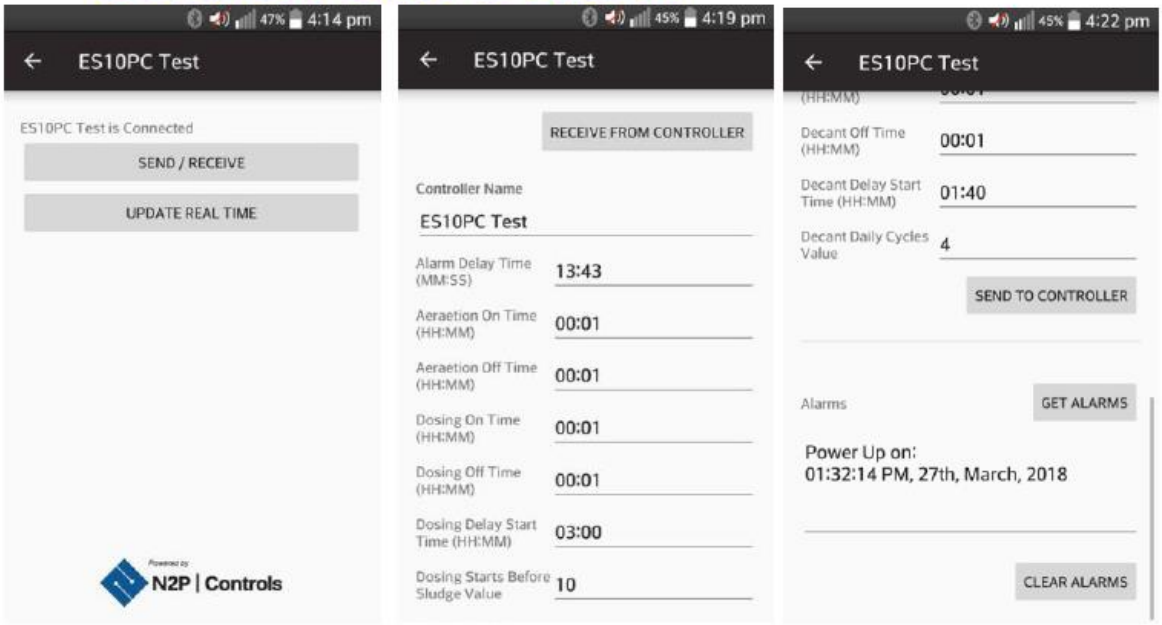
1. The App is to be loaded onto an android mobile or tablet. Open the App and click *Discovering* to find the controller. It will be labelled RWT10-2_v1. Select this device and connect to it. When you first connect to the unit, you will be asked to enter a PIN. This PIN is 1234.

2. Once you are connected to the controller, you will have a main menu. To ensure the correct date and time is loaded, click *UPDATE REAL TIME*. This will load the time from your device to the controller. Ensure you get the confirmation *Time downloaded to controller*. Do this when the controller is first powered up and/or it has lost power for a period of time.

3. Click *SEND / RECEIVE* to go into the settings part of the App. This will take you to the set-up page. In this page click *RECEIVE FROM CONTROLLER*. This populates the page with the controller's current settings. You can change these details e.g. Controller Name, Alarm Delay Time, Dosing On Time, cycles etc. Once changes are made, you click *SEND TO CONTROLLER*, and this will be downloaded to the controller. Ensure you get the confirmation message that the download was successful.

4. When connected to the controller, you can download the Alarm History. The alarm history will show the latest 20 alarm state changes. I.e. it will show when an alarm occurred and when it was cleared. It will also show when the controller was powered up. You can clear the alarms by pressing CLEAR ALARMS.

Control Panel & Alarm



Pumps and Blowers

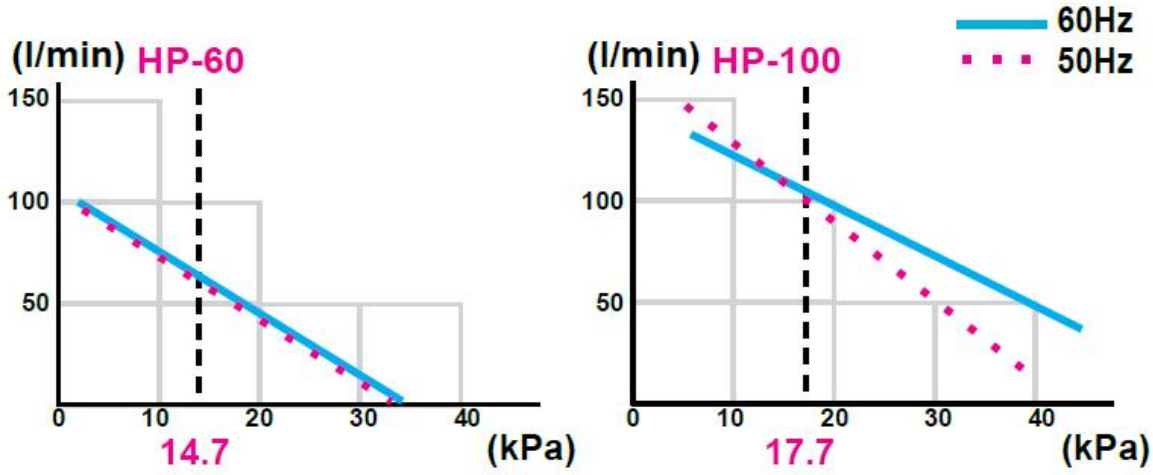
MEDIUM CAPACITY AIR PUMPS

HP SERIES - Silent Type SPECIFICATIONS

HP - 60
HP - 80
HP - 100
HP - 120

TYPE		HP-60		HP-80		HP-100		HP-120	
Rated Voltage	V	240							
Power Supply Frequency	Hz	50	60	50	60	50	60	50	60
Normal Pressure	kgl/cm2 (MPa)	0.15 (0.015)				0.18 (0.018)			
Exhaust Volume	l/min	60		80		100		120	
Power Consumption	W	51		71		95	100	115	125
Noise level	dBA(1m)	35		36		38		40	
Weight	kg	7.0		7.0		8.5		8.5	

Performance Curves



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BIANCO PUMPZ

PRODUCT PROFILE
BIANCO SUBMERSIBLE PUMP
BIA-B42AC (805140)

Submersible high head pump designed for AWTS and rainwater tanks. Fitted with noryl impellers and stainless steel strainer.

Features

- Glass Filled Nylon pump body and Stainless Steel cover for strength and lightness.
- Easy grip, nylon carry handle.
- Tripple seal system: Dual mechanical seal (Carbon ceramic) in oil bath and Oil Seal
- 3 Stage High Head pump with durable Noryl impellers.
- Elevated (88mm) suction intake with Algae-Proof slotted strainer.
- 10m Power lead and automatic Float Switch. All cables to H07RNF standard.
- 240V Single Phase , 0.55kW
- Built in auto-resetting thermal overloads

Benefits

- Strainer design improves water flow and prevents blockage from algae growth.
- Elevated intake draws oxygenated water from higher in tank and avoids sludge layer.
- Leads to improved water quality with lower algae and anaerobic mater for better smelling water and cleaner clothes washing.
- Quality pump materials assist with longer pump life while still being light to lift and lower.
- High Head pump with low energy usage

Applications

- Domestic pressure systems (with optional Press Control)
- Pumping Clean and pre-treated water.
- AWTS – Automated Water Treatment Systems pump out to dripper beds.
- De-watering of cellars, basements and garages.

Liquid:	
Liquid Type:	Clean Water
Solid Handling:	2mm Ø
Liquid Temperature Range:	2-35°C

Materials:	
Pump Body:	Glass filled nylon
Impeller:	Glass filled nylon
Elastomers:	NBR
Rotor/Shaft:	410 SS
Strainers	304 SS

Installation:	
Max Ambient Temperature:	40°C
Discharge Size/Pipe Connection:	1"
Net weight:	12kg
Dimensions (mm):	225L x 163W x 490H (mm)

Electrical Data:	
Rated Voltage:	240V
Rated Output:	550W
Power:	0.55kW
Mains Frequency:	50Hz
Current:	3.4A
Capacitor:	18 µF
Motor Duty:	Continuous
Motor Type:	Asynchronous
Motor Protection:	Built-in thermal overload
Ingress Protection:	IP 68
Insulation Class:	B
Power cable length:	10m
Cable Material:	H07 RN-F

Hydraulic Data:	
Max Flow (l/min):	105l/min
Max Head (m):	32m

2 Year Bianco Pumpz Warranty

WHITE INTERNATIONAL

Distributed by White International Pty Ltd
A.B.N. 46 000 119 380
PO BOX 304 MILPERRA LPO NSW 2214
HOTLINE: 1300 783 601 FAXLINE: 02 9783 6003
Email: pumpsales@whiteint.com.au

Distributed by White International NZ Ltd
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FAXLINE: 0800 804 344
Email: sales@whiteint.co.nz

BIA-B42AC_10/04/18

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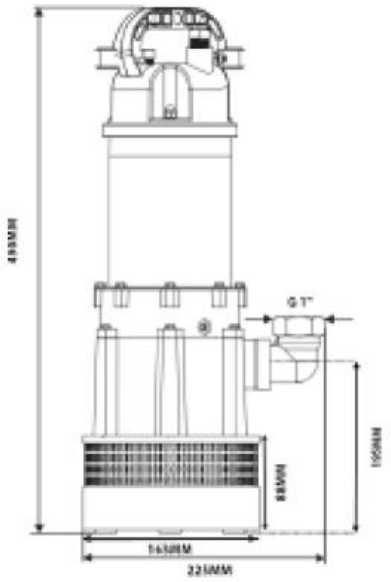
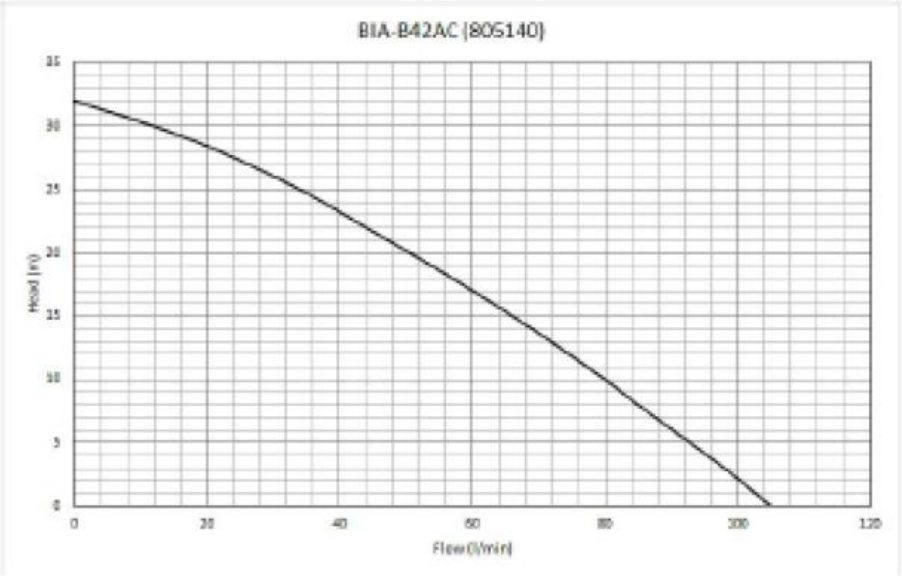
20/12/2023

BIANCO PUMPZ

PRODUCT PROFILE
BIANCO SUBMERSIBLE PUMP
BIA-B42AC (805140)





WHITE INTERNATIONAL

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Email: sales@whiteint.co.nz

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Frequently Asked Questions

My system smells – is that normal?
No. However you may notice some smells in some circumstances. When a system is first installed it might take some time for the scum to form on the septic chamber. Check that the air blower is operating and that plentiful bubbles of air are rising in the aeration chamber. If smells persist you should check your use of household chemicals (eg. disinfectants, bleaches) as they can react with the system biology and kill off some of the bugs that treat the sewage. Excessive water flows can overload the system – try to spread washing loads over 2-3 days if possible.

Is the sprayed effluent safe?
Your RWT10-2 when operating correctly will produce effluent at the prescribed quality. Although the effluent has been disinfected it should not be used for drinking. Surface or subsurface irrigation has been extensively tested and is considered to be the best known practice today. You should avoid direct contact with the spray and children and pets should be kept away from the effluent. Please note that it should not be irrigated onto crops for human consumption. Please don't hesitate to contact Rivatec Environmental if you are unsure or require further testing for your peace of mind.

What happens if the power fails?
The RWT10-2 has sufficient capacity to treat and store 24 hours wastewater. Should a blackout occur you need not worry unduly provided power is restored within the 24 – 36 hours. If for any reason the power is switched off at the tank (or the earth leakage circuit breaker trips for any reason) you should investigate immediately or contact Rivatec Environmental for further advice.

What should I do when the alarm (RED or YELLOW LED) comes on?
When the alarm trips MUTE the system (using the switch on the alarm panel) and contact Rivatec Environmental. Sometimes the problem can be easily fixed over the phone alternatively the Rivatec Environmental / Agent will check the system within 24 hours of your phone call.

What if the system floods or overflows?
It is possible for the tank to flood or overflow. If your property is subject to extensive rainfall and flooding, your tank may be flooded by the excessive rainwater. The circuit breaker at your house should shut the power and protect the system. You should not reconnect the power until the water level falls again. Contact Rivatec Environmental / Agent for advice before reconnecting power to the system. It is also possible for the pump to fail, irrigation filter/lines to become blocked or the power to fail for some reason. In such events, the water level in the tank could rise and flood the system and eventually flow out of the lid. Usually the alarm and RED or YELLOW LED should have warned you of the situation. Contact Rivatec Environmental / Agent immediately for advice and appropriate action to take.

Are there any household chemicals that I shouldn't use?
Generally speaking your RWT10-2 system is robust and can be treated as if you have 'flush and forget' central sewage. It is desirable that you try to use recommended biodegradable products wherever possible in place of harsh chemicals, bleaches and strong detergents. Do not dispose of sanitary napkins, disposable nappies or similar solids into the system. Avoid excess fats and grease from the kitchen whenever possible.

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Owners - Tenant Responsibilities

- The current owners should advise Rivatec Environmental / Agent in writing if the property changes ownership. Notification must advise Rivatec Environmental / Agent of the new owners name and contact address and telephone number if possible.

- The owner / tenant of the property should ensure safe passage for the Rivatec Environmental / Agent. Any animals that may pose a danger to the service technician should be locked up or penned during servicing.

- The owner / tenant should provide a key for the Rivatec Environmental / Agent if there are any locked gates which prevents entry to your property.

- The owner / tenant should ensure that the area around the RWT10-2 is kept neat and tidy at all times.

- The owner / tenant should ensure that the irrigation disposal area is kept neat and tidy at all times.

- The owner / tenant should monitor the irrigation sprinkler system to ensure all spray jets are working properly. (The owner / tenant will be required to replace or clear any blocked or broken sprinklers).

- The owner / tenant should ensure that any inline filters on the irrigation sprinklers system is checked and cleaned on a regular basis (every two weeks). The Rivatec Environmental / Agent will clean the filter every three months only.

- The owner / tenant should ensure prompt payment of any service or repair accounts.

Thank you for your cooperation, if you have any questions in regards to this matter please contact us on 1300 327 847 during business hours.

Initial:
20/12/2023

Controlling Phosphorus in your Environment

Why worry about Phosphorus (P)?

In Australia our plants have adapted to a low nutrient environment. Adding nutrients to the land can speed up the life cycle of our native plants, encourage weeds, and disturb the natural ecosystem.

Further, excessive levels of nutrients are a major cause of unsightly and sometimes poisonous blue-green algae infestation in our waterways. These algae blooms in our rivers and estuaries are believed to be increasing in frequency and severity and can cause a number of problems. Some blue-green algae are poisonous to humans and wildlife. Stock and domestic pets have died. Water supplies can be disrupted (toxins need to be removed before use) and recreational opportunities are compromised.

To reduce the frequency and intensity of blue green algae blooms and maintain our native surroundings we need to reduce the amount of phosphorus entering our landscape.

What can I do to minimise Phosphorus discharges from my RWT10-2 treatment system?

The principal means of phosphorus entering the land application area is through the use of detergents and other cleaning products. Selecting cleaning products that are low in phosphorus will help in on-site sewage management and aid in the protection of our native landscapes.

Always follow the manufacturers dosage instructions and try to avoid using excessive amounts of bleach and disinfectants.

Initial:
20/12/2023

Sales and Service

HEAD OFFICE

Steven Fowles .. *Manufacture/Sales* … .....CENTRAL COAST ..... ……..1300 327 847

MAINTENANCE LOG

Date	Service Details	Agent

Rivatec Environmental

ABN 19 099 003 737
Rivatec Environmental
6 Marklea Close Tuggerah
NSW PO Box 605 Wyong NSW
2259
1300 327 847
Email: steven@rivatec.com.au
www.rivatecenvironmental.com.au

Initial:
20/12/2023

Attachment 3 – Rivatech RWT10-2 – Schematic diagrams

Rivatec Environmental

ABN; 19 099 003 737
PO Box 605 Wyong 2259
6 Marklea Close Tuggerah 2259
Ph; 1300 327 847

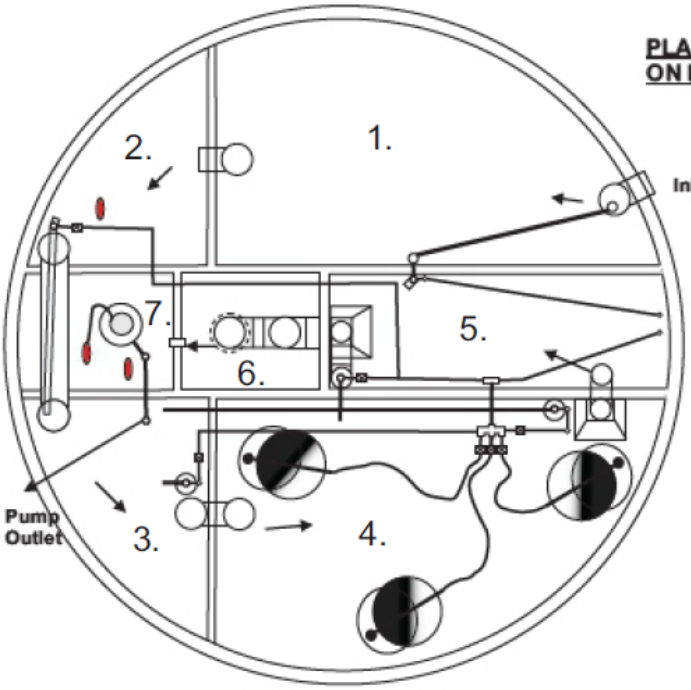
email; steven@rivatec.com.au
rivatecenvironmental.com.au

Designed; SF
Lic;339816C

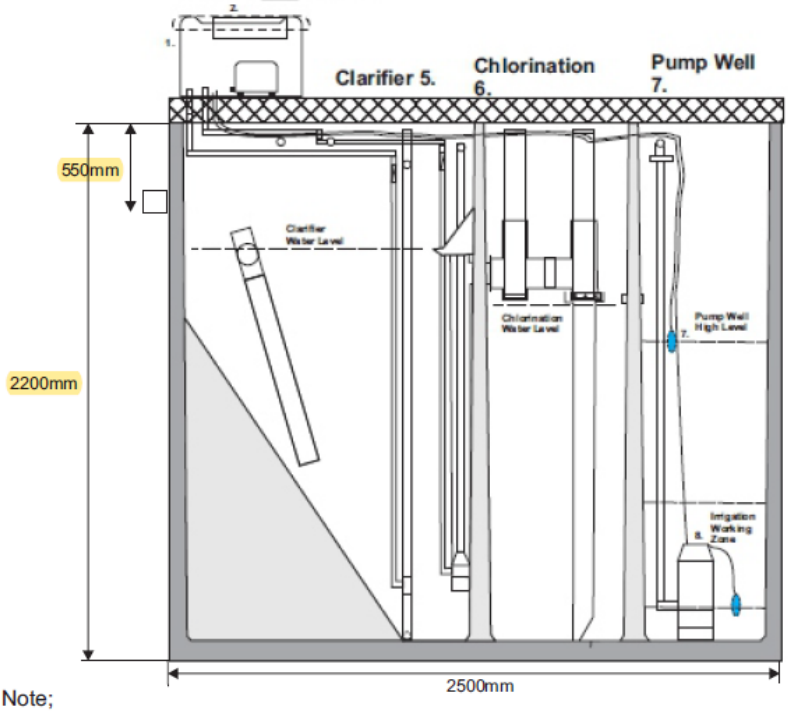
Date;

Site;

RWT10 - 2



Legend;
1. 2/3 Primary
2. Buffer Primary
3. 1/3 Primary
   3100 litres
4. Aeration
   2650 litres
5. Clarifier
   565 litres
6. Disinfection
   165 litres
7. Irigation
   165 litres



Hole Excavation

Depth - 2200mm
Width - 3000mm

Note;
All Tanks To Comply With AS/NZ 1546.1 - All PVC Fittings To Comply With AS/NZ 1477
System Designed By RIVATEC ENVIRONMENTAL PTY LTD
Tank Manufacture;
Central Coast Septics

Initial:
20/12/2023

Central Coast Septics Pty. Ltd.

ABN 63 000 605 069

Registered Office;
5 Markles Close
Tuggerah NSW 2259
PO Box 245
Wyong NSW 2259
Ph; (02) 4352 2154

MANUFACTURES OF SEPTIC TANKS AND COLLECTION WELLS email.info@centralcoastseptics.com.au

SPECIFICATIONS;

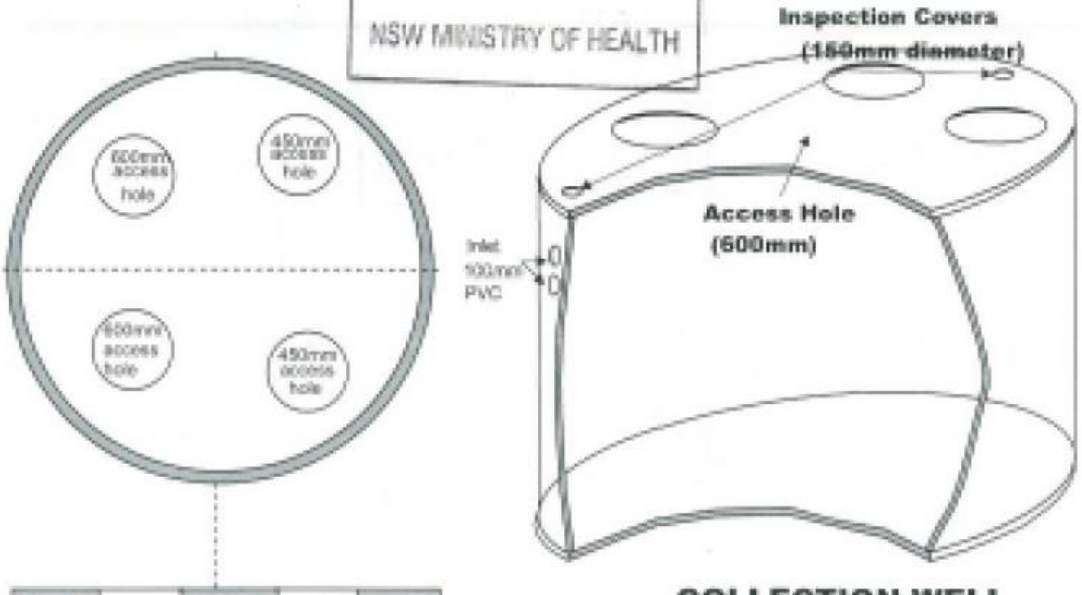
BASE; 80mm thick reinforced with one layer of SL72 reinforcement complying AS/NZS 4671

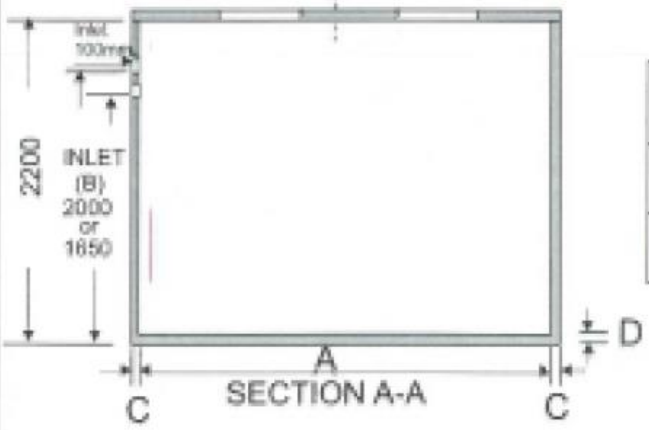
LID; 80mm thick reinforced with SL72 bottom plus N12 trimmer bars sitting on top of SL72. This lid has not been designed to carry fill or other surcharge loading apart from pedestrain traffic.

CONCRETE COVER; As per **AS/NZS 1546-1;2008** minimum concrete cover is to be 20mm.

Combined Collection Well Capacity
7100 litres
8500 litres

APPROVED
- 8 JAN 2018
NSW MINISTRY OF HEALTH





COLLECTION WELL

(A) mm	(B) mm	(C) mm	(D) mm	CAPACITY Litres
2400	2000	50	80	8500
2400	1650	50	80	7100

INSTALLATION;
NOTE THAT THE TANK IS TO BE FOUNDED ON A BED OF UNIFORMLY COMPACTED AND LEVELLED SAND AT LEAST 100MM THICK.

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