

TREATMENT PLANT APPROVAL 17/2020

Plumbing and Drainage Act 2018

Approval

1. The **Rivatec ES10PC** (“the system”) described in the Specifications and Drawings in the attached Schedule and manufactured by **Rivatec Environmental Pty Ltd** (ABN 19 099 003 737) (“the manufacturer”) has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code) dated 26 October 2017.
2. Approval is granted for the secondary quality wastewater treatment system, subject to compliance by the manufacturer with the requirements of the *Plumbing and Drainage Regulation 2018*, and the conditions of approval detailed below.
3. This approval, the conditions of approval and the Schedule comprise the entire Treatment Plant 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.
6. The secondary quality wastewater treatment system, which is an example of the approved systems, may only be used on premises that generate per day:
 - (a) a maximum hydraulic loading of 1,500 litres; and
 - (b) a maximum organic loading of 700grams BOD⁵
7. The system must continue to meet the requirements of secondary quality wastewater treatment system, producing the following effluent quality:
 - (a) 90% of the samples taken must have a BOD⁵ less than or equal to 20 g/m³ with no sample greater than 30g/m³.
 - (b) 90% of the samples taken must have total suspended solids less than or equal to 30g/m³ with no sample greater than 45g/m³.
 - (c) 90% of the samples taken must have a thermotolerant coliform count not exceeding 200 organisms per 100 mL with no sample exceeding 1000 organisms per 100 mL.
 - (d) Total chlorine concentration must be between 0.5g/m³ and 2.0 g/m³ in four out of five samples taken.
8. Each system must be serviced in accordance with the details supplied in the owner’s operation and maintenance manual.
9. This approval does not extend, apply to, or include the land application system used in conjunction with an approved system installed on premises.

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10. 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; and
- (e) detailed instructions for authorised service personal for its operation and maintenance.

11. 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 a number of installed systems for audit. The Chief Executive will notify the supplier's nominated NATA accredited laboratory which systems are to be audited for BOD⁵ 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)BOD⁵ for influent and effluent; and
- e)TSS for influent and effluent.

12. 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.

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

14. This approval expires on 01 January 2024 unless cancelled earlier in accordance with paragraph 12 above.

Treatment Plant Approval

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Department of Housing & Public Works



Lindsay Walker

**Director
Plumbing, Drainage and Special Projects
Building Legislation and Policy**

Date approved: 12 November 2020

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63 George Street Brisbane
GPO Box 2457, Brisbane Qld 4001

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Website www.hpw.qld.gov.au

ABN 61 331 950 314

TREATMENT PLANT APPROVAL No. 17/2020
Plumbing and Drainage Act 2018

SCHEDULE

Attachment 1

Drawings and Specifications for the

Rivatec ES10PC

Treatment Plant Approval

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PRODUCT CERTIFICATE OF REGISTRATION



Global Certification Pty Ltd

Number 463

Product Performance Testing

AS/NZS 1546.3:2008 On-site Domestic Wastewater Treatment Units – Aerated Wastewater Treatment Systems

Issued to

Rivatec Environmental Pty Ltd

6 Marklea Close, Wyong, NSW 2259

Certification Date: - 28/08/2006 Expiry Date: - 27/08/2021

Product Certified:

Tank Type	Model ID	System Capacity	No. of Persons	Manufactured and assembled
Vertical axis type cylindrical precast concrete collection well	ES10PC	System Capacity = 6889 Litres Primary Treatment = 3247 Litres Secondary Treatment = 2852 Litres	10 EP (equivalent persons)	Manufactured and Assembled: 6 Marklea Close, Wyong, NSW 2259

NACE CODES: 3700

This Certificate of Conformance to the Product Certificate Scheme for "Domestic Wastewater Treatment Units (Septic Tanks) and Rainwater Tanks" 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: 28th June 2019


Bruce Smith Director



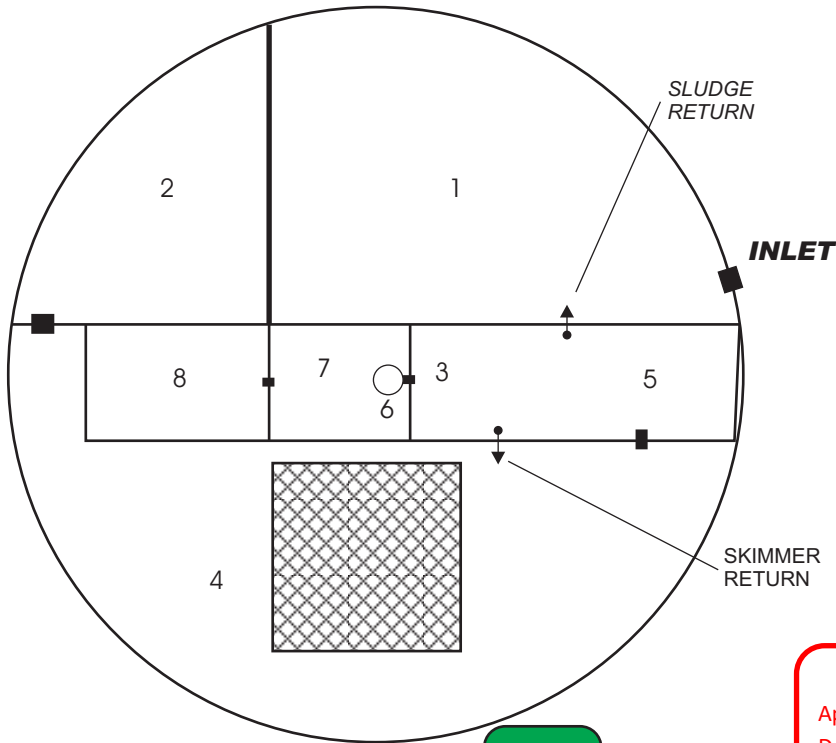
www.ias-anz.com.au/register

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

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ES10PC



LEGEND;

- 1. 2/3 PRIMARY TREATMENT**
- 2. 1/3 PRIMARY TREATMENT**
Minimum 3247lt
- 3. SURGE REDUCTION**
- 4. AERATION**
Minimum 2852lt
- 5. CLARIFIER**
Minimum 460lt
- 6. CHLORINATOR**
- 7. CHLORINE RETENTION**
Minimum 165lt
- 8. PUMP WELL**
Minimum 165lt

Treatment Plant Approval

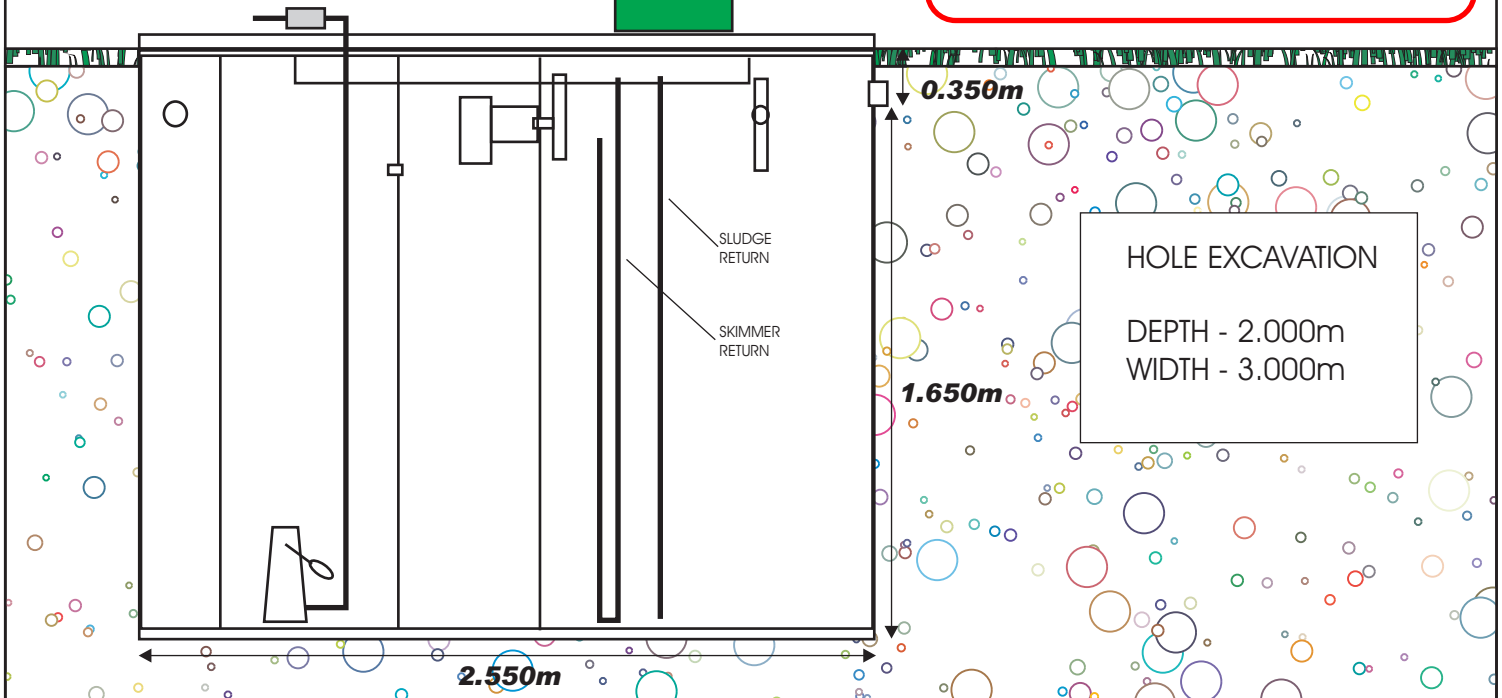
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GREEN BOX



HOLE EXCAVATION

DEPTH - 2.000m

WIDTH - 3.000m

NOTE;

ALL TANKS TO COMPLY WITH AS/NZ 1546.1
SYSTEM DESIGN BY EARTHSAFE NEWCASTLE PTY LTD

ALL PVC FITTINGS TO COMPLY WITH AS/NZ 1477

TANK MANUFACTURE;
CENTRAL COAST SEPTICS

GRAHAMS CONCRETE KYOGLE



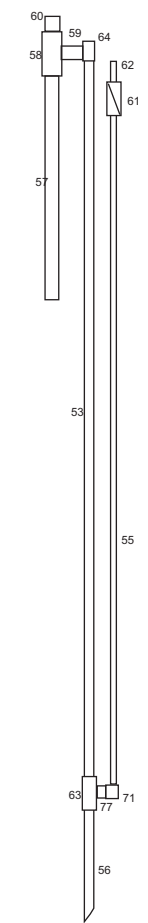
**Rivatec
Environmental**

ABN: 93 115 940 700
PO Box 605 Wyong 2259
Ph: 1300 327 847
F: 02 43534113

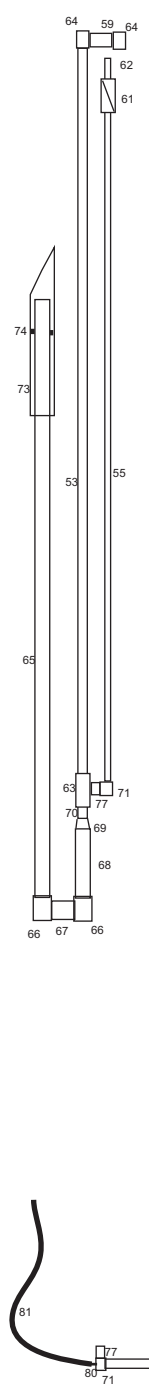
6 Marlea Close
Tuggerah 2259
NSW

Designed:
Date:
Lic: 188794C
SITE:

**Sludge
Return
Assembly**



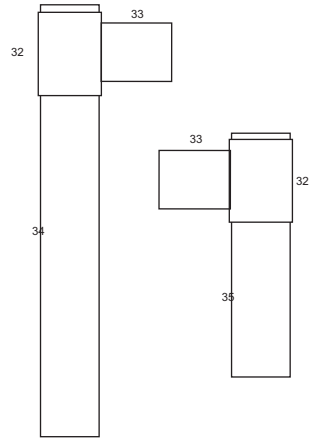
**Skimmer
Return
Assembly**



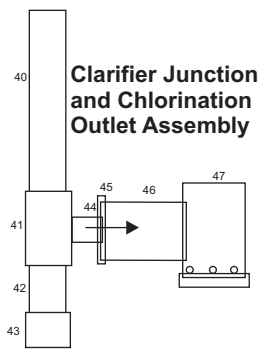
LEGEND;

1. Primary
2. Primary
3. Aeration
4. Clarifier chamber
5. Chlorination chamber
6. Pump well
7. Air Diffuser Disc
8. 2 x Bio Media Blocks
9. 13mm air hose - 2000mm
10. Concrete support block for Air diffuser disc
11. 50mm inlet junction Aeration to Clarifier
12. 50mm inlet junction to Clarifier
13. 50mm outlet junction from Clarifier
14. Sludge return to Primary
15. Skimmer return to Aeration
16. 100mm Chlorinator junction
17. 90mm Chlorine canister
18. Outlet junction from Chlorination chamber
19. Irrigation pump
20. High level float switch
21. Pump line outlet
22. Primary outlet junction
23. Primary inlet junction
24. 1/3 concrete primary baffle
25. Concrete 3 chamber insert
26. 7100LT concrete tank
27. 2 x Bio Media Blocks (550x550x600)
28. 25mm media support pipe
29. Green poly control cover or simalar
30. 80watt air blower
31. Control unit
32. 100mm dwv pvc square junction
33. 200mm x 100mm dvc pvc pipe
34. 400mm x 100mm dwv pvc pipe
35. 300mm x 100mm dwv pvc pipe
36. 100mm x 50mm dwv pvc pipe
37. 50mm dwv pvc square junction
38. 400mm x 50mm dwv pvc pipe
39. 200mm x 50mm dwv pvc pipe
40. 250mm x 50mm pn9 press pvc pipe
41. 50mm x 25mm #21 pvc tee
42. 140mm x 50mmpn9 press pvc pipe
43. 50mm x #6 pvc cap with 10 hole in base
44. 25mm x plastic bsp M&F tank outlet
45. 100mm x dwv pvc glued cap
46. 180mm x 100mm dwv pvc pipe
47. 100mm x dwv pvc F&F test opening with 5 x 10mm holes
48. 350mm x 90mm pvc stormwater pipe with 5 x 10mm holes
49. 90mm x pvc stormwater glued cap
50. 20mm x 20mm #21 bsp press pvc tee
51. 120mm x 20mm pn12 press pvc pipe
52. 25mm x 20mm #19 press pvc tee
53. 1450mm x 25mm press pvc pipe
54. 25mm x #6 press pvc cap
55. 1350mm x 15mm pn18 press pvc pipe
56. 280mm x 25mm pn12 press pvc pipe
57. 400mm x 32mm pn12 press pvc pipe
58. 32mm x 25mm #19 press pvc tee
59. 90mm x 25mm pn12 presspvc pipe
60. 70mm x 32mm pn12 press pvc pipe
61. 15mm x ball valve pvc swj
62. 60mm x 15mm pn18 press pvc pipe
63. 25mm x 15mm #19 press pvc tee
64. 25mm x #13 press pvc elbow
65. 1300mm x 32mm pn12 press pvc pipe
66. 32mm x #13 press pvc elbow
67. 70mm x 32mm pn12 press pvc pipe
68. 200mm x 32mm pn12 press pvc pipe
69. 32mm x 25mm #8 reducing coupling press pipe
70. 70mm x 25mm pn12 press pvc pipe
71. 15mm x #13 press pvc elbow
72. 15mm x #19 press pvc tee
73. 400mm x 50mm dwv pvc pipe with 45D cut at one end
74. Bsb32 rubber o-ring
75. 400mm x 15mm pn18 press pvc pipe
76. 200mm x 15mm pn18 press pvc pipe
77. 45mm x 15mm pn18 presspvc pipe
78. 800mm x 15mm pn18 presspvc pipe
79. 200mm x 150mm pn18 pree pvc pipe
80. 3/16 x 1/8 brass tail
81. 500mm x 4mm flex rubber hose
82. 25mm x 32mm #17 bsp male adaptor
83. 180mm x 25mm pn12 press pvc pipe
84. 1650mm x 25mm pn12 press pvc pipe
85. 550mm x 25mm pn12 press pvc pipe
86. 140mm x 25mm pn12 press pvc pipe
87. 25mm x #2 bsp male adaptor
88. 25mm x spring check valve
89. 13mm tail x 15mm bsp male plastic director
90. 13mm tail x 20mm bsp male plastic director
91. 25mm x 25mm #19 press pvc tee
92. 25mm x pn12 press pvc pipe
93. 25mm x #7 press pvc socket

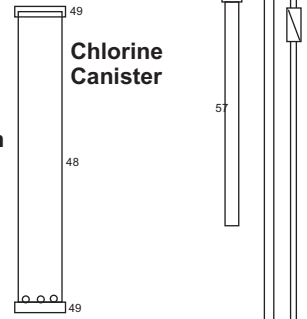
**Primary Inlet and
Outlet Junction
Assembly**



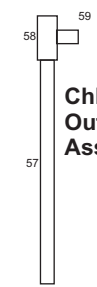
**Clarifier Junction
and Chlorination
Outlet Assembly**



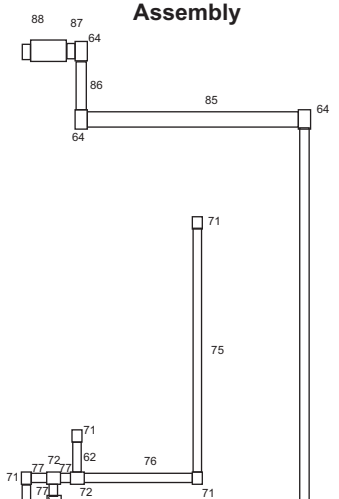
**Chlorine
Canister**



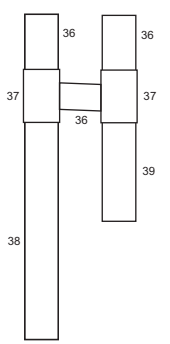
**Chlorine Retention
Outlet Junction
Assembly**



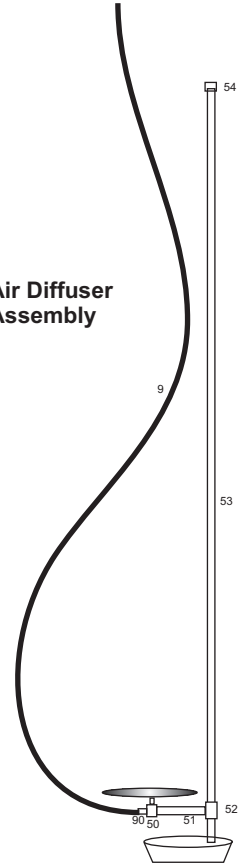
**Pump Riser
Assembly**



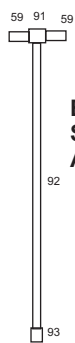
**Aeration / Clarifier
Junction
Assembly**



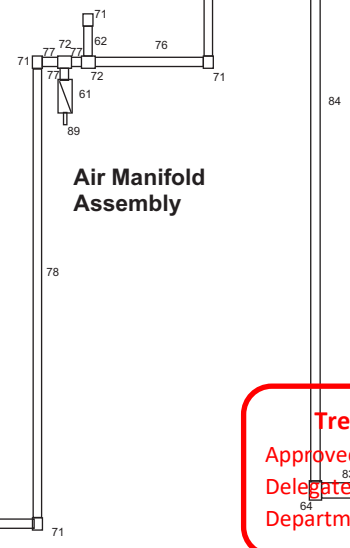
**Air Diffuser
Assembly**



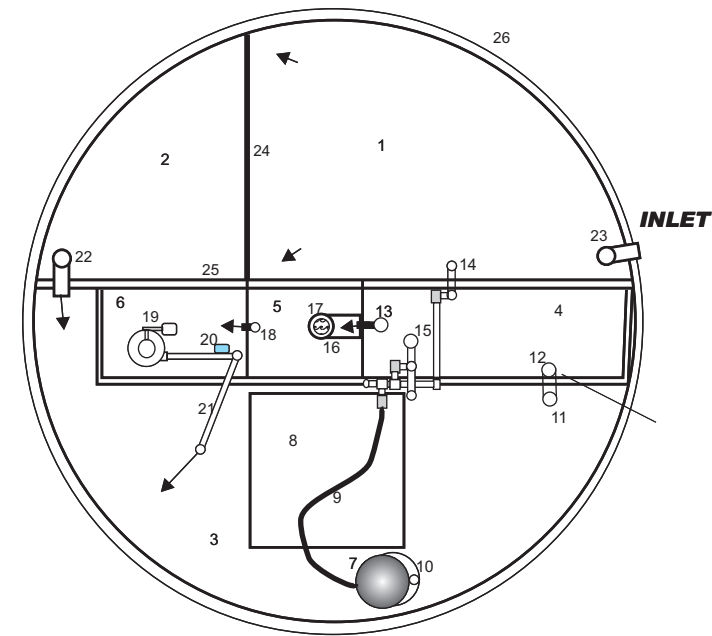
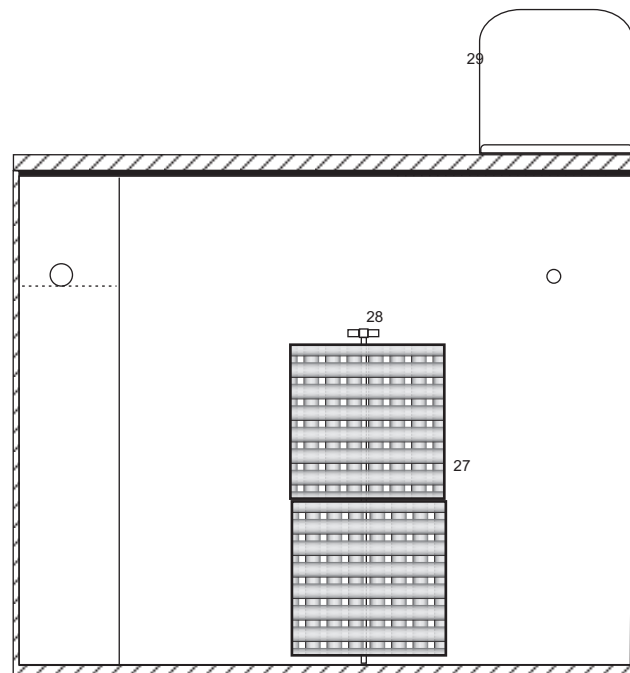
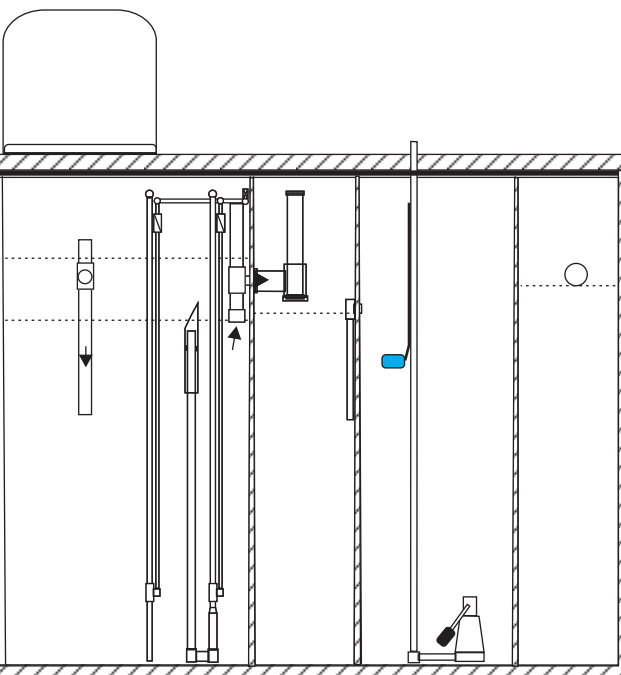
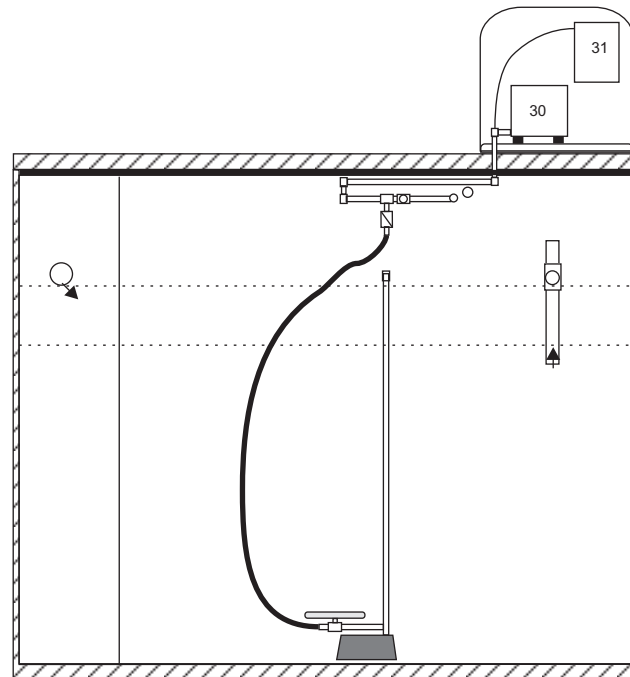
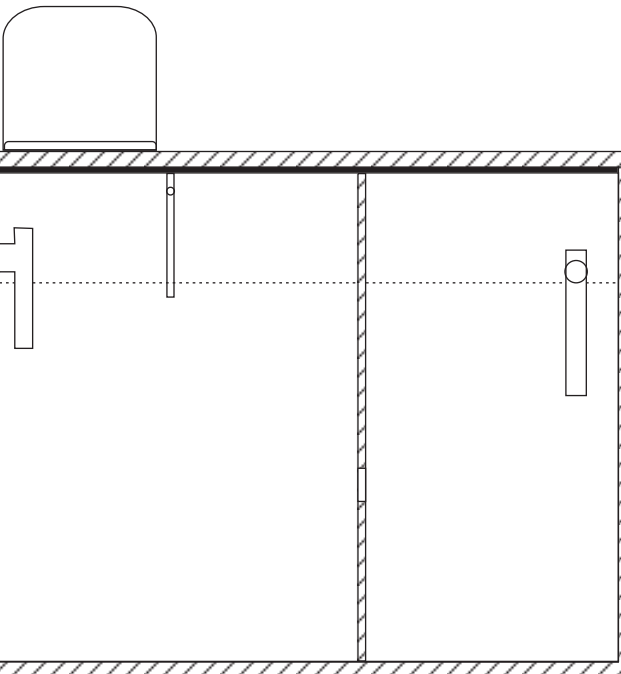
**Bio Media
Support
Assembly**



**Air Manifold
Assembly**

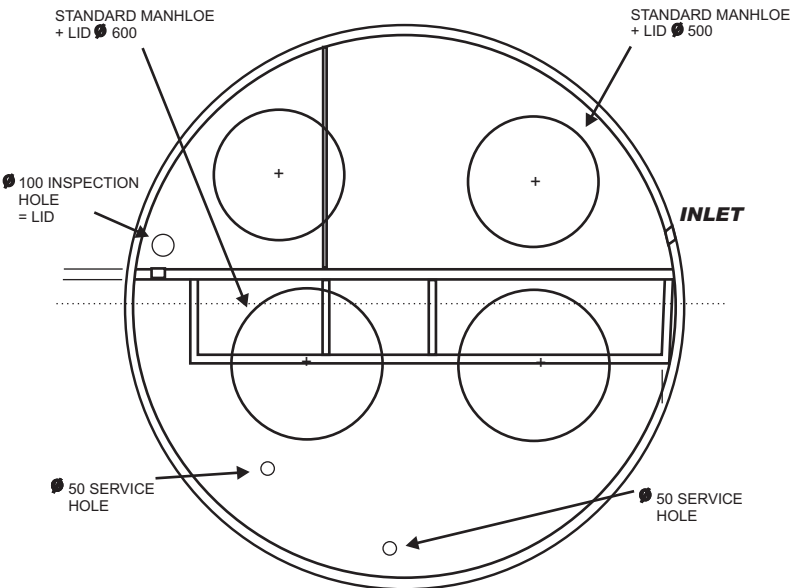


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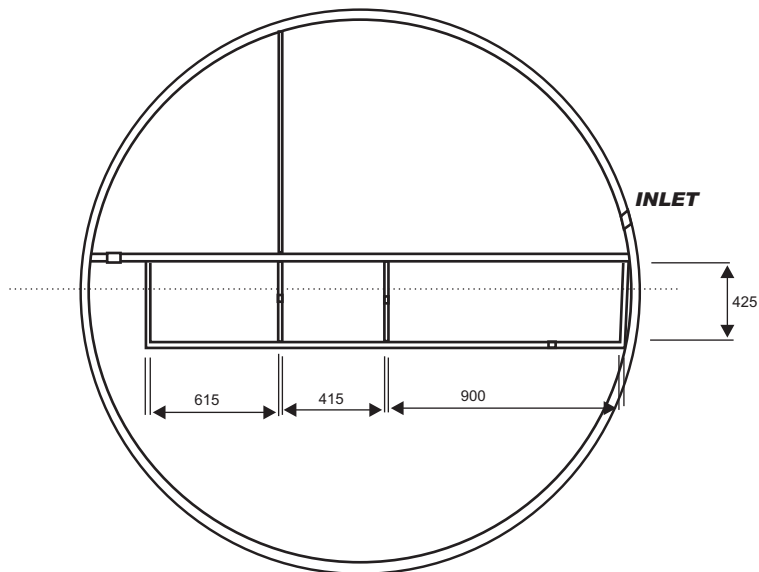
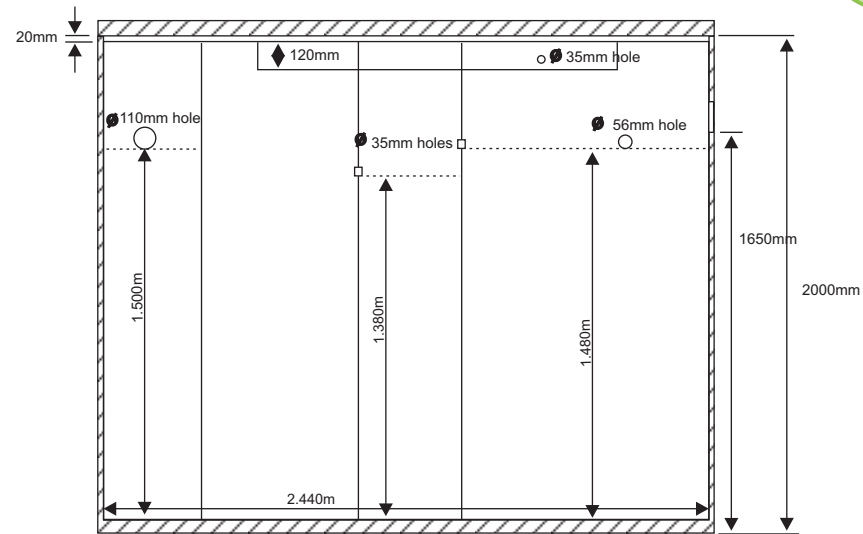


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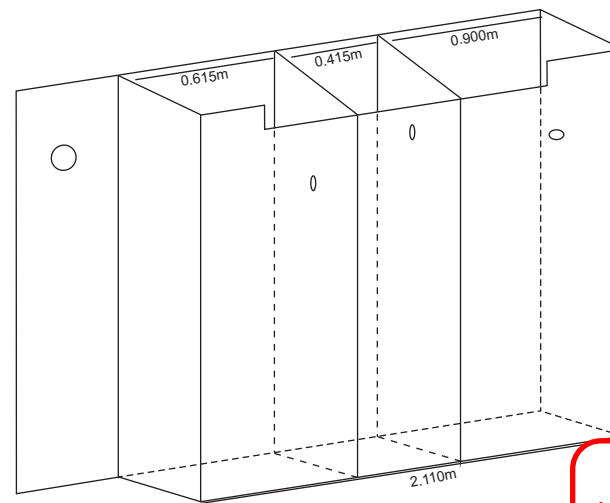




EFFLUENT TREATMENT INSERT
PLAN VIEW AT BASE OF INSERT
+ LID DETAILS



EFFLUENT TREATMENT INSERT
PLAN VIEW AT TOP OF INSERT



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