



Certificate of Accreditation

On-Site Waste Water Management System

This Certificate of Accreditation is hereby issued by the Minister for Building and Construction pursuant to Section 59(2) of the *Building Act 2000* and the Plumbing Code of Australia as applicable.

System: A & A Worm Farm Waste System Models
PT 3000 LG, PT 3000LP, CT3000LG, CT3000LP, CT3200LG,
CT3600LG, CT3600LP, CT5000LG, CT5000LP

Manufacturer or Supplier: A & A Worm Farm Waste Systems PTY LTD

Of: 5/2135 Frankston-Flinders Road
Hastings, 3915

This is to certify that the A & A Worm Farm Waste Systems as described in Schedule 1, has been accredited for use as an on-site waste water management system in single dwellings (within plumbing installations in Tasmania). This accreditation is subject to the conditions and permitted uses specified in Schedule 2, and the Plumbing Code of Australia as applicable.

Dale Webster
Director of Building Control
Delegate of the Minister for Building and Construction

Date of Issue: 30 August 2016

Certificate Number: FOL/16/5175

This Certificate of Accreditation is valid until 30 August 2021 subject to conditions unless withdrawn earlier by the Director

SCHEDULE I: Specification (Informative)

A & A Worm Farm Waste System

General Description

The A & A Worm Farm Waste System (“the system”) is a primary treatment system which collects and treats domestic and commercial wastewater and organic waste.

- 1) The treatment train contains the following elements (see Attachment A):
- a) A polyethylene or concrete tank tested and accredited in accordance with AS/NZS 1546.1 (See Table I) containing the wastewater drain through the organic pile and the plastic-latticework. This separates the liquids and solids and allows continuous flow of liquid to the chamber below.
 - i. A raised perforated plastic platform i.e. ‘a soils/liquid separator’,
 - ii. A filtration bed mix including composting worms,
 - iii. An air vent pipe,
 - iv. A compost bin located on the top of the tank used as a chute for deposition of organic waste,
 - v. An Orange SP or equivalent submersible effluent distribution pumps (where applicable).
[Note that no pump is required for gravity-flow systems.]
 - b) A distribution box to evenly distribute effluent to the land application area and to collect wormcasts from the effluent.

Treatment process

- a) Wastewater enters the tank and flows onto the plastic latticework platform where the solids pile up and are decomposed aerobically by worms and micro-organisms.
- b) The wastewater drain through the organic pile and the plastic-latticework. This separates the liquids and solids and allows continuous flow of liquid to the chambers below.
- c) The primary effluent (liquid and finely composted worm casts) is discharged by either a pump or gravity feed system to a land application system.

Models

PT 3000L G, PT 3000L P, CT 3000L G, CT 3000L P, CT3000L P, CT 3200L G, CT 3600L G, CT 3600L P, CT 5000L G, CT 5000L P

The maximum hydraulic load of the system is specified on the Table 1 below:

Model	Tank	Accreditation Number	Maximum flow Litres/day
PT 3000L G (poly tank gravity feed) PT 3000L P Poly tank pump system)	ReIn Pty. Ltd.	SMK1651	1800
	Everhard Industires Pty. Ltd.	SMK01950	
CT 3200L G (concrete tank gravity feed) CT 3200L P (Concrete tank pump system)	Hendrixx Concrete Pty. Ltd. Icon-Septech Pty. Ltd.	SMK0716 SMK0714	3200
	Precast Concrete Wangaratta Pty. Ltd. Statewide Concrete Products	SMK1165 SMK0722	
CT 3600L G (Concrete tank gravity feed) CT 3600L P (Concrete tank pump system)	Icon-Septech Pty. Ltd.	SMK0714	3600
CT 5000L P (Concrete tank pump system) CT 5000L G (Concrete tank gravity feed)	Hendrixx Concrete Pty. Ltd.	SMK0716	4500

SCHEDULE 2: Conditions of Accreditation

Normative

Definitions

Where included in this Certificate of Accreditation and Schedules:

AS/NZS 1547 means the Joint Australian/New Zealand Standard 'AS/NZS 1547:2012 On-site domestic wastewater management';

AS/NZS 1546.1 means the Joint Australian/New Zealand Standard 'AS/NZS 1546.1:2008 On-site domestic wastewater treatment units, Part 1: Septic Tanks';

AS/NZS 3000 means the Joint Australian/New Zealand Standard 'AS/NZS 3000:2000 Wiring rules'

AS/NZS 5667 means the Joint Australian/New Zealand Standard 'AS/NZS 5667.1:1998 Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and preservation and handling of samples';

BOD₅ means '5-day Biochemical Oxygen Demand unless otherwise stated';

Council means 'the Municipal Council having jurisdiction';

Commissioned means 'when any required test results from a NATA Certified Laboratory show that the water quality requirements for the system have been met or all pre-commissioning tests have been carried out in accordance with AS/NZS 1547 on all associated equipment including the land application area';

Designer means 'a person who is accredited under the *Building Act 2000* or a *Plumber* who has a specialty in the area of designing on-site waste water management system installations

Director means 'the Director of Building Control';

EC means electrical conductivity

E. coli means 'Escherichia coli of the family Enterobacteriaceae which is a bacterium used in public health as an indicator of faecal pollution';

FOG means Fat, Oil and Grease

g/m³ means grams per cubic metre, which is equivalent to milligrams per litre (mg/L)

Informative defines the application of Schedule 1, which is for information and guidance only.

Manufacturer means 'A and A Worm Farm Waste Systems PTY LTD';

NATA means 'National Association of Testing Authorities';

Normative defines the application of Schedule 2, which is an integral part of the Certificate of Accreditation.

PCA means 'Vol. 3 of the National Construction Code (Plumbing Code of Australia)';

Permit means 'a Permit issued by the *council* pursuant to section 82 of the *Building Act 2000*';

Permit authority means 'a person or body authorised for that purpose by the *council* of the municipal area in which the on-site waste water management system is installed';

Plumber means a person who holds an appropriate class of licence under the *Occupational Licensing Act 2005* as a Plumber Practitioner (Certifier).

Supplier means 'the party that is responsible for ensuring that products meet and, if applicable, continue to meet, the requirements on which the certification is based.' The supplier is A and A Worm Farm Waste Systems PTY LTD.

System means 'A and A Worm Farm System'.

TN means 'Total Nitrogen';

TP means 'Total Phosphorus';

TSS means 'Total Suspended Solids'.

General

1. No modifications or variations to the system may be made unless the manufacture has prior approval from the Director of Building Control in writing.
2. The system is approved subject to the relevant municipal council being satisfied that the installation shall be installed and maintained in accordance with *Australian standards AS/NZS 1546.1 On-site domestic wastewater treatment units: Septic tanks and AS/NZS 1547 On-site domestic wastewater management* (as amended):
 - a) The design, manufacture, installation and maintenance of the treatment system, and
 - b) The design, installation and maintenance of the land application system.
3. A permanent, clear and indelible notice must be attached to the system in a prominent position. The Notice must include:
 - a) Manufacturer's name and phone number,
 - b) Model number of the system, and
 - c) Date of installation.

Performance

4. Estimated electricity usage: the system must be continuously connected to a 10 AMP 240V/50Hz AC power supply. A weather-proof isolating switch must be provided at the power outlet. The power supply must have its own clearly marked designated RCD (residual-current device) protected circuit breaker in the fuse box and no other appliances shall be connected to the same circuit.

Model	Orange SP100 180 Watts		Orange SP213 400 Watts		Orange SP334 750 Watts		kWh/year	Approximate annual cost @ ~\$0.33/kWh
	Hours / day	kWh / day	Hours / day	kWh / day	Hours / day	kWh / day		
3000	1	0.18	0.3	0.12	2	0.15	44-66	\$15-\$22
3200	1.8	0.32	0.53	0.21	0.36	0.27	77-117	\$25-\$39
3600	2	0.36	0.6	0.24	0.4	0.3	88-132	\$26-\$40
5000	2.5	0.45	0.75	0.3	0.5	0.37	110-165	\$36-\$50

Installation

5. When a treatment system is purchased, the manufacture or distributor must provide the property owner with a copy of the following documents:
 - Statement of warranty and of service life of the system,
 - Installation and maintenance manual,
 - Owner's manual,
 - Schematic drawing of the treatment system,
 - This Certificate of Accreditation.
6. The pipework connecting the treatment system to the house and to the land application area must be installed by a Plumbing Certifier (drainage), or a Plumbing practitioner working in the employment of a Plumbing Certifier (drainage) licensed by the Department of Justice and in accordance with the manufacturer's specifications in the installation manual and the most recent version of:
 - a) AS/NZS 1546.1 *On-site domestic wastewater treatment: Septic tanks*
 - b) AS/NZS 1547: *On-site domestic wastewater management*), and
 - c) The Tasmanian Plumbing Regulations.
7. The electrical components of each treatment system must be installed by a licensed electrician in accordance with the manufacturer's instructions.
8. The system must be installed in such a way that provides ease of ongoing access to relevant components of the system for the purpose of inspection and maintenance is ensured.

Effluent Disposal and Management

9. The effluent land application area and duplicate reserve area must be assessed, designed, constructed and maintained in accordance with land application methods for primary treated effluent in the latest version of AS/NZS 1547. Effluent from the system must not be applied to land via surface irrigation.

Maintenance and monitoring

10. The relevant local council shall require the owner/user of the system to enter into a service contact with a Licensed Plumbing Certifier/ Contractor to service and maintain the treatment system and land application system every 6 months for the first year and then every 2 years thereafter.
11. The system must be serviced and maintained in accordance with the manufacturer's specifications in the A and A Worm Farm servicing manual.

Figure 1: Typical Installation A



Figure 2: Typical Installation B

