



Tasmanian Plumbing Code 1994

PART C2 - SYSTEM ACCREDITATION REPORT AND CONDITIONS

No. BSR0452

TYPE OF SYSTEM: Waterless Composting Toilet

TITLE: Nature Loo Sun-Mar Excel

APPLICANT: Australasian Connections Pty Ltd
ABN: 55 604 943 863
Trading as: Nature Loo
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TOOWONG Qld. 4066
Email: info@nature-loo.com.au
Web: www.nature-loo.com.au

MANUFACTURER: SUN-MAR Corporation, Burlington, Ontario, Canada

SYSTEM DESCRIPTION: The Sun-Mar Excel waterless composting toilet system makes use of aerobic composting and dehydration processes in the treatment of blackwater waste. The system consist of three chambers:

The Composting Chamber - Faeces, urine, toilet paper and organic matter in the form of a bulking agent are deposited through the toilet chute into the composting chamber. Once every third day when the toilet is in use, the composted material is aerated and mixed by rotating the handle of the Bio-drum. As the drum rotates the drum door closes automatically so that all waste remains in the drum.

Composted Finishing (End Product) Drawer – When the Bio-drum is approximately $\frac{2}{3}$ full a small amount of compost is deposited into the finishing drawer by rotating the drum while the drum door remains open. The frequency of the removal of the compost depends on usage and will vary between 1 to 4 times per year. The manufacturer recommends that the compost should be left in the tray for a minimum of 3-4 weeks before being emptied.

Evaporating Chamber – Liquid wastes in the form of urine entering the system is controlled by several means. First of all some liquid waste is absorbed by the compost pile which helps to maintain the moisture content of the pile. Excess moisture is removed in the form of vapour from the pile and any excess liquid percolates through the pile and drains onto the evaporating chamber/tray where it is evaporated by means of a 250 W heating pad mounted underneath the evaporating tray.

Air is drawn through the system by means of a 30 W fan installed at the rear of the toilet below the exhaust fan. Air is pulled through intake holes at the front end of each side of the toilet; over the evaporating tray and up the vent stack which is attached to the rear of the toilet. The negative pressure, which the fan creates within the toilet, ensures that there is no offensive odour coming from the toilet when in use.

SPECIFICATION: Materials: Fibreglass and high grade stainless steel

SUPPORTING DOCUMENTS:

- Nature Loo's Application for Accreditation of the Nature Loo Sun-Mar Excel Waste Water Management System
- Standards Australia International Standards Mark Schedule for Certified Product
- Sun-Mar Excel Owner's Manual
- National Sanitation Foundation Report on Performance Evaluation of the Sun-Mar X.L. July 1990
- NSW Health Department Certificate of Accreditation WCT 004 23 April 2004

SCHEDULE (S)

Schedule 1: Conditions of Accreditation

Schedule 2: Diagrams of Nature Loo Sun-Mar Excel

NOTE:

- Composting action decreases as temperature drops therefore, the toilet must be kept constantly at or above 15^o C. when in extended use.
- In the event of an Owner's default in failing to comply with the conditions of a special plumbing permit, the Council or Permit Authority may take action to obtain compliance in accordance with the *Building Act 2000* or *Plumbing Regulations 2004*.

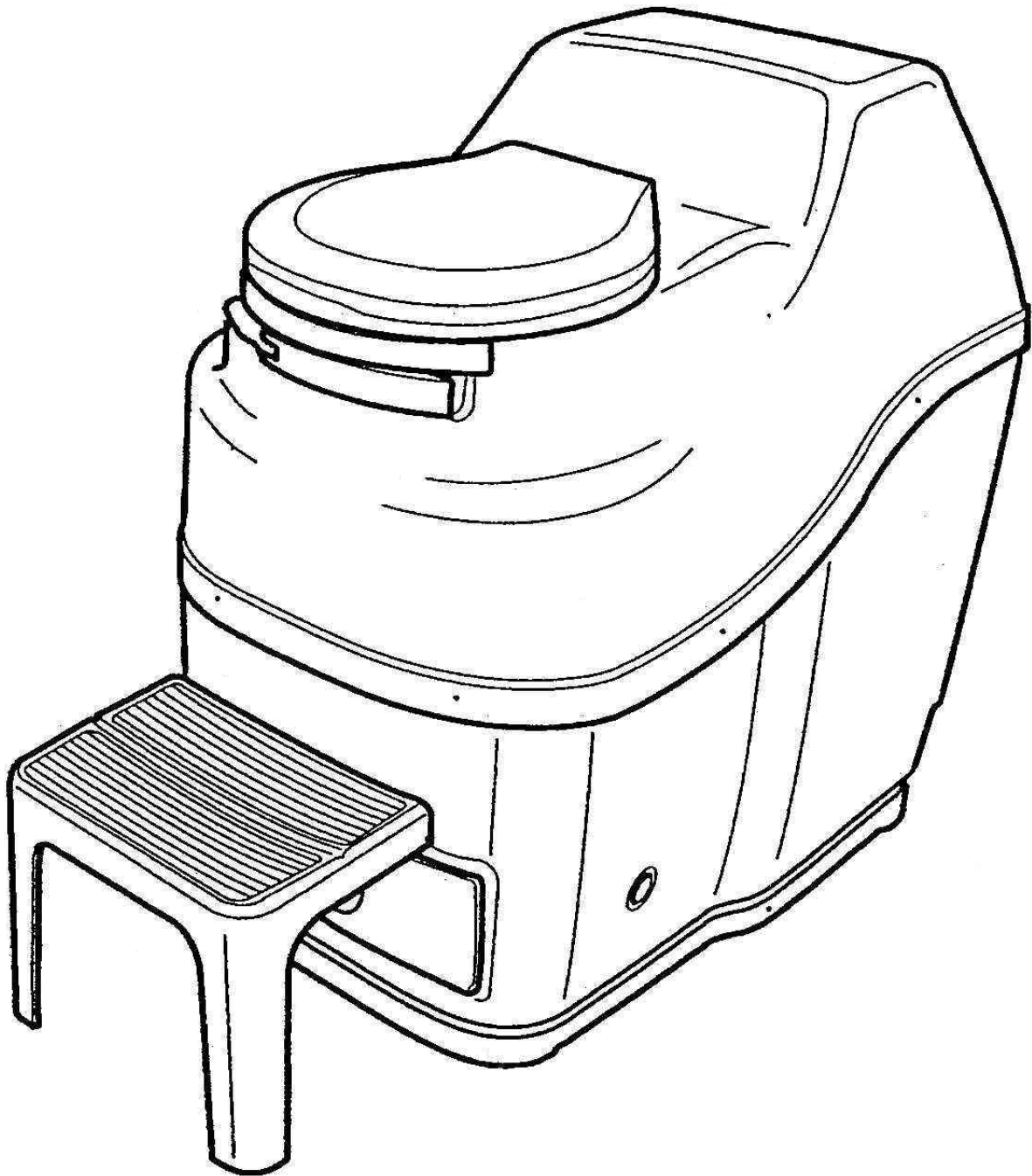
SCHEDULE 1**CONDITIONS OF ACCREDITATION:****NATURE LOO SUN-MAR EXCEL WATERLESS COMPOSTING TOILET SYSTEM.**

1. The Nature Loo Sun-Mar Excel Waterless Composting Toilet is only to be used in domestic situations and where in the opinion of the Permit Authority: -
 - 1.1. the unit provides for adequate sanitation where no sewerage system is available; and
 - 1.2. the unit is capable of being installed and operated in accordance with the manufacturers instructions and the conditions listed below.
2. Installation of the Nature Loo Sun-Mar Excel is restricted to a maximum of 4 persons occupying a domestic premises.
3. For each installation the owner of a premises must make an application for a special plumbing permit to the Permit Authority having jurisdiction to install a Nature Loo Sun-Mar Excel Waterless Composting Toilet as a waste water management system in accordance with Section 80, Part 7 of the *Building Act 2000*.
4. An application to the Permit Authority to install a Nature Loo Sun-Mar Excel Waterless Composting Toilet must include:
 - 4.1. plans and specifications of the Nature Loo Sun-Mar Excel Waterless Composting Toilet;
 - 4.2. a statement detailing the proposed method of disposal of the composted end product, the frequency of such disposal and the estimated volume of composted end product to be removed;
 - 4.3. a statement as to whether the composting system is likely to produce a liquid component and how it is proposed to dispose of the liquid. The statement must be supported by detailed plans of any necessary liquid disposal system.
5. The owner is to be provided with a comprehensive operation and maintenance manual (specifically written for Australian conditions) detailing the start up procedure and maintenance program necessary for the efficient and safe operation of the unit;
6. A permanent notice with basic instructions is to be affixed to the unit in a prominent position. The permanent notice is to include provision for recording the date the last time humus material was removed from the composting chamber onto the composted end product tray.
7. The waste chute must be cleansed at least daily or more frequently when it becomes fouled with excreta.
8. The Nature Loo Sun-Mar Excel composting toilet system must be installed, operated and maintained in accordance with the manufacturer's instructions, the conditions of accreditation and any relevant and reasonable condition set by the Permit Authority under a special plumbing permit.
9. The composted end product in the Nature Loo Sun-Mar Excel composting toilet system must be retained on the composted end product tray for a period of not less than 4 weeks before the tray is emptied. A statement to that effect must be included on any accompanying literature and the Owner's Manual.

10. Material, which has been only partially composted, may only be removed from the Nature Loo Sun-Mar Excel composting toilet system with the written consent of the Permit Authority. The Permit Authority may issue instructions as to who may remove the partially composted material (humus) and the method of disposal of the humus.
11. Unless otherwise directed by the Permit Authority or the relevant Environmental Health Officer, the composted end product is to be disposed of by burial within the confines of the premises in soil which is not intended to be used for the cultivation of food for human consumption at a depth no less than 300 mm. The minimum cover of soil over the deposited humus must be 100 mm. Alternatively the composted end product may be retained for an additional period of three months in a lidded childproof compost bin. At the completion of this period the humus may be used as a soil conditioner without any further treatment subject to the consent of the Environmental Health Officer.
12. The Sun-Mar Excel must only be installed in a sanitary compartment satisfying Part 3.8.3.4 of the Building Code of Australia – Volume Two or Tas Part F2.102 of the Building Code of Australia – Volume One.
13. All plumbing work installed in connection with the Nature Loo Sun-Mar Excel composting toilet system must satisfy the relevant requirements of the Tasmanian Plumbing Code, and be carried out by a registered plumber with appropriate qualifications.
14. Any proposed modifications to the Nature Loo Sun-Mar Excel composting toilet system specified processes, equipment, materials, fittings or manuals must be authorised by Department of Infrastructure, Energy and Resources and may be subject to additional verification and/or testing.
15. Where the Nature Loo Sun-Mar Excel composting toilet system has been found not to operate satisfactorily during its serviceable life, and as a result require modification to achieve the required end product quality limits set out in Table A1 of AS/NZS 1546.2:2001 *On-site domestic wastewater management units; Part 2: Waterless composting toilets*, the installed systems must be modified accordingly.
16. All electrical work in connection with the Nature Loo Sun-Mar Excel composting toilet system must be carried out by a licensed electrician and in accordance with relevant provisions of AS/NZS 3000.
17. Each installation of a Nature Loo Sun-Mar Excel composting toilet system must be inspected and checked by the designer or the designer's agent. The designer or the designer's agent on completion is to certify that the installation has been installed and commissioned in accordance with its design, the conditions of accreditation and any additional requirements of the Permit Authority.
18. The certificate of accreditation does not cover the method of disposal from the Nature Loo Sun-Mar Excel composting toilet system emergency drain. The emergency drain may be connected to an existing or proposed waste water management system subject to any relevant and reasonable conditions imposed under a special plumbing permit.
19. Nature Loo is to keep a register of all sales and installations within Tasmania and the register must be made available to the Department of Infrastructure, Energy and Resources on request.
20. The Certificate of Accreditation for the Nature Loo Sun-Mar Excel composting toilet system is valid for five (5) years from the date of issue or until withdrawn by the Minister.

SCHEDULE 2A

**NATURE LOO SUN-MAR EXCEL WATERLESS COMPOSTING TOILET
TYPICAL DIAGRAM**



SCHEDULE 2B

NATURE LOO SUN-MAR EXCEL WATERLESS COMPOSTING TOILET

AIR FLOW DIAGRAM

