

03 December 2018

TO WHOM IT MAY CONCERN

RE: ROTA-LOO COMPOSTING TOILET INSTALLATION

This document is to support the application to a relevant New South Wales local authority for the installation of a Rota-Loo Waterless Composting Toilet (WCT) system.

The NSW Department of Health has approved the Rota-Loo for installation and use as a Waterless Composting Toilet; certificate number WCT010.

Rota-Loo has been certified as compliant to AS/NZS1546.2:2008 On-site domestic wastewater treatment units - Waterless Composting Toilets

JASANZ Certifying Organisation: IAPMO R&T Oceana
Product Compliance Certificate: OMK30059



A copy of the certificate is attached below.

The system has no effluent output and all end product waste may be disposed of within the premises following a period of composting during which the waste is held within the system. End product waste has been tested by an independent NATA approved laboratory and found to comply with the requirements of the standard.

The applicant has been given all necessary instructions for the installation and operation of the Rota-Loo, and a copy of the NSW Approval Certificate and conditions. These documents may be found on our website, www.rotaloo.com.au

Kind regards,



Sonya Sing Lee

IAPMO R&T OCEANA

1040 Dandenong Road, Carnegie VIC 3163 AUSTRALIA



IAPMO R&T Oceana is a product certification body which inspects and arranges for the independent laboratory testing of samples taken from the manufacturer's stock or from the market or a combination of both, to verify compliance of the requirements of applicable Standards and Specifications. This activity is coupled with periodic surveillance of the certified product taken from the market place or the manufacturer's factory. This certification is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO R&T Oceana of the product acceptance by Authorities Having Jurisdiction. The IAPMO R&T Oceana "OceanaMark" Product Certification Scheme is a JAS-ANZ accredited ISO Guide 67 Type 5 Product Certification Scheme.

OCEANAMARK CERTIFICATE

IAPMO R&T Oceana hereby grants to:

PFG Group Victoria Pty Ltd T/A Kiel Industries

A.B.N.: 32 628 714 652

87-93 Tramway Road, Morwell, Victoria, Australia, 3840

the right to use the OceanaMark in accordance with IAPMO Oceana Pty Ltd 'Mark Rules' on the product as described in the attached OceanaMark Schedule. The Certificate is granted subject to IAPMO Oceana Pty Ltd 'Governance Rules'.

Evaluated to:

AS/NZS 1546.2 On-site domestic wastewater treatment units - Waterless composting toilets

Manufacturer:

PFG Group Victoria Pty Ltd T/A Kiel Industries

Certificate No.: OMK30059

Certified

19 June 2017

Date:

Issue Date: 20 November 2018

Expiry Date:

18 June 2022

Chief Executive Officer of the IAPMO Group

This OceanaMark certification is for the period indicated herein and is void after the date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of IAPMO R&T Oceana, or any evidence of non-compliance with applicable Standards, Specifications or of inferior workmanship, may be deemed sufficient cause for revocation of this certification. Reproduction of or reference to this certificate for advertising purposes may be made only by specific written permission of IAPMO R&T Oceana. Any alteration of this certificate could be grounds for revocation of this certification.



OCEANAMARK SCHEDULE



Certificate Holder: PFG Group Victoria Pty Ltd T/A Kiel Industries	Certificate No.: OMK30059
Address : 87-93 Tramway Road MORWELL VIC 3840 AUSTRALIA	Issue Date: 20-Nov-18
A.B.N.: 32 628 714 652	Expiry Date: 18-Jun-22
Manufacturer: PFG Group Victoria Pty Ltd T/A Kiel Industries	First Certified: 19-Jun-17
	Standards: AS/NZS 1546.2:2008 On-site domestic waste water treatment units Part 2: Waterless Composting Toilets

Std/Spec: AS/NZS 1546.2:2008			Certificate No.: OMK30059			
Brand Name	Model Name	Model ID	Product Type	Product Description	Application	Capacity
Rota-Loo	Rota-Loo 650	RL650	Waterless Composting Toilet	Self contained WCT unit for safe treatment and handling of human waste	Home / Holiday Home	4 equivalent full time people
Rota-Loo	Rota-Loo 950	RL950	Waterless Composting Toilet	Self contained WCT unit for safe treatment and handling of human waste	Home / low use public facility	8 equivalent full time people
Rota-Loo	Rota-Loo 2000 Maxi	RL2000	Waterless Composting Toilet	Self contained WCT unit for safe treatment and handling of human waste	Public use facility	20 equivalent full time people

END RECORD

Chief Executive Officer of the IAPMO Group



Health

Certificate of Accreditation

Sewage Management Facility

Waterless Composting Toilet Systems

This Certificate of Accreditation is issued by the Secretary of the NSW Ministry of Health pursuant to Clause 41(1) of the Local Government (General) Regulation 2005.

System: *Rota-Loo Waterless Composting Toilet Systems*

Manufacturer: *PFG Group Victoria Pty Ltd T/A Kiel Industries*

Of: *87-93 Tramway Rd, Morwell, Victoria, 3840*

The Rota-Loo Waterless Composting Toilets as described in Schedule 1 has been accredited as a sewage management facility for use in single domestic premises in NSW. This accreditation is subject to the conditions of accreditation and permitted uses specified in Schedule 2.

*A/Director, Environmental Health
for Secretary (delegation PH335)*

Issued: *10 December 2018*

Certificate No: *WCT010*

Expires: *31 December 2022*

Rota-Loo Waterless Composting Toilet Systems

Schedule 1: Specification

General Description

The Rota-Loo composting toilet systems are designed to receive and treat human waste from one or two toilet pedestals and reduce such wastes after a composting period into an innocuous relatively dry waste that is capable of being disposed of within the premises without nuisance or risk to health.

Specification

The Rota-Loo composting toilet system comprises a circular outer tank, inside which is a turntable divided into six (6) or eight (8) equal sections, each section holding a removable composting bin. The Rota-Loo is situated below floor level and directly under the toilet pedestal to which it is connected by a waste chute. Access to the bins is provided by a hatch type door fitted on one vertical side of the outer tank. The outer tank, turntable, waste chute and bins are manufactured of medium density polyethylene.

Each bin has holes in the base and side to permit drainage of liquid and movement of air through the waste pile to maintain an environment for aerobic composting activity. The bins are supplied with a Geotextile filter pad to ensure effluent solids are contained in the bin.

An air venting system is attached to the Rota-Loo to draw warm fresh air through the outer tank and out through an above-roof level vent. A low powered fan (DC or AC), located in the vent pipe, draws air through the outer tank to ensure adequate air flow to evaporate liquids, provide oxygen to the composting material and create a negative air pressure to prevent any odour rising into the toilet room. The vent system is manufactured from readily available DWV PVC pipe and fittings.

The composting capacity and usage of the Rota-Loo models are expressed in the following table.

Model	Outer Tank Dimensions (mm)	Composting Bins Capacity	Eq. full time adult residential use
RL650	1200 x 650	6 x 30 L	4
RL950	1200 x 950	6 x 65 L	8
RL2000	1900 x 1000	8 x 150 L	20

In installations where high liquid loads occur (typically public use facilities) or in cold climates the air flow through the Rota-Loo outer tank may not be enough to evaporate all the separated liquid. For these cases, provision is made to drain excess liquids into an absorption trench or a secondary liquid evaporation system which can be placed to effectively utilise solar heat transfer.

Method of Operation

The waste chute from the toilet pedestal above is located directly over a collection bin. When the first bin has been filled, the outer hatch door is opened and the turntable rotated by hand one position. Once a bin is filled and rotated, no fresh waste can be added and the contents will compost safely and efficiently shut away inside the outer tank. The second bin is filled and rotated and so on until all bins have been filled.

The first bin is then removed and the contents - humus - is disposed of by burying in a suitable location within the premises. The Rota-Loo design allows for a composting time of approximately 12 months at the designed usage capacity. The compost bins are numbered for easy recording and a direction arrow indicates the direction of rotation.

Schedule 2: Conditions of Accreditation

1. General

1.1 For each installation the owner/occupier of the premises shall make an application to the Local Authority to install a Rota Loo composting toilet system as a waste management facility in accordance with Section 68, Part C of the Local Government Act 1993 and Clause 29 of the Local Government (General) Regulation 2005.

1.2 For each installation the application to the local authority shall include:

- 1.2.1 Plans and specifications of the nominated model of the Rota Loo composting toilet system;
- 1.2.2 A site plan drawn to scale showing the location and type of the proposed sullage disposal system for the premises and state the method of disposal;
- 1.2.3 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;
- 1.2.4 A statement on whether the composting system is likely to produce a liquid component and how it is proposed to dispose of the liquid. The statement shall be supported by detailed plans of any necessary liquid disposal system.

1.3 Installation of the nominated model of the Rota Loo composting toilet system is restricted to the number of persons occupying a domestic premises as set out in the table attached to Schedule 1 and where in the opinion of the local authority the nominated model of the Rota Loo composting toilet system will be capable of providing satisfactory toilet accommodation.

1.4 A permanent notice with basic instructions shall be affixed to the unit in a prominent position. The permanent notice shall include provision for recording the date the last time composted material was removed from the composting bin.

1.5 The manufacturer shall supply with each system a comprehensive manual with details of the maintenance procedures necessary to ensure the efficient and safe operation of the system.

1.6 The Rota Loo composting toilet system shall be installed and operated in accordance with the manufacturer's instructions and any conditions imposed by the Local Authority.

1.7 All sullage water shall be disposed of by means of a disposal system designed to the satisfaction of the Local Authority.

2. Installation and Commissioning

2.1 The Local Authority should require that on completion of the installation of the nominated model of the Rota Loo composting toilet system, the system is inspected and checked by the manufacturer or the manufacturer's agent. The manufacturer or the agent is to certify that the system has been installed and commissioned in accordance with its design, conditions of accreditation and any additional requirements of the Local Authority.

2.2 The Local Authority should require that all electrical work, where necessary, must be carried out by a licensed electrician and in accordance with the relevant provisions of AS/NZS 3000.

3. Maintenance

3.1 Material, which has been only partially composted, may only be removed from the Rota Loo composting toilet system with the written consent of the Local Authority. The Local Authority may issue instructions as to who may remove the humus and the method of disposal of the humus.

3.2 Unless otherwise directed by either the Local Authority or the NSW Ministry of Health, 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. The minimum cover of soil over the deposited humus must be 100 mm.

3.3 Alternatively the composted end product may be retained for an additional period of three months in a lidded compost bin. At the completion the humus may be used as a soil conditioner without any further treatment.

4. On-going Management – Verification Testing

4.1 The manufacturer will make available to NSW Health when requested a full list of all new installations of systems within the jurisdiction of NSW Health from the date of accreditation.

4.2 NSW Health may request from the manufacturer, results of field-testing of the system carried out within Australia. Such field tests must:

- Include systems installed within NSW
- Demonstrate that end product from the system meets the requirements of AS/NZS1546.2 Appendix A
- Have testing of samples carried out by a NATA registered laboratory generally as required by AS/NZS1546.2
- Include a report on the service history of the system and performance over time.