Puraflo® System
Operation & Maintenance Manual

ANUA

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Puraflo® Maintenance Group Schemes

Puraflo™ is an effective treatment system. You can achieve optimum performance and maximise the life expectancy of the system by following these recommendations

- Read this manual and keep for reference
- Take up the offer of a service agreement from Anua.
- Desludge septic tank and sump as required
- Ensure storm water does not enter septic tank

- Do not allow grease enter the septic tank
- Do not block ventilation holes in lid
- Do not tamper with modules
- Do not drive over or place heavy loads on lids of modules

In event of failure please follow instructions overleaf.

In the event of the alarm light flashing:-

(Note: After a power outage the alarm light can remain on for a short period of time, typically 1-2 hours)

1. Inspect the control panel for an electrical trip and reset if possible

2. Inspect the pump sump for high water level

3. If alarm light continues to flash please phone 01278 439325 immediately.

(All work should be carried out by suitably competent person)

Contents

1.0 Introduction

The following manual provides a general description of the Puraflo® system for the treatment of effluent from a primary treatment arrangement.

Included in this manual are operating instructions and essential maintenance requirements.

Important:	***Section 4.0 describes safety precautions which must be adhered to. Please read this section carefully.***

Puraflo® is a highly efficient biofiltration system for the treatment of domestic waste water effluent. Poor quality effluent distributed evenly over the biofibrous peat fibre percolates through the media, emerging as a clear innocuous liquid. The treatment of the effluent within the system is achieved by a combination of unique physical, chemical and biological interactions between the wastewater and the active specialised media.

2.0 General Description

The Puraflo® system is designed such that maintenance requirements are minimised while at the same time effectively treating the effluent passing from the septic tanks.

The effective performance of the Puraflo® effluent treatment system and indeed the septic tanks is dependent on the activity of tiny lifeforms that are present in the effluent. These lifeforms grow by consuming the impurities in the effluent, so that the treated liquid emerges from the Puraflo treatment system with very low levels of pollution in it. Optimum performance of the system requires that these lifeforms have a suitable environment in which to thrive. This requires some limited ongoing maintenance.

The waste water treatment system installed comprises of a septic tank and the Puraflo® effluent treatment system. The septic tank is designed to retain the solid material from the waste water.

The outlet pipe from the septic tank is fitted with a specially designed filter to enhance the capacity of the septic tank to retain solids. The effluent from the septic tank or tanks is collected in the collection sump from where it is pumped by submersible pumps (Duty/Duty) onto the Puraflo® treatment modules.

The Puraflo® treatment modules consists of at least 95% natural organic premium material and less than 5% inorganic matter. This material is specially extracted from peat and blended by Bord na Móna to provide a biofibrous® material with a large surface area and high biological activity.

A layer of clean broken stone (particle size) within the range of 25 - 50 mm is placed underneath the media to facilitate drainage of treated effluent and provide additional treatment capacity.

2.1 Puraflo™Containment Structure/Housing

For the Puraflo Modules, the Biofibrous® media is contained within a structurally designed retaining module prefabricated from plastic.

2.2 Puraflo™ Distribution System

A specially designed distribution system is installed to ensure even applications of the effluent over the treatment media, providing maximum treatment efficiency. The distribution network is set at commissioning to ensure effective liquid distribution.

3.0 Operational Recommendations

The Puraflo® system is designed to effectively treat the effluent from the septic tank or tanks. To ensure optimum performance from the Puraflo effluent treatment system the following steps should be routinely carried out.

3.1 Maintenance Of Puraflo™ Bed

The Puraflo® modules should be checked monthly for the following:-

1. Evidence of sludge carry-over (as seen by patches of slime growing on top of the peat fibre Media).

2. Evidence of ponding (as seen by liquid constantly on peat fibre media surface).

3. Evidence of poor distribution (as seen by unusually dry surface areas or very wet areas).

NB *The Puraflo® bed has been compacted to a specific level. No walking is allowed on the bed nor laying of any equipment without supervision from Puraflo® personnel.*

3.2 Septic Tank

The Puraflo® system is designed for continuous operation. To ensure optimum performance from the Puraflo® system, ensure that the recommended maintenance procedures are carried out and the following points are adhered to:-

1. Ensure that storm water is not channeled to the septic tank.

2. Ensure that the waste from domestic meat/ food grinders is not emptied down the waste drain to the septic tank.

3. Ensure that significant concentrations of greases or fats are not emptied down the waste drain to the septic tank.

4. Ensure that non biodegradable materials are not flushed to septic tank.

5. During desluding ensure the filter on the outlet pipe is removed, hosed down to remove any sludge attached and replaced correctly.

Septic Tank (extract from SR6: 1991)

De-sludge the tank when the depth of sludge in the inlet half (i.e. the first compartment in a two compartment tank) is greater than 450 mm (1.5 ft). Check this depth by dipping. The presence of scum in the second compartment maybe taken as an indication that de-sludging is necessary.

The importance of de-sludging cannot be overstated as only settled liquid should be treatment in the Puraflo™ system.

3.3 Grease Trap

Where Puraflo® systems are to be installed in sites where grease production is likely to be problematic (pubs/restaurants, golf clubs, nursing homes etc) a suitable grease trap **must** be installed and maintained.

3.4 Control Panel

Familarise yourself and your staff with the locations of the electrical control panel and respond to alarm conditions promptly (alarm sounding or light flashing).

3.5 In the Event of Blockage

In the event of a blockage the following steps should be carried out:-

A. Inspect the inlet manhole and remove any solid material which may be clogging the inlet tee pipe.

B. Inspect filter or filters on outlet pipe of septic tank and remove any solid matter which may be clogging unit.

Note: Excessive use of disinfectants and detergents should be avoided.

4.0 SAFETY

4.1 Sump

Ensure that cover is in place at all times unless under instruction from relevant personnel or for maintenance/inspection purposes.

4.2 Septic Tank

Septic tanks are potentially dangerous when being desludged and desludging of septic tanks should not be done alone. Entry into a tank should never be made unless by a properly trained person(s). Naked lights should not be used in the vicinity of the tank due to the danger of explosion. The manhole covers on the septic tank should not be left off an unattended tank. Disused or abandoned tanks should be demolished, filled in or sealed so that accidental entry is impossible.

4.3 Site (where applicable)

Where a boundary fence is erected around the Puraflo® system, then the fence itself should have a padlocked gate to exclude trespassers.

4.4 General

Protective gloves and/or clothing should be worm when contact is made with sump and septic tank.

4.5 Electrics

All switches should be turned off before any maintenance/inspection work is done at the sump.

4.6 Maintenance Checklist

Item	**Recommended Inspection Interval**	**Normal State**
Septic tank inlet T-piece	monthly	Clear
Septic tank outlet T-piece ***&*** ***Filter***	monthly	Clear
Septic tank sludge depth	every 3 months	75 mm - 450 mm depth
Pump sump unit	monthly	Liquid only - no solids
Puraflo™ Modules	monthly	No sludge carryover No ponding Good distribution
Puraflo™ sampling chamber	monthly	Flow
Control panel	monthly	MCB switch on RCD switch on Alarm switch on Overload trip lamp off

Guarantee

Anua will provided the Puraflo® treatment system is operated in accordance with its recommendations both written and oral, guarantee its satisfactory operation for sewage treatment for a period of one year from the date of installation. During the said period of one year, Anua will at its own expense repair or replace any defective part of the Puraflo system including pumps.

The guarantee is subject to immediate notification of a problem being given to Anua and does not apply to any defects whether of workmanship materials or design arising from or in the works of any independent Contractor or to any failure due to accidental or malicious damage, plant abuse, fair wear and tear, frost or storm damage or infiltration of storm water

APPENDIX I

CONTROL PANEL DIAGRAMS

APPENDIX 2

PUMP DATA SHEET

APPENDIX 3

AS BUILT DRAWINGS

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