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The Bio-Pure

Simple solution sewage systems

MANUAL

A member of



BRITISH WATER

expertise worldwide



PERFORMANCE RESULTS

We Build It Ltd
Kingsnordley Farm, Kingsnordley
Nr. Alveley, Bridgnorth, WV15 6EU Shropshire, United Kingdom

EN 12566-3, Annex B
"Small wastewater treatment systems for up to 50 PT"

Small wastewater treatment system Bio-Pure
biological aeration system

Nominal organic daily load	0.26	kg/d
Nominal hydraulic daily load	0.80	m ³ /d
Material	Glass reinforced plastic (GRP)	
Treatment efficiency (nominal sequences)	COD	92.1 %
	BOD ₅	96.2 %
	SS	94.9 %
	NH ₄ -N*	81.4 %
Electrical consumption	1.3	kWh/d

* determined for temperatures ≥ 12°C in the bioreactor.

certified according to:

PIA - Prüfinstitut für Abwassertechnik GmbH

(PIA GmbH)
Hergenrather Weg 30
D-52074 Aachen

Certified according to:
ISO 9001:2000



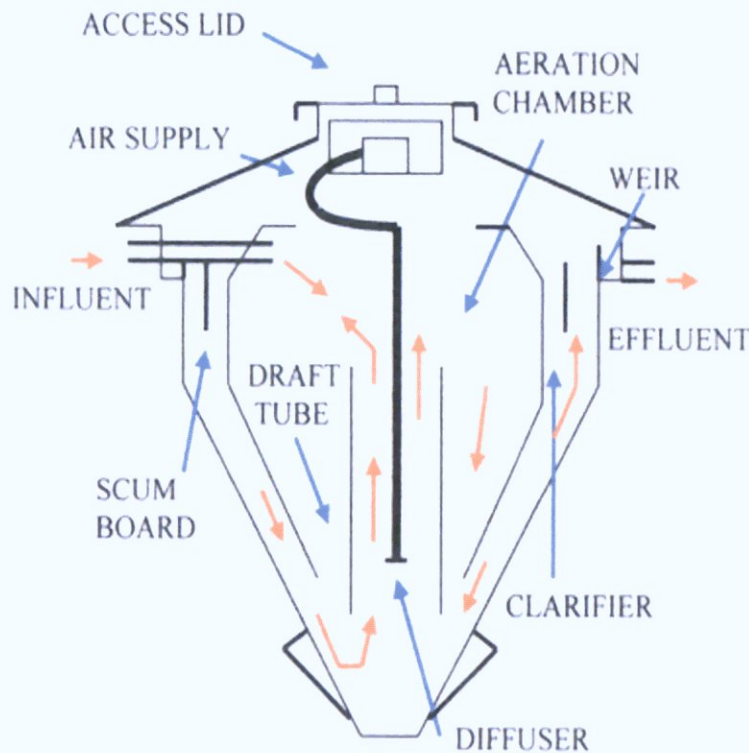
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Notified according to:
EN 12566-3:2009



Elmar Janke 20/06/2012

Introduction



The Bio-Pure is a fibreglass conical shaped tank containing a circular aeration chamber, a centre draft tube with an air diffuser located in the centre through which air is continuously forced by means of a blower motor.

Raw sewage enters the Bio-Pure through the inlet pipe flowing into the centre aeration chamber. Air released through the diffuser at the bottom of the draft tube causes an upward flow of fluid ensuring continuous combining of oxygen with sewage. This allows for growth of various aerobic organisms that biologically degrade the sewage contaminants.

Any remaining aerated solids settle to the bottom of the tank where they are drawn back up through the draft tube repeatedly until thoroughly cleansed.

As more sewage enters through the inlet and into the aeration chamber it displaces the treated effluent into the outer tank, any remaining solids will settle to the base and return back to the aeration chamber. The treated effluent will flow over the weir and out of the outlet where it can be disposed of through a water course or soak away.

The Bio-Pure is 96% efficient, thus allowing long intervals before de-sludge is required. The waste water is cleaned to a standard of 20 mg/l biological oxygen demand and 30 mg/l suspended solids, meeting the usual discharge level requirement.

Installation Notes

Installation should be carried out observing good working practice and adhering to the Health and Safety at Work Act

NOTE – Specialist advice must be sought when installing in high water table or flood conditions. It is not recommended to install the unit near to trees and shrubs but if this is necessary the unit should be surrounded by a root-proof membrane.