

Oxyfix[®]

Aerated Wastewater Treatment

Technical Guide WW 2

Proven SAFF Treatment Technology with flow control for fluctuating Domestic or Commercial applications.



03.25 | WASTEWATER | WW02 OXYFIX

Applications

Residential Homes
Small communities
Schools
Camping grounds
Maraes
Restaurants

Product Attributes

Proven SAFF technology
Adaptable for fluctuating occupancy
Discrete low visual impact
Robust durable lightweight concrete
Flexible disposal options

Sustainability

Customisable for climate-resilient infrastructure

Quality/Environment/Health & Safety

ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018
PIA Quality Tested (Germany)

Oxyfix Treatment - 1,800L - 120,000L/day

- The Oxyfix, a European designed SAFF (submerged aeration fixed film) treatment system which has been installed in more than 15,000 applications throughout the world.
- The Oxyfix is designed by Eloy Water Belgium (circa 1965), and PIA tested to the most rigorous European standards that expect performance at peak and starved conditions.
- The Oxyfix features a balanced flow control which allows for adjustment of aeration to suit the individual application, most suitable where fluctuating loads are expected
- The Oxyfix is modular and manufactured in lightweight self-compacting concrete
- Designer Eloy (Belgium) warrantee performance requirements from qualified designers using approved design principals.

The Oxyfix Certification and Accreditation

- PIA performance tested (Germany)
- EC certification – Health & Safety (EU)
- BENOR certification - Manufacturing process (Brussels)
- Probeton certification - Construction (France)
- AS/NZS: 1546 and 1547 (NZ)

Unique qualities

- Simple & Efficient SAFF Technology
- Adjustable aeration for fluctuation loads
- Proven for high nutrient reduction
- Visually Discreet
- Simple to maintain
- Low power consumption
- Durable high strength lightweight concrete
- Modular – Easy to retrofit
- Can be installed in high water tables (specific design criteria)
- Allows light traffic loading (specific design criteria)

100% ecological and sustainable

The Oxyfix SAFF process produces a clear odourless liquid suitable to be irrigated into the landscaped garden, bush, trees or suitably designated area. The small (16mm) irrigation pipe has flexibility of location and can be placed on elevated or sloped areas.

Designing

- Flows 1800 – 120,000L
- Design assistance available
- Traffic loading design available
- High Water table design available
- Intermittent flows design assistance
- The tanks are modular and ideal for retrofitting



FIG. 1 Low Visual Impact

Warrantee

- 10 years Warrantee - Oxyfix concrete tank
- 2 years Warrantee (parts only) - Components

The Oxyfix®

Product Range

- 1.8 m³/day (approx 0-5 bedroom)
- 3.0 m³/day (approx 5-7 bedroom)
- Commercial application up to 120 m³/day

Components

1. Primary Chamber
2. Aeration Chamber with Oxybee media
3. Clarifier
4. Pump chamber
5. Controller, Air blower pump & Alarm System in secure locker
6. Irrigation disposal area

Process

Primary Chamber

1. Wastewater gravities into the anaerobic primary chamber from the building. Solid matter settles on the floor of the chamber to be “degraded” by the anaerobic bacteria. The suspended (*floating*) matter such as fats and oils will form a “crust” at the surface. The liquid from this chamber gravities into the following chamber.

Aeration chamber

2. The aeration chamber is injected with a balanced adjustable flow of suffused air from a diaphragm blower into disc diffusers located on the floor of the tank aerating the chamber. Naturally forming active bacteria utilize the oxygen to digest organic matter. The biomedica (*Oxybee*) in this chamber provide a large surface environment for the bacteria to rapidly grow and multiply.

Clarification

3. The digested waste liquid enters the clarification chamber by gravity. This tapered chamber has a recycling function, where any residue or fine remaining particles settle on the narrow floor to be picked up and returned to the primary chamber by a venturi suction action, for the process to be fully repeated.

Pumpout or gravity flout

4. For sites where pumping is required, a pump chamber is connected to the outlet of the Oxyfix. Pumping allows controlled distribution into small diameter pressure compensating pipe to any contour or elevation. The pump is designed according to the required pressure and has a high level float switch which will alarm if levels in the tank are beyond normal parameters.

Distribution

- Flout - passive dosing system (no power)
- Pump Station - Pump suitable to head loss

Optional Land Application

- Drip irrigation (16mm) into landscaped garden bush or trees
- LDPE drilled pipe (into suitable soil conditions)
- ETS Beds (into suitable soil conditions)
- Sand beds (into suitable soil conditions)

Controller

5. The automatic electrical controller manages the operation of the aeration blower, pump and alarm system. The controller is located in a separate and waterproof compartment in a convenient area close to the system. An operation/alarm panel is located in a visible position inside the building.

Irrigation Area

6. Disposal of the treated effluent from the tank is through small (*16mm dia.*) self compensating drip irrigation system to evenly distribute treated effluent onto your landscaped garden, trees or bush. Various irrigation layout designs can be considered to suit your property.



FIG. 2 Oxyfix

For more information please request specification data information.

Oxyfix Treatment Performance

Recent Projects



> KERIKERI OPEN AIR MARKET



> DARFIELD PUBLIC TOILET



> CASTAWAY RESORT



> SOLAN HEIGHTS SUBDIVISION



> FIRST OXYFIX NZ8PE



> VILLA CONTANT



> LADBROOKS SCHOOL



> AKARDA COTTAGES



> LITTLE RIVER

Eloy Water Network

Eloy Water is a Belgian Company which has been a designer, producer and distributor of purification systems for the treatment of domestic and industrial wastewater since 1965. Specialising in the treatment and the reuse of wastewater from single domestic dwelling to medium size communities, Eloy Water has always invested in the development and integration of the latest technologies into its production.

With a presence in 25 countries, Hynds Pipe Systems Ltd is the exclusive distributor of Eloy Water products in New Zealand.

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