

Water Management Solutions

BioFicient[®] Advanced Domestic Wastewater Treatment System

FIRST
Domestic System to
gain certification under the latest
Australian Standard **AS 1546.3**



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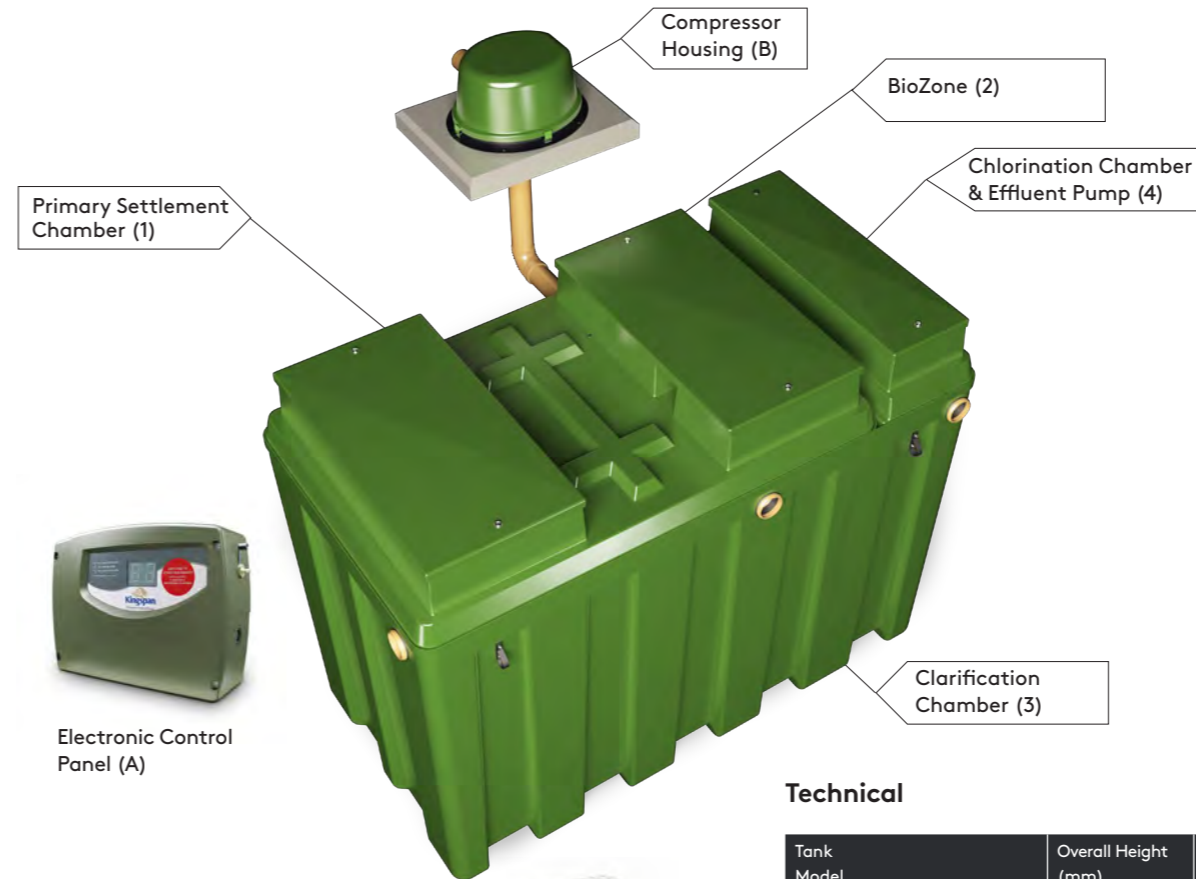
BioFicient® Advanced

The BioFicient® Advanced Domestic Wastewater Treatment System provides a reliable and effective solution, suitable for homes with up to eight people.

Why Kingspan Water & Energy?

With over 65 years of experience in premium wastewater treatment solutions worldwide, you can trust Kingspan to help you select the correct wastewater treatment solution tailored to your home's individual needs. The BioFicient® AWTS provides a reliable and effective solution for domestic applications without access to mains drainage.

Suitable for homes with up to 8 people, the BioFicient® is manufactured from high quality Fibre Reinforced Plastic (FRP) and uses the latest treatment technology to deliver a high quality of water discharge. The BioFicient® AWTS is designed to be fully compliant with all relevant Australian standards.



Product Benefits

- Over 65 years of manufacturing premium Wastewater Treatment Systems
- First domestic system to gain the latest Australian Standard – AS1546.3:2017
- Class leading, high performance treatment technology – 99.69% reduction in organic pollutants
- Low, energy efficient power consumption
- 15 year structural & 2 year mechanical warranty
- Minimal, simple, cost effective maintenance requirement
- System status monitor with audible & visual alarm activation
- Compact & shallow single tank construction
- Aesthetically pleasing, low profile covers
- Lightweight yet robust corrosion resistant FRP construction

Technical

| Tank Model | Overall Height (mm) | Inlet Invert (mm) | Outlet Invert (mm) | Length (mm) | Width (mm) |
|---------------------------|---------------------|-------------------|--------------------|-------------|------------|
| BFA (8PE) – 500mm Invert | 2215 | 500 | 430 | 2850 | 1482 |
| BFA (8PE) – 700mm Invert | 2415 | 700 | 630 | 2850 | 1482 |
| BFA (8PE) – 1200mm Invert | 2915 | 1200 | 1130 | 2850 | 1482 |



Compressor Housing (B)

The Compressor Housing (B) provides a home for the high quality, energy efficient compressor (blower) and Electronic Control Panel (A). The compressor provides the air that is driven in to the BioZone to provide oxygen and movement to the media (H) and the Control Panel operates and powers the mechanical components within the BioFicient. The Control Panel provides constant system status which can be viewed on the integrated LCD display. Fault signal to the Audible/Visual Alarm is supplied, in the unlikely event of system/power error. A standard battery backup power supply is installed to ensure fault signal is active in the event of power failure to the system.



1. Primary Settlement Chamber

Wastewater from the home will flow to the Primary Settlement Chamber (1), where a physical separation of foreign material and sewage solids will occur. At this stage the TSS (Total Suspended Solids) and BOD (Biochemical Oxygen Demand – the measurement of organic matter contained with the water) are greatly reduced. This primary treated effluent is then displaced into the BioZone for further treatment. The settled solids in the Primary Settlement Tank should be removed periodically, as required.

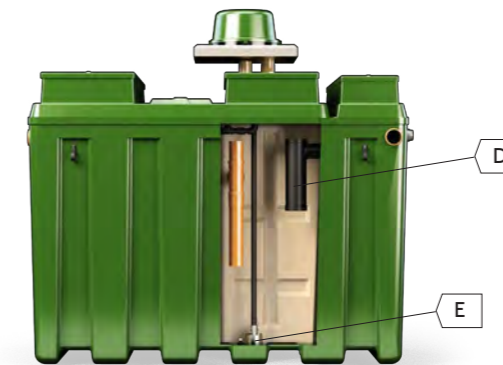


2. BioZone Chamber

The BioZone (2) is where most of the biological treatment process will occur. This chamber contains thousands of maintenance free, patented, high surface area biofilm carrying media (H), specifically designed for this type of treatment system. The naturally occurring microorganisms present in the wastewater will adhere to the media and, in turn, will consume the organic based pollutants within the wastewater – thus providing the highly efficient treatment process. Air/Oxygen is delivered from the Air Compressor to a fine bubble disc diffuser (C), positioned at the bottom of the chamber. The air provides the oxygen required by the microorganisms to live and creates movement within the tank to ensure complete contact between the media and the wastewater. Following this biological treatment process, the effluent is then displaced into the Clarification Chamber (3).

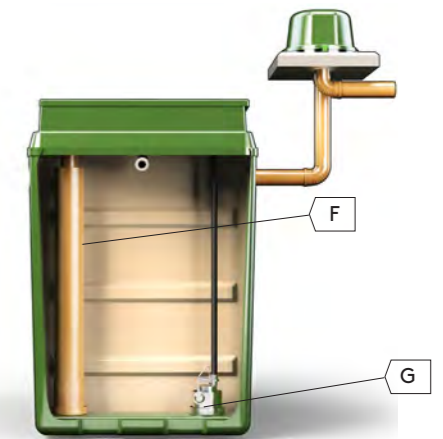


Media (H)



3. Clarification Chamber

This chamber allows fine particles, present in the treated effluent, to easily settle out. The chamber contains a timer controlled effluent pump (E) to remove these settled particles and deliver them back to the Primary Settlement Tank (1) thus ensuring the excellent quality of the treated effluent. The treated effluent then discharges to the Chlorination Chamber (4) via a fine particle filter (D).



4. Chlorination Chamber

The biologically treated effluent will pass through a Chlorine Tablet Feeder (F) system that will dose the final effluent and provide the final disinfection process required for most applications. The fully disinfected effluent will then be delivered to the disposal system (irrigation/soakaway system) via an integrated stainless-steel float controlled effluent pump (G).

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