

Turn your domestic waste water
into **wanted** water
with a



KUBOTA SUBMERGED MEMBRANE BIOREACTOR SYSTEM



From the New Zealand supplier



Kubota

A world leader in submerged membrane systems, with a proven performance track record over 15 years.

The most **environmentally friendly, technically superior** sewage system on the market today, the **Kubota Submerged Membrane Bioreactor** for domestic and commercial applications

Now in New Zealand

Until recently, the cost prohibited the use of this remarkable technology in the treatment of domestic sewage, but now Oasis Clearwater Environmental Systems introduce the Membrane Bioreactor (MBR) domestic and commercial waste water treatment system to New Zealand.

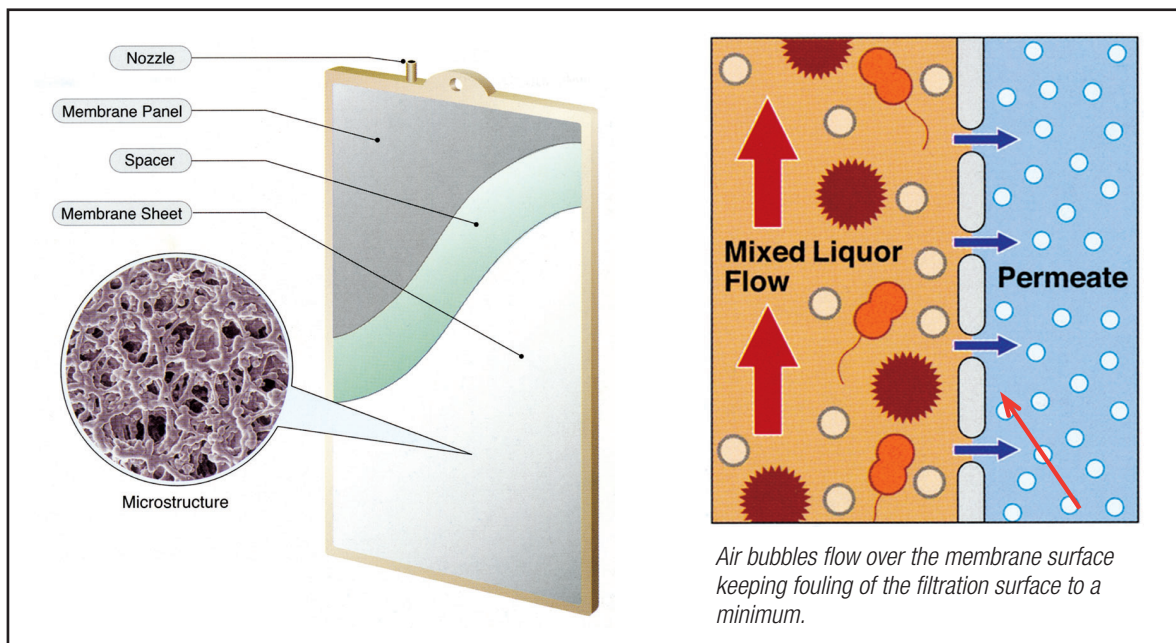
The Kubota Membrane technology

The development of the Submerged Membrane Bioreactor technology by Kubota was the result of a Japanese Government initiative to produce compact, high quality effluent treatment plants.

Membrane Bioreactor advantages

Membrane Bioreactor technology has a number of inherent advantages. The principle of the operation does not require flocs to be formed to remove the solids in sedimentation and therefore the Biomass can operate at very high levels of Suspended Solids. This reduces sludge volume - allowing for smaller tank size and accordingly a smaller footprint.

High mixed liquor suspended solid concentrations offers many process benefits over conventional treatment systems including steady operating conditions, complete nitrification, reduced bio-solids, lower BOD5 levels and nil counts of faecal coliforms.



Since producing their first pilot plant in 1989 and then the first commercial plant in 1991, Kubota have installed over 1500 plants, covering a wide range of effluents including sewage, industrial and food processing waste and greywaters, all treating the liquid to a high standard for recycling and reuse.

The Kubota system utilizes flat sheet membrane panels, several of which are housed in a membrane cartridge. The membrane cartridge is submerged in the liquid in the third treatment chamber for final filtering of the liquid.

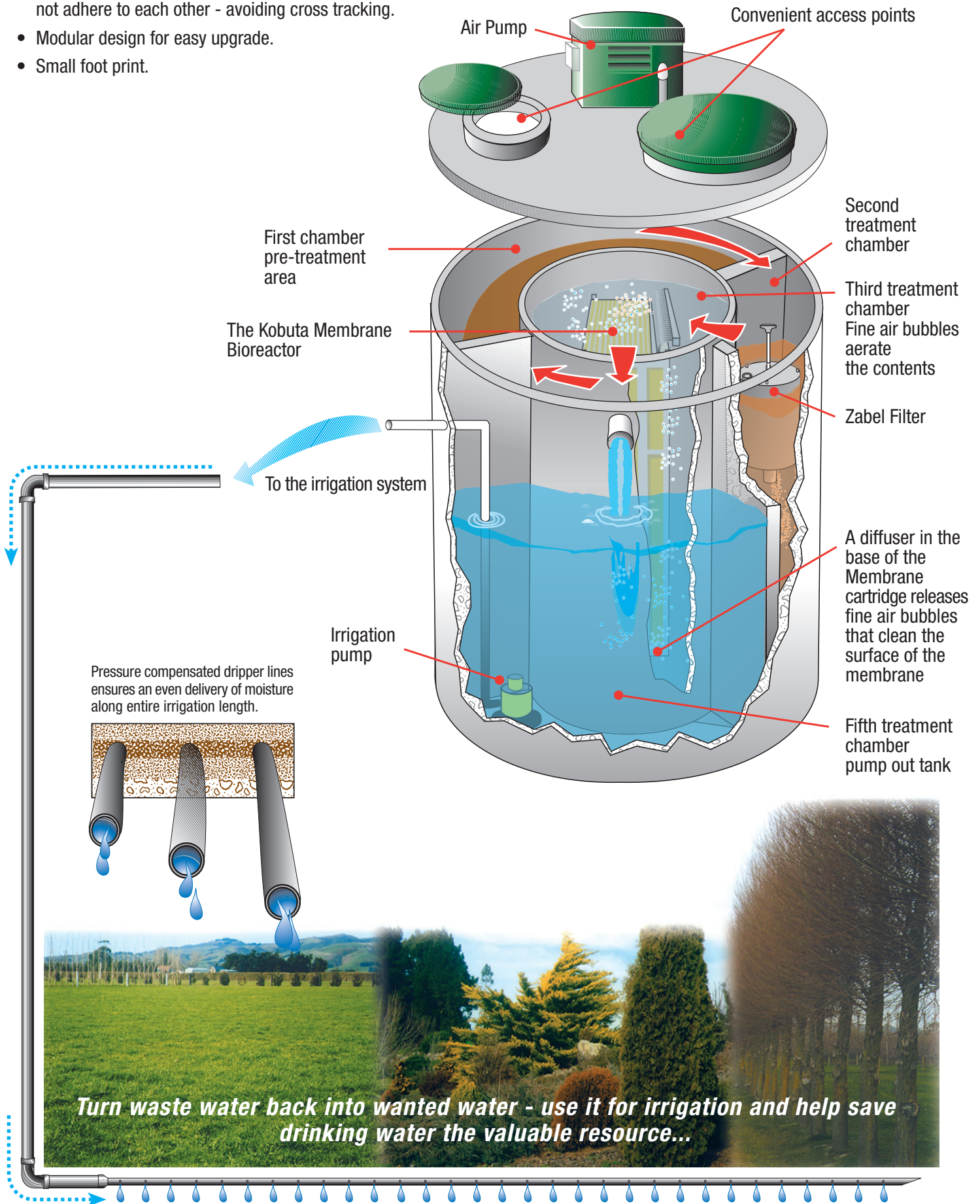
Bacteria and most viruses are removed from the liquid as it passes through the very fine pores in the membranes (0.1 micron effective pore size),

The system also incorporates an air diffuser located at the base of the membrane unit, this generates an upward crossflow of air bubbles over the membranes keeping fouling of the filtration surface to a minimum.

- The Kubota Membrane is especially designed for waste water.
- Kubota is the MBR technology world leader with more than 1500 installations worldwide.
- The Kubota system offers a long membrane life with a proven performance record.
- It is simple, compact and more reliable than conventional treatment systems.
- Membrane filtering produces high quality water - ideal for re-use.

Benefits of Kubota Membrane Bioreactor

- Robust design and minimal operator intervention.
- Low servicing needs - typically twice yearly.
- Fewer process steps to achieve high quality effluent.
- Membranes are not clogged by hairs or fibres, eliminates sludge settling.
- Rigid design prevents damage through fatigue - membranes do not adhere to each other - avoiding cross tracking.
- Modular design for easy upgrade.
- Small foot print.



Specifications and design criteria

The design specifics for each installation relates directly to the anticipated daily flow requirements. Oasis Clearwater Environmental Systems and their trained distributors will be able to design and specify the correct system for your needs.

System Sizing	Peak Daily Flow Rate	Type of System
0-10 persons	2500 Litres/Daily	Kubota LF10

Typical figures for a MBR domestic system

Parameter	Units	Average test figures
BOD ₅	mg/L	< 5
Suspended solids	mg/L	< 5
Faecal coliforms	No/100ml	Typically zero
PH		< 7.4 - 8 range
Total Nitrogen	mg/L	< 5
Total Phosphorus	mg/L	< 5

Oasis Clearwater Environment Systems are the approved New Zealand distributors for Packaged Commercial and Domestic Treatment Systems from 1m³ to 50m³ per day.

For systems above this, contact the Oasis Clearwater Environment Systems Head Office or Aquatec Maxon PTY Ltd.

Technical specifications

- Primary Pre-treatment chamber 3500 litres
- Secondary Pre-treatment chamber 750 litres
- Membrane Bioreactor chamber 2150 litres
- Pumpwell 1050 litres
- Total operating capacity 7450 litres
- Total holding capacity 9400 litres
- Control panel - Audio and visual alarm
- Tank construction - All concrete

Tank Dimensions

- Height 2500 mm
- Diameter 2500 mm
- Weight 6.5 Tonnes
- 10 Person – 2500 Litres per day capacity

Consistent with our policy of product improvement, we reserve the right to alter specifications without notice.

Certifications

N.Z TP 58 APPROVAL - 3rd Edition
 AUS/NZS 1547.2000 - On Site Domestic Waste Water
 AUS/NZS 1546 s 1: 1998 - Septic Tank Manufacture

Our company and our capabilities

Oasis Clearwater Environmental Systems has been pioneering onsite wastewater treatment since 1990. Our team of qualified professionals have many years of combined experience designing and developing innovative technology and systems to meet demanding standards for waste water treatment.

We have also established close working relationships with several leading international authorities and manufacturers of similar equipment to complement our knowledge.

We offer a full range of services including

- Design and construction.
- Liaison with local and regional councils.
- Upgrading of existing systems.
- Maintenance programmes.
- Domestic and commercial applications.

Committed to quality

To ensure constant quality, our products are manufactured, assembled and fitted out at our own concrete product manufacturing plant.



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Your authorised local distributor

