



Maxi 6500

Environmental Sewage Systems

1800 808 135

MAXI 6500 DESIGN CALCULATIONS

PROPOSED INFLUENT QUANTITIES/QUALITIES AVERAGE
FLOW RATE: 6500 litres per day **MAXIMUM FLOW RATE:**
8500 litres per day

150 litres per person per days average

$$25 \times 150 = 3750$$

Maximum: 225 litres per person

$$20 \times 225 = 5625 \text{ litres/day}$$

BOD₅ 150 – 300 mg/L

SS 150 – 300 mg/L

Total Nitrogen 50 – 60 mg/L

Total Phosphorous 10– 15 mg/L

PROPOSED EFFLUENT QUALITY

BOD₅ <20 mg/L

SS <30 mg /L

Free Chlorine >0.2 & <2.0 mg/L

**Thermotolerant
Coliforms** <30 cfu/100ml

Nitrogen <30 mg/L

Phosphorus <10 mg/L

SEPTIC SECTION: 10,500 LITRES

1500 sludge allowance + (150 x N)

N = Number of persons

1550 + (150 x 50)

1550 + 7500

9050 litres maximum capacity

SUPPLIED CAPACITY 9050 LITRES

AERATION:

VOLUME: 10500 litres
150 litres per person
150 x 50
7500 litres maximum capacity

SUPPLIED CAPACITY 7500 LITRES

AIR SUPPLY: 400 litres per minute
8 litres per person per minute
8 x 50
400 litres per minute

SUPPLIED CAPACITY 2x200 LITRES PER MINUTE

2x HP200 Air Blowers

DIFFUSERS: 9000 mm
1 x 300 mm per 5 persons
9 x 1000 mm diffusers

GROWTH MEDIA:

8 square metres per person

8 x 50 = 450 square metres

SUPPLIED 400 SQUARE METRES

CLARIFIER:

1250 litres capacity

CHLORINATION:

5 Bay Chlorine Bath

200 gram trichlor tablets

CHLORINE DETENTION:

Half hour detention time

8000 litres /10 hours

800/ hour

400-500 litres per hour

SUPPLIED 1000 LITRES

IRRIGATION:

As per site evaluation report

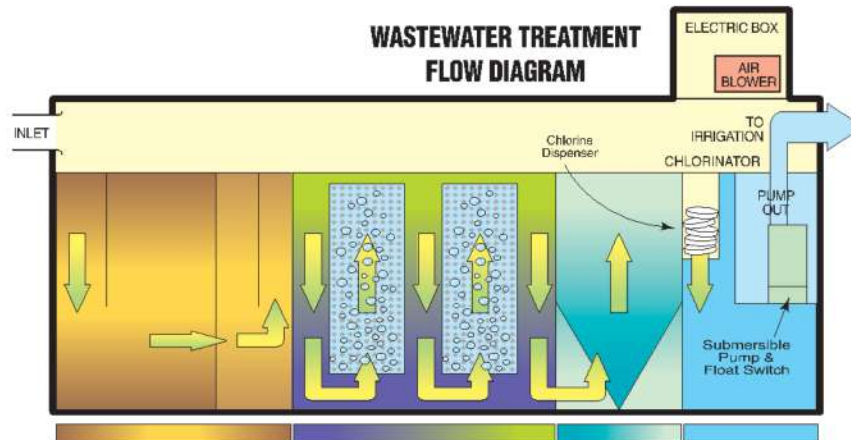
MAXI 6500 SPECIFICATIONS

Description	Specification
Number of persons	50@150 Litres per person per day
Tanks	4 x 7000 litre Econocycle Tanks
Blower	400 litres per minute
Irrigation Pump	Suited to the irrigation requirements
Septic Section 1	7000 litres tanks
Septic Section 2	3500 litres tanks
Aeration Section 1	3500 litres of aeration divided into three sections
Aeration Section 2 & 3	480m ² (9 packs x 500 x 800 x 800mm)
Media	7000 litres tanks
Diffusers	9x1000mm 25OD
Chlorinator	5 Chlorine canister

TECHNICAL PROCESS DESCRIPTION

This is a general breakdown of our wastewater treatment unit.

The wastewater unit works on the combined principles of primary settling plus aerobic and tertiary treatment.



As you can see in the above diagram all your household wastewater and effluent enters the tank through the inlet shown here on the left side of tank.

This settles into the septic zone (identified by the orange & yellow shaded area).

Towards the top of the baffle wall which separates the septic and aeration compartments, there is an outlet which enables the effluent to trickle into the aeration / treatment zone. The aeration / treatment zone is the blue shaded area of the diagram.

From this, the effluent is filtered over a mass of growth media plates. The growth media acts as a bacteria-breeding ground, which sounds quite nasty but is actually a very important and proficient function of the wastewater unit.

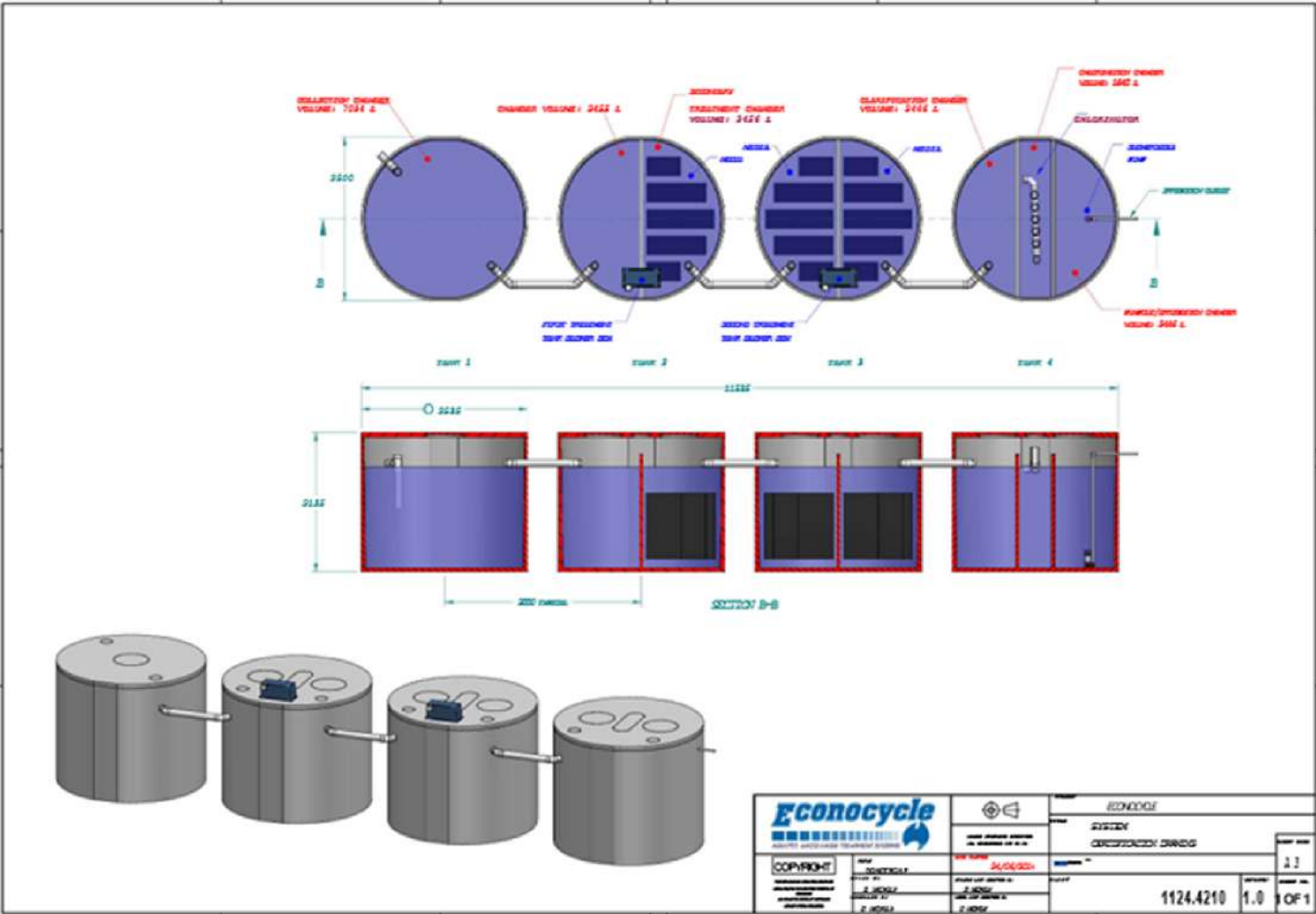
The growth media (illustrated as the grey checked areas) enables the bacteria to break down.

Once the organic impurities have been absorbed within the aerobic culture of microorganisms, the water passes to the clarification zone. At this stage the water has been recycled into clean, clear, odorless water.

The clarification zone is the secondary sedimentation process.

Before the water is released from the tank it is circulated through the chlorinator. The chlorinator is as the name suggests – a chlorine based chamber that acts as a final back up and safeguard to catch and kill any nasties that may have escaped through the aeration and clarification processes.

Drawings – Maxi 6500



		ECONOCYCLE SYSTEM ECONOCYCLE 3000		2.2
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