



Maxi 25

Environmental Sewage Systems

1800 808 135

MAXI 25 DESIGN CALCULATIONS

PROPOSED INFLUENT QUANTITIES/QUALITIES AVERAGE
FLOW RATE: 3750 litres per day **MAXIMUM FLOW RATE:**
5625 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 Total 20 – 100 mg/L

Phosphorous 10– 25 mg/L

PROPOSED EFFLUENT QUALITY

BOD₅ <10 mg/L

SS <10 mg /L

Free Chlorine >0.2 & <2.0 mg/L

**Thermotolerant
Coliforms** <10 cfu/100ml

SEPTIC SECTION: 7000 LITRES

1500 sludge allowance + (150 x N) N =
Number of persons
1550 + (150 x 25)
1550 + 3750
5300 litres capacity

SUPPLIED CAPACITY 7000 LITRES

AERATION:

VOLUME: 6250 litres
250 litres per person
250 x 25
6250 litres

SUPPLIED CAPACITY 7000 LITRES

AIR SUPPLY: 200 litres per minute
8 litres per person per minute
8 x 25
200 litres per minute

SUPPLIED CAPACITY 200 LITRES PER MINUTE

DIFFUSERS: 1600 mm
1 x 300 mm per 5 persons
5 x 300 mm diffusers
1500 mm

GROWTH MEDIA:

5 square metres per person

5 x 25 = 125 square metres

SUPPLIED 160 SQUARE METRES

CLARIFIER:

0.42M2 / 500 litres capacity

CHLORINATION:

Twin Chlorine Bath

200 gram trichlor tablets

CHLORINE DETENTION:

Half hour detention time

5625 litres /10 hours

562/ hour

281 litres

SUPPLIED 500 LITRES

IRRIGATION:

As per site evaluation report

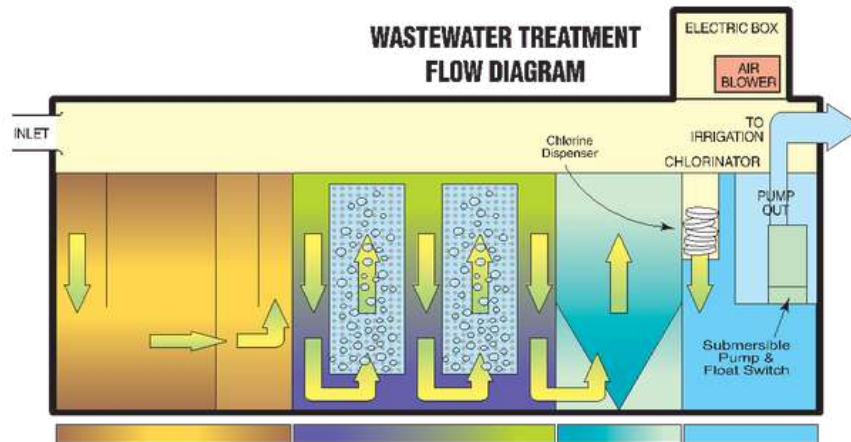
MAXI 25 SPECIFICATIONS

Description	Specification
Number of persons	25 EP
Tanks	2 x 7000 litre Econocycle Tanks
Blower	200 litres per minute
Irrigation Pump	Suited to the irrigation requirements
Septic Section	7000 litres tanks
Aeration Section	7000 litres of aeration divided into three sections
Media	Aqua Cool CF1900 160m ² (8 packs x 500 x 800 x 800mm)
Diffusers	5x700mm
Chlorinator	2 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 25

