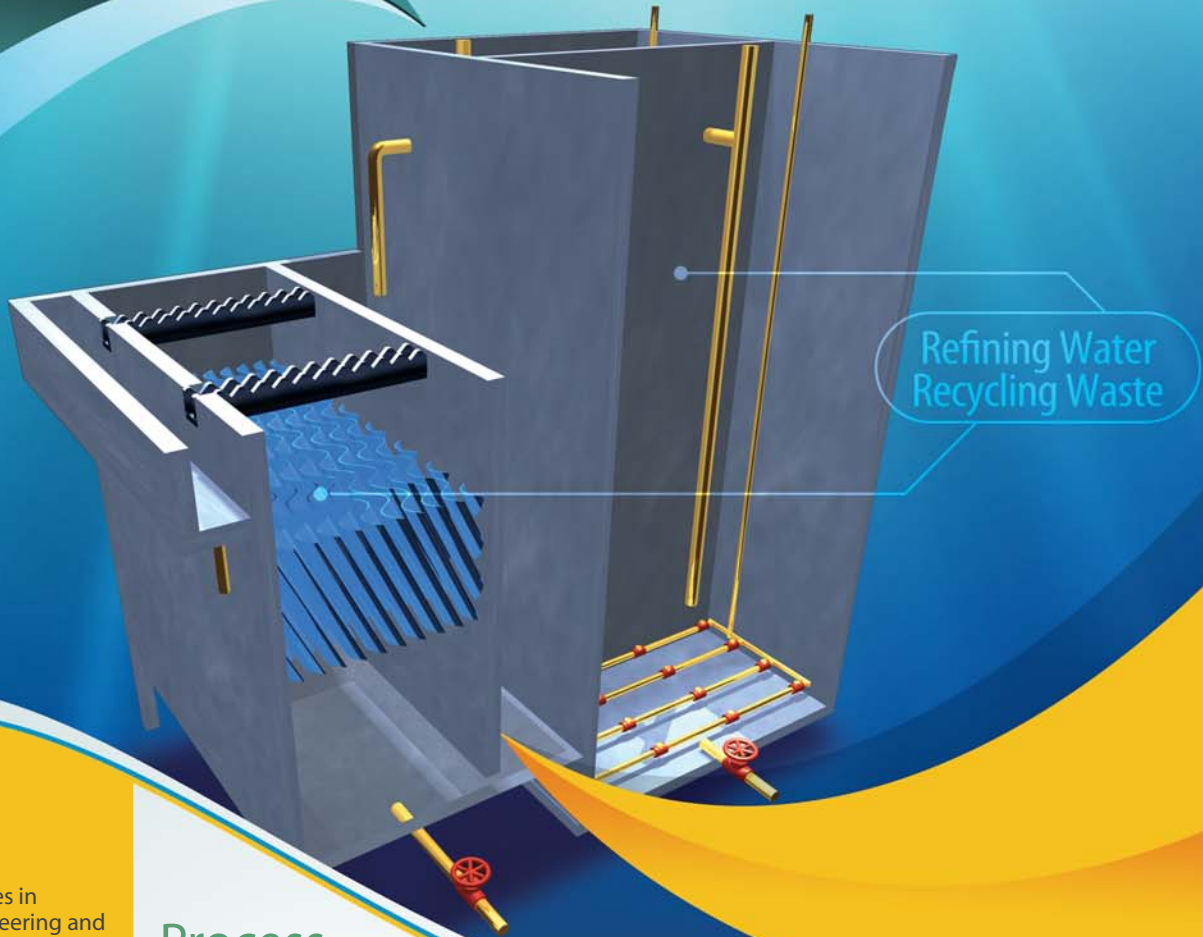


# BIO CLARIFIER-MB

SEWAGE TREATMENT CUM RECYCLING PLANT



## About Qualicom

Qualicom specializes in Environment Engineering and Water Resource Management.

For last more than 15 years, Qualicom has been innovating highly optimized solutions in Raw Water Treatment, Effluent Treatment and Recycle and Zero Liquid Discharge to Industrial and Commercial Institutions, Defence Establishments, Municipalities and Urban communities.

Qualicom integrates extensive range of technologies with design, engineering and project management capabilities to offer end to end solutions to the promoters and end users as also the consultant fraternity.

Qualicom has knowledge partners in various eminent institutes of India as well as cooperation tie ups with major global technology providers.

In Qualicom, we believe in building an environment of Sustainable and Inclusive growth.

## Process Write Up

### Bar Screen and O&G Trap

Bar screen traps the floating, non bio degradable solids. O&G Traps restricts the floating Oil and Grease from reaching the reactors.

### Equalisation Tanks

With the help of diffusers the sewage is thoroughly mixed in the Equalisation tank. It also ensures uniform flow to the Biological system.

### Anoxic Tank

Denitrification and luxury uptake of phosphorus take place by mixing a food source of raw sewage with microorganisms by returning suspended sludge.

### Aerobic Reactors

In the reactors, microbiological growth takes place over specially designed carrier elements which digests the Organic load and generates sludge. Oxygen is diffused through fine bubble diffusers.

### Flocculation Zone

A flocculation zone with agitation arrangement is introduced with dosing system before the clarification

to enhance the settling process which helps in removal of TSS. Subsequently it facilitates phosphate removal.

### Clarification

Settling media is specially oriented inside the clarifiers for efficient removal of sludge from the water.

### Disinfection

The water coming out from the Clarifiers has limited organic load and can be discharged to drains/ water bodies after suitable disinfection by chlorine.

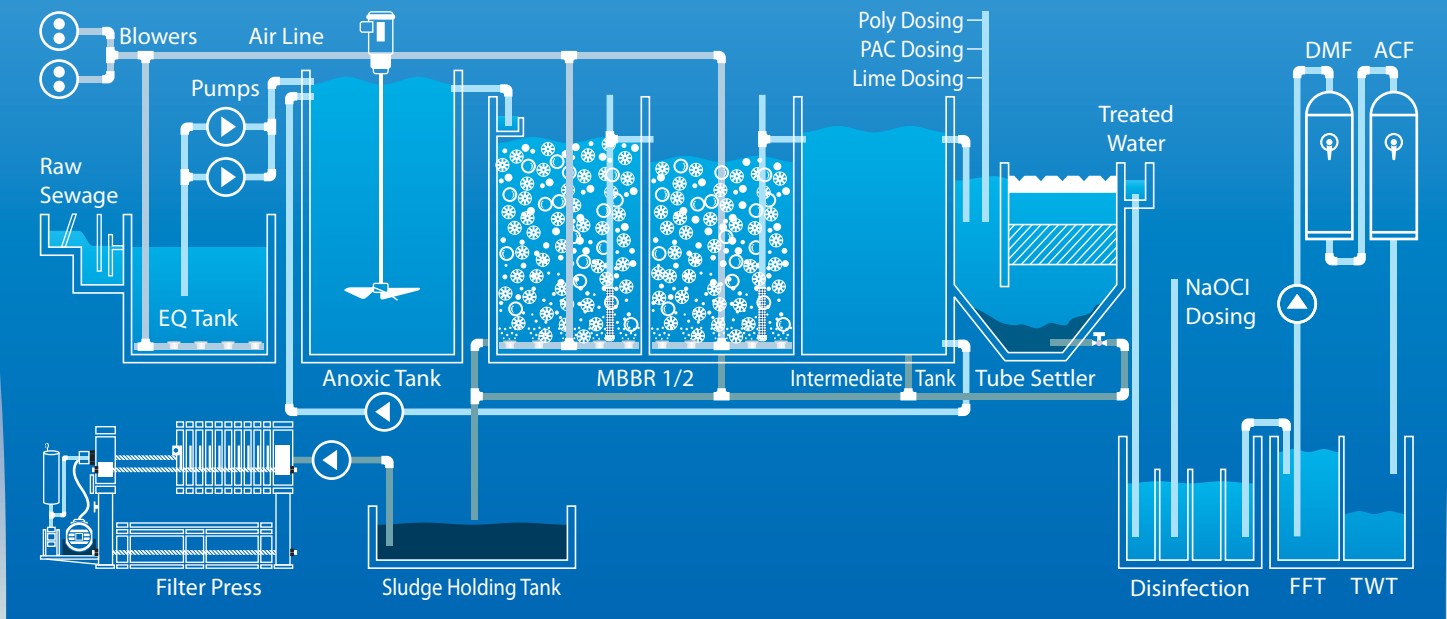
### Tertiary Treatment

To reuse, the grey water is passed through a filtration media to further reduce the suspended organic load.

### Sludge Conditioning and Handling

The sludge generated is fully digested, i.e. no odour, and is dewatered for subsequent handling with the help of filter press or centrifuge.





### Design Basis

PARAMETERS	UNIT	RAW SEWAGE	AFTER TS		AFTER TTP		Treated Sewage with Anoxic, TTP & UF
			Treated Sewage without Anoxic	Treated Sewage with Anoxic	Treated Sewage without Anoxic	Treated Sewage with Anoxic	
pH	-	6.5-7.5	6.5-7.5	6.5-7.5	6.5-7.5	6.5-7.5	6.5-7.5
BOD less than (<)	ppm	400	30	20	25	10	5
COD less than (<)	ppm	800	250	100	150	50	30
O & G less than (<)	ppm	50	10	10	10	10	<5
TSS less than (<)	ppm	400	100	10	100	10	<5
N-Total	ppm	30	30	10	10	10	10
NH4-N	ppm	15	15	5	5	5	5
P04- (P)	ppm	5	5	5	2	2	2

### Sewage Generation Pattern

Domestic	House, Apartment, Colony, Society etc.	135 ltrs/ person/ day
Commercial	Schools, Institutes, malls, Office, IT Park etc.	15-70 ltrs/ person/ day
Hospitality	Restaurant, Hotel etc.	35-100 ltrs/ seat/ room/ day
Hospitals	Hospitals	200-400 ltrs/ Bed/ day 35-40 ltrs/ Out Patient/ day

### Flexibility of The Product

CAPACITY	30KLD and above.
ADD-ON POSSIBILITIES	UF & RO to achieve Zero Liquid Discharge.
MOC of Tanks / Reactors	CIVIL, MSEP, MS-FRP, SS
INSTALLATION OPTIONS	Over ground, Under Ground, Basement and Containerized.
TREATED WATER	Drainable / Reusable as per PCB norms.

### Advantages of MBBR Technology

- ✓ Space Requirement is almost 30% of conventional Activated Sludge Process (ASP).
- ✓ MBBR is a self sustaining design and does not require too much of Operator interference.
- ✓ In MBBR sludge generation is low and stabilized and does not require Sludge Recycling.
- ✓ MBBR design can tolerate occasional Power cuts and shut offs.
- ✓ In MBBR design capacity enhancement to some extent is possible.



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