

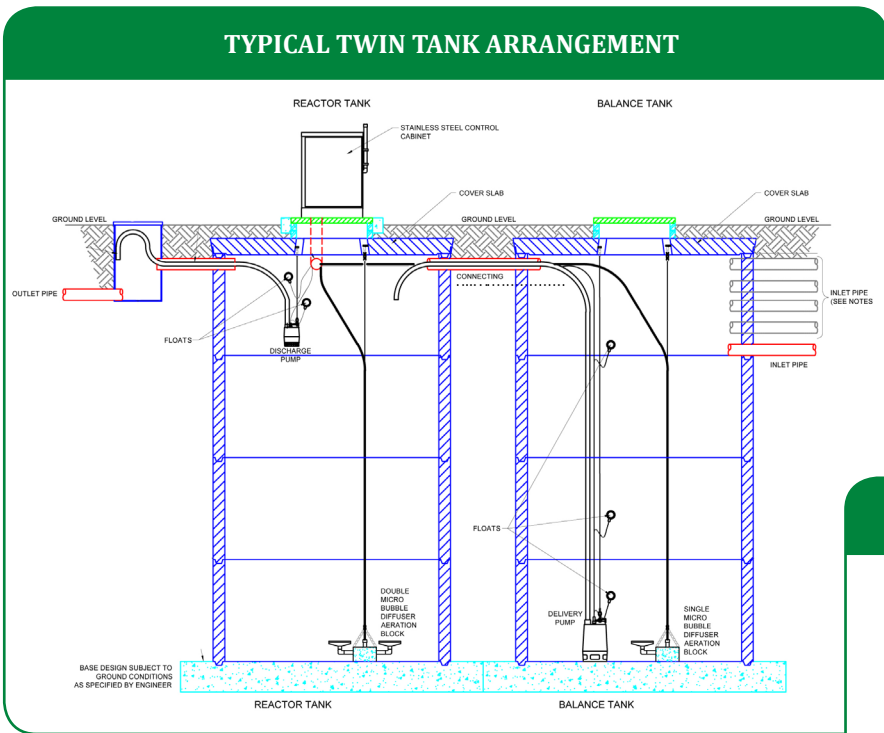
COMPACT 6-8PE | COMPACT 10-30PE Wastewater Treatment Solutions

Aerated activated sludge provides the biological treatment. Bio-Bubble Compact incorporates Advanced-Aeration which is unique in that it instills the most favourable conditions to stimulate and cultivate healthy, naturally selected microorganisms to form the activated sludge. A low sludge loading and advanced sludge-age promotes the formation of a healthy dense flocculation with clear liquid interface to produce a stable, odourless, high quality effluent. A high ratio balance capacity ensures Bio-Bubble Compact systems can absorb peak diurnal or abrupt instantaneous flows without upsetting the biological treatment. The system imparts a very stable environment to preserve the quality of the final effluent. In this respect, there are no other biological systems capable of continually maintaining the high quality of final

effluent as the Bio-Bubble Advanced Aeration process. During reactor settlement, the system will evolve over 20 minutes showing a clear strata between the treated effluent and sludge blanket. Within a Bio-Bubble, stratification does not stop there. Solids converted to inert matter will settle first and gradually, increasing layers of organic matter will form an overlay. Bio-Bubble humus characteristics are again very different. It contains about 98% water, is viscous and virtually odourless. The liquid readily disperses and the remaining substance resembles snuff. It is highly stable and contains phosphates, and makes an excellent organic fertiliser. In comparison to other treatment systems, the volume of humus sludge is significantly reduced on average by 90%.

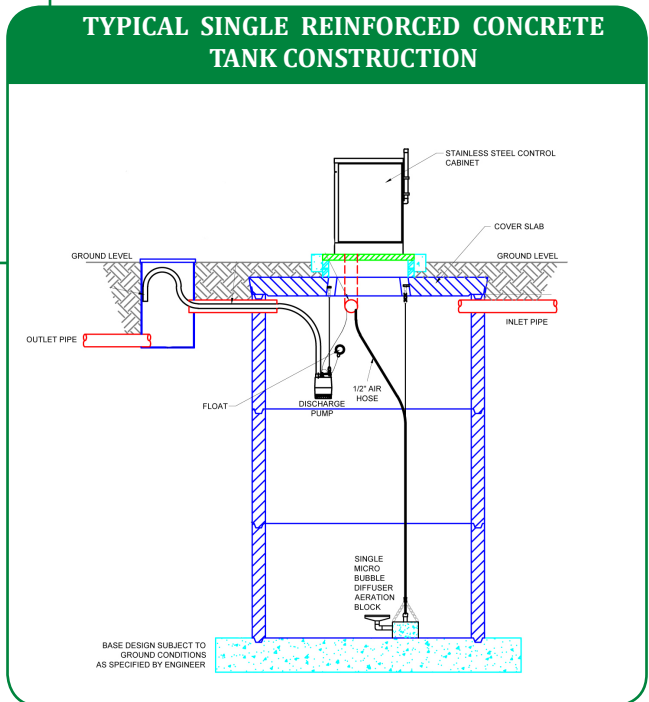
THE STANDARD BIO-BUBBLE FINAL EFFLUENT DISCHARGE QUALITY

10mg/l BOD : 15 mb/l Suspended Solids : 2 mg/l Ammonia



- Tanks constructed with reinforced pre-cast concrete rings
- Lasting infinitely beyond average 10 to 15 years of GRP tank systems.
- Permits various installation formats ie flush-to-ground, under driveways
- Durable stainless steel control kiosk can be positioned remotely
- Systems can be remotely monitored with fault alarms transmitted to head office or any designated person
- Discharge can flow direct* to ponds, rivers, streams, bog gardens, bore-holes, ditches
- May be used for irrigation or a recycling

* with approval



MAINTENANCE

Designed with minimum maintenance in mind, all controls are housed in a thermostatically protected kiosk, the only equipment in the tank is a pump to discharge the treated effluent. Systems are fitted with a Radio Frequency (RF) alarm system and remote monitor to provide both visual and audible alarms for mechanical failure. We can also incorporate a system connecting to a landline or SMS text that transmits alarms direct to Bio-Bubble head office. Bio-Bubble also offers competitive maintenance packages for the upkeep of their systems.

TYPICAL DATA FOR DOMESTIC APPLICATIONS FOR POPULATIONS UP TO 30 PE

Population Equivalent	Hydraulic Load (200 l/ per capita)	Reactor Internal Dimensions*	Typical Power Consumption**
≤ 6	1.2 m ³ /d	1.8m Ø x 3m deep	< 2.8 kWh/d
8	1.6 m ³ /d	1.8m Ø x 4m deep	< 2.9 kWh/d

Population Equivalent	Hydraulic Load (200 l/ per capita)	Balance Tank Internal Dimensions*	Reactor Internal Dimensions*	Typical Power Consumption**
10	2.0 m ³ /d	1.2m Ø x 3m deep	1.8m Ø x 3m deep	3.0 kWh/d
12	2.4 m ³ /d	1.8m Ø x 3m deep	1.8m Ø x 3m deep	3.2 kWh/d
15	3.0 m ³ /d	1.8m Ø x 3m deep	1.8m Ø x 3m deep	5.0 kWh/d
20	4.0 m ³ /d	1.8m Ø x 4m deep	1.8m Ø x 4m deep	5.4 kWh/d
25	5.0 m ³ /d	1.8m Ø x 4m deep	2.1m Ø x 4m deep	5.5 kWh/d
30	6.0 m ³ /d	1.8m Ø x 4m deep	2.1m Ø x 4m deep	5.7 kWh/d

A typical selection of Bio-Bubble Compact Systems showing the final effluent quality being achieved over a long term

Property	BOD (mg/l)	TSS (mg/l)	Ammonia (mg/l)
Wild Tracks	8.8	9.0	<0.02
Collicorner	1.5	2.0	<0.03
Redford House	2.0	8.5	0.03
Woodruff	4.0	5.0	<0.20

Property	BOD (mg/l)	TSS (mg/l)	Ammonia (mg/l)
Westley Manor	2.1	8	0.03
Little Elm	1.2	2.5	0.03
Mount Fidget	0.6	4.0	0.03
Within Cottages	1.8	7.1	0.1
Home Farm	2.13	2.0	0.03

* Tank dimensions based upon standard pre-cast concrete rings
 ** Power consumption assumes permanent residency to the population stated

