



BioTornado

www.biotornado.com

BIOLOGICAL DOMESTIC

Wastewater Treatment Plant



**Next-Generation Wastewater
Treatment Technology**



**ODORLESS
WORKING**



**Compact
And Easy
To Install**



**Invisible On
The Site.**



**One Day
Installation
Process.**





BioTornado revolutionizes **wastewater management** with its advanced technology, catering to both small homes and larger complexes for up to 50 people.

It features **8 specialized cleaning chambers**, ensuring efficient and cost-effective treatment.



BIOTORNADO

MAINTENANCE REQUIREMENTS

**Maintenance
once a year**



**Inspection
twice a year**



BIOTORNADO FEATURES



Capacity :

Ideal for Home and Commercial Buildings, Serving 4 – 50 people, with a treatment capacity of 0.6 – 7.5 m³/day.



Maintenance Ease :

Designed for easy maintenance to ensure longevity and optimal performance.



Simple Installation :

User-friendly installation process for quick and efficient setup.






Sleek Design :

Blends seamlessly into medium-sized residential environments





COMPARISON

FEATURES	 SEPTIC	 WASTE WATER FACILITY	 BIO TORNADO
Performance	25%	94%	98%
Nitrogen	Irremovable	26.4mg/L	16.3mg/L
Phosphorus	Irremovable	6.79mg/L	1.56mg/L
Service	2-6 in Year	2-3 in Year	1 Time in Year
Pollution of the environment	75%	6%	2%
Secondary use	Not Allowed	Allowed	Allowed
Cover Size	1m-1.5m	0.7m-1.5m	0.65m
Number of Working Cameras	1-2	2-6	8
Operation of the air supply unit	24h/a Day	24h/a Day	12h/a Day

BIOTORNADO'S TREATMENT OPTIONS

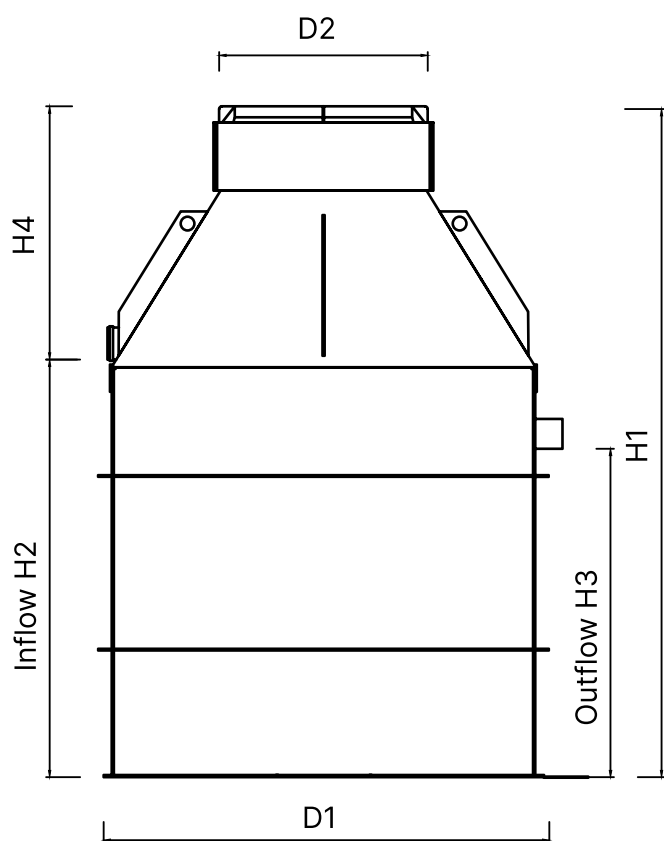


MODEL	PEOPLE	CAPACITY	WEIGHT
B4S-B6S	2-6	0.6 – 0.9 M ³ /DAY	150-165
B4A-B10A	4-10	0.6 – 1.5 M ³ /DAY	150-240
B15A-B50A	15-50	2.25 – 7.5 M ³ /DAY	340-540

MATERIALS : HIGH QUALITY POLYPROPYLENE (PP)

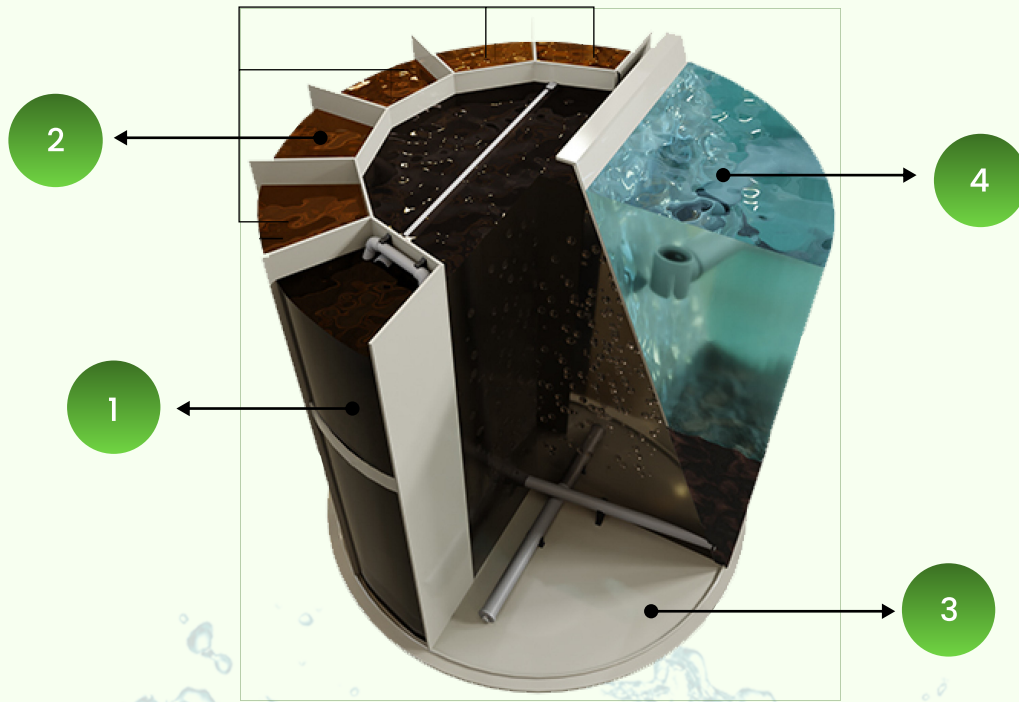


PERFORMANCE RESULT



	EFFLUENT (%)	EFFLUENT (MG/L)
BDS5	97.6	8.41
ChDS	94.5	37.8
SM	97.5	8.81
SS	97.5	8.81
NKj	87.6	10.3
Ntot	80.1	16.3
Nb	80.1	16.3
Pb	80.8	1.56
NH4N	89.6	8.4
N02N	-	0.381
NO3N	-	5.64

HOW DOES IT WORKS?



1. Anaerobic

Wastewater enters BioTornado through the inlet and passes through a mechanical grate, ensuring that large particles and grit do not hinder the treatment process or cause mechanical maintenance issues. In the anaerobic zone, complex organic matter is broken down into simpler forms in preparation for the next stage of treatment, all in the absence of air.

2. Anoxic Zone

Here, the simplified organic matter undergoes denitrification, where nitrate and nitrite are converted into nitrogen gas. This process effectively reduces the nitrogen content in household wastewater.

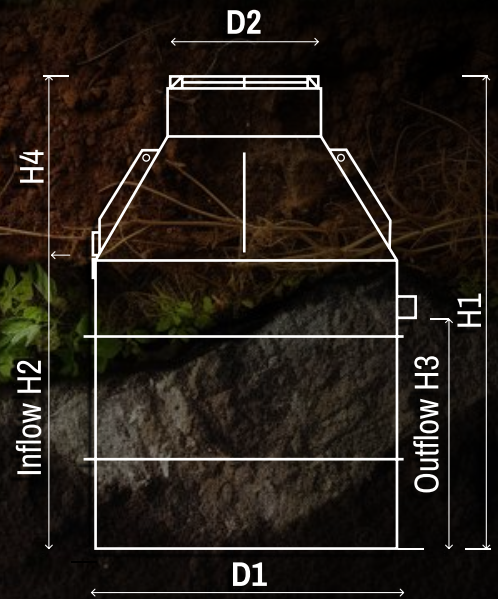
3. Aeration Zone

Oxygen is supplied in this chamber, enabling aerobic bacteria to consume and decompose the organic matter in the presence of free oxygen. These bacteria play a crucial role in removing organic matter from the wastewater.

4. Clarification Zone/Settlement Zone

The wastewater from the aeration tank flows into the clarification zone, where gravity separates water from sludge. The heavier sludge settles at the bottom and is transferred back to step #01, while the treated water is collected in the next compartment. This water meets the effluent standards of Scandinavian markets and adheres to strict EU safety, health, and environmental protection requirements. It can be utilized for home gardening purposes or safely discharged into the environment.

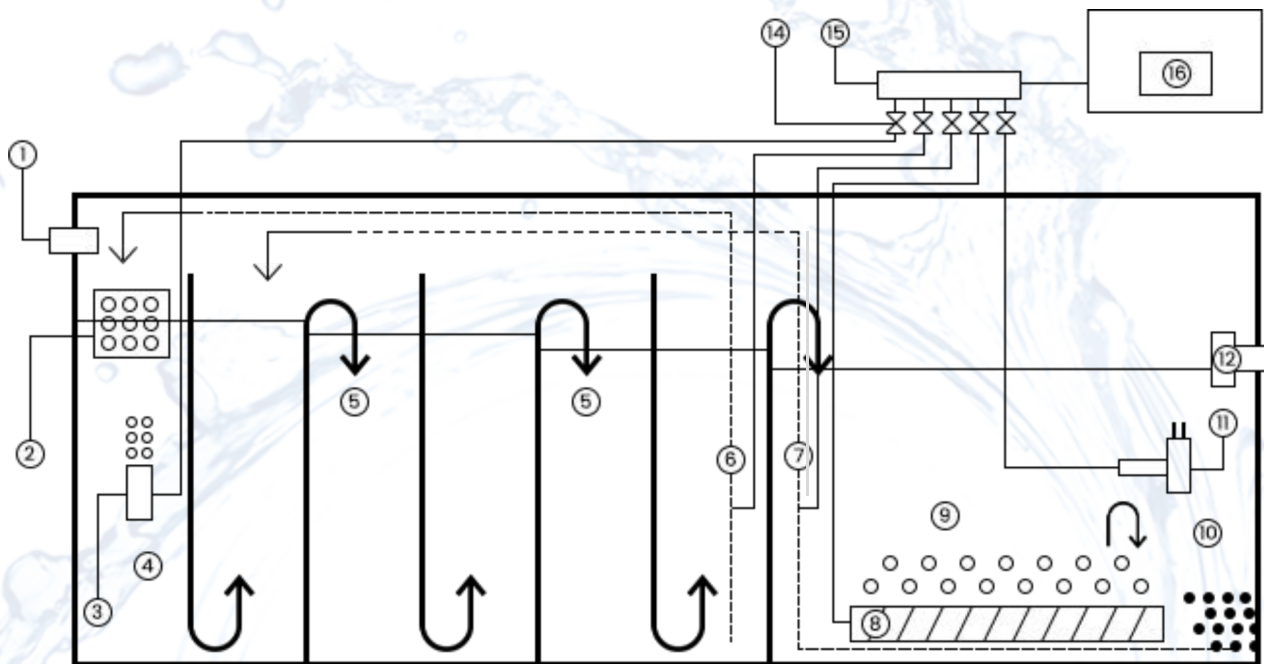
DIMENSION GUIDE



Model	Diameter D1,m	Height H1,m	Inlet H2, m	Outlet H3, m	Cover D2, m	Inlet	Outlet
B4S	1.48	1.95	1.38	1.06	0.07	110	110
B4A	1.48	2.3	1.38	1.06	0.07	110	110
B6S	1.65	2	1.54	1.21	0.07	110	110
B5A	1.65	2.5	1.54	1.21	0.07	110-160	110
B8A	1.78	2.5	1.69	1.37	0.07	110-160	110
B10A	1.93	2.7	1.74	1.41	0.07	110-160	110
B15A	2.08	2.95	2.1	1.76	1.26	110-200	110
B20A	2.57	3	2.05	1.71	1.26	110-200	110
B25A	2.54	3.3	2.4	2.06	1.26	110-200	110
B30	2.78	3.2	2.34	2.01	1.26	110-200	110

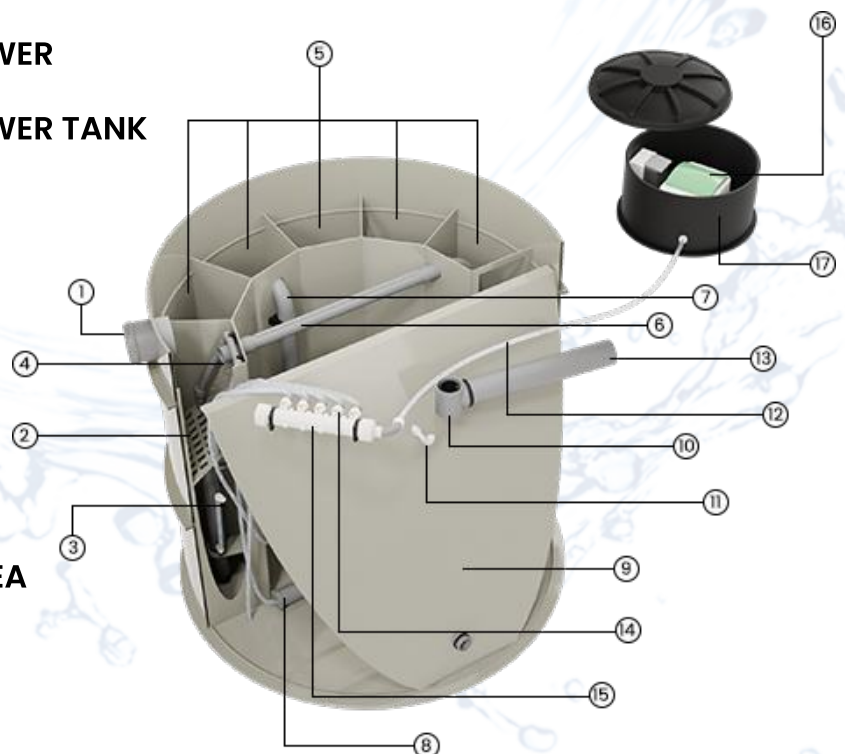


STANDARD COMPARTMENTS



FEATURES :

1. INLET
2. MECHANICAL GRATE
3. AIR SUPPLY
4. ANAEROBIC AREA
5. ANOXIC AREA
6. CIRCULATION PIPE
7. AERATION DIFFUSER
8. AERATION AREA
9. PRECIPITATOR AREA
10. AIR SUPPLY TO HE PRECIPITATOR AREA
11. OUTLET WATER FLOW REGULATOR
12. AIR DISTRIBUTION DAMPERS
13. AIR DISTRIBUTION MANIFOLD
14. AIR DISTRIBUTION MANIFOLD
15. BLOWER
16. BLOWER TANK





BioTornado



Explore Our **Domestic Wastewater** Solution

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