

# HydroClear™ High Performing, Cost Effective Sewage Treatment Plant



## Benefits

- Can remove 97% of pollutants - making it a market leader
- Easy access & cost effective installation with minimal damage to the surrounding area. Due to an excavation depth of only 2.2m, the 6-population model can be installed using a 2.5 tonne mini-digger rather than the 7 or 12 tonne models required for traditional methods.
- Low running noise - due to high diaphragm blowers
- Power failure default - means that even if the power trips out, the HydroClear will continue to perform as a septic tank
- Running Costs cut by up to 25% - due to lower installation costs, 12-24 month desludging intervals and biennial maintenance.
- CE approved and tested to EN 12566-1
- Minimal Odour - hermetically sealed and market leading biological oxygen demand (BOD) performance means the HydroClear remains practically odour free
- Maintenance Friendly - ground level access to desludging and maintenance points

Domestic wastewater treatment has changed since the days of cess pits and septic tanks, with rigorous effluent quality legislation driving the design of more effective systems, the latest of these being the European-wide product testing standardisation which has raised the benchmark for domestic sewage treatment plants, BS EN 12566-3. The HydroClear™ represents significant progress for the domestic wastewater industry. With contemporary design engineering and analysis software and state-of-the-art manufacturing facilities combine to create this unique product which dominates the market with a class-leading pollutant removal of 97%.

The HydroClear is an aerated biological system which benefits from a moving bed biological reactor (MBBR) at its core. A new process which embraces the benefits of common fixed film media processes without suffering their common downfalls.

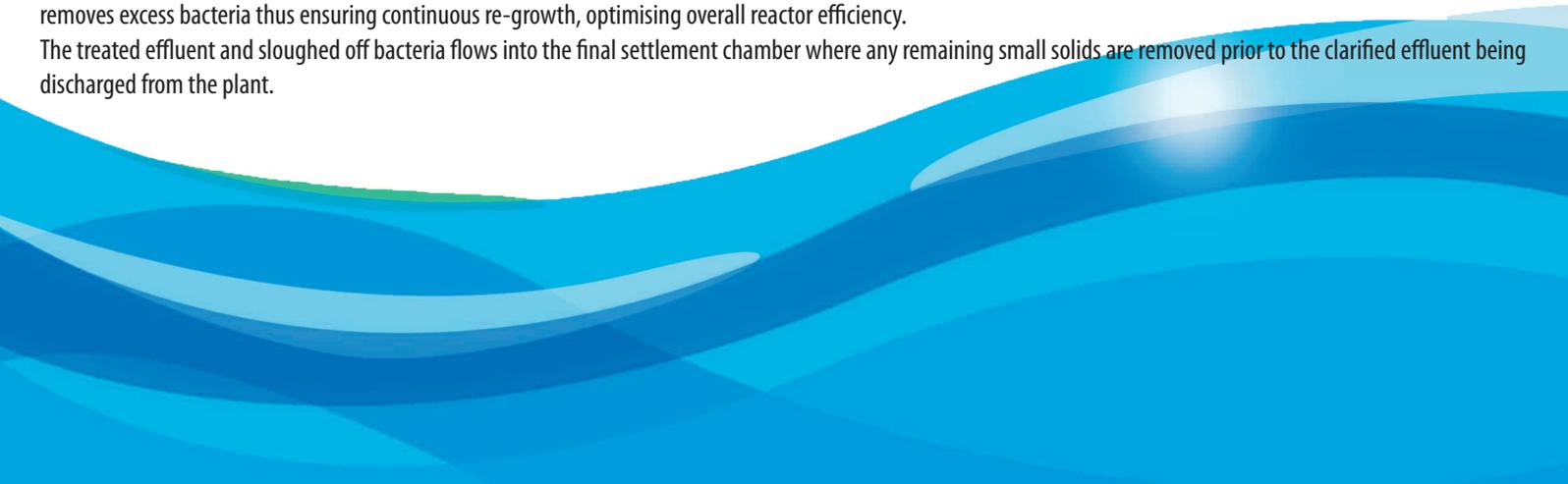
Incorporating a three chamber design (primary settlement, aeration chamber and final settlement) the HydroClear manages to overcome the problem of “channelling” which is an issue with more common processes such as Submerged aerated filters, rotating biological contactors or trickling filter designs.

Larger solids are removed by settlement and flotation in the primary settlement chamber, an accumulation will form at the base of the tank which is removed annually or biennially by desludging.

The clarified water then passes to the biological reactor where it is treated to remove the dissolved constituents, mobile media elements support large bacterial populations within the reaction chamber while induced air promotes complete mixing, ensuring that full treatment is achieved.

Unlike conventional media beds, MBBR systems are self cleaning and unable to become blocked through channelling. Media interactions produce a sloughing effect that removes excess bacteria thus ensuring continuous re-growth, optimising overall reactor efficiency.

The treated effluent and sloughed off bacteria flows into the final settlement chamber where any remaining small solids are removed prior to the clarified effluent being discharged from the plant.



# Balmoral HydroClear™

Sewage treatment plant

High performing, cost effective sewage treatment plant

## Sizes and dimension

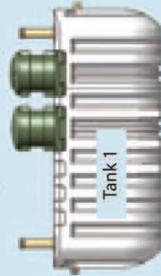
Balmoral HydroClear 6-pop



Balmoral HydroClear 30-pop\*



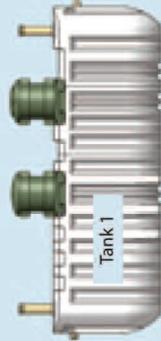
Balmoral HydroClear 12-pop



Balmoral HydroClear 40-pop\*



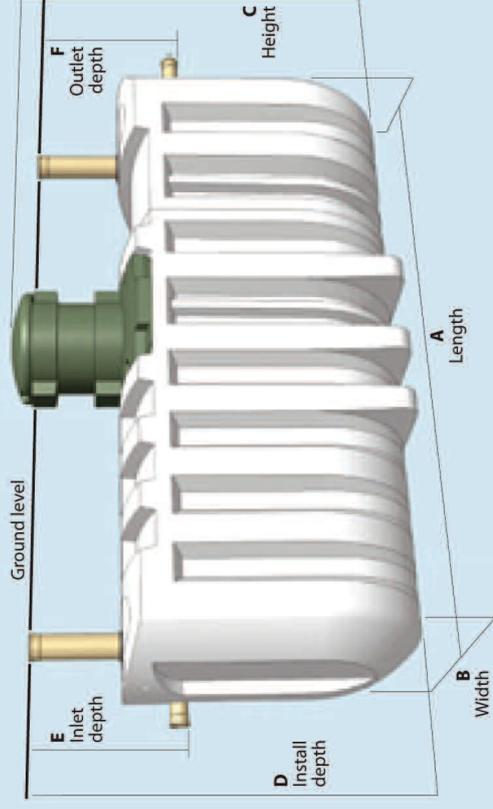
Balmoral HydroClear 20-pop



Balmoral HydroClear 50-pop\*



## Key dimensions



\* Installations can be in line as shown or side by side as conditions dictate.

Tank pop size	Total capacities Litres	Tank 1						Tank 2						Tank 3						
		A Length	B Width	C Height	D Install depth	E Inlet depth	F Outlet depth	A Length	B Width	C Height	D Install depth	E Inlet depth	F Outlet depth	A Length	B Width	C Height	D Install depth	E Inlet depth	F Outlet depth	
6-pop	4400	3400	1250	2635	2450	1000	1050													
12-pop	5950	4500	1400	2635	2450	1000	1050													
20-pop	7960	5680	1400	2635	2450	1000	1050													
30-pop	11410	4500	1400	2635	2450	1000	1050	4500	1400	2635	2450	1050	1050							
40-pop	14920	4500	1400	2635	2450	1000	1050	5680	1400	2635	2450	1050	1050							
50-pop	18400	5680	1400	2635	2450	1000	1050	4500	1400	2635	2450	1050	1050	3400	1250	2635	2450	1050	1050	