



Water & Sewage
Pumping and

The Pump People.

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SEWAGE TREATMENT STATIONS



UNNOTICED

This is all you see of a 6 or 12 Population Equivalent Sewage Treatment Plant which is suitable for most domestic houses.

Manufacturers reserve the right to change specifications without prior notice

Sewage Treatment A3-Oct09

- ◆ **COST EFFECTIVE**
- ◆ **PURPOSE BUILT**
- ◆ **FINAL EFFLUENT CAN BE PUMPED FROM WITHIN THE CHAMBER**
- ◆ **LARGE SELECTION OF CHAMBER SIZES**
- ◆ **ROBUST CHAMBER DESIGN**
- ◆ **AFTER SALES SERVICE**

Each enquiry handled by our experienced sales team is treated individually. We make sure your sewage treatment station meets the Building Regulations and suits your ground conditions. From a studio apartment to hotel complex, granny flat to an industrial estate we have the know-how to offer the right combination of chamber, pump, access cover and accessories to make this part of your overall job a success.

We can arrange delivery of your sewage treatment station anywhere in the U.K., or even overseas. After installation we can also arrange for one of our Approved Distributors to commission the station and offer a service contract for a long trouble free service life.

EACH STATION IS MANUFACTURED TO FIT YOUR REQUIREMENTS

Planning restrictions on effluent discharge quality can now be met resulting in a greater scope for building development.



6 Population equivalent, the smallest in the range.

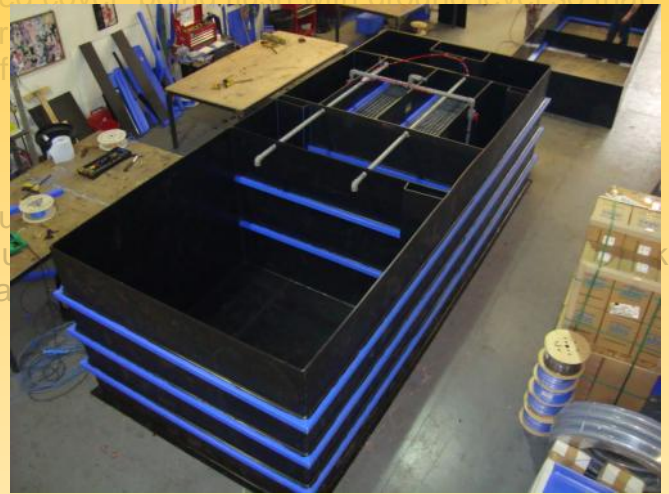
Designed in accordance with BS6297 and tested to BSEN 12566-Pt3, the AMOS Range of units produce final effluent qualities significantly better than standard requirements. In compliance with BSEN 12566, all AMOS treatment plant in the range up to and including 50pe have been tested.

The AMOS Sewage Treatment System is available as a single structure "unitank" design up to 300pe and thereafter as a modular system to suit any application.

AMOS systems are manufactured entirely from premium grade polypropylene to ensure a robust unit with an infinite life expectancy.

There are no electrical, (unless a discharge pump is fitted), mechanical or moving parts within the unit thereby eliminating the need for internal access except for routine desludging. The only mechanical item is an above-ground blower unit.

The design of the AMOS system also takes into consideration ease and economy of installation, with all units having an external flat base. The finished cover being flush with ground level so that there is no restriction to pedestrian access over the area after installation. AMOS units can also be installed in trafficked areas subject to confirmation at time of order



25 Population equivalent under construction showing the separate treatment stages and internal air pipes before the cover is sealed in place.



70 Population equivalent being loaded at the factory for delivery on site.

An additional benefit of the AMOS design is that should the final effluent require pumping to the point of discharge, the AMOS system can include an internal pump fitted into an integral tank thereby eliminating the need for an additional external tank.



200 Population equivalent installed. Showing finished landscaping, control kiosk with air louvers and loss-of-air alarm beacon.

EACH STATION IS MANUFACTURED TO FIT YOUR REQUIREMENTS

For any application where connection to the main sewer is not possible, the AMOS Sewage Treatment System offers a practical and cost effective solution.

Size Selection Chart & Technical Data

Model Ref	PE	BOD/day kg	Flow/day M3	Length mm	Width mm	Depth mm	Std Inlet mm	Weight kg	Blower Rating
CLF 1	6	0.36	1.20	1500 diameter		2100	110	250	60 w
CLF 2	12	0.72	2.40	1900 diameter		2100	110	350	80 w
CLF 3	18	1.08	3.60	2500 diameter		2100	110	600	120 w
CLF 4	25	1.50	5.00	4710	1500	2174	160	1200	120 w
CLF 5	30	1.80	6.00	4010	2124	2174	160	1400	0.55 kw
CLF 6	40	2.40	8.00	5060	2124	2174	160	1700	0.55 kw
CLF 7	50	3.00	10.00	5610	2124	2174	160	1900	0.55 kw
CLF 8	60	3.60	12.00	6010	2124	2174	160	2100	0.75 kw
CLF 9	70	4.20	14.00	6810	2124	2174	160	2200	0.75 kw
CLF 10	80	4.80	16.00	6760	2524	2174	160	2300	0.75 kw
CLF 11	90	5.40	18.00	7360	2524	2174	160	2650	1.10 kw
CLF 12	100	6.00	20.00	7760	2524	2174	160	2900	1.10 kw
CLF 13	125	7.50	25.00	8200	1500	2900	160	3000	1.50 kw
CLF 14	150	9.00	30.00	9200	1500	2900	160	3250	1.50 kw
CLF 15	200	12.00	40.00	10500	1500	2900	160	3400	2.20 kw
CLF 16	250	15.00	50.00	11500	2250	2900	160	3600	2.20 kw
CLF 17	300	18.00	60.00	12000	2400	2900	160	3850	2.20 kw

- All units have an inlet of 600mm unless otherwise requested at the time of order.
- Unit dimensions can be changed to suit any site restrictions as long as overall volumes are retained.
- Integral duty only or duty/standby pumped discharges are available as an option.
- These units are for standard 20mg/L BOD; 30mg/L SS; 20mg/L NH₄ effluent qualities. Treatment systems to achieve more stringent effluent qualities and phosphate removal are also available.
- All treatment systems include loss-of-air alarms as standard.
- For applications in excess of 300pe modular units are used.



Sewage Treatment Stations

How it Works

Raw sewage is either pumped or runs by gravity into the tank which is divided into sectors, the first being the Primary settlement tank.

PRIMARY SETTLEMENT TANK

The primary settlement tank is a two stage tank designed to maximize the removal of gross and suspended solids prior to transfer of the settled effluent to the biozone for treatment. The primary settlement tank also incorporates a sludge storage volume (based on full load) depending on the desludge periods as identified for individual applications.

BIOZONE

The biological treatment phase utilizes a biological aerated filter which incorporates two proven principles of biological process in the form of a fixed film reactor for process stability and a suspended floc dispersed growth system for high transfer rates and operational control to ensure a stable treatment process which is largely unaffected by shock loads.

The process incorporates a submerged, high rate, plastic media on which a fixed film of biomass is grown. This film takes nutrition from the incoming settled effluent and is provided with oxygen by means of a small blower unit which aerates the media through HDPE membrane diffusers to provide fine bubble aeration. The action of the fine bubble aeration is carefully controlled to provide optimum oxygen transfer rates and to provide a scouring action to slough off excess biomass to keep the thickness of the fixed biological film at optimum levels, thereby preventing the production of anaerobic bacteria and ensuring maximum process efficiency.

The fact that the media remains submerged allows for an element of suspended floc dispersed growth which means that there will be biomass which is "unfixed" to the media but achieves treatment through suspended aeration.

The biozone incorporates a two stage process as standard that allows for constant mixing of incoming settled effluent to provide optimum treatment stability and to avoid any "short-circuiting."

The use of a two stage biozone ensures a high degree of process efficiency to not only reduce B.O.D. levels to that required, but will also achieve reductions in ammoniacal nitrogen in excess of standard requirements.

FINAL SETTLEMENT TANK

The final settlement tank is designed in accordance with the requirements of BS 6297 to ensure relevant surface areas and rise rates are achieved to provide maximum settlement of any suspended solids prior to discharge.

The system also incorporates continuous and automatically timed humus sludge return systems to return humus sludge from both the final settlement tank and each biozone, back to the primary settlement tank.

Additionally this system also provides for continuous recycling of treated effluent back to the P.S.T. to not only provide dilution of incoming settled effluent but to also ensure continuous flow during periods of low or no flow, thereby keeping the biomass in prime condition.

INFLUENT DESIGN PARAMETERS.

DWF (Dry Weather Flow) - ATP1 = 1.20m³/day : ATP2 = 2.40m³/day
Peak Design Flow - 3 x DWF
Organic Load - ATP1 = 0.360g/BOD/day : ATP2 = 0.720g/BOD/day
Nature of Influent - CRUDE SEWAGE
PH Range - 6 – 8
Standard Effluent Quality - 20mg / L BOD : 30mg / L SS