

MARSH ULTRA:POLYLOK

# ECO-FRIENDLY SEWAGE PLANT PROCESSING



# Energy-efficient, economical and flexible process control for Ultra:Polylok™ sewage treatment plants

## Efficiency

Air blower speed/output is controlled using a variable speed 'drive' which supplies the precise amount of air required to enable the sewage treatment plant to function efficiently.

Optimisation of the air blower output results in improved running costs, meaning the end-user can be assured they have the most economical solution for their wastewater system.

This is a unique feature when it comes to overall energy-efficiency as most process control kiosks currently available within the industry have a one size fits all approach.

## Flexibility

These next-generation process control kiosks are built with flexibility in mind. Additional control options can be programmed into the 'drive' to regulate the volume of air delivered to the sewage treatment plant for different periods. This can be particularly beneficial for seasonal applications such as campsites, caravan parks, lodges or hotels where they may operate at peak capacity for short periods of the year. This functionality permits the volume of air to be increased or reduced, depending on the amount of people to be accommodated, thereby offering the end-user the ability to further reduce energy and running costs..

In addition, the process control kiosk allows for system expansion in the case of business/site growth (subject to design), thus eliminating the need to install extra tanks, pipework, air blowers, etc.

## Noise reduction

We believe these kiosks to be the quietest on the market today. They are fitted with a number of noise reduction measures as standard, making them ideal for caravan parks, campsites, etc, subject to kiosk placement/location. This can reduce the need for creating barriers or planting to restrict noise.

Further noise reduction measures can be added through the use of acoustic PUNF foam linings and various acoustic noise absorbing baffles. This not only reduces noise but enables the kiosk to be placed in a more convenient location on sites where space is at a premium (the recommended distance from the sewage treatment plant should be 10m).

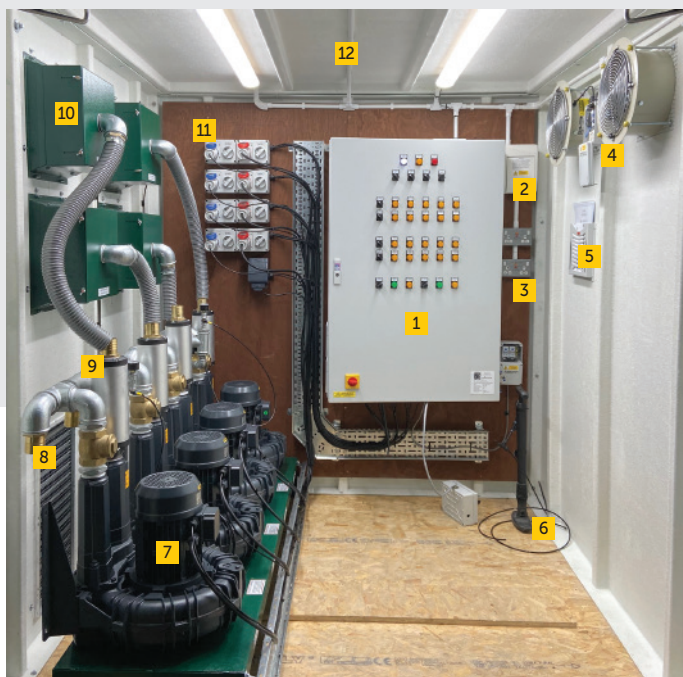
Specification/costs of noise reduction options, including measured decibel levels at a given distance from the kiosk, can be supplied on request.



## Features

- **Powder coated, mild steel or GRP kiosk (Green - RAL6005)**  
The kiosk protects the motor and controls from the elements
- **Forced ventilation, including ambient temperature control**  
A ventilation fan/thermostat maintains the optimal ambient temperature in accordance with the air blower manufacturer's specifications
- **Thermal protection on motors**  
Protects the motor windings from overheating, increasing the reliability and lifespan of the motor
- **Electrical overload and short circuit protection**  
As required by electrical regulations
- **Air intake filter maintenance alarm**  
Alerts the end-user when the intake filter needs cleaning/replacing
- **High pressure alarm**  
Alerts the end user if the system design pressure has been exceeded, typically suggesting a blockage or restriction in the pipework
- **Low pressure alarm**  
Alerts the end user if the system design pressure is low, typically suggesting a leakage in the pipework
- **Standard acoustic attenuation including air intake silencer and external acoustic hood**  
Reduces noise from the blower motor and air intake





### Key

- 1 Electrical control panel
- 2 Kiosk lighting and power DB
- 3 230v RCD sockets
- 4 Kiosk ventilation fans/thermostat control box
- 5 Electrical panel drawings and documents
- 6 Test equipment (for use when commissioning)
- 7 Aeration blowers
- 8 Pipe manifold including 50mm outlets and return valves
- 9 Air intake silencer
- 10 Aeration blower intake filter
- 11 Blower power and control outlets
- 12 Kiosk lighting

## Specifications

Ultra:Polylok		Kiosk					
Model	People served	Height	Width	Depth	Power rating Kw	Recommended electrical supply 230v	Recommended electrical supply 400v
UP55	55	1350	850	500	0.8	230v SP&N 16A type C/D MCB	400v TP&N 10A type C/D MCB
UP75	75	1350	850	500	0.8	230v SP&N 16A type C/D MCB	400v TP&N 10A type C/D MCB
UP100	100	1350	850	500	1.1	230v SP&N 20A type C/D MCB	400v TP&N 16A type C/D MCB
UP125	125	1350	850	500	1.1	230v SP&N 20A type C/D MCB	400v TP&N 16A type C/D MCB
UP150	150	1350	850	500	1.1	230v SP&N 20A type C/D MCB	400v TP&N 16A type C/D MCB
UP175	175	1350	850	500	1.1	230v SP&N 16A type C/D MCB	400v TP&N 16A type C/D MCB
UP200	200	1350	850	500	1.5	230v SP&N 25A type C/D MCB	400v TP&N 20A type C/D MCB
UP225	225	1350	850	500	1.5	230v SP&N 25A type C/D MCB	400v TP&N 20A type C/D MCB
UP250	250	1350	850	500	2.2	230v SP&N 40A type C/D MCB	400v TP&N 32A type C/D MCB
UP275	275	1350	850	500	2.2	230v SP&N 40A type C/D MCB	400v TP&N 32A type C/D MCB
UP300	300	1350	850	500	3.0	230v SP&N 50A type C/D MCB	400v TP&N 40A type C/D MCB
UP325	325	1450	950	500	3.0	230v SP&N 50A type C/D MCB	400v TP&N 40A type C/D MCB
UP350	350	1450	950	500	3.0	230v SP&N 50A type C/D MCB	400v TP&N 40A type C/D MCB
UP375	375	1450	950	500	3.0	230v SP&N 50A type C/D MCB	400v TP&N 40A type C/D MCB

#### Notes:

- > The dimensions given on this page are for guidance only
- > For precise kiosk and Ultra:Polylok sewage treatment plant sizes and configurations, please contact Marsh Industries
- > All dimensions in mm

## Maintenance

Our engineers will advise of the appropriate maintenance plan once the site installation has been completed, however the process controls installed within the kiosk are designed to alert you to any imminent maintenance required on the system.

## Installation

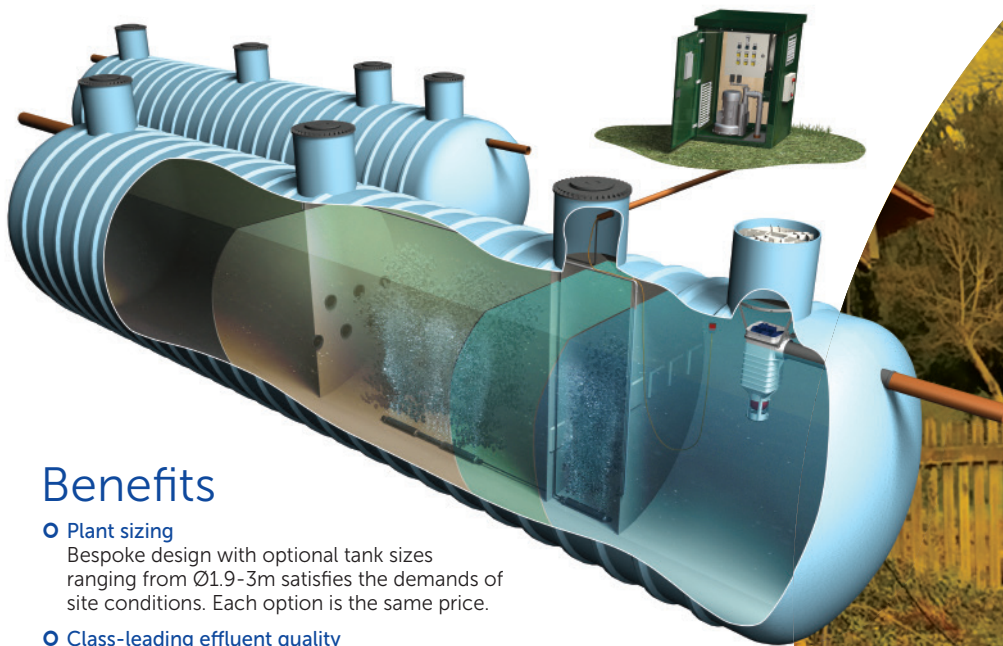
All kiosks are supplied fully assembled, tested and ready for installation. An electrical supply/connection to the kiosk should be all that is required on site (electrical supply requirements will be supplied upon kiosk specification).

# Ultra:Polylok Sewage treatment plants

Marsh Ultra Polylok sewage treatment systems provide advanced biological treatment to off-mains wastewater on sites ranging from 50-500PE.

The units are ideally suited for large residential, commercial, industrial and leisure sites - particularly where onerous consent standards preclude the use of standard 'off the shelf' units.

Proven reliability of the simple but effective Submerged Aeration Filtration (SAF-MBBR) system offers both operating and financial benefits when compared to more complex alternatives that require frequent servicing and maintenance to sustain performance.



## Benefits

- **Plant sizing**  
Bespoke design with optional tank sizes ranging from Ø1.9-3m satisfies the demands of site conditions. Each option is the same price.
- **Class-leading effluent quality**  
15:20:5mg/ltr (BOD:suspended solids:ammonia) effluent quality ensures discharge is well within national consent standards.
- **Heavy duty shell as standard**  
Structurally sound and built to last. Enables installation in all ground conditions.
- **High media surface area**  
High specification bio-media (310m<sup>3</sup> per m<sup>2</sup>) and membrane diffusers provide even circulation to eliminate 'dead spots'.
- **Internal recirculation**  
Continues the treatment process to provide higher effluent quality whilst balancing flow over 24 hour period or periods of intermittent use.
- **Polylok tertiary filter**  
All plants fitted with the patented Polylok tertiary filter to reduce suspended solids in the final effluent by a further 35%, whilst also reducing residual BOD and Ammonia levels.
- **Carbon cover**  
600mm carbon cover provides significant strength and durability, and helps to reduce possible odours.
- **Optional extras**  
Optional extras include extensions for deep installations, pumped outlets for sites with adverse levels, sample chambers, Degreaser trash barriers, phosphate reduction and UV treatment chambers.



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