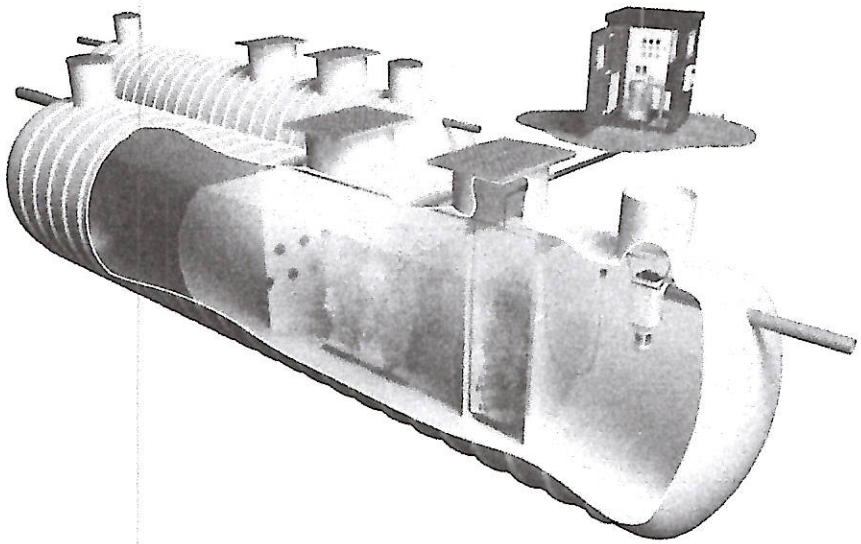
GAIA

Key Information

Please find below key information & illustration of your Marsh Ultra Polylok

For Illustration Purposes Only



The price for the Ultra Polylok 70PE will be the same regardless of diameter profile

Table 1: Illustrates the daily loadings for the site along with the peak flows over a 24-hour period.
Table 2: Displays peak and average flows along with influent concentrations of BOD and Ammonia.
Table 3: Details the final effluent standard and the optimum de-sludge period when the plant undergoes 100% loading.
Table 4: We have processed the design of the plant using our industry leading Gaia© design system which generates a volume to fit in three different diameter sizes being 1.9m, 2.5m and 3m. This will allow you to consider the best depth and length for site taking into consideration access, pylons, tree roots, hard rock or high water table conditions. Gaia was developed in collaboration with one of the UK's leading civil engineering universities.
Table 5: Specifies the total air and media required for the sewage treatment plant.

The Marsh Whisspurr (Acoustic Vibration Reduction Unit) designed to reduce noise and vibration from diaphragm compressors used in the water and wastewater treatment sectors. Contact our Marsh Contracts Team for more information & prices on 01933 654582 or contracts@marshindustries.co.uk

When you have chosen the diameter and size of the plant we will prepare a technical drawing in a PDF format. Literature and installation details are enclosed.

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Table 1 - Daily loadings for the site over a 24-hour period

Waste Source		Flow [l/day]		BOD [g/day]		Ammonia [g/day]	
Description	No.	Per Head	Total	Per Head	Total	Per Head	Total
76No. Standard Residential	76	150	11400	60	4560	8	608
10% Flow Reduction to allow for reduced Occup			10260		4104		547.2
Total for this Schedule			10260		4104		547

Table 2 - Flows and influent concentrations

Biochemical oxygen demand [mg/l]	400
Ammonia concentration [mg/l]	53.3
Average hydraulic flow [l/hour]	428
Peak flow [l/hour]	1283

Table 3 - Effluent standard and desludge period

Biochemical oxygen demand [mg/l]	20
Total suspended solids [mg/l]	30
Ammonia concentration [mg/l]	20
Desludge frequency [days]	90

Table 4 - Three bespoke tank options to suit loadings

Tank Chambers	Marsh Ultra Polylok 70PE Tank Sizes Chamber Length [m]			Volume [m^3]		
	Ø1.9m	Ø2.5m	Ø3m	Ø1.9m	Ø2.5m	Ø3m
Primary Hemisphere	0.45	0.65	0.85	0.85	2.13	4.01
Primary Settlement Tank	3.36	1.68	0.90	9.52	8.24	6.36
First Biological Zone	2.13	1.23	0.85	6.04	6.04	6.04
Second Biological Zone	0.85	0.60	0.60	2.42	2.95	4.24
Final Settlement Tank	0.71	0.60	0.60	2.03	2.95	4.24
Final Hemisphere	0.45	0.65	0.85	0.85	2.13	4.01
Total	7.95	5.41	4.65	21.70	24.42	28.89
		↑ Recommended			↑ Recommended	

Table 5 -Media and Air Requirements

Biological Zones	Media Required [m^2]	Total Air Requirements [m^3/hour]
First Biological Zone	477.42	23.82
Second Biological Zone	206.19	18.47

Table 6 - Price and payment terms for Marsh Ultra Polylok 70PE

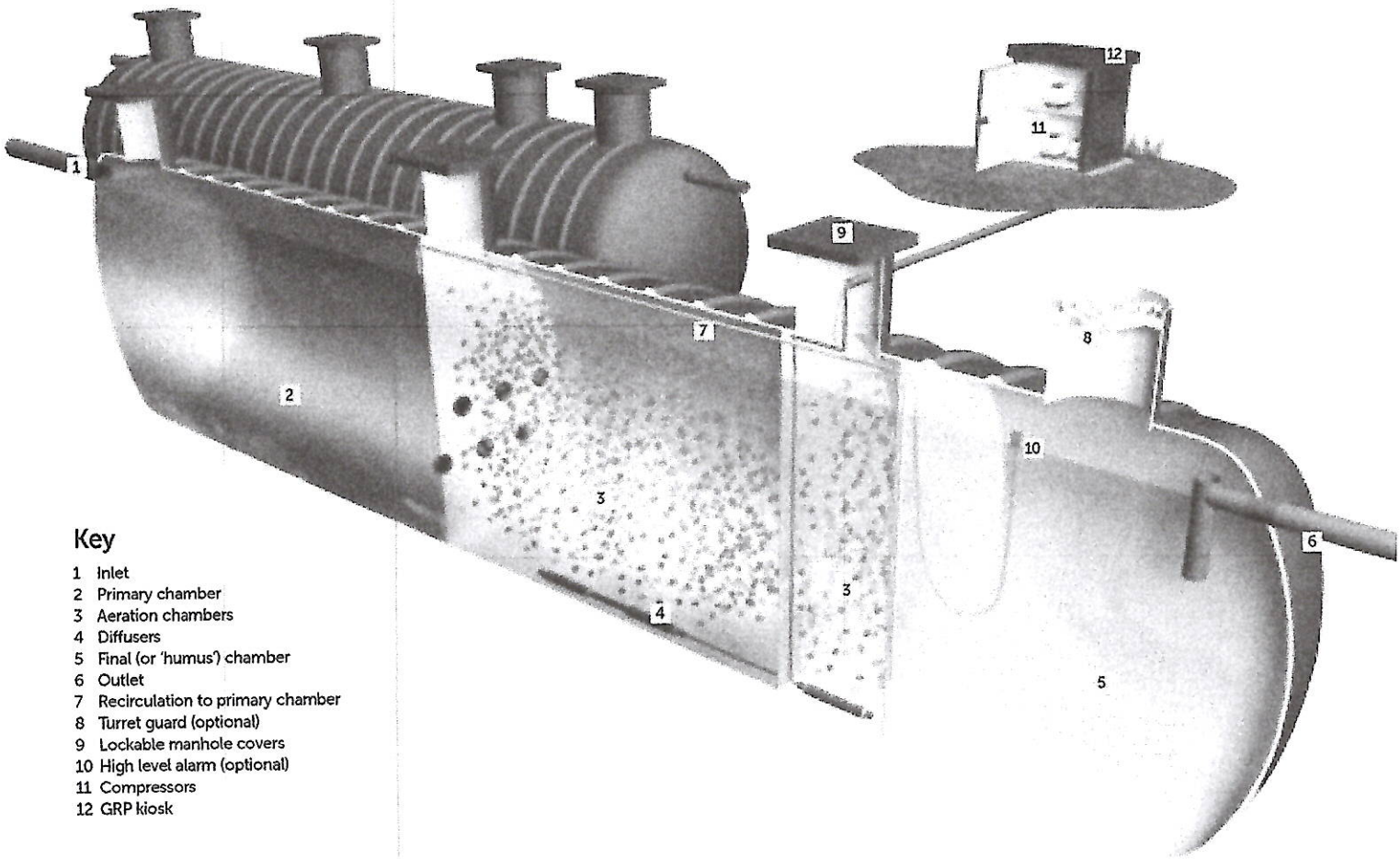
Please note all prices exclude VAT. Quote valid for 90 days.

Marsh:Standard
Cost-effective sewage treatment
Biological processing for off-mains wastewater

Overview

Marsh:Standard cost-effective sewage treatment systems provide biological treatment to off-mains wastewater on large residential, commercial, industrial and leisure sites ranging from 50-300+PE.

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



Key

1 Inlet
2 Primary chamber
3 Aeration chambers
4 Diffusers
5 Final (or 'humus') chamber
6 Outlet
7 Recirculation to primary chamber
8 Turret guard (optional)
9 Lockable manhole covers
10 High level alarm (optional)
11 Compressors
12 GRP kiosk

This is not a typical tank installation. Configuration and components are shown for illustration purposes only

Benefits

Plant sizing
Designed to BS12255, systems are available from 50-300+ PE in sizes ranging from Ø2.5-3m satisfying the demands of virtually all site conditions.

Class-leading effluent quality
Designed to British Water loadings (150litres per person, 60mg BOD litre and 8mg/litre Ammonia) ensures effluent discharge is well within national consent standards.

Cost-effective operation and maintenance
Systems have no internal moving parts and require minimal ongoing maintenance.

Heavy duty shell as standard
Structurally sound and built to last. Enables easy installation in all ground conditions.

High media surface area
High specification bio-media (310m^3 per m^2) and membrane diffusers provide even circulation to eliminate 'dead spots'.

Low energy compressor(s)
Easily accessible low energy compressor for minimal running, maintenance and servicing costs. Integral alarm detects low pressure in air line.

Internal recirculation
Continues the treatment process to provide higher effluent quality whilst balancing flow over 24 hour period or periods of intermittent use.

Lockable manhole covers
600mm lockable manhole covers provide significant strength and durability, and helps to reduce possible odours.

Health and Safety considerations
The Marsh:Standard is fitted with many safety features including turret guards, failure alarms for compressor components and high level alarms.

Optional extras
Optional extras include carbon covers for odour control, turret guards for additional safety, polylok filters to further reduce suspended solids, high level alarms and telemetry for monitoring, and risers/pumped outlets for deeper installations.

Manufactured in the UK
All units are manufactured in our twin manufacturing plants at Kettering and Bridgwater. The tanks are constructed using GRP (virgin unfilled resin – no 'fillers' such as chalk) providing consistent wall thickness ensuring superior structural strength and durability.

Specifications

Model	Population served	Width +/-50mm	Length +/-50mm	Height +/-50mm	Inlet		Outlet		Turrets x 4	Desludge
					Invert	Ø	Invert	Ø	Ø	Days
MS55	50-55	2500	4160	2950	600	160	800	160	600	90
MS60	60	2500	4470	2950	600	160	800	160	600	90
MS70	70	2500	5350	2950	600	160	800	160	600	90
MS85	85	2500	6000	2950	600	160	800	160	600	90
MS100	100	2500	6950	2950	600	160	800	160	600	90
MS125	125	2500	8550	2950	600	160	800	160	600	90
MS150	150	2500	10200	2950	600	160	800	160	600	90
MS200	200	2500	13400	2950	600	160	800	160	600	90
MS250	250	3000	9650	3450	600	160	800	160	600	60
MS300	300	3000	9650	3450	600	160	800	160	600	45

> *Pumped outlets are available*
> *The dimensions given on this page are for guidance only*
> *For precise tank sizes and configurations, please contact Marsh Industries*
> *All dimensions in mm*