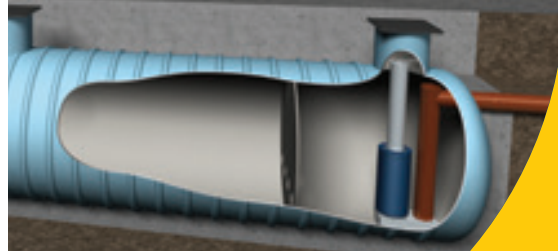


OFF-MAINS DRAINAGE PRODUCTS



British-made off-mains drainage systems for domestic, commercial, agricultural and leisure sites

Practical products

Easy to install. Built to last

We design our systems to be straightforward to handle, install and maintain. Products that do the job with no surprises.

Built on experience

Proven designs, proven performance

Our team has over 100 years of combined experience in wastewater treatment. We focus on what works - reliable performance and long service life.

Certified compliance

Meets UK and EU regulations

All products are fully type-tested and certified to meet current Building Regulations and environmental standards.

Environmentally aware

Natural solutions

We're committed to minimising environmental impact by providing environmentally sensitive products through responsible manufacturing practices that reduce waste.

Reliable supply

Stock available when you need it

We work with the largest distributor networks in Europe. That means consistent availability and dependable delivery times.

Straightforward support

Technical help when it matters

We offer practical support: site visits, product advice, and tailored solutions. No jargon, no delays.

Our strength

We're only as good as the people behind the product: Our team, and the customers who use our systems every day.



DOMESTIC AND COMMERCIAL SEWAGE TREATMENT SOLUTIONS _____ 5

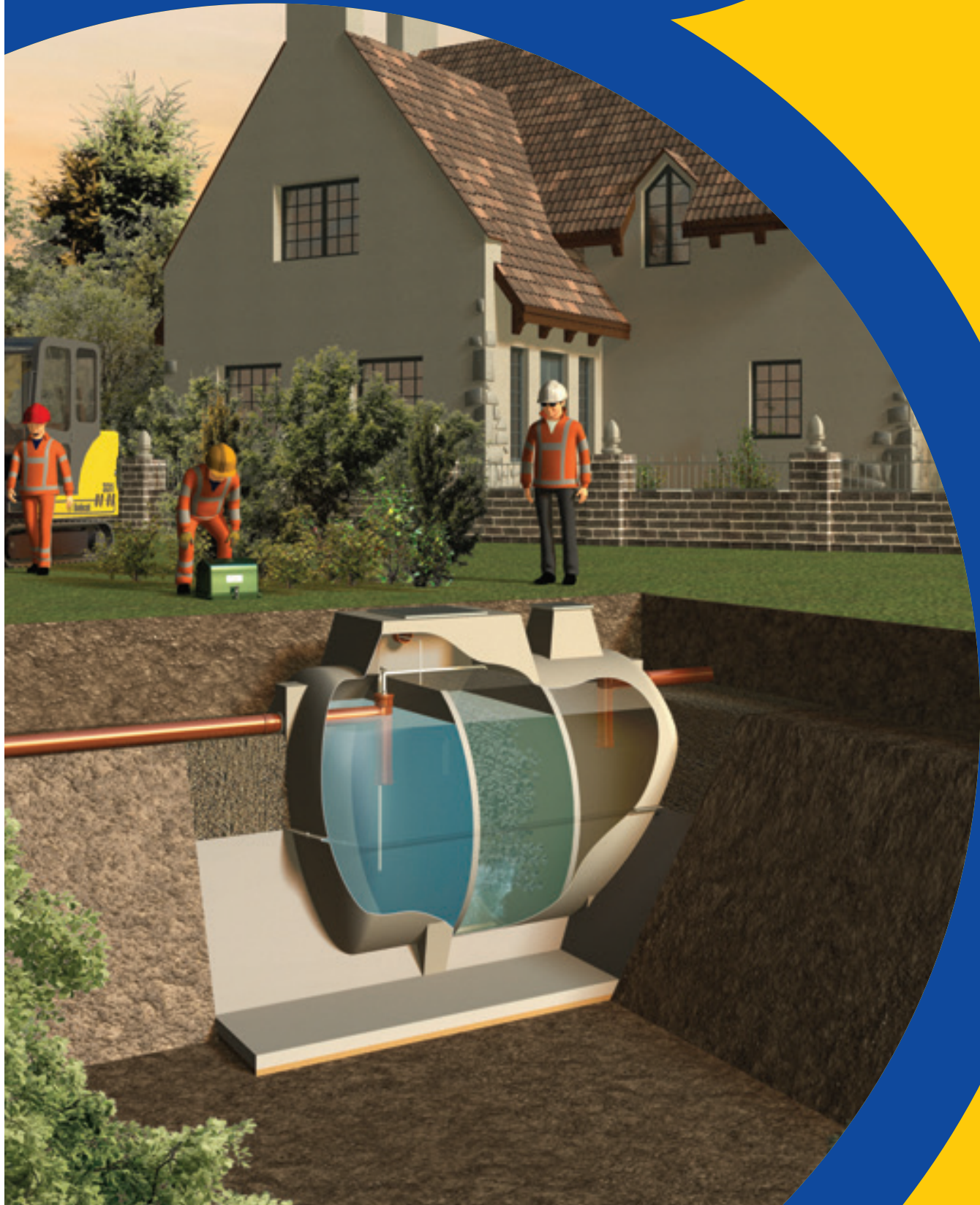
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DOMESTIC AND COMMERCIAL SEWAGE TREATMENT SOLUTIONS

Tried, tested and trusted

Marsh Industries provides the UK's most comprehensive range of off-mains drainage products, built to serve everything from a single home to sites catering for over 1,000 people.

From the UK's market-leading Marsh Ensign sewage treatment plant (4–50 population equivalent), through to the heavy-duty Marsh Ultra-Polylok (50–1000+ population equivalent), our systems are designed for reliable, long-term performance and are fully tested and certified to the highest standards.

The range also includes the innovative Marsh Nutra-Lite SBR, our latest development in advanced sewage treatment which also provides phosphate and nitrate removal for sites that require strict environmental protection.

Ensign and shallow Ensign

Intensive biological processing
for off-mains wastewater
4-50PE



Uni:Gem★

Unique septic tank to sewage
treatment plant conversion unit
Up to 6PE



Nutra-Lite SBR
Sequential Batch Reactor
Advanced sewage treatment
6-25PE



Portapura

Portable sewage treatment
solutions for temporary buildings
2-5PE



Marsh Phos-Lite

The natural solution for
phosphate removal
6-25PE



Septic tanks and cesspools

Basic treatment to domestic
off-mains wastewater
2800-20,000L



Marsh Gemini

Combining the Marsh Nutra-Lite
and Marsh Phos-Lite
6-16PE



Ultra:Polylok

Advanced biological processing for
commercial off-mains wastewater
50-1000+PE



GEM-APS

Aerated Precipitation System
Controlled chemical dosing
6-1000PE



Marsh:Standard

Cost-effective sewage treatment for
commercial off-mains wastewater
50-1000+PE



Ultra:Polylok L

Intensive biological processing for
off-mains wastewater
6 and 12PE



Ensign

Sewage treatment plants



Intensive biological processing for off-mains wastewater

Overview

The Marsh Ensign is widely regarded as one of the most efficient, reliable and economical sewage treatment plants on the market.

The standard Ensign has been adapted to improve reliability and the Ensign:Ultra now brings unique enhancements to further improve noise level, treatment efficiency and final effluent quality.

Class leading performance

Tested and approved to BSEN12566-3/A1:2009 all Ensign units provide treatment well within national consent requirements. Published test results of 11.5:19.2:8.4mg/ltr (BOD:suspended solids:ammonia), with influent concentrations on test higher than those chosen by most competitor plants, effectively equates to 97% pollutant removal.

Unrivalled choice

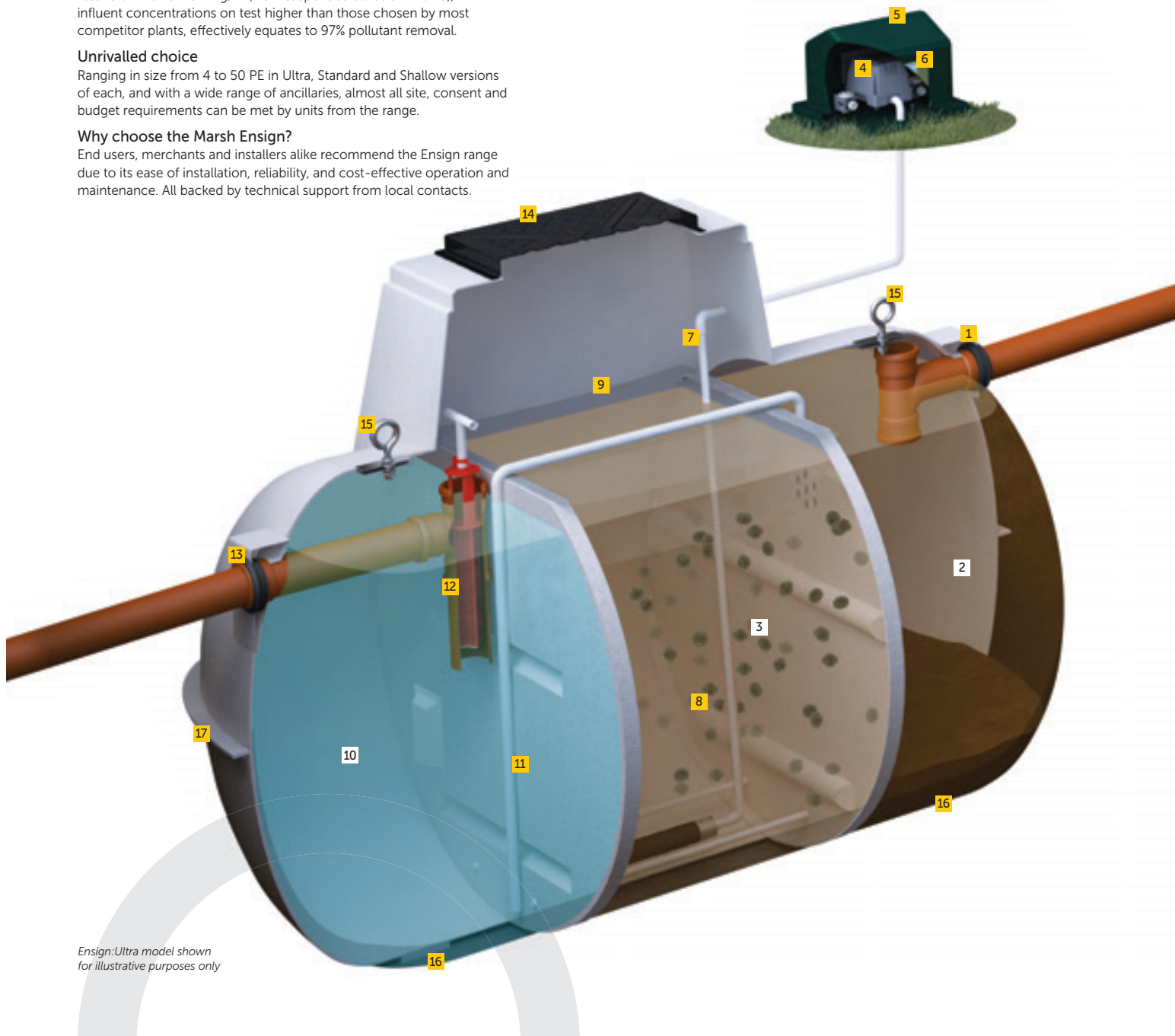
Ranging in size from 4 to 50 PE in Ultra, Standard and Shallow versions of each, and with a wide range of ancillaries, almost all site, consent and budget requirements can be met by units from the range.

Why choose the Marsh Ensign?

End users, merchants and installers alike recommend the Ensign range due to its ease of installation, reliability, and cost-effective operation and maintenance. All backed by technical support from local contacts.

Operating principle

In addition to anaerobic digestion taking place in the primary settlement chamber [2] the Ensign:Ultra unit allows the clarified water to pass into a second 'aeration' chamber [3] where it is treated to remove the dissolved constituents. Here aerobic bacteria, supported by diffused air and mobile media, ensures full treatment is achieved before the treated effluent and 'sloughed off' bacteria flows to a final settlement chamber [10]. The final effluent is then discharged to the drainage field or watercourse via a Polylok filter.



Ensign:Ultra model shown for illustrative purposes only



The Marsh Ensign is widely regarded as one of the most efficient, reliable and economical sewage treatment plants on the market

Benefits

- 1 Inlet with 'Forsheda seal'**
Forsheda seal provides flexibility in the joint for easier installation. *Optional risers to increase invert depth are available.*
- 2 Primary settlement chamber**
- 3 Aeration chamber**
- 4 Advanced compressor with alarm (Ensign:Ultra units only)**
Near silent compressor ensures minimal running, maintenance and servicing costs. Integral alarm detects low pressure in air line. (Regular Low-energy compressor on Ensign:Standard models).
- 5 Compressor housing - internal or external options available**
The compressor can be housed internally or externally with no difference in cost. *External recommended to increase compressor life, and supplied as standard on 4PE, shallow and pumped outlet versions.*
- 6 RCD/Electrical connection (Ensign:Ultra units only)**
The RCD box provides easier installation and - a higher degree of safety. (Regular plug/socket connection on Ensign:Standard models).
- 7 PVC pressure pipe/diffuser(s)**
Provides a protective conduit for the air diffuser line. Can be easily removed for maintenance and cleaning.
- 8 Bio-media**
High specification bio-media (310m³ per m²) and membrane diffusers ensure even circulation to eliminate 'dead spots'. The bio-media is contained by a stainless steel securing mesh to ensure no migration during handling or potential flooding.
- 10 Stainless steel mesh (Ensign:Ultra units only)**
Retains media in aeration chamber during transportation and handling, and in the event of flooding.
- 11 Final settlement chamber**
- 12 32mm sludge return**
Larger diameter sludge return prevents the possibility of blockages and improves system circulation. Provides higher effluent quality whilst balancing flow over a 24 hour period or periods of intermittent use.
- 13 Unique Polylok tertiary filter (Ensign:Ultra units only)**
The Polylok tertiary filter reduces suspended solids and BOD by a further 40% helping to extend drainage field life.
- 14 Outlet with 'Forsheda seal'**
Forsheda seal provides flexibility in the joint for easier installation. *Optional pumped outlets are available.*
- 15 Impermeable lid (Ensign:Ultra units only)**
Heavy duty lid/frame improves strength and durability whilst blending into the surrounding environment. (Regular lid on Ensign:Standard models).
- 16 Integral lifting eyes**
For steadying purposes only. Not to be used for lifting the tank
- 17 Stabilising feet**
Stabilising feet prevents the tank from rolling and allows safe and steady transportation and installation.
- Unique 'keying-in' lip**
Assists anchoring into granular or concrete surrounds.

Specifications

Ensign:Ultra and Ensign:Standard

Model	Plant sizing examples (Approximate)		Length	Width	Height	Inlet		Outlet	
	Residential	Workplace (no canteen)	+/-50mm	+/-50mm	+/-50mm	Invert	Ø	Invert	Ø
4	NA	6 people	1620	1352	1575	540	110	600	110
6	4-bed / 6 people	9 people	2602	1650	1935	550	110	625	110
8	5-bed / 8 people	12 people	2602	1650	1935	550	110	625	110
10	2 x 3-bed / 10 people	15 people	2602	1650	1935	550	110	625	110
12	2 x 4-bed / 12 people	18 people	2860	1912	2139	550	110	625	110
16	2 x 4-bed & 1 x 3-bed / 16 people	25 people	2860	1912	2284	720	110	800	110
20	3 x 4-bed / 18 people	32 people	3650	1912	2284	720	160	800	160
25	4 x 4-bed & 1 x 3-bed / 24 people	38 people	3650	1912	2284	770	160	850	160
30	5 x 4-bed or 6 x 3-bed / 30 people	48 people	4200	1912	2284	770	160	850	160
35	7 x 3-bed / 35 people	56 people	4200	1912	2284	770	160	850	160
40	8 x 3-bed / 40 people	72 people	5200	1912	2284	770	160	850	160
45	9 x 3-bed / 45 people	80 people	5200	1912	2284	770	160	850	160
50	9 x 3-bed / 45-50 people	80-90 people	5200	1912	2284	770	160	850	160

Notes:

- > Larger population sewage treatment plants may be supplied as multiple tank configurations.
- > For plant sizing, precise tank sizes and configurations, please contact Marsh Industries
- > All dimensions in mm