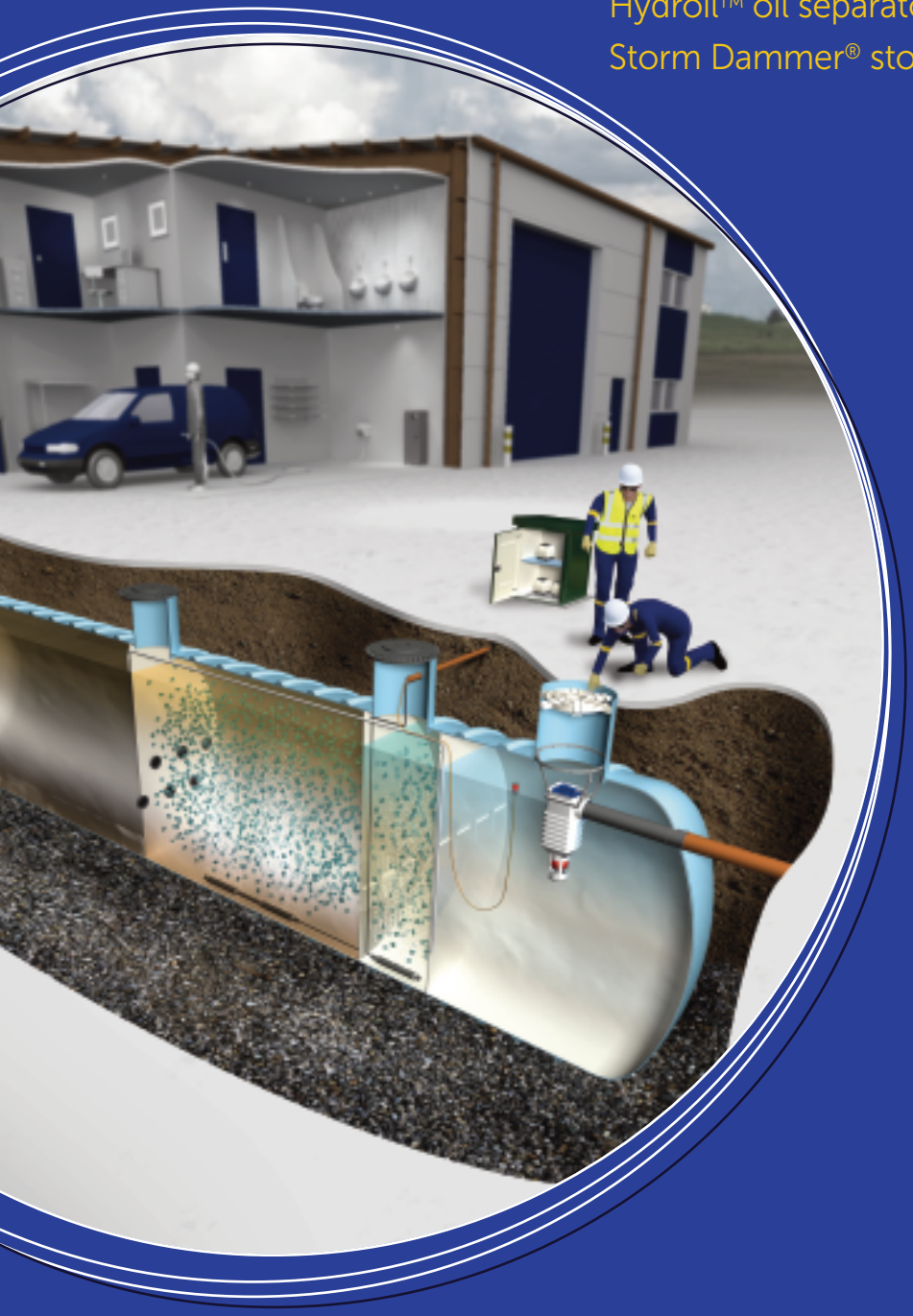
Marsh Industries

Commercial wastewater treatment products

Pump stations
Ultra:Polylok™ sewage treatment plants
Agri:Silage tanks
Marsh GMS★ grease management systems
Hydroil™ oil separators
Storm Dammer® stormwater flow attenuation



MARSH

www.marshindustries.co.uk

WE are the **innovators** in domestic, commercial and agricultural waste and surface water treatment products

WE are Marsh Industries

Our brand communicates the straight talking approach we have become known for

WE deliver world-class water/wastewater treatment products and solutions to the domestic, commercial and agricultural sectors from our UK manufacturing plants in Kettering and Bridgwater.

WE think smarter

Efficiently meeting the demands of our customers

We strive to be recognised as a collaborative and trusted partner for our customers, aligned to their business, and with a reputation for providing quality products that really do add value.

WE innovate

Enabling technologies that deliver tangible benefits

Working across many areas of the UK and European construction sectors our specialist 'innovation' team combines 100+ years' experience of designing, manufacturing and testing wastewater treatment products that are proven to be economic, efficient and environmentally sensitive.

WE comply

With UK/EU building and environmental regulations

Our products are fully type-tested and certified to ensure compliance with relevant environmental permitting programmes and Building Regulations.

WE deliver

UK nationwide and overseas

With one of the largest merchant distributor networks available in Europe, customers specify Marsh products and services because they know WE deliver from a solid foundation of knowledge, experience, product quality and proven performance.

WE support

Specialist services to further enhance customer requirements

There are times when our customers need a little extra support. Whether this is on-site advice, backup support, specialist testing or bespoke project solutions, WE offer a range of services when and where required.

TOGETHER we are a strategic partnership

Our core strength lies in the knowledge, experience and enthusiasm of our staff and our customers combined

Project management

With extensive experience of managing the design, manufacture and despatch of pump stations, sewage treatment plants, attenuation tanks, rainwater harvesting systems and associated products, Marsh Industries' Civils Team works closely with clients to ensure projects are delivered on time and on budget.

The company trains its team to recognised competency standards to address the growing management requirements from order placement through to delivery and installation.

All products are backed by Marsh Industries commercial and technical support.

Post installation and commissioning visits are available, together with service and maintenance contracts if required.

Gaia Sege©

Process design software

Developed by Marsh Industries, the unique Gaia Sege process design software uses core information to accurately calculate and tailor key variables ensuring total optimisation for individual applications.

These precise calculations provide assurance to consultants, engineers, specifiers and contractors that the system is specifically designed to meet the appropriate standards of regulatory bodies.

Sewage treatment plants

For sewage treatment plants, the software uses established core process equations to accurately calculate and tailor key variables ensuring total processing optimisation for Biological Oxygen Demand (BOD), Total Suspended Solids (TSS) and Ammonia (NH_4) reduction and removal.

Gaia Sege software also uses 'British Water Flows & Loads' data to calculate initial flows and loadings whilst also calculating peak flows and levels.

The programme can also calculate accurate sludge generation and storage on a daily basis, dependent upon final effluent standards required, ensuring the optimisation of primary chambers, individual clarifiers, diffused oxygen feed and final settlement chamber.

Pump chambers

Gaia Sege utilises current building regulations to calculate precise storage chamber sizes. Pump systems are determined by using friction head loss calculations based on minimum self-cleansing velocities in order to specify the best possible pump(s) for the application.

Grease traps

Appropriate grease trap sizes are generated by accounting for the amount of grease and flow generated from the grease producing facility whilst providing adequate retention time befitting of these variables.

Storm Dammer water attenuation tanks

Marsh Industries' rainfall storage sizing programme, Gaia Storm Dammer, can simulate the calculated flood storage required for any prolonged period within a set geographic area (ie, 1 in 5 year or 1 in 100 year rainfall).

Pump stations

For pumping sewage and water to mains

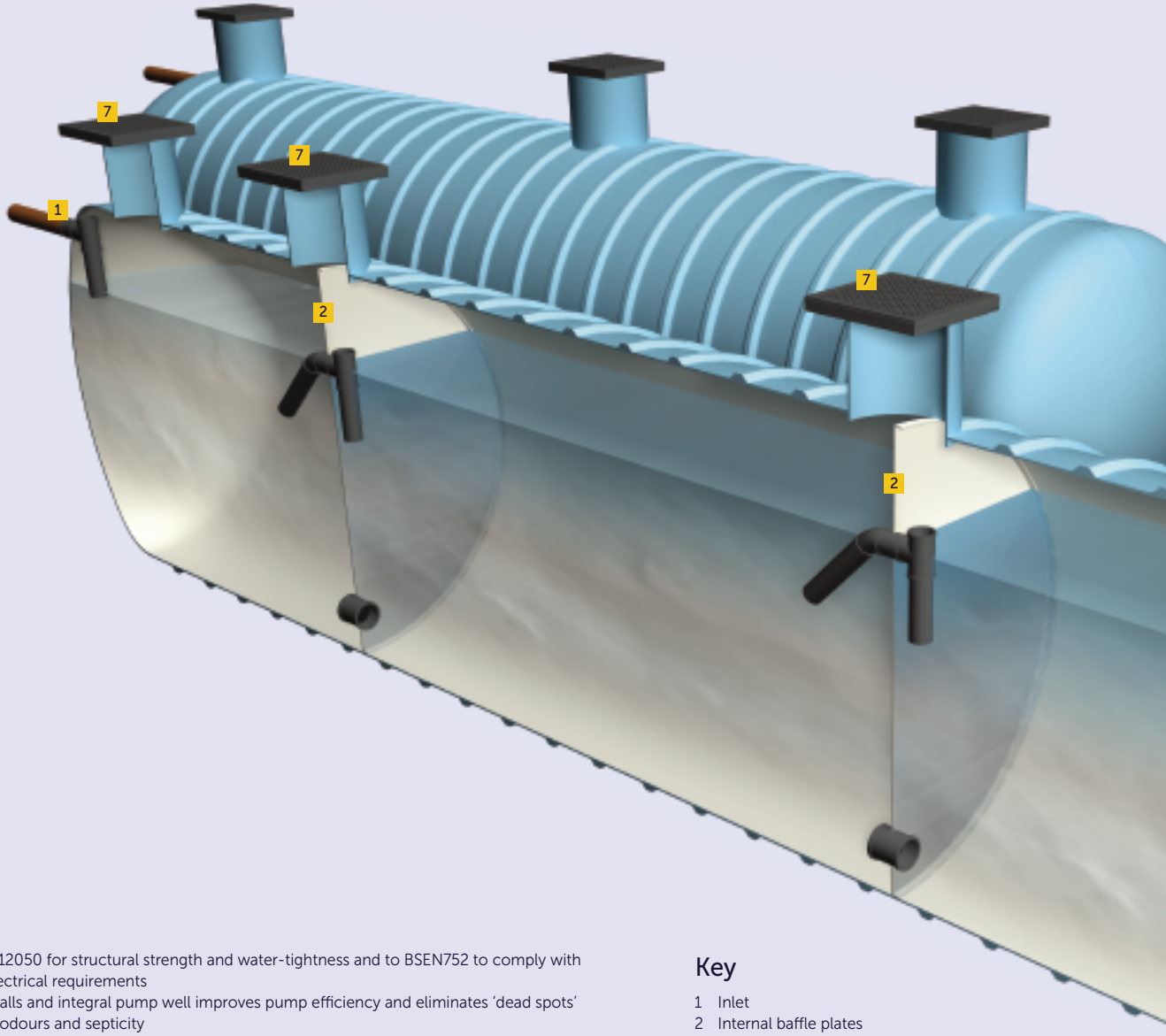
Overview

When discharge to mains is required, but to do so by gravity is impractical, a pump chamber system will be needed.

Pump station systems are usually bespoke. However there are several factors that play a role in identifying precisely the right tank sizes and type that are required for your project.

Marsh Industries' system designers can work closely with you to identify all key requirements in accompaniment with Marsh Industries' unique process design software, Gaia Sege.

All pump stations are available for dirty water (DW) or sewage (SW), in single pump (SP) and twin pump (TP) configurations.



Benefits

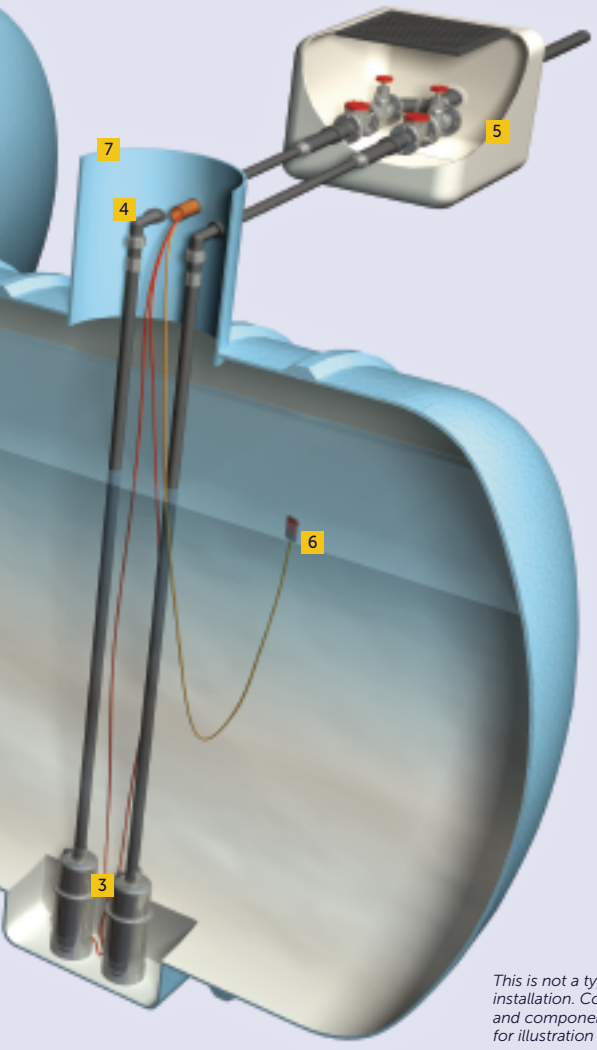
- Designed to BSEN12050 for structural strength and water-tightness and to BSEN752 to comply with hydrostatic and electrical requirements
- Smooth internal walls and integral pump well improves pump efficiency and eliminates 'dead spots' which can lead to odours and septicity
- Unique 'keying-in' lip to assist anchoring into concrete surround
- Variable invert depths and orientations to suit individual site conditions
- Pre-assembled pipework for fully automatic operation
- Heavy duty (industrial) 'peardrop' floats and market leading pumps throughout ensure robust, reliable design and maximum efficiency of pump with minimal clogging or wear
- High level alarm as standard

Key

1 Inlet
2 Internal baffle plates
3 Submersible pumps
4 Outlets
5 Outlet valves (Internal as standard. External/chamber optional)
6 High level alarm
7 Manway access

Guidance notes

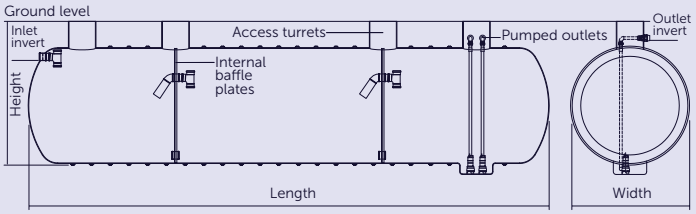
- *Where foul water drainage from a domestic property is to be pumped to mains the effluent receiving chamber should be sized to contain 24-hour inflow to allow for disruption in service, the minimum daily discharge being taken as 150 litres per person per day*
- *For other building types the capacity of the receiving chamber should be based on the calculated daily demand of the water intake for the building, or when only a proportion of the foul sewage is to be pumped then the capacity should be based pro-rata*
- *If the sewer is to be 'adopted' by a local water authority, please contact Marsh Industries as Sewers for Adoption (SFA) specification and additional local authority related criteria may apply*



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

Specifications

Commercial/industrial tank examples

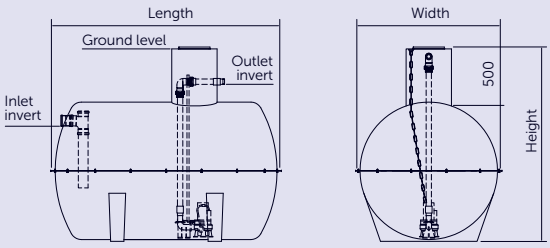


Typical side elevation — View on outlet end

Maximum capacity litres	Tank length	
	Ø2.5m chamber	Ø3m chamber
30000	6500	
40000	8600	5900
50000	10600	7200
75000		10600
100000		13900

Standard pump stations

For smaller housing projects, and commercial/industrial sites



Typical side elevation — View on outlet end

Model	Length	Width	Height	Inlet		Outlet		Total Storage Litres
				Invert	Ø	Invert	Ø	
AT2800	3000	1250	1750	800	110	300	63	2800
AT3800	4000	1250	1750	800	110	300	63	3800
AT4500	2650	1600	2100	800	110	300	63	4500
AT6000	2950	1900	2400	800	160	300	63	6000
AT8000	3640	1900	2400	800	160	300	63	8000
AT10000	4200	1900	2400	800	160	300	63	10000
AT12000	5200	1900	2400	800	160	300	63	12000
AT14000	5840	1900	2400	800	160	300	63	14000
AT16000	6700	1900	2400	800	160	300	63	16000
AT18000	7500	1900	2400	800	160	300	63	18000
AT20000	8100	1900	2400	800	160	300	63	20000

Notes:

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> *All dimensions in mm*

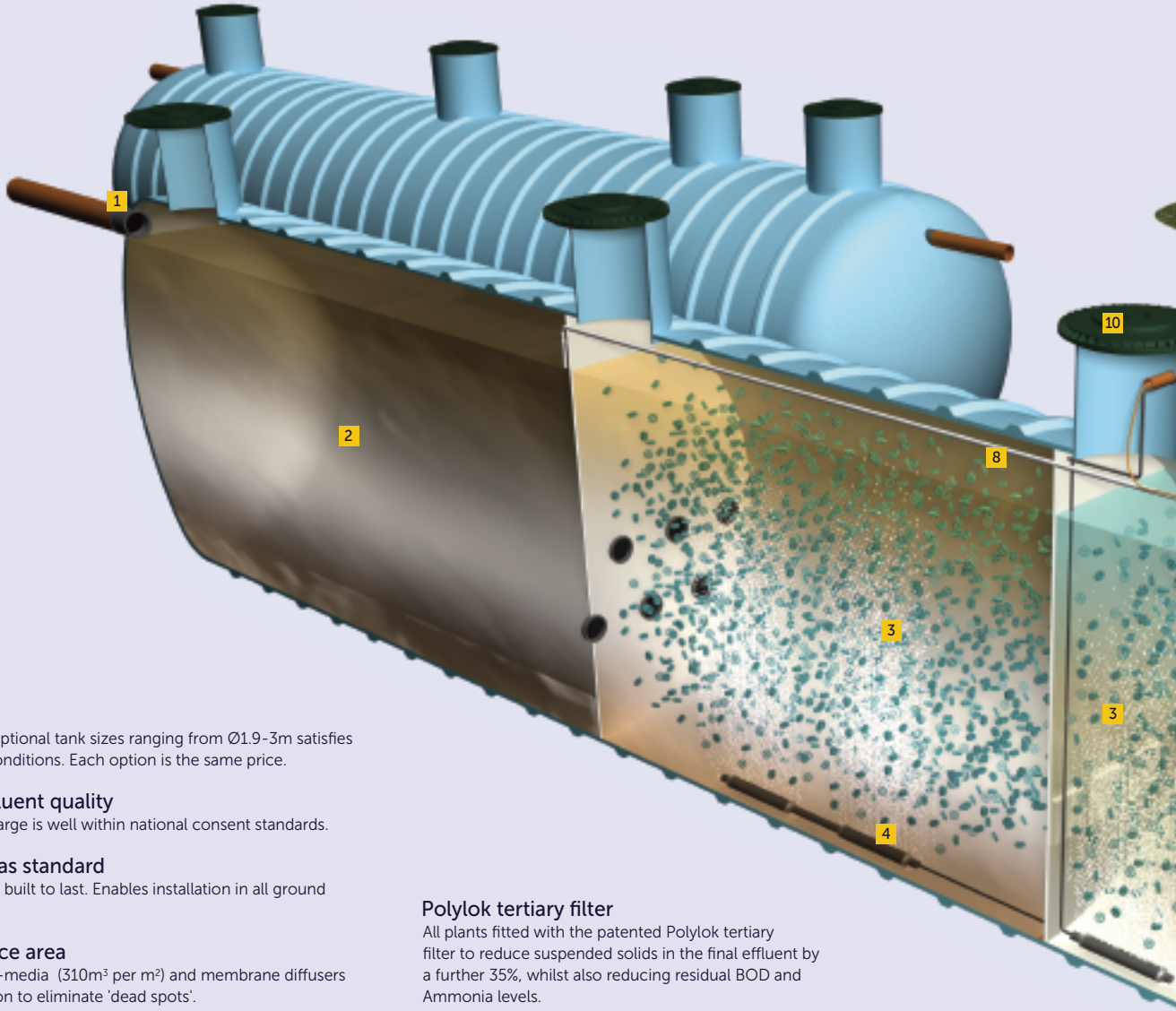
Ultra:Polylok™
Sewage treatment plants
Advanced biological processing for off-mains wastewater

Overview

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
Ensures effluent 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 (310m³ per m²) 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.

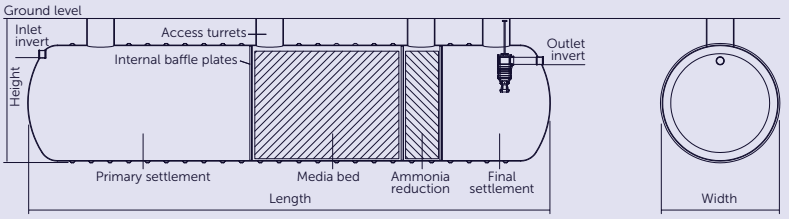
Polylok tertiary filter
All plants fitted with the patented Polylok tertiary filter to reduce suspended solids in the final effluent by a further 35%, whilst also reducing residual BOD and Ammonia levels.

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, Degrilleur trash barriers, phosphate reduction and UV treatment chambers.

Specifications

Ultra:Polylok tank examples



Typical side elevation

View on outlet end

Model Up to	Width Ø	Length	Height	Inlet		Outlet		Turret dia	Desludge Days
				Invert	Ø	Invert	Ø		
55PE	1900	6540	2500	750	160	900	160	600	90
60PE	1900	7050	2500	750	160	900	160	600	90
75PE	2500	5730	3100	900	160	1000	160	600	90
100PE	2500	7080	3100	900	160	1000	160	600	90
125PE	2500	7980	3100	900	160	1000	160	600	75
150PE	2500	8640	3100	900	160	1000	160	600	60
175PE	2500	9930	3100	900	160	1000	160	600	60
200PE	2500	10200	3100	900	160	1000	160	600	45
225PE	2500	11360	3100	900	160	1000	160	600	45
250PE	2500	12530	3100	900	160	1000	160	600	45
275PE	3000	9060	3800	1100	160	1300	160	750	30
300PE	3000	9780	3800	1100	160	1300	160	750	30
350PE	3000	11220	3800	1100	160	1300	160	750	30
400PE	3000	12660	3800	1100	160	1300	160	750	30

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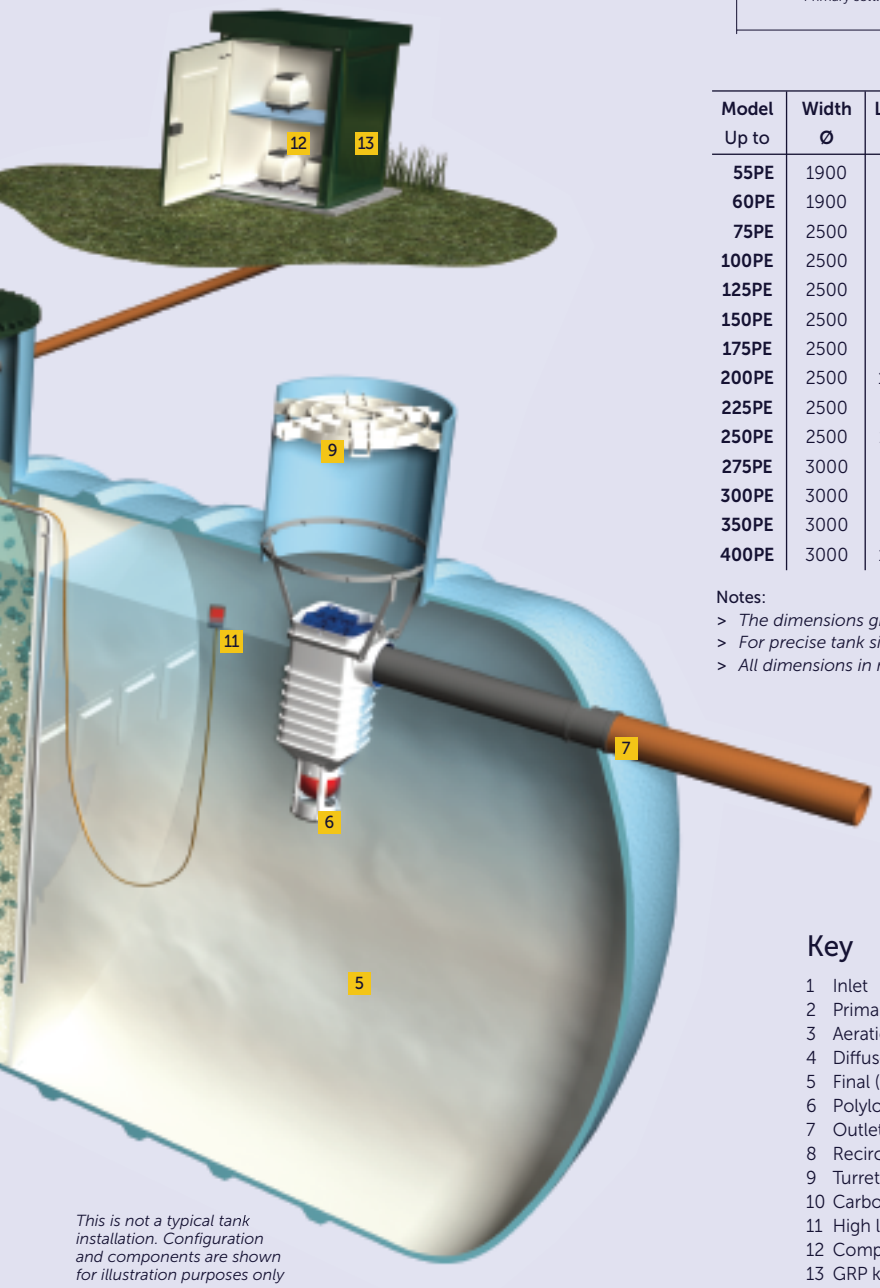


This is not a typical tank installation. Configuration and components are shown for illustration purposes only

Key

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

Agri:Silage Tanks

Environmentally safe silage effluent storage

Overview

Designed and manufactured in accordance with BS4994/ BSEN976, the Marsh range of silage tanks provides environmentally safe storage of silage effluent.

Available in capacities up to 100,000 litres in Ø2.5m and Ø3m diameters, the tanks are manufactured using GRP (virgin unfilled resin - no 'fillers' such as chalk) providing consistent wall thickness ensuring superior structural strength and durability. This also enables the tank to be significantly lighter for on-site handling/positioning and better suited to withstand greater hydrostatic pressures when in use.

The tanks are supplied with a chemically resistant gel-coat that protects the fibres in the laminates and provides excellent water and chemical resistance. This inherent integrity allows Marsh to offer an unrivalled 50 year design life, backed by a 25 year structural guarantee.

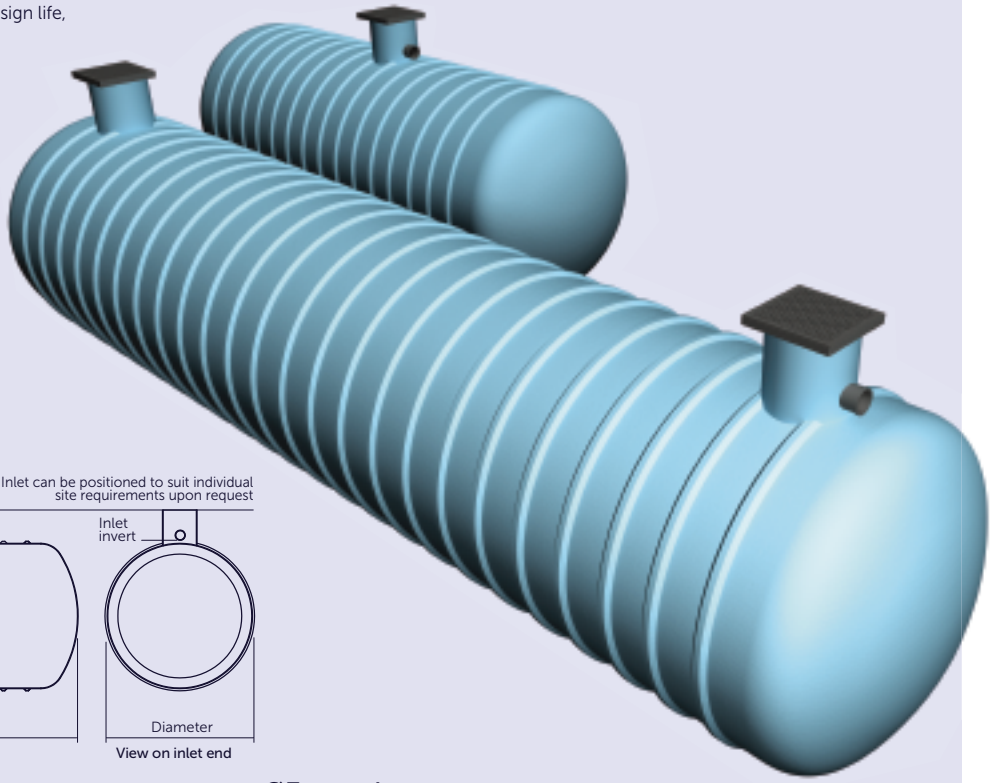
Benefits

- Available in capacities from 20,000 to 100,000 litres in Ø2.5 and Ø3m diameters
- Designed to meet latest UK and European standards
- Heavy duty shells enable installation in all ground conditions
- Variable invert depths and orientations to suit individual site conditions
- Optional high-level alarm available
- Guaranteed for 25 years with a design life of 50 years

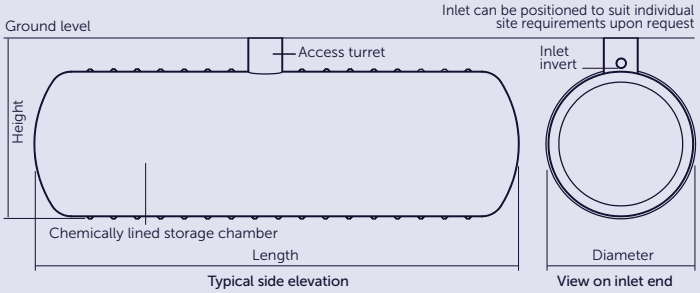
Guidance notes

- *Reference should be made to DEFRA guidance notes 'The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations - UK' and gov.uk guidance 'Storing silage, slurry and agricultural fuel oil'*

Industrial/commercial septic tanks and cesspools are available. Contact Marsh Industries for further details.



Specifications



Ø2.5m tanks

Capacity Litres	Dia Ø	Length	Height	Inlet Invert	Turret size	No. of Turrets
20,000	2500	4500	3100	500	Ø600x600	1
25,000	2500	5500	3100	500	Ø600x600	1
30,000	2500	6500	3100	500	Ø600x600	1
35,000	2500	7550	3100	500	Ø600x600	1
40,000	2500	8600	3100	500	Ø600x600	2
45,000	2500	9600	3100	500	Ø600x600	2
50,000	2500	10600	3100	500	Ø600x600	2
55,000	2500	11600	3100	500	Ø600x600	2
60,000	2500	12600	3100	500	Ø600x600	2
65,000	2500	13650	3100	500	Ø600x600	2
70,000	2500	14700	3100	500	Ø600x600	2

Ø3m tanks

Capacity Litres	Dia Ø	Length	Height	Inlet Invert	Turret size	No. of Turrets
40,000	3000	5900	3600	500	Ø600x600	1
45,000	3000	6600	3600	500	Ø600x600	1
50,000	3000	7200	3600	500	Ø600x600	1
55,000	3000	7900	3600	500	Ø600x600	1
60,000	3000	8600	3600	500	Ø600x600	2
65,000	3000	9300	3600	500	Ø600x600	2
70,000	3000	10000	3600	500	Ø600x600	2
75,000	3000	10600	3600	500	Ø600x600	2
80,000	3000	11300	3600	500	Ø600x600	2
85,000	3000	11900	3600	500	Ø600x600	2
90,000	3000	12600	3600	500	Ø600x600	2
95,000	3000	13200	3600	500	Ø600x600	2
100,000	3000	13900	3600	500	Ø600x600	2

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Degrilleur™

Trash barrier for sewage treatment plants and pump chambers

Overview

When non dissolvable objects are flushed into the sewer and then into a sewage treatment plant or pump station downstream, it can lead to blockages or worse - possible plant failure.

To combat this Marsh Industries has developed the 'Degrilleur' – a bar screen which prevents any unsuitable materials from entering the system.

The unit has no moving parts and requires no electrics, is available in two capacities, 2000 and 12,000 litres, and is suitable for domestic, commercial and industrial installations.

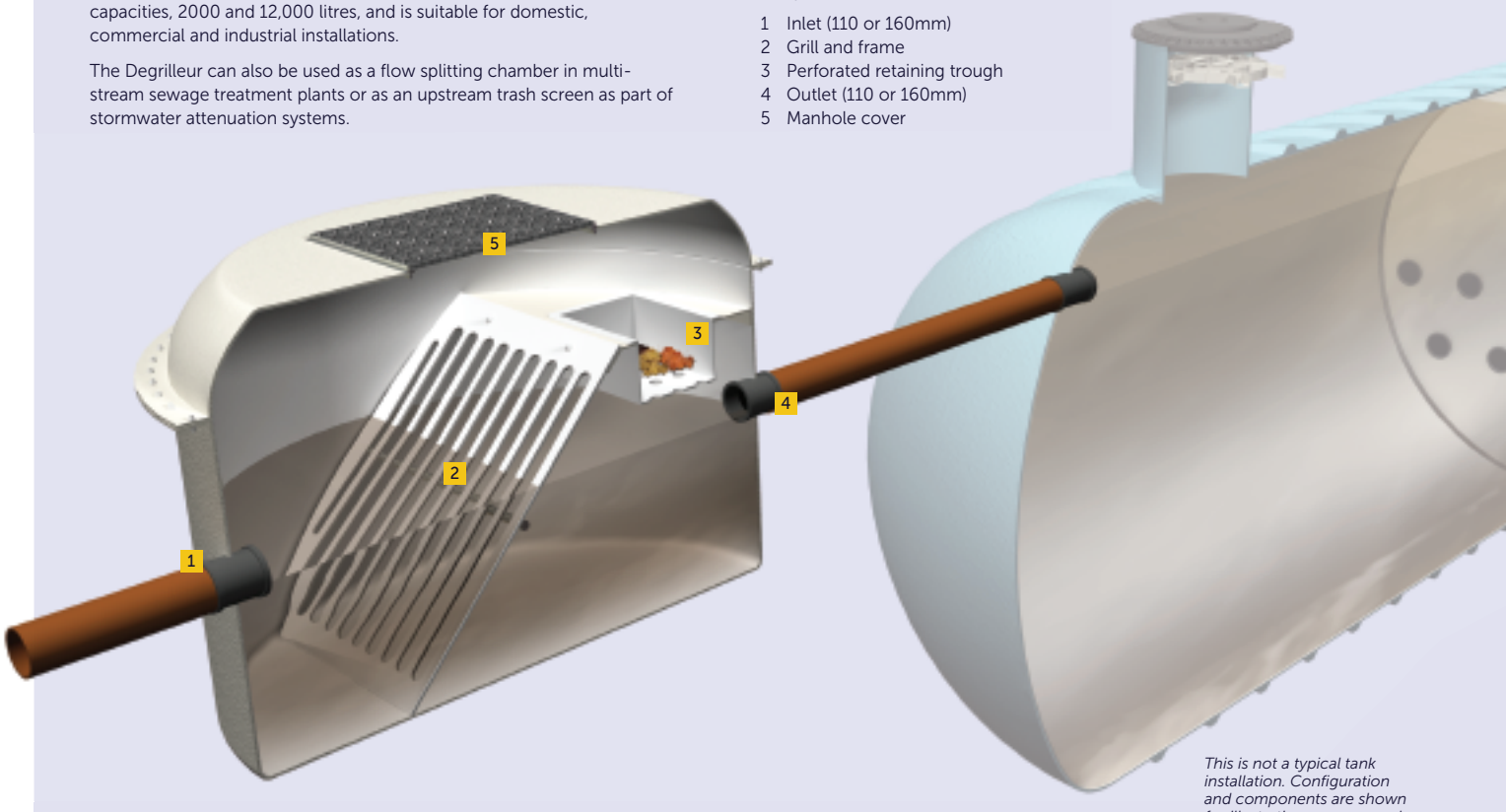
The Degrilleur can also be used as a flow splitting chamber in multi-stream sewage treatment plants or as an upstream trash screen as part of stormwater attenuation systems.

Operating principle

The Marsh Degrilleur, positioned ahead of the system inlet, blocks the debris and forces it to rise to the top of the chamber where it is collected in a retaining trough for disposal.

Key

1 Inlet (110 or 160mm)
2 Grill and frame
3 Perforated retaining trough
4 Outlet (110 or 160mm)
5 Manhole cover



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Specifications

Cylindrical Degrilleur

Model	Dia Ø	Height
MID-1	1100	1100
MID-2	1500	1500
MID-3	1700	1700

Horizontal Degrilleur

Model	Dia Ø	Length
MID-4	1900	2950
MID-5	1900	5200

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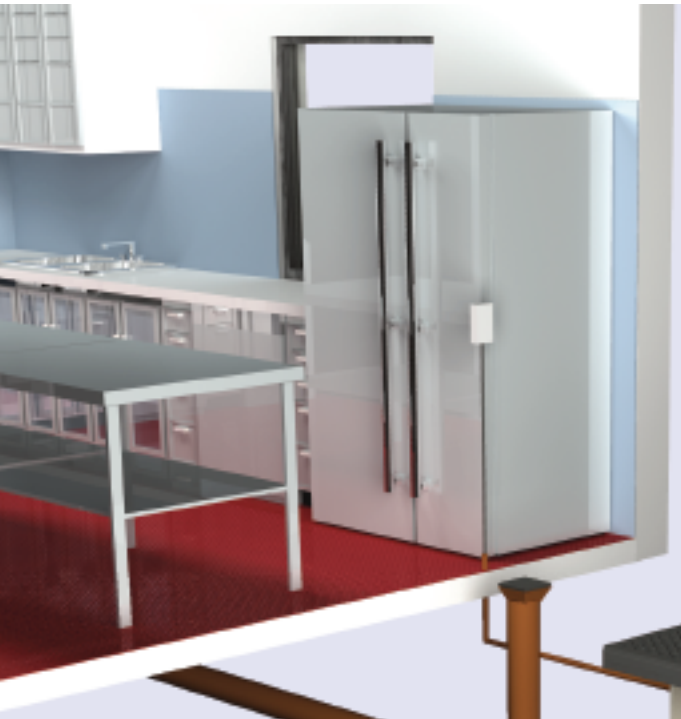
Marsh GMS★
Grease traps
Innovative and reliable grease management systems



Overview

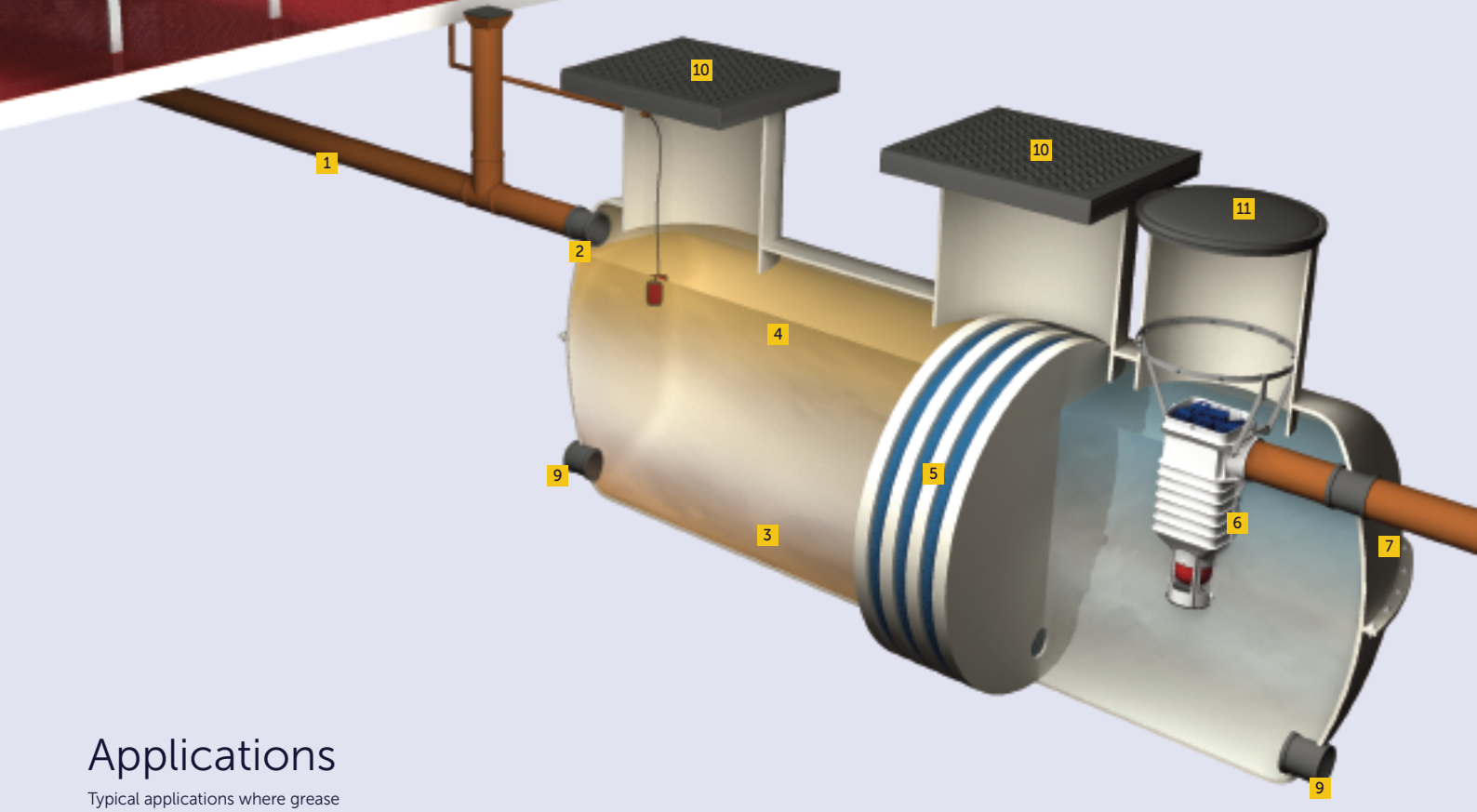
Available in capacities from 2800 to 20,000 litres, Marsh Industries' Grease Management System (GMS★) range of grease traps effectively prevents Fats, Oils and Grease (FOG) from entering the drainage network or sewage treatment plants.

Testing and verification

Marsh Industries has reassessed the currently prescribed testing methods for grease traps and devised its own unique test rig and analysis at Loughborough University.

The rig, put to test for 12 months, addressed calls from the industry for clarity in testing procedures of grease trap technology. After completing trials, the new range of grease traps are the only products of its type that have been successfully tested using materials that match the FOG used in the food industry – as opposed to the traditional test method of using heating oils.

A white paper, published by Marsh, titled "A New way forward for Meaningful Testing of Grease Traps", reports on analysis from the tests carried out at Loughborough University and can be downloaded from www.marshindustries.co.uk



Applications

Typical applications where grease traps/separators may be required:

- Bakeries
- Canteens/kitchens
- Fast food restaurants
- Food processing factories
- Hotels
- Public houses
- Restaurants
- Social clubs

Benefits

- Storage capacities ranging from 2800-20,000 litres
- Advanced coalescent filter system
- Bespoke design tailored to individual project specifications
- Adjustable turret and invert height
- Optional Polylok filter for further wastewater treatment
- Optional high level alarm

Operating principle

Marsh GMS★ grease traps provides sufficient storage in its primary chamber allowing for adequate solidification of FOG molecule structures before passing through an advanced coalescing filtration system.

The coalescing filtration system contains three different grades of filter to prevent solids and waste passing into the final settlement chamber.

In larger units, an optional Ultra Polylok UV Filter is available which can provide further treatment to residual solids and can also destroy viruses, parasites and other pathogenic bacteria.

Key

1 Wastewater pipe
2 Tank inlet
3 Solids retention
4 Fats, oils and grease (FOG) retention
5 Advanced coalescing filter
6 Polylok filter (optional)
7 Tank outlet
8 Mains sewer system
9 Additional desludge points (optional)
10 Heavy duty manhole cover
11 Outlet access
12 High level alarm (optional)

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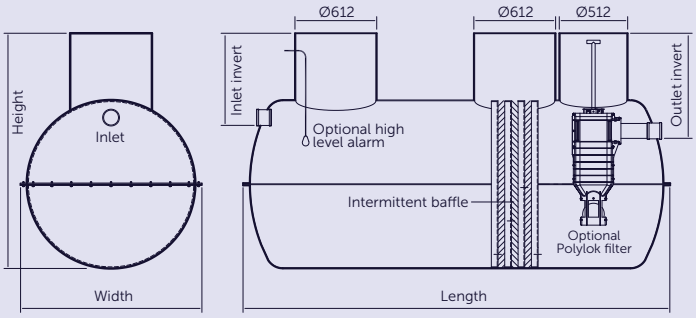
Specifications



Model	Size	Width	Length	Height	Inlet		Outlet	
	Litres				Invert	Ø	Invert	Ø
MG2800	2800	3000	1100	1600	685	110	800	110
MG3800	3800	3150	1250	1750	685	110	800	110
MG4500	4500	2950	1600	2100	685	110	800	110
MG6000	6000	2950	1900	2400	685	160	800	160
MG8000	8000	3640	1900	2400	685	160	800	160
MG10000	10000	4200	1900	2400	685	160	800	160
MG12000	12000	5500	1900	2400	685	160	800	160
MG14000	14000	5840	1900	2400	685	160	800	160
MG16000	16000	6700	1900	2400	685	160	800	160
MG18000	18000	7500	1900	2400	685	160	800	160
MG20000	20000	8100	1900	2400	685	160	800	160

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Hydroil™

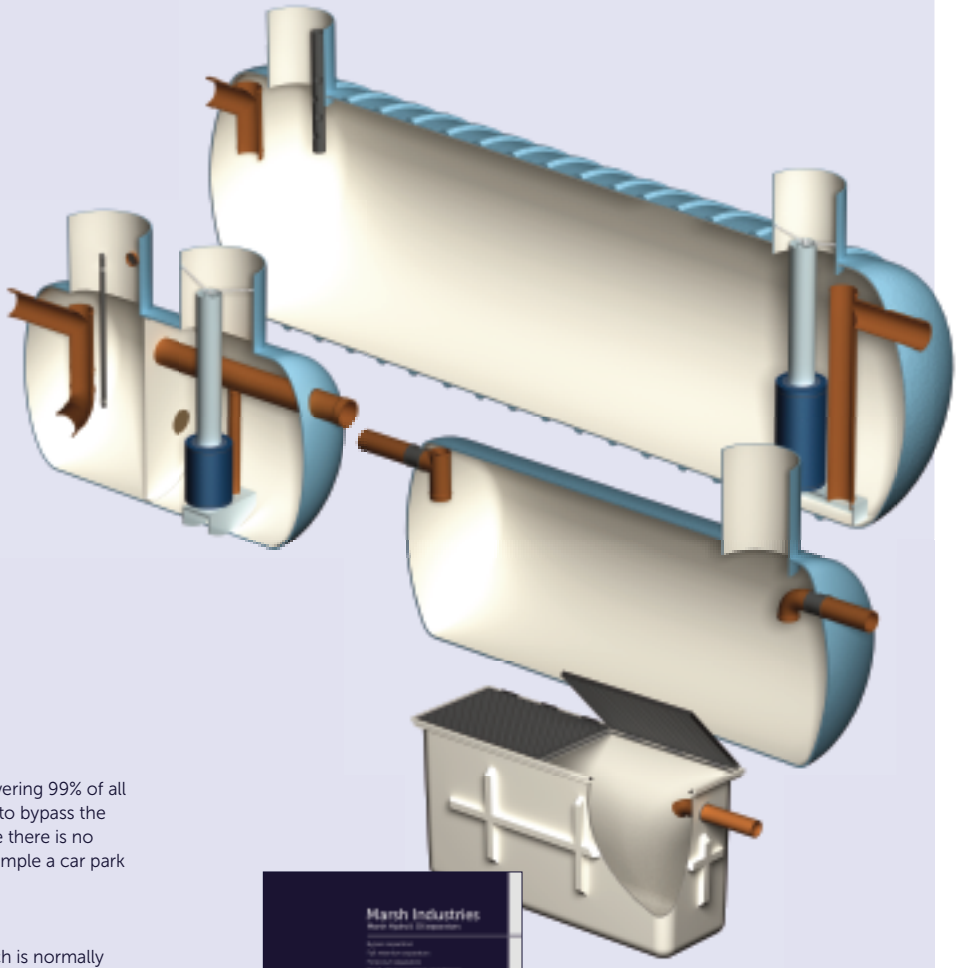
Oil separators, wash-down separators and silt traps

Overview

Designed and tested to BS EN858 parts 1&2, Marsh Hydroil separators are manufactured from virgin unfilled resin offering exceptional durability, impact resistance and are guaranteed to be watertight and of uniform thickness. These combined properties ensure that the full range of separators stand up to the most rigorous conditions during their service life.

Internal working components, such as coalescing filters, automatic closure devices, weirs, oil skimmer plates, and their configurations offer the most modern and efficient oil/water separation capability available to the market today.

A wide choice of inlet and outlet positions are available on the units - detailed requirements should be provided at time of order (standard inlet and outlet positions will otherwise be fitted).



Separator types

Bypass separators

Treats all flows from rainfall events of up to 6.5mm/hr covering 99% of all rainfall events. Flows higher than 6.5mm/hr are designed to bypass the separator. Typically used in a 'low risk' environment where there is no requirement to provide full treatment for the flow; for example a car park where the risk of a significant spillage is small.

Full retention separators

Treats the full flow delivered by the drainage system, which is normally equivalent to the flow generated by a rainfall intensity of 65mm/hr. Typically used where there may be a 'high risk' of a significant fuel spillage, such as vehicle workshops

Forecourt separators

A type of full retention separator specifically designed to store the maximum spillage likely to occur on a petrol station forecourt (a single compartment of a road tanker – currently up to 7,600 litres in the UK.)

Classes

All three types of separators can be classed in two categories based on performance under standard test conditions:

Class 1 designed to achieve a discharge concentration of less than 5mg/litre of oil. These separators are required for discharges to surface water drains and the water environment.

Class 2 designed to achieve a discharge concentration of less than 100mg/litre of oil under standard test conditions. They are suitable for dealing with discharges where there is a lower quality requirement, such as discharges to the foul sewer.

Wash-down separators and silt traps

It is a legal requirement to install a silt trap or wash-down separator on commercial sites, such as vehicle wash bays, where there is an environmental risk of contamination from dirt, brake dust, traffic film residue, cleaning agents, oil, etc.

For full details and specifications, please refer to the Marsh Hydroil oil separators brochure

Benefits

- Corrosion resistant
- Designed and tested to meet latest UK and European standards
- Heavy duty shells enable installation in all ground conditions
- Tank shells guaranteed for 25 years with a design life of 50 years
- Easy access turrets for maintenance and servicing (Turret guards optional)
- Variable invert depths and inlet/outlet configurations to suit individual site conditions
- Vented turrets dissipate excessive fumes and vapours
- Various alarm types available (Required by EN858-1)
- Optional Polylok filter on wash-down separators can further reduce pollutants from entering the drainage system
- Hinged, galvanised steel grating on silt traps provide structural integrity and easy emptying

Bypass separator range

Model	Max flow litre/sec	Drainage area m²	Silt storage litres	Oil storage litres	Diameter	Length	Height	Connection size	Inlet invert	Outlet invert
NSBP 3	3	1700	300	45	1200	2100	1840	160	900	950
NSBP 4.5	4.5	2550	450	67.5	1200	2100	1840	160	900	950
NSBP 6	6	3400	600	90	1200	2100	1840	160	900	950
NSBP 8	8	4530	800	120	1200	2110	1840	160	900	950
NSBP 10	10	5660	1000	150	1200	2760	1840	160	900	950
NSBP 15	15	8510	1500	225	1200	4030	1840	200	900	950
NSBP 18	18	9940	1800	270	1800	2380	2440	200	900	1000
NSBP 20	20	11370	2000	300	1800	2620	2440	200	900	1000
NSBP 25	25	14185	2500	375	1800	3180	2440	250	900	1000
NSBP 30	30	17000	3000	450	1800	3740	2440	250	900	1000
NSBP 40	40	22650	4000	600	1800	4860	2440	315	900	1000
NSBP 45	45	25325	4500	675	1800	5420	2440	315	900	1000
NSBP 50	50	28000	5000	750	1800	5980	2440	315	900	1000
NSBP 60	60	32333	6000	900	2500	4006	3140	315	900	1000
NSBP 70	70	36665	7000	1050	2500	4566	3140	315	900	1000
NSBP 75	75	41000	7500	1125	2500	4886	3140	315	900	1000
NSBP 80	80	45330	8000	1200	2500	5126	3140	315	900	1000
NSBP 100	100	56660	10000	1500	3000	4674	3640	315	900	1000
NSBP 125	125	70820	12500	1875	3000	5713	3640	400	900	1000

Full retention separator range

Model	Max flow litre/sec	Drainage area m²	Silt storage litres	Oil storage litres	Diameter	Length	Height	Connection size	Inlet invert	Outlet invert
NSFR 3	3	170	300	30	1200	1400	1840	160	900	950
NSFR 4.5	4.5	255	450	40	1200	1700	1840	160	900	950
NSFR 6	6	340	600	60	1200	2400	1840	160	900	950
NSFR 8	8	453	800	80	1200	3200	1840	160	900	950
NSFR 10	10	566	1000	100	1200	3500	1840	160	900	950
NSFR 15	15	851	1500	150	1800	3600	2440	200	900	1000
NSFR 20	20	1137	2000	200	1800	4000	2440	200	900	1000
NSFR 30	30	1700	3000	300	1800	4800	2440	250	900	1000
NSFR 40	40	2265	4000	400	1800	6200	2440	315	900	1000
NSFR 50	50	2800	5000	500	1800	7500	2440	315	900	1000
NSFR 60	60	3233	6000	600	2500	5200	3140	315	900	1000
NSFR 65	65	3670	6500	650	2500	5600	3140	315	900	1000
NSFR 70	70	4318	7000	700	2500	6000	3140	315	900	1000
NSFR 80	80	4533	8000	800	2500	6600	3140	315	900	1000
NSFR 100	100	5666	10000	1000	2500	8600	3140	315	900	1000
NSFR 125	125	7082	12500	1250	3000	7200	3640	400	900	1000
NSFR 150	125	8500	12500	1500	3000	8400	3640	450	900	1000

Forecourt separator range

Model	Capacity litres	Diameter	Length	Height	Connection size	Inlet invert	Outlet invert
Class 1 C	10000	1800	4200	2200	160	700	800
Class 2 C	10000	1800	4200	2200	160	700	800
Class 1 PS	10000	1800	4200	2200	160	700	800
Class 2 PS	10000	1800	4200	2200	160	700	800

Wash-down separator range

Model	Capacity litres	Diameter	Length	Height	Connect' size	Inlet invert	Outlet invert
WD2800	2800	1250	3000	1750	110	700	750
WD3800	3800	1250	4000	1750	110	700	750
WD4500	4500	1600	2650	2100	110	700	750
WD6000	6000	1800	2950	2300	110	700	750
WD8000	8000	1800	3600	2300	160	700	750
WD10000	10000	1800	4200	2300	160	700	750
WD12000	12000	1800	5000	2300	160	700	750
WD15000	15000	2500	3100	3000	160	700	750
WD18000	18000	2500	4100	3000	160	700	750
WD20000	20000	2500	4500	3000	160	700	750

Silt trap

Model	Capacity litres	Length	Width	Height	Conn' size	Outlet invert
CST1	1050	2110	720	1140	110mm	315

Notes:

- *The dimensions given on this page are for guidance only*
- *For precise tank sizes and configurations, please contact Marsh Industries*
- *Number of access shafts will be built to suit site specifications and to maintain safe access for emptying*
- *All dimensions in mm*

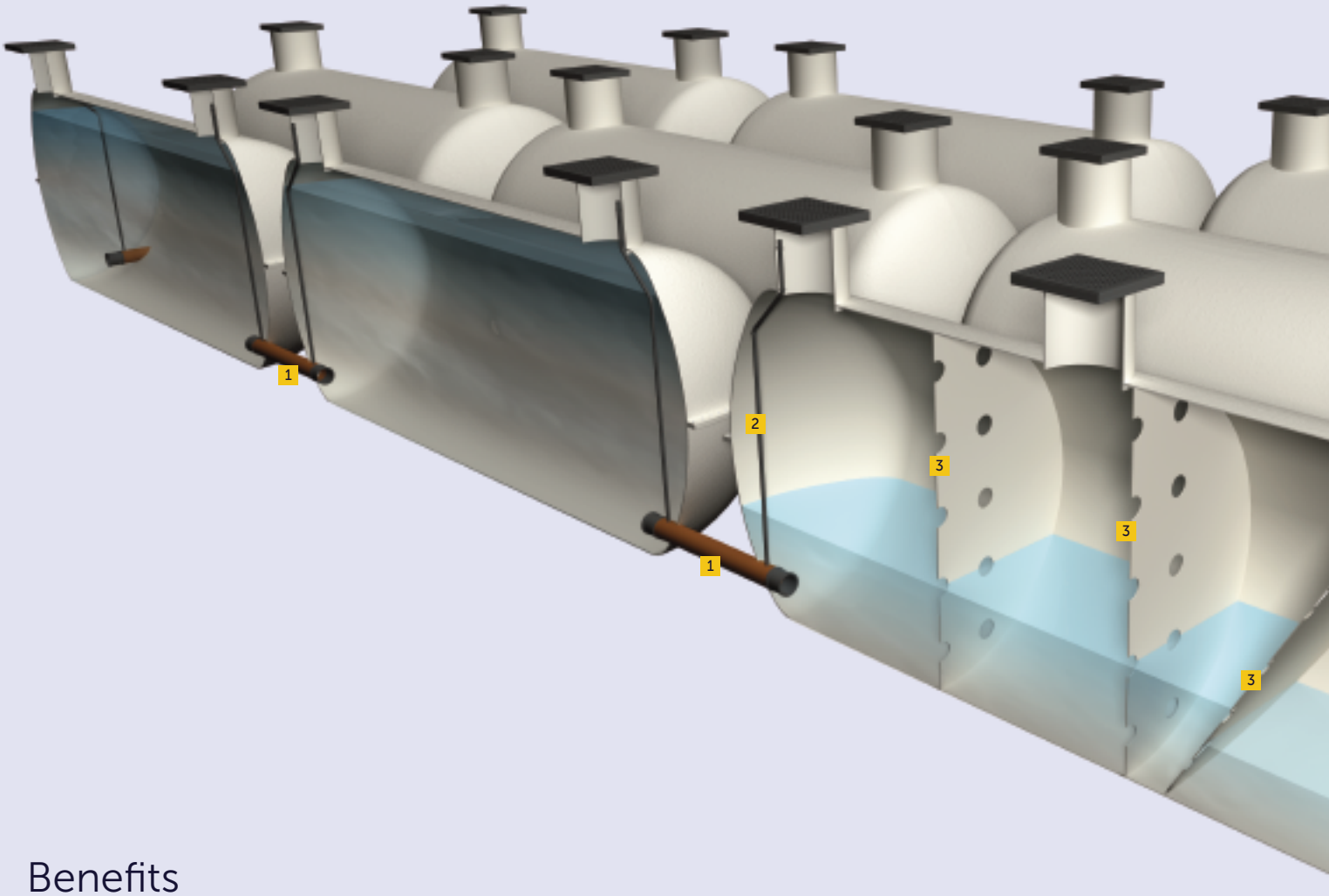
Storm Dammer®

Stormwater flow attenuation

Overview

Available in capacities from 2800-110000 litres in multiple configurations with tank sizes ranging from Ø1.2m to Ø3m diameters, the Storm Dammer alleviates the risk of flooding and reduces pressure on drains/sewers by storing the excess flow of stormwater before controlled discharge downstream.

Greater capacity and ease of inspection and maintenance makes Storm Dammer the industry choice for developers, municipal planners and civil engineers.

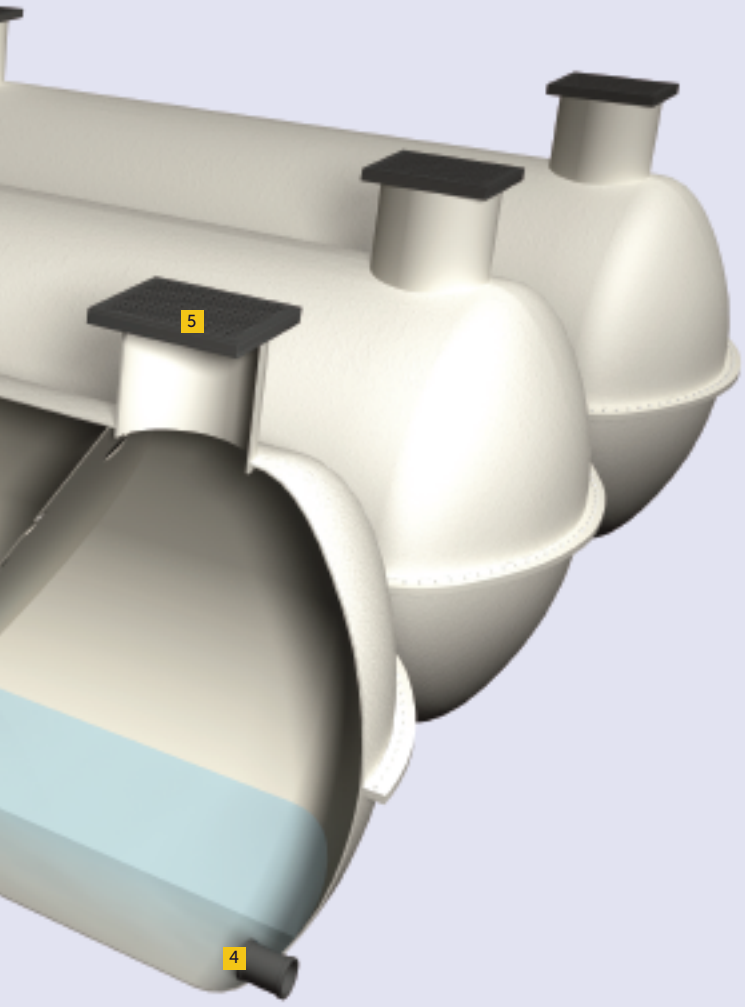


Benefits

- Designed to meet latest UK and European standards
- Multiple tank configurations and inlet orientations to suit storage and site layout requirements
- Tank diameters range from Ø1.2 to Ø3m with length up to 20 metres
- Heavy duty shells manufactured from virgin unfilled resin provides superior structural strength and durability. This also enables the tank to be significantly lighter for on-site handling/positioning and better suited to withstand greater hydrostatic pressures when in use
- Tank design offers easy access for inspection, maintenance and cleaning when compared to inaccessible crate systems
- Systems can be fitted with flow control devices and orifice plates to regulate storage and discharge
- Easily accessible, low energy submersible pumps ensure minimal running, maintenance and servicing costs
- Guaranteed for 25 years with a design life of 50 years

Key

1 Connecting pipework
2 Internal vent pipes
3 Flow control devices
4 Outlet
5 Access manways

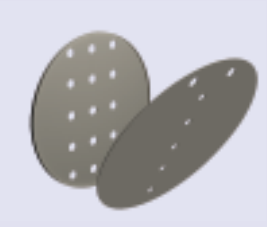


This is not a typical tank installation. Configuration and components are shown for illustration purposes only

Fittings and accessories

Orifice baffles

Utilising Marsh Industries' unique Gaia Storm Dammer program, in conjunction with the Micro Drainage Design program, the standard range of Storm Dammer tanks are designed using orifice baffles as the primary flow attenuation system.



Precise calculations from the Gaia Storm Dammer program ensures that the correct type of orifice baffles are distributed throughout the system to deliver the optimum outflow required.

Flood and storm control valves

Storm Dammer systems can be designed to include Vortex Storm Control units which can reduce out-flow on varying scales.

Pumps can also be fitted to upline chambers allowing stored water to be distributed to other chambers that may not be in the immediate area.

Pumps

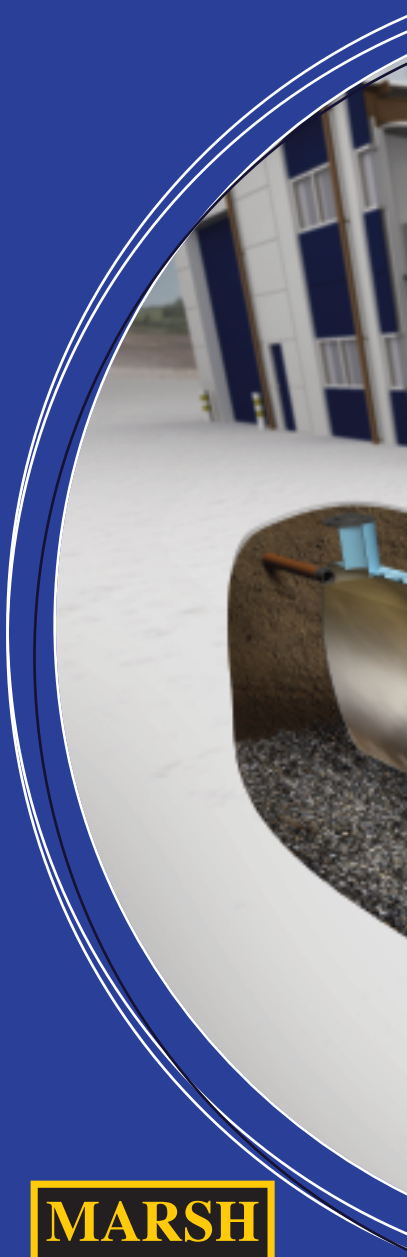
Marsh Industries works in partnership with major UK pump manufacturers to develop attenuation tanks and pump chambers that are designed to distribute water to the mains drainage network or to other off-site storage tanks. Pumps can be supplied as single, twin or multi-line installations in both single and three phase.

AUTOadapt™ sump pump

Designed for a range of water and wastewater applications, the AUTOadapt pump removes the complexity of standard submersible pumps by combining all external sensors switches and cables from the pit within the pump itself. This simplifies installation and operation, and vastly increases reliability.

Domestic products from the Marsh range

- Sewage treatment plants
- Pump chambers
- Septic tanks
- Cesspools
- Uni:Gem septic conversion units
- Grease traps
- Rainwater harvesting systems



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