BELOW GROUND STORAGE TANKS

A below ground storage tank provides a reliable solution for the collection and retention of:

- Sewage (cesspool)*
- Surface water
- Veterinary/animal waste
- Firefighting reservoirs
- Rainwater harvesting reservoirs
- Animal drinking reservoirs



** For sewage applications please consult Klargester for advice on the capacity of tank required.*

Storage tanks are available in standard capacities ranging from 18,180 litres up to 55,000 litres, with capacities up to 80,000 litres available on request.

Specialist Applications: Tanks can also be provided with special linings and used for:

- Silage effluent
- Higher octane fuels
- Agricultural/farm waste

Always consult Klargester for advice on non-sewage applications.

Each tank is delivered to site as a complete unit ready for installation. Full installation instructions are provided with each unit, but are also available on request. A 'high level' alarm is available for monitoring the tank for optimum usage.

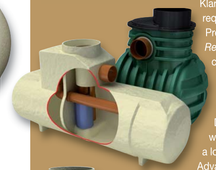
- Constructed from non-corrosive materials and designed in accordance with BS 6297: 1983
- Manufactured under the quality procedures of BS ISO 9001: 2000
- Factory tested to ensure watertight and structurally sound
- Easy to install and maintain
- Lockable manhole cover
- 12 month warranty

Please note: These tanks are NOT suitable for the storage of potable drinking water.

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OIL/WATER SEPARATORS

Separators are used to separate hydrocarbon (oil) based contaminants from surface water run-off. Car parks, commercial developments, road schemes, or in fact any areas where there is likely to be surface water run-off will probably require a separator.



Klargester has developed the following options to meet the requirements of local government agencies for Pollution Prevention Guideline PPG3 and EN858-1. *Bypass* and *Full Retention* separators include allowance for silt storage capacity, and have the option to fit additional alarms.

Bypass Separator NSB Range

Designed to treat 10% of the flow and separate oil from water. Uses include car parks, roadways and other sites with a low risk of pollution. Available in Class I and Class II format. Advanced rotomoulded construction on selected models.



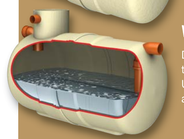
Full Retention Separator NSF Range

Designed to treat the 100% of the flow and separate oil from water. Uses include fuel depots, vehicle workshops, scrap yards and other sites with a high risk of pollution. Available in Class I and Class II format. Advanced rotomoulded construction on selected models.



Forecourt Separator

Designed to contain a spillage from a single cell of a road tanker, of 7600 litres, plus an additional area of up to 720 m² of forecourt or refuelling area. Uses include petrol stations, refuelling points and other areas where fuel is stored. Available in Class I and Class II format.



Washdown & Silt Separator

Designed to treat the whole flow from an area and separate the oil from the water, but not designed to be Class I. Uses include car washes, tool hire depots and other sites with washdown areas.

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SEPTIC TANKS

SuperSeptic Tank

The ***SuperSeptic*** new generation septic tank adds an integral aeration chamber to the basic septic tank design. It allows a natural liquid overflow (BOD factor 50) to a drainage field or garden, but with substantially less odour and pollution - and less danger to children, pets and plants.



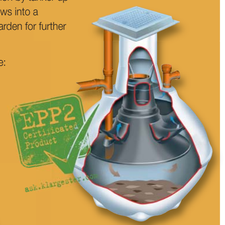
Unlike traditional septic tanks (*Alpha* and *Beta*, below), the ***SuperSeptic*** has a small air pump, which may be located above ground and up to 13 metres away. The airflow steadily aerates the sewage in the tank, significantly reducing the BOD factor. As a result, odour of the overflowing liquid is reduced significantly.

Alpha & **Beta** Septic Tanks

Alpha and ***Beta*** septic tanks only provide settlement for sewage solids. Sewage flows into the tank. The solids settle for collection by tanker up to four times a year. The liquid (BOD factor 200) overflows into a suitably designed, correctly situated drainage field or garden for further biological treatment.

Septic tanks may only be installed in applications where:

- Soil is of suitable porosity
- Installation complies with the Building Regulations (Approved Document H)
- The installation will not contaminate any ditch, stream or other watercourse



Alpha *for standard applications*



Beta *with tougher walls for challenging sites*

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The Market Leading Range of Klargester Sewage Treatment, Pumping and Drainage Solutions from Kingspan Environmental


Commercial Sewage Treatment Plants


Large Capacity Pumping Stations


Stormwater Attenuation Systems


Domestic Sewage Treatment Plants


Packaged Pump Systems


Reed Beds


Oil/Water Separators


Septic Tanks


Below Ground Storage Tanks


Grease & Silt Traps


Packaged Drainage Systems

KingspanWater Rainwater Harvesting Solutions


Residential & Commercial Rainwater Harvesting


Domestic Rainwater Harvesting


Garden Watering Systems

Accredited to
BS EN ISO 9001: 2008
BS OHSAS 18001: 2007

UK GREEN BUILDING COUNCIL
BRITISH WATER

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Klargester

Water Management Solutions

Sewage Treatment, Surface Water Run-off & Rainwater Harvesting Systems



Sustainable, Reliable, Affordable

Kingspan

PACKAGED SEWAGE TREATMENT PLANTS



BioDisc® BA-BD Range of High Performance Sewage Treatment Plants

BioDisc© is Klargester's premier sewage treatment plant and offers a high performance, low maintenance system producing clear, odourless effluent (BOD Factor 15) which meets the rigorous quality standards demanded by local environment agencies. It is the only domestic treatment plant using a Rotating Biological Contactor (RBC). Operating costs are minimal, with an extremely quiet and reliable low power electric motor. ***BioDisc©*** uses rotating discs as a medium for supporting bacteria which carry out the aerobic treatment process. Primary and final settlement are contained within the unit which also has a totally unique flow management system to provide optimum performance under all circumstances.

The exceptional quality of ***BioDisc©*** is recognised worldwide, having achieved DIN approval in Germany, SFT certification in Norway, IAB for Ireland, NSF approval in the USA and UK Agrément certification. It has also now been performance certified to the new EU CEN standard.

Biotec™ Range of High Efficiency Sewage Treatment Plants

The ***Biotec™*** sewage treatment plant employs the well proven aerobic biological process for the treatment of sewage. Three distinct process stages take place within the single tank.

- Coarse solids are separated and retained for gradual breakdown.
- The separated liquor is continuously distributed over specialist media (which develop bacteria) by an airlift operated by a remotely sited blower.
- Final settlement of solids takes place. With normal domestic sewage a discharge of 20mg/l biological oxygen demand (BOD), 30mg/l suspended solids (SS), 20mg/l ammonia can be achieved.



All Klargester sewage treatment plants are fitted with unobtrusive low profile covers that provide full access for maintenance and annual desludging. For extra peace of mind and guaranteed long-term performance, Klargester offers service packages on all models.

DRAINAGE SOLUTIONS

Reed Beds Tertiary Treatment Process

A reed bed is a natural filtration process used in conjunction with a Sewage Treatment Plant to further enhance the quality of the effluent migrating into the surrounding watercourse. Performance tested in Germany to EN12566-3 in combination with a Part 3 plant, effluent discharge is typically improved by at least 50%, providing reduced BOD and suspended solids.

Ideal for new applications with tight discharge consents and improved effluent quality for existing installations, they are Building Regulations compliant, simple to install and require very little maintenance.

As well as being aesthetically pleasing during summer months, they are environmentally friendly.

Reed Bed modules are designed with a hydraulic gradient across the length of the units and an adjustable outlet weir allows water level control. Comprising of two or four individual one-piece GRP reed beds installed flush to the ground, the system is sized for the following domestic applications:

- 2 individual reed beds = Single house application
- 4 individual reed beds = Two house application



Ezy-Drain Revolutionary Packaged Drainage Field

While great advances have been made in wastewater technology, land drainage remains reliant on traditional techniques.

Now Klargester can offer the Ezy-Drain system, a revolutionary new product that redefines the method of dispersing water into soil.

Utilising recycled synthetics packed around sectional tubes, the Ezy-Drain design offers a packaged solution to avoid the drawbacks of using loose quarried aggregates. The resultant benefits are an extremely lightweight system that can be rapidly installed without the need for specialist skills.
The system is ideal for the following applications:

- drainage field for sewage treatment plants or septic tanks
- effluent drainage system from a treatment plant to discharge point
- seasonal soakaway flowing from a treatment plant



PACKAGED PUMP STATIONS

HillMaster Range of Pump Stations



Klargester manufactures the ***HillMaster*** range of packaged pumping stations suitable for use with either raw waste water or settled effluent. Best practice should always be to pump sewage to a mains sewer if there is one within reasonable proximity. Klargester will be pleased to give advice regarding this on an individual site basis.

For developments where foul drainage by gravity is not possible, including:

- Domestic sewage pumping
- Effluent pumpsets for sewage treatment plants
- Surface water pumping systems
- Septic tank pumpsets
- 24 hour storage chambers specifically designed to meet the requirements of Building Regulations Document H1 Foul Drainage
- Bespoke systems including large capacity concrete chambers

All standard packaged pump systems are supplied with GRP/polyethylene chambers, pump(s), high-level alarm, pre-set automatic level control, non-return valve, discharge pipe and all connections.



RAINWATER RECYCLING

KingspanWater Domestic RainStore Waterbutts

The choice for domestic rainwater collection has never been better. The ***RainStore*** water butt range features capacities from 100 litres to 900 litres, providing smart, practical and stylish rainwater storage to any property.

The 700 litre waterbutt is a perfect rainwater storage solution for serious water use. The excellent product design gives a generous lid opening for the use of a submersible pump and comes fully supplied with ***RainStore*** diverter kit and tap under the lid.





KingspanWater Commercial RainStore Above Ground Water Storage Tanks

The ***Commercial RainStore*** range features capacities from 1300 litres to 10000 litres, sizes that will really make a difference to metered properties and areas prone to water restrictions.

The system will provide 100% tax deduction on first year purchases under the Enhanced Capital Allowance Scheme in the UK. ***RainStore*** tanks can easily be fitted to existing guttering of a building or incorporated in new build plans.

The tanks collect rainwater from the roof via the downpipe. The rainwater flows though a filter to remove unwanted debris and then flows straight into the tank. There is an option for in-line and submersible pumps for the extraction of water (not part of our package).



RAINWATER HARVESTING SYSTEMS

Rainwater harvesting is very simple. The rain that falls on your building's roof is captured as it passes down the gutter downpipes. This water is then filtered to remove leaves and debris before being stored in an underground tank.

What happens next depends on the system you choose...



KingspanWater Raintrap Garden Watering System

The ***Raintrap*** is an economy system, delivering the stored water under pumped pressure to a hosepipe for basic garden watering and car washing duties.

KingspanWater Envireau Rainwater Harvesting System

The ***Envireau*** system is the next step up, being fully integrated into the building's plumbing system. This puts rainwater to use in non-applications such as toilet flushing and washing machines. Fully automated, the system draws on captured rainwater first before switching over to mains supply should the storage tank run empty.



A rainwater harvesting system will **save you money – over 50%** of household water consumption could be replaced with harvested rainwater!

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