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Kingspan *Klargester*

SEPTIC TANKS

FOR THE COLLECTION
& SETTLEMENT OF
DOMESTIC SEWAGE



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Kingspan
Environmental

Septic Tanks

FOR THE COLLECTION AND SETTLEMENT OF DOMESTIC SEWAGE

A septic tank provides a traditional solution to sewage disposal needs for domestic dwellings without access to mains drainage.

Sewage enters the septic tank into a settlement chamber, allowing solid waste (sludge) to sink and liquid to rise to the surface. This surface liquid makes contact with oxygen and the organic matter starts to breakdown biologically.

This liquid still contains sewage but in small enough particles to be carried through the discharge outlet and into the ground (soakaway).



WHY DO I NEED A SEPTIC TANK?

Basic septic tanks only partially treat sewage and discharge effluent of low quality. Many authorities in the UK prohibit their use.

In all instances a Sewage Treatment Plant should be considered as the first option.

Septic tanks may be installed, subject to consent, in applications where:

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

WHAT PRODUCTS ARE AVAILABLE?

If you are not connected to mains drainage you have three options:

- The **Klargester Alpha** and **Beta+** ranges of septic tanks only provide settlement for sewage solids. The liquid overflow requires further biological treatment in a suitably designed, correctly situated drainage field.
- A **Klargester Sigma** shallow dig septic tank will drastically reduce the time and cost of a septic tank installation. Sigma is EN 12566 Part 1 approved and 99.7% efficient.
- A full sewage treatment plant with integral biological treatment technology produces far superior treated effluent - see the **Klargester Biotec™**, **Biosafe** and **BioDisc®** ranges.

Any product installation is dependent on obtaining regulatory approvals.

Get in touch for a **FREE** professional site visit and a representative will contact you within 5 working days to arrange a visit.

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SOIL POROSITY

To establish the overall length of a drain run needed, a soil porosity test is required. The following procedure should be adopted:

- Excavate a hole 300mm square by 300mm deep below the proposed invert level of the land drain.
- Fill hole with water to a depth of 300mm and allow to drain away overnight.
- Refill to a depth of 300mm and observe the time taken to drain from 75% full to 25% full level (i.e a depth of 150mm). Divide this time by 150mm. The answer gives the average time in seconds (Vp) required for the water to drop 1mm.

Repeat this exercise two more times with at least two trial holes. Calculate the average time.

By reference to the table the length of drain run required for various capacity tanks may be established.

Drainage field disposal should only be used on test values (Vp) between 15 and 100. Where a Vp value falls outside these limits, our technical team can advise.

For detailed calculations of the drainage field, please contact the Klargester technical sales team on 01296 633000 or email info@klargester.com.

TYPICAL INSTALLATION



■ Alpha Septic Tank

Largest **Alpha** tanks provide a reliable and economic solution for homes not connected to mains drainage. Alpha tanks are manufactured from composite GRP – light, chemically resistant and watertight.



■ Beta+ Septic Tank

Beta+ is a septic tank designed for modern living. Manufactured from tough polyethylene, the squat design means a shallow excavation and reduced excavation time. High structural strength means concrete backfill is only required on 'wet sites'.

■ **Sigma Shallow Dig Septic Tank**

The **Sigma** shallow dig septic tank is designed to reduce both installation time and cost. Manufactured from GRP, the tank is easy to handle and install, requiring less backfill material and less soil disposal.



- Top soil
- Geotextile membrane
- Washed gravel or clinker
20-50mm grade
- Drainage network

50mm

300mm

■ SIGMA SHALLOW DIG SEPTIC TANK

The **Sigma** shallow dig septic tank is available in various sizes suitable for properties with dig height restrictions.

MODEL REFERENCE	CAPACITY (litres)	No. PEOPLE (150l/head/day)	DIAMETER (mm)	LENGTH (mm)	STANDARD INVERT HEIGHT (mm)
STH028	2800	5	1225	2955	500
STH038	3800	12	1225	3895	500
STH057	5700	24	1425	4275	500
STH071	7150	34	1920	3225	500
STH091	9150	47	1920	3960	500

- Robust and simple to install
- Less excavation costs, less soil disposal and less backfill material
- Made from composite GRP – strong, light, chemically resistant and watertight
- EN-12566 Part 1 approved and 99.7% efficient

■ BETA+ ROTOMOULDED SEPTIC TANK

Beta+ septic tanks are available in two sizes suitable for various applications.

CAPACITY (litres)	No. PEOPLE (150l/head/day)	WIDTH (mm)	VARIABLE INLET LEVEL (mm)
3000	6	1700	900 - 500
4100	14	1940	900 - 500

- Manufactured from robust, impact resistant, high quality polyethylene
- Strong, easy to move and simple to install
- Wide neck for easy access for annual desludging
- Extension neck available to allow for deeper installation on difficult sites
- Proven performance – under EN-12566 Part 1 testing, **Beta+** retained 99% of sewage solids in the tank

■ ALPHA GRP SEPTIC TANK

The **Alpha** septic tank comes in three sizes and is suitable for individual domestic dwellings up to a large family house.

CAPACITY (litres)	No. PEOPLE (150l/head/day)	WIDTH (mm)	INLET LEVEL TO BASE (mm)
2800	5	1905	1565
3800	12	2070	1795
4600	17	2080	2035

- Performance tested to EN-12566 (Part 1) requirements
- Internal baffle design within the tank aids separation and retention of solids, improving the effluent quality thus providing a long life to the soakaway
- Made from composite GRP – strong, light, chemically resistant and watertight



SIGMA SHALLOW DIG SEPTIC TANK



BETA+ SEPTIC TANK



ALPHA SEPTIC TANK

PROFESSIONAL INSTALLERS

Klargester Accredited Installers

Experience shows that correct installation is a prerequisite for the long-lasting and successful operation of any wastewater treatment product. This is why using an installer with the experience and expertise to install your product is highly recommended.



Services include :

- Site survey to establish ground conditions and soil types
- Advice on system design and product selection
- Assistance on gaining environmental consents and building approvals
- Tank and drainage system installation
- Connection to discharge point and electrical networks
- Waste emptying and disposal

Contact us for further details.



CARE & MAINTENANCE

Kingspan Environmental Services

Who better to look after your treatment plant than the people who designed and built it?



Kingspan Environmental have a dedicated service division providing maintenance for wastewater products.

Factory trained engineers are available for site visits as part of a planned maintenance contract or on a one-off call out basis.

To find out more about protecting your investment and ensuring peace of mind, call us on:

NI: 0844 846 0500
ROI: 048 3025 4077

or visit us online:

www.kingspanenvservice.com



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UK: College Road North, Aston Clinton, Aylesbury, Buckinghamshire HP22 5EW

Tel: +44 (0) 1296 633000 Fax: +44 (0) 1296 633001 Scottish Office: Tel: +44 (0) 1355 248484
email: info@klargester.com

Ireland: Unit 1a, Derryboy Road, Carnbane Business Park, Newry, Co. Down BT35 6QH

NI Tel : +44 (0) 28 302 66799 Fax: +44 (0) 28 302 60046 ROI Tel: 048 302 66799 Fax: 048 302 60046
email: info@klargester.ie

Visit our website www.klargester.com, or our company website www.kingspanenv.com



Certificate No. FM 563603



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In keeping with Company policy of continuing research and development and in order to offer our clients the most advanced products, Kingspan Environmental reserves the right to alter specifications and drawings without prior notice.