



Alpha Septic Tank

Installation & Operation Guidelines



DS1535P	Alpha Septic 2900L (6PE) UK G SS Sales Drawing
DS1536P	Alpha Septic 3800L (12PE) UK G SS Sales Drawing
DS1542P	Alpha Septic 2900L (6PE) UK G TS Sales Drawing
DS1543P	Alpha Septic 3800L (12PE) UK G TS Sales Drawing
DS1537P	Alpha Septic - Trimming and Extension Neck Details

Please request copy of the specific sales drawing from our sales department.



IMPORTANT NOTE: When adding water to a Twin Stage Alpha Septic Tank, fill via the Final Settlement Chamber (second stage). The water can overflow through the Transfer Hole into the Primary Settlement Chamber (first stage).

Part Code	1016700
Issue	01
Description	ECN 2380
Date	August 2026

INTRODUCTION

Thank you for choosing a Kingspan product. Please read this manual thoroughly, preferably before installation. This manual should be referred to by:

- The installer
- The desludge contractor
- The owner/user

EXPLANATION OF SAFETY SYMBOLS

This instruction manual contains important safety symbols. It is necessary to take note of any safety notices in order to avoid damage to equipment and also to ensure that the Klargestor guarantee is maintained. In extreme situations non-observance of safety instructions can lead to injury and even death.

Symbols used in this manual:

	DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	NOTE	Typical Installation ➤ Pictorial representation on page 6 indicates basic requirements for a standard system. ➤ All pipework fitted to the tank connections is supplied by others.

ESSENTIAL SAFETY INFORMATION

It is essential to take note of these basic warning signs. There are additional warnings given within other pages of this manual.

	DANGER	Danger due to lack of oxygen ➤ Never climb into the Alpha Septic Tank for repairs, even after desludging, without first ensuring that the tank has been flushed with fresh air. ➤ During repairs in the Alpha Septic Tank ensure continuous ventilation. Repairs must only be carried out by professionally qualified personnel.
	CAUTION	Danger as a result of removing the plant access cover ➤ When the access cover is removed for de-sludge purposes, ensure there is a safety fence placed around the opening to prevent injury to people in the area.
	CAUTION	Danger as a result of the product weight ➤ The product weight is available on page 11 of this manual. Use appropriate lifting equipment when necessary. ➤ The unit's weight can lead to injury or damage if the unit is not correctly handled.

HEALTH AND SAFETY INFORMATION

Please read and follow for your own and others safety

You must read these warnings carefully before installing or using the equipment. Please ensure that you have performed a risk assessment before commencing any installation. Note that the risk assessment should be performed by a person who understands the hazards of the work, and the work environment. Note that it must be *suitable and sufficient*, i.e. adequately considered risks and ensures controls in place to mitigate risks.

You must observe all-hazard labels and take appropriate action to avoid exposure to the risks indicated. Always ensure that all relevant documents are supplied with the equipment when being transferred to a new owner.

 WARNING	General Guidelines - Personal Safety ➤ Only experienced and competent person(s) should carry out the installation. ➤ Take care to maintain correct posture, particularly when lifting. ➤ Use appropriate lifting equipment when necessary. ➤ The covers must be kept locked.
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 CAUTION	Personal Protective Equipment ➤ We recommend the use of a dust mask and gloves when cutting plastic components. ➤ Person(s) carrying out maintenance on the equipment should wear suitable PPE.
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 CAUTION	Working Area ➤ Ensure that the working area is adequately lit. ➤ Ensure that you are familiar with the safe working areas and their access and egress. ➤ Use only the designated access walkways. ➤ Do not walk on the cover. ➤ Always keep proper footing and your balance, avoid any sharp edges, or restricted points.
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Please note additional safety warnings within the following chapters of this manual.

TECHNICAL DATA

Unit	Alpha Septic 2900L	Alpha Septic 3800L
Length (mm)	2240	2690
Width (mm)	1220	1220
Inlet Invert depth (mm) – Single Stage	600 - 1050	600 - 1050
Inlet Invert depth (mm) – Twin Stage	600 - 1050	600 - 1050
Installation depth (mm) - Single Stage	1960 – 2410*	2100 – 2550*
Installation depth (mm) - Twin Stage	1960 – 2410*	2100 – 2550*

*With the use of an Extension Neck (Optional Extra), an extra 500mm can be added to the maximum installation dept. Refer to sales drawing DS1537P Neck Trimming and Extension Neck details.

Unit	Alpha Septic 2800L	Alpha Septic 3800L
Max PE	6	12
Maximum Daily Flow (m3/d)	0.9	1.80

All surface water must be excluded. These units should be used exclusively for the treatment of sewage from domestic properties. Contact Kingspan if your sewage results, wholly or partly, from any commercial function.

DESLUDGING

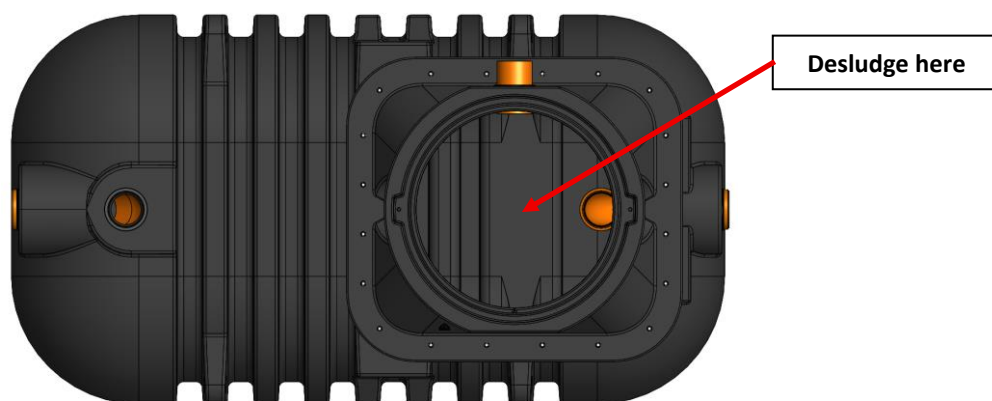


CAUTION

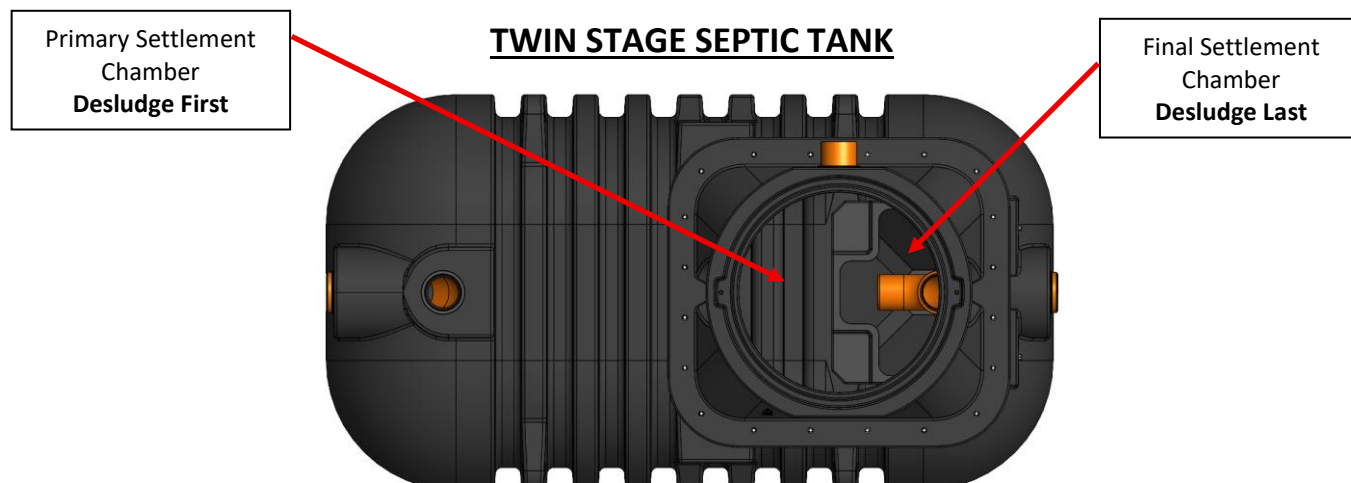
Plant Desludging

- Desludging should be carried out by a licensed waste disposal contractor holding the relevant permits to transport and dispose of sewage sludge.
- Ensure the area is clear from any obstacles which could result in injury.

SINGEL STAGE SEPTIC TANK



TWIN STAGE SEPTIC TANK



Single Stage Septic Tank:

Insert the suction hose down through the access shaft, taking care not to damage the internal pipework. Desludge the full volume of the tank (see table below).

Twin Stage Septic Tank:

Insert the suction hose down through the access shaft, taking care not to damage the internal pipework. Desludge the Primary Settlement Chamber first, then the Final Settlement Chamber (See table below). NOTE: refill the Final Chamber up to the transfer (approx. 170 L (Alpha Septic 2900L) / 265 L (Alpha Septic 3800L)).

Desludging frequency is dependent on the incoming organic load, and therefore site specific.

Approximate de- Sludge volumes – This table is a guide only.

Model	Alpha Septic 2900L Single Stage	Alpha Septic 2900L Twin Stage		Alpha Septic 3800L Single Stage	Alpha Septic 3800L Twin Stage	
App. Desludge Volume	Only 1 Chamber 2900 Litres	Primary Chamber 2640 L	Final Chamber 260 L	Only 1 Chamber 3800 Litres	Primary Chamber 3365 L	Final Chamber 435 L
Desludge Period (at maximum loading)	12 Months	12 Months		12 Months	12 Months	

CONTENTS

INTRODUCTION 2

EXPLANATION OF SAFETY SYMBOLS..... 2

ESSENTIAL SAFETY INFORMATION 2

HEALTH AND SAFETY INFORMATION 3

TECHNICAL DATA 3

DESLUDGING..... 4

CONTENTS..... 5

SYSTEM OVERVIEW 6

ALPHA SEPTIC TANK CHECKLIST 7

SELF HELP 7

DESCRIPTION AND PROCESS 8

INSTALLATION 9

MAINTENANCE..... 13

WARRANTY 13

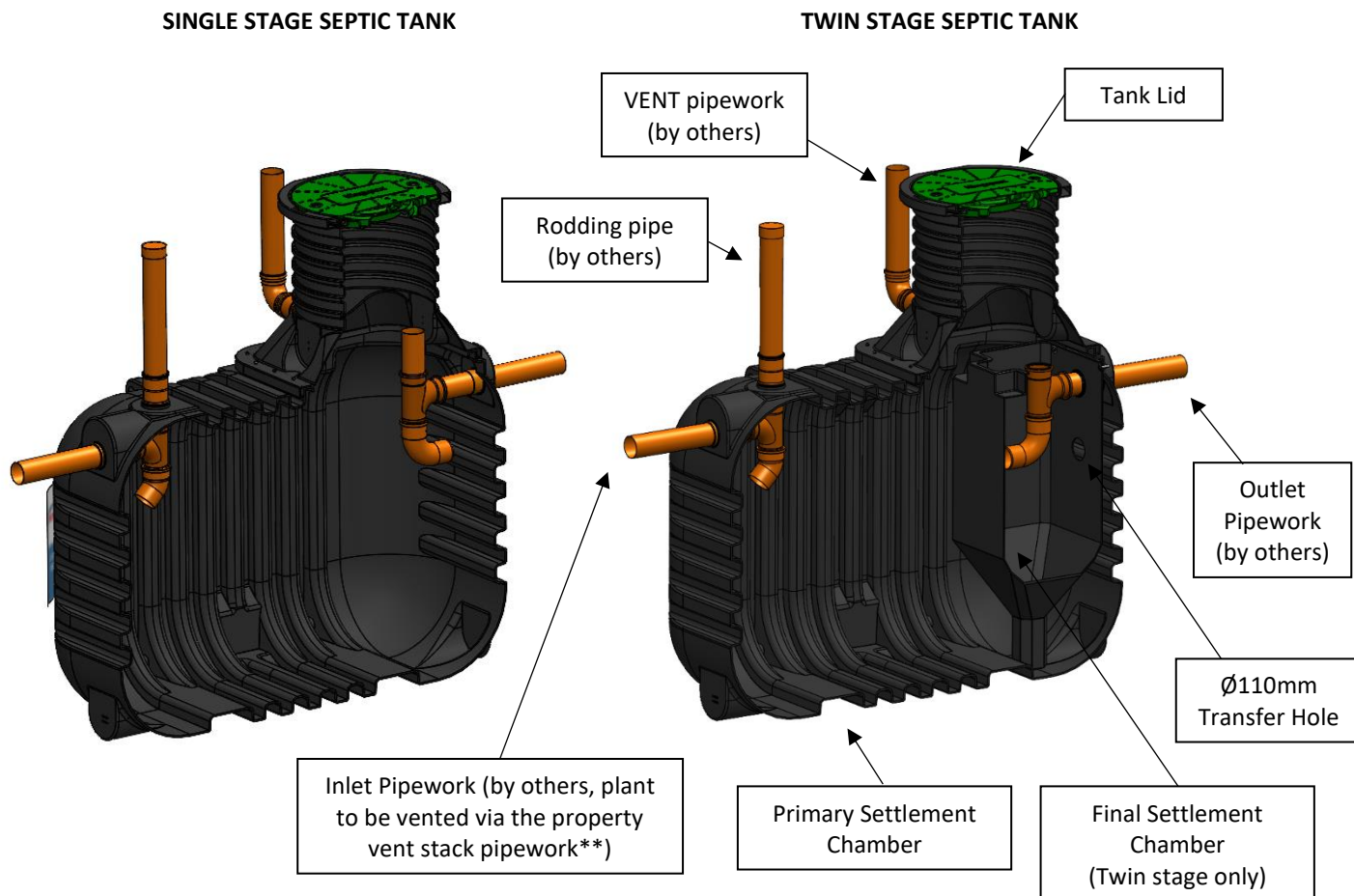
NOTICE..... 14

CE-MARKING 15

SYSTEM OVERVIEW

NOTE	Typical Installation ➤ Pictorial representation below indicates basic requirements for a standard system. ➤ All pipework fitted to the tank connections is supplied by others.
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Pictorial representation below indicates basic requirements for a standard system.



** Alternatively, where no property vent stack is fitted, the unit must be vented via the vent pipe on the side of the tank.

ALPHA SEPTIC TANK CHECKLIST

The delivery paperwork will have 1 item listed; check that the Code on the paperwork is the same as the code on the unit delivered. Example: AST029SUGK.

The unit will be fitted complete with internal pipework.

Alpha Septic Tank

Item 1

NB: Septic tanks vary in design and volume (Alpha Septic 029 & Alpha Septic 038, Single & Twin Stage).

Please check your order and cross reference with relevant sales drawing.

(Alpha Septic 029 - Single Stage shown).



Rodding Pipe Kit (supplied by others)

Ø110mm Pipe Connector, Drainage pipe and Blanking Cap.



Please make sure that the delivery is complete when unloading these components.

Please report any damages or shortages to your Kingspan representative within two working days.

SELF HELP

Provided that your tank is installed correctly you should not need to get into much – if any – self-help. However, some of the most likely question and answer situations are listed below.

Plant flooding

- Check for blocked outlet system.

Plant odour

- Check if the tank needs desludging.
- Check vent circuit is clear.

DO's



Do contact us for advice if you have any cause for concern. All contact details are at the end of this manual.

Do only flush the 3 P's (Pee, Poo & Paper)

DON'TS



Don't pump feed the plant without seeking advice from Kingspan or installer.

Don't use a waste disposal unit as you will be adding to the biological load, and your system may not be large enough to cope with the waste. If you are unsure, please refer to our sales team for guidance.

Don't throw any medicines down the toilet.

Don't empty large quantities of bleach or similar cleaning reagents into the system.

Don't empty cooking oil or similar down the sink.

Don't cover the plant with soil material or prevent access for service and desludging.

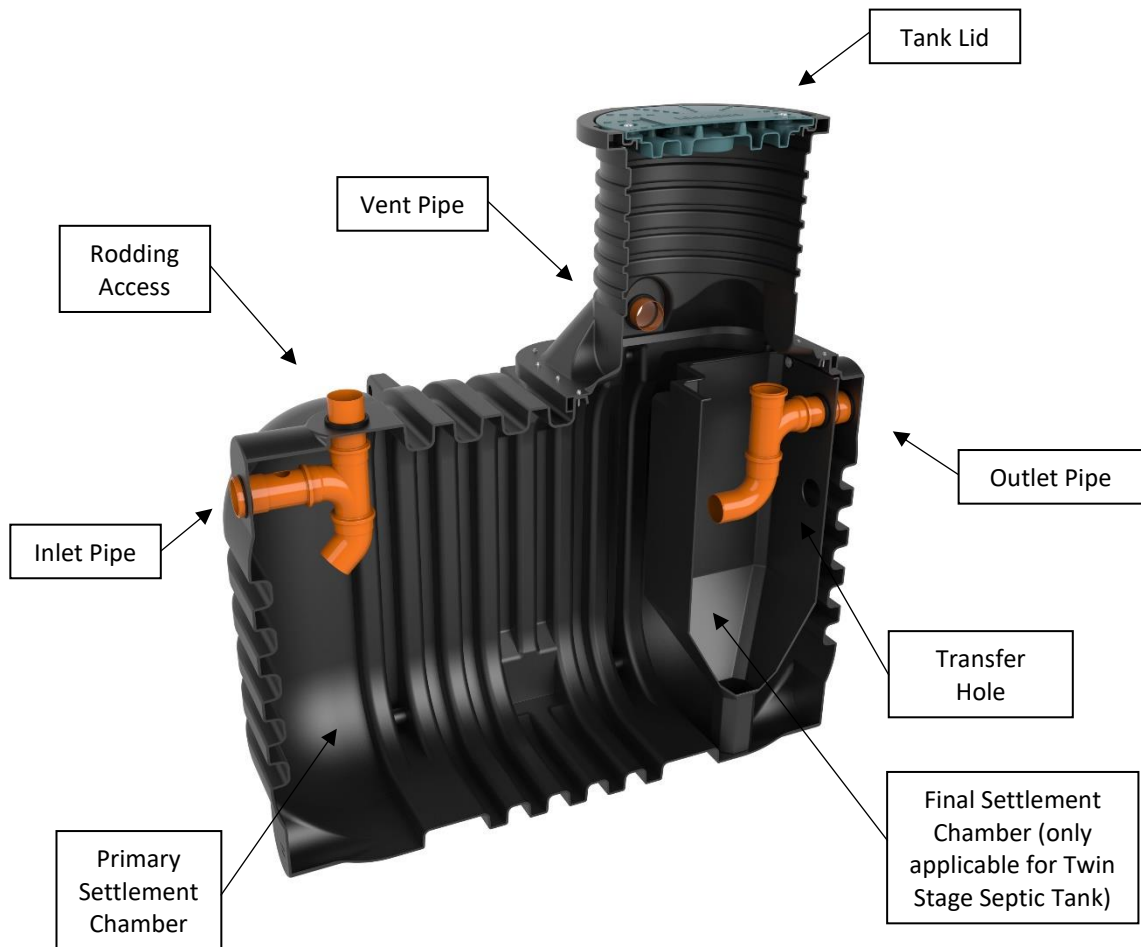
Don't try to enter the plant.

Don't discharge backwash from Hot Tubs and Swimming Pools into the plant.

Don't put sanitary towels, incontinence pads, nappies, tampons, or other non-biodegradable items down the toilet.

DESCRIPTION AND PROCESS

The Alpha Septic Tank is designed to accept crude domestic sewage discharging to a correctly sized drainage field. The Alpha Septic Tank is a self-contained single piece unit.



The main casing and cover of the Alpha Septic Tank are constructed of Medium Density Polyethylene.

Crude sewage enters the Alpha Septic Tank through an inlet pipe in the side of the unit. Here, solids will settle in the bottom of the tank.

- *Alpha Single Stage Septic Tank*, single stage settlement.
- *Alpha Twin Stage Septic Tank*, two stage settlement.

Periodic desludging is required dependent on site loadings, see section about desludging.

INSTALLATION



CAUTION

Danger as a result of the product weight

- The product weight is available on page 11 of this manual. Use appropriate lifting equipment when necessary.
- The unit's weight can lead to injury or damage if the unit is not correctly handled.

Before you begin

In Great Britain and Northern Ireland you must have approval to discharge before you install a Septic Tank. You must therefore submit plans of the location of both the tank and soakaway layout to your Local Authority, who may also be able to offer you advice if required.

Our Alpha Septic Tanks comply with the principles set down in BS 6297:2007. The design also meets all the requirements of both the Water Act Consent and Building Control Regulations in Great Britain and Northern Ireland.

What about ground conditions?

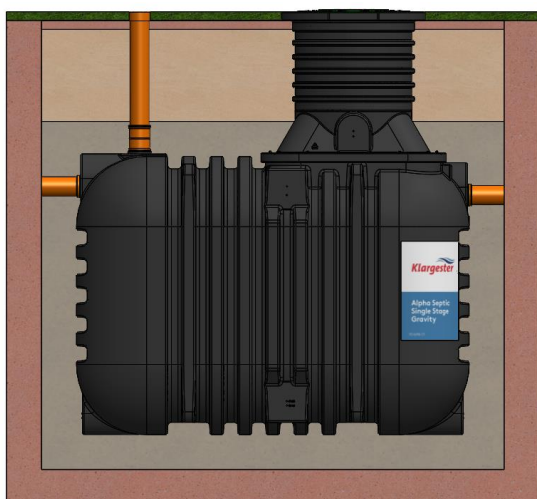
Prior to installation care should be taken to establish the depth to the water table and land drain facilities as ground conditions will determine the type of backfill materials to be used. In dry free draining soils where the ground is dry all year round i.e. the water table never rises above the base of the tank then use backfill recommended for *Dry Site*. In clays, silts, heavy ground or badly drained ground where the water table rises above the base of the tank use backfill recommended for *Wet Site*.

Backfill

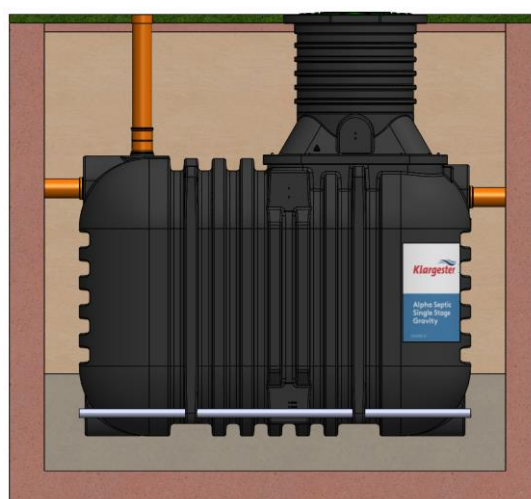
Our Septic Tanks are structurally tested in accordance with EN 12566-1, which specifies structural stability testing for both wet and dry sites using granular backfill 3-8mm. However, in GB&I we recommend Concrete backfill due to the rising Water table and changing climate.

Concrete backfill is recommended for *Dry site* and *Wet site*. In line with structural testing, our tanks can be installed in Pea Shingle but for installation with Pea Shingle 2x retaining bars (optional extra) shall be installed through the 4x Ø50 holes at the base of the tank and Concrete backfill to a level above the retaining bars (min. 200mm) will ensure self-anchoring of the tank if there is a risk of a high-water table or of the site flooding.

Concrete Backfill



Pea Shingle Backfill with Retaining Bar



Concrete Specification below is a *general* specification. It is not a site-specific installation design.

GENERAL CONCRETE SPECIFICATION IN ACCORDANCE WITH BS EN 206-1 (BS 8500-1)		
TYPE OF MIX		(DC) DESIGN
PERMITTED TYPE OF CEMENT		BS 12 (OPC): BS 12 (RHPC): BS 4027 (SRPC)
PERMITTED TYPE OF AGGREGATE (coarse & fine)		BS 882
NOMINAL MAXIMUM SIZE OF AGGREGATE		20 mm
GRADES:	C25 /30	REINFORCED & ABOVE GROUND WITH HOLDING DOWN BOLTS
	C25 /30	REINFORCED (EG. FOR HIGH WATER TABLE)
	C16 /20	UNREINFORCED (NORMAL CONDITIONS)
MINIMUM CEMENT CONTENT:	C30 C20	270 - 280 Kg/M3 220 - 230 Kg/M3
SLUMP CLASS		S1 (25mm)
RATE OF SAMPLING		READY MIX CONCRETE SHOULD BE SUPPLIED COMPLETE WITH APPROPRIATE DELIVERY TICKET IN ACCORDANCE WITH BS EN 12350-1
NOTE: STANDARD MIXES SHOULD NOT BE USED WHERE SULPHATES OR OTHER AGGRESSIVE CHEMICALS EXIST IN GROUND WATER		

Where should I site the Septic Tank?

British Standard code of practice BS EN 12566-1 recommends that septic tanks should not be closer than 7 metres from a dwelling. The outlet from the tank should be well away from any source of water supply. Care should be taken to site the tank. Roads, driveways and vehicles should not be permitted within a distance equal to the depth of the unit, unless suitable structural protection is provided to the installation, to avoid damage to the tank structure. Don't forget that there must be access for service vehicles during installation and desludging. If the tank can only be installed where it will be subjected to a traffic load, then contact our sales team for details of any special requirements.

General

INSTALLATION SHOULD ONLY BE CARRIED OUT BY A COMPETENT CONTRACTOR.

The septic tank is supplied with a standard neck extension giving an Inlet Invert of 600-1050mm from the top of the manhole cover to the bottom of the inlet pipe. Refer to page 11 for tank dimensions. Normal safety precautions must be adopted during excavation. Excavate a trench for the inlet and outlet pipework noting; the inlet invert selected, and that the outlet pipe is 50mm lower than the inlet pipe.

If the excavation is in unstable ground, take particular precautions to avoid a collapse of the sides of the excavation. Guidance on excavation to these depths and the safety measures required are given in BS6031, BS8000: Part 1 and HSE Construction Summary Sheet. Make sure that any water collecting in the hole is pumped out during installation. In areas where the water table is above the bottom of the excavation and/or the excavation is liable to flood, the excavation must be de-watered, using suitable pumping equipment, until the installation is complete. Ensure that the pump discharge does not saturate the ground in the immediate vicinity. In such conditions it may be advisable to line the excavation with polythene sheeting, to prevent cement being washed out of the concrete surround/base. In situations where the excavation will not maintain a vertical wall, it will be necessary to support side walls of the excavation (E.g., with suitable trench sheets and bracing systems) from the bottom to the top. DO NOT completely remove the shoring system until after the backfilling is complete, but before the concrete fully hardens.

During installation, care must be taken to ensure the body of the unit is uniformly supported to avoid point loads on the unit. A water supply must be available on site to enable the unit to be ballasted during backfilling.

When units are installed in unstable ground conditions where movement of the surrounding material and/or unit The connecting pipework must be designed to minimise the risk of damage from differential movement of the unit(s) and/or surrounding material.

Installation

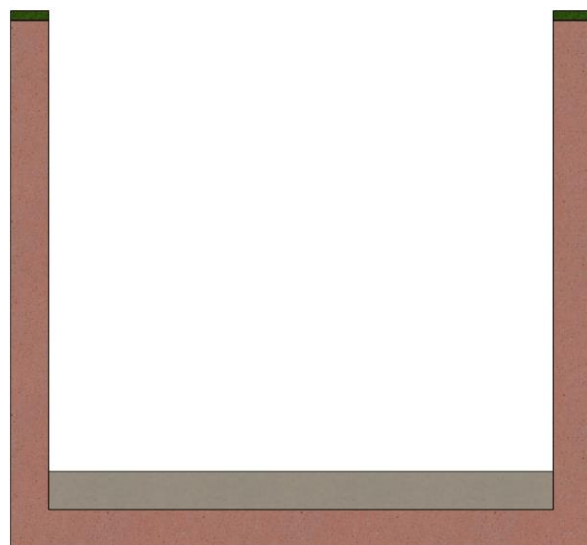
1. Excavate Hole & Lay Concrete Bed

- Approximate dimensions of units:

Unit	Inlet Invert (mm)	Unit Width (mm)	Unit Height (mm)	Length (mm)	Water Fill Volume (m ³)
Alpha Septic 2900L	600 - 1050	1220	1960 – 2410*	2240	2.9
Alpha Septic 3800L	600 - 1050	1220	2100 – 2550*	2690	3.8

**With the use of an Extension Neck (Optional Extra), an extra 500mm can be added to the maximum Unit Height. Refer to sales drawing DS1537P Neck Trimming and Extension Neck details.*

- Excavate a hole with clearance on all sides and base of the unit of min. 200mm and level the base. If levelling pegs are used, they should only be placed at the corners of the hole, well away from the septic tank.
- If shuttering is required to maintain a vertical wall, increase the width of the excavation to accommodate.
- If the excavation has an unstable base, excavate an additional 250 – 300 mm and fill with compacted hard-core.
- If water is present in the excavation, de-water using suitable pumping equipment. Place a sheet of polythene over the base and up the sides of the excavation before creating the concrete slab.
- A minimum base of 200 mm of lean mix concrete is required for all ground conditions. The installer must ensure that the base is adequate to support the weight of the tank and its contents.
- It is recommended to backfill with C25 SEMI-DRY MIX.



2. Lower Unit onto Concrete & Ensure Level

- Approximate weights of units in kilograms, with 1050mm Inlet Invert:

Unit	Estimated Weight (Single Stage / Twin Stage)
Alpha Septic 029	160 / 175 kg
Alpha Septic 038	200 / 220 kg

- If retaining bars (optional extra) are required, these need to be installed through the 4x Ø50 holes at the base of the tank prior to installing the tank. Refer to sales drawing for details.
- Lower the septic tank into the hole using a rope sling through the lifting points provided on the tank. Under no circumstances should the sling be attached to the inlet pipe or outlet pipe.
- Check the Inlet and Outlet pipe orientation is correct.
- Check the unit is levelled.



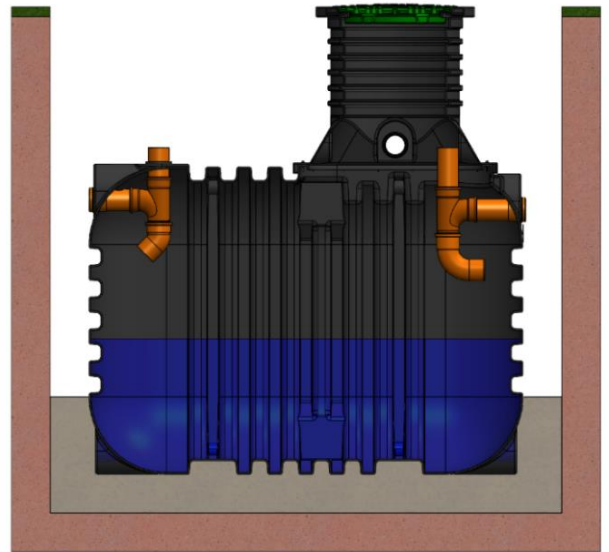
NOTE

Tank Installation

- Ensure appropriate rated lifting slings are used when lifting the tank
- The tank must not be lifted with any water inside

3. Backfill the Tank Unit

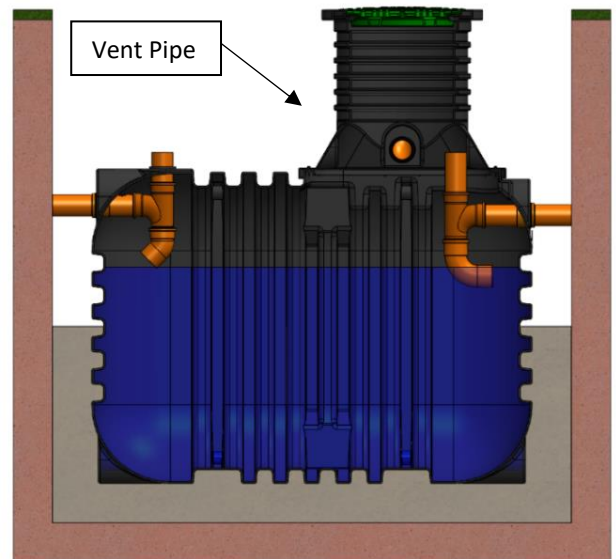
- Concrete backfill is recommended, refer to page 9 for specification of backfill for Wet site and Dry site.
- The backfilling must start before the base has hardened and must be a single continuous operation, so the tank has a full concrete jacket without joins.
- The backfill must be free from organic material, large stones, brick, or sharp objects.
- Backfilling must be carried out in layers, making sure that voids are not left under or around the sides of the tank and there are no localised stress concentrations.
- The installer must progressively fill the tank via a hose while keeping the water level 300 mm above the backfill to stabilise pressures on the tank. **If the pressures are not stable the tank can become distorted and damaged.**



IMPORTANT NOTE: When adding water to a **Twin Stage Alpha Septic Tank**, fill via the **Final Settlement Chamber** (second stage). The water can overflow through the **Transfer Hole** into the **Primary Settlement Chamber** (first stage).

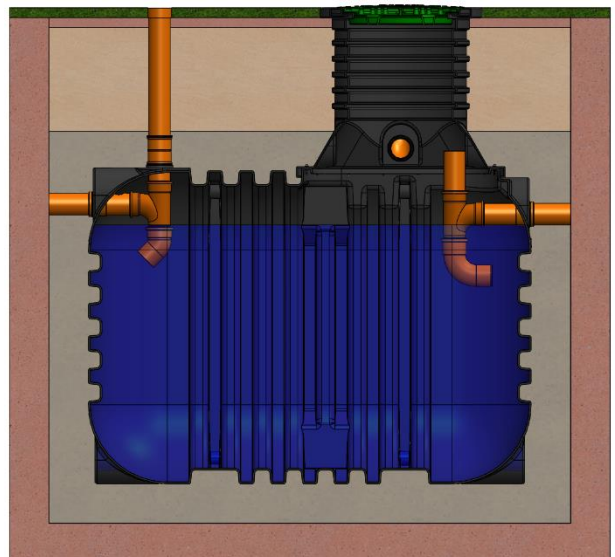
4. Second Backfill Stage

- Continue to fill the tank with water and backfill evenly around the tank, consolidating in 300 mm layers.
- DO NOT use vibrating pokers to consolidate concrete.
- DO NOT discharge concrete directly on to the tank.
- Ensure that the concrete is not too wet and that it's tampered in around the tank.
- Continue until just below inlet and outlet pipework.
- Remove any temporary covers and connect inlet and outlet pipework.
- **Where there is no property vent stack, the Septic Tank will need venting through the Ø110 Vent Pipe on the side of the Tank.** Ø110 Pipework to be taken above ground and suitable vent mushroom fitted. Installer must ensure adequate venting is provided for the Septic Tank to work efficiently.



5. Final Stage

- A Ø110mm rodding pipe is located on the top of the tank, fitted with a Ø110mm grommet. Ø110mm drainage pipe must be fitted and capped off with Ø110mm PVCu blanking cap. The length of the pipe should be up to ground level.
- Continue to concrete backfill up to min. 200 mm above the tank shoulder.
- Backfill up to ground level can be Pea Shingle filling the last bit up to lip with soil.
- Once the unit has been installed, it must be left filled with water.



MAINTENANCE

Follow de-sludging procedure on page 4.

WARRANTY

The company will replace or, at its option, properly repair without charge any goods which are found to be defective, and which cause failure in normal circumstances of use **within a period of twelve months from the date of delivery.**

This warranty is conditional upon:

- (a) The Buyer notifying the Company of any claim within Seven days of the failure becoming discernible.
- (b) The Company being allowed a reasonable opportunity to inspect the goods so as to confirm that they are defective.
- (c) The goods not having been modified, mishandled or misused and being used strictly in accordance with any relevant instructions issued by the Company.

The Company's liability under this Clause is limited to the repair or replacement of the defective goods, and does not cover costs of transport, installation or associated site costs, if applicable.

The Company's liability to replace or repair the goods is in lieu of and excludes all other warranties and conditions, and in particular (but without limitation) the Company shall have no liability of any kind for consequential loss or damage.

Please register your unit for warranty following the QR Code or website below. Please complete ALL sections of the form and submit. ***Terms & Conditions Apply. To avail of your extended warranty, you must register within 3 months of purchase.**



<https://water.kwe.kingspan.com/warranty-registration>

Also within this manual is a **Notice**, describing the necessary maintenance for the plant. This should be fixed within the building.

For any further advice, please contact our Service & Warranty department on +44 (0) 844 225 2785. It would be helpful if you provide your equipment serial number.

NOTICE



Alpha Septic Tank

The foul drainage from this property discharges to a Septic Tank and then dispersed through a drainage field.

The Septic Tank requires emptying at least once every 12 months (at full occupancy) by a licensed contractor. Desludging is site specific.

THE OWNER OF THE PROPERTY IS LEGALLY RESPONSIBLE FOR ENSURING THAT THE SYSTEM DOES NOT CAUSE POLLUTION, A HEALTH HAZARD OR A NUISANCE.

We recommend that a separate log is kept for all desludging's, the log should detail the date and any action taken, e.g. regular maintenance service and de-sludge volume removed.

This notice should be fixed by the owner within the building alerting current and future owners to the type of system installed.

Please contact Kingspan Water and Energy to arrange desludging or to request replacement operating instructions.

Kingspan Water & Energy Service Contact Numbers:

GB: 0333 240 6868

NI: 028 3836 4600

IRL: 0818 543 500

CE-MARKING

	
 Kingspan Water and Energy Ltd College Road North, Aston Clinton Aylesbury HP22 5EW United Kingdom 26	
EN 12566-1: Small wastewater treatment plants; Prefabricated septic tanks	
Alpha Septic Tank (Polyethylene)	
Nominal Capacity	2 m ³ (2867 L measured volume)
	3 m ³ (3811 L measured volume)
Watertightness: (water test)	Pass
Crushing resistance: (pit test)	Pass
Hydraulic Efficiency	99.84% (Single Stage)
	99.98% (Twin Stage)

Contact Details

UK

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Buckinghamshire | HP22 5EW

T: +44 (0) 1296 633 033

F: +44 (0) 1296 633 001

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