Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services
Paul R. LePage, Governor Mary C. Mayhew, Commissioner

Department of Health and Human Services
Maine Center for Disease Control and Prevention
286 Water Street
11 State House Station
Augusta, Maine 04333-0011
Tel.: (207) 287-8016; Fax: (207) 287-9058
TTY Users: Dial 711 (Maine Relay)

Tel. (207) 287-5672 Subsurface Wastewater Unit Fax (207) 287-4172

September 10, 2013

SeptiTech, LLC
Attn.: Ronald J. Horton, P.E.
69 Holland Street
Lewiston, ME 04240

Subject: Approval for General Use, SeptiTech System

Dear Mr. Gray:

Thank you for your letter of 09/06/13 and supporting information as well as information in your prior correspondence. You have requested on behalf of SeptiTech, a subsidiary of Bio-Microbics Inc., to modify the approval of the SeptiTech advanced wastewater treatment system. The modification would be to use GRAF "Carat S" polypropylene tanks in the system rather than FRALO and Infiltrator tanks as currently used.

The Division approves the use of GRAF "Carat S" polypropylene tanks in SeptiTech systems. All conditions of the approval dated 09/27/12, copy attached, remain in effect.

Because installation and maintenance has a significant effect on the working order of onsite sewage disposal systems, including their components, the Division makes no representation or guarantee as to the efficiency and/or operation of this system. Further, the Division strongly recommends that property owners enter into long term maintenance contracts with SeptiTech, in accordance with SeptiTech's company policies.

Feel free to copy and distribute this letter as necessary. If you have any questions, please contact me.

Sincerely,

James A. Jacobsen

James A. Jacobsen
Project Manager, Webmaster
Division of Environmental Health
Drinking Water Program
Subsurface Wastewater Unit
e-mail: james.jacobsen@maine.gov

/jaj

xc: File

SeptiTech®
a subsidiary of Bio-Microbics, Inc.

69 Holland St | Lewiston, ME 04240
p 207.333.6940 | f 207.333.6944
info@septitech.com | www.septitech.com

September 6, 2013

Mr. James A. Jacobsen
Project Manager
Division of Environmental Health
Drinking Water Program
Subsurface Wastewater Unit
286 Water Street, Augusta, ME 04333

RE: SeptiTech Approval for General Use – Amendment Request

Dear Mr. Jacobsen,

I am writing to request that the Maine Department of Health and Human Services amend the SeptiTech System General Use approval dated September 27, 2012 to include the use of the GRAF "Carat S" polypropylene tank as both septic and processor tank in our residential and commercial advanced wastewater treatment systems.

SepiTech is currently using the FRALO (polyethylene) and Infiltrator (polypropylene) tanks in our system design. Both of these tanks are good tanks but we feel that the GRAF "Carat S" polypropylene tank is of higher quality rigid fabrication, light weight and easier to transport, is resistant to chemicals and organic solvents, and has a larger access opening for inspection and maintenance of our system.

In an email dated August 29, 2013, I had provided you with several certificates and literature on the GRAF "Carat S" tank. I had also provided you with current SeptiTech System drawings using the FRALO and Infiltrator tanks.

I have attached an Installation and Maintenance manual for the GRAF "Carat S" tank for your review. Note that the GRAF "Carat S" tank comes in four sizes. The sizes are: 700 gal. (2,700 L), 1,000 gal. (3,750 L), 1,250 gal. (4,800 L), and 1,700 gal. (6,500 L).

SeptiTech believes that the use of the GRAF tank as part of our General Approval treatment system will improve on the life of the tanks and the system, provide additional options to property owners, and promote advancement in the Maine Subsurface Wastewater Program.

Thank you for your consideration and timely approval of this request. If you have any additional questions please email me at rhorton@SeptiTech.com or call me at 207-333-6940 x 109.

Sincerely;

Ronald J. Horton, P.E.

Ronald J. Horton, P.E.
Senior Engineer
SeptiTech

info@graf.info
www.graf.info

Installation and maintenance instructions for GRAF rainwater storage tank, Carat -S- series

700 US-gallons **2700 L**	**Order No. 372024**
1000 US-gallons **3750 L**	**Order No. 372025**
1250 US-gallons **4800 L**	**Order No. 372026**
1700 US-gallons **6500 L**	**Order No. 372027**

The points described in these instructions must be observed under all circumstances. All warranty rights are invalidated in the event of non-observance. Separate installation instructions are enclosed in the transportation packaging for all additional articles purchased from GRAF.

Missing instructions must be requested from us immediately.

The tank must be checked for any damage prior to insertion into the trench under all circumstances.

Installation must be carried out by a specialist company.

Basis for installation and assembly are the corresponding German standards (DIN).

Table of contents

1. General notes

1.1 Safety

The relevant accident prevention regulations must be observed during all work. Particularly when walking on the tanks, a 2nd person is required to secure the tank.

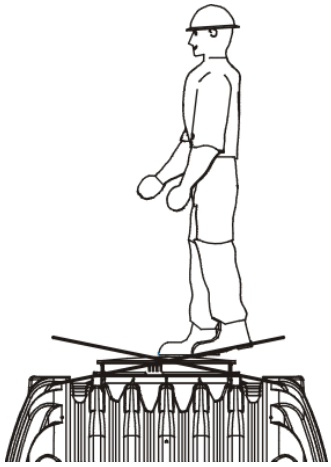
The relevant regulations and standards must additionally be taken into consideration during installation, assembly, servicing, repair, etc.

The system or individual parts of the system must be installed by qualified specialists.

During all work on the system or parts of the system, the entire system must always be rendered inoperable and secured to prevent unauthorised reactivation.

Except in the event of work carried out in the tank, the cover of the tank must always be kept sealed, as this otherwise constitutes a maximum risk of accident. Only original GRAF covers or covers approved in writing by GRAF must be used.

GRAF offers an extensive range of accessories, all of which are designed to match each other and which can be extended to form complete systems. The use of other accessories may lead to impediments to the system's functional capability, therefore invalidating liability for resulting damage.



1.2 Identification obligation

All service water pipes and outlets must be identified in writing with the words **"Not drinking water"** or in the form of images in order to avoid inadvertent connection with the drinking water mains even after a number of years. Mix-ups, e.g. by children, may still occur even in the case of correct identification. All service water extraction points must therefore be installed with valves with **child-proof locks**.

1.3 Scope of supply

The scope of supply of the basic tank Carat includes the following components:

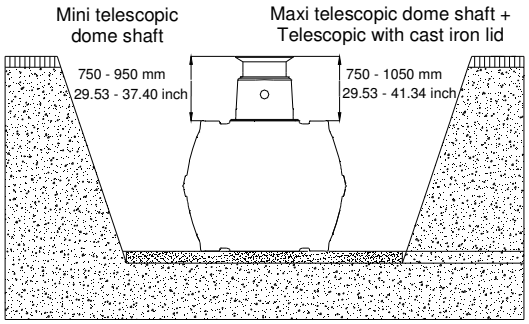
- Carat half-shell bottom
- Carat half-shell top
- Accessory-package Carat "S"
    - Carat S sealing
    - Carat S connection clips
    - Carat S centring pins
    - Carat crane eye
    - Lubricant tube

info@graf.info
www.graf.info

2. Installation conditions

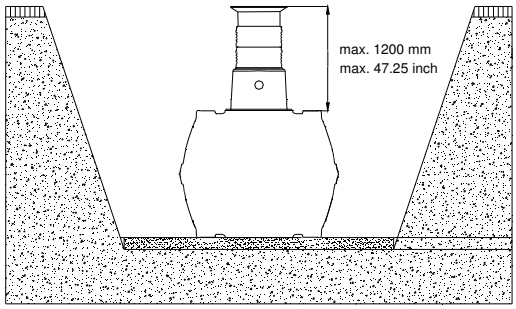
Coverage heights with telescopic dome shaft in green areas.

The mini dome shaft produces a depth of cover of between 420 – 620 mm (16.54 – 24.41 inch).



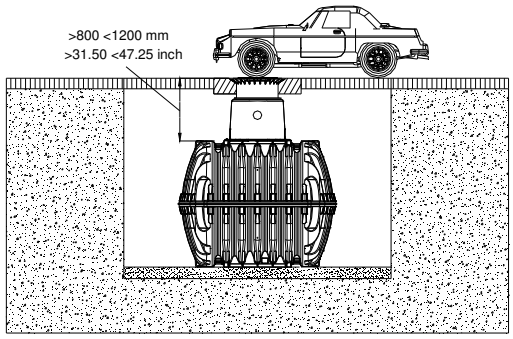
Maximum coverage heights with intermediate section and telescopic dome shaft.

(in green areas only, without groundwater and stratum water)

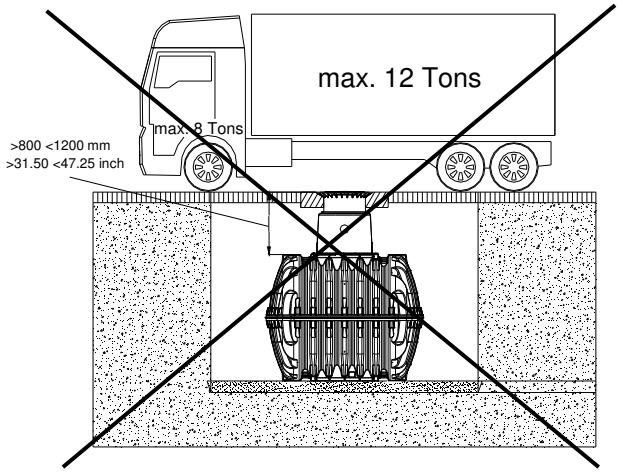


Coverage heights with cast telescopic dome shaft (class B) in areas used by passenger cars.

(without groundwater and stratum water)

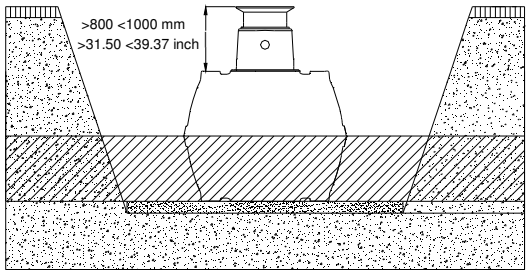


The Carat – S series tanks must not be installed below areas used by vehicles which are heavier than passenger cars.

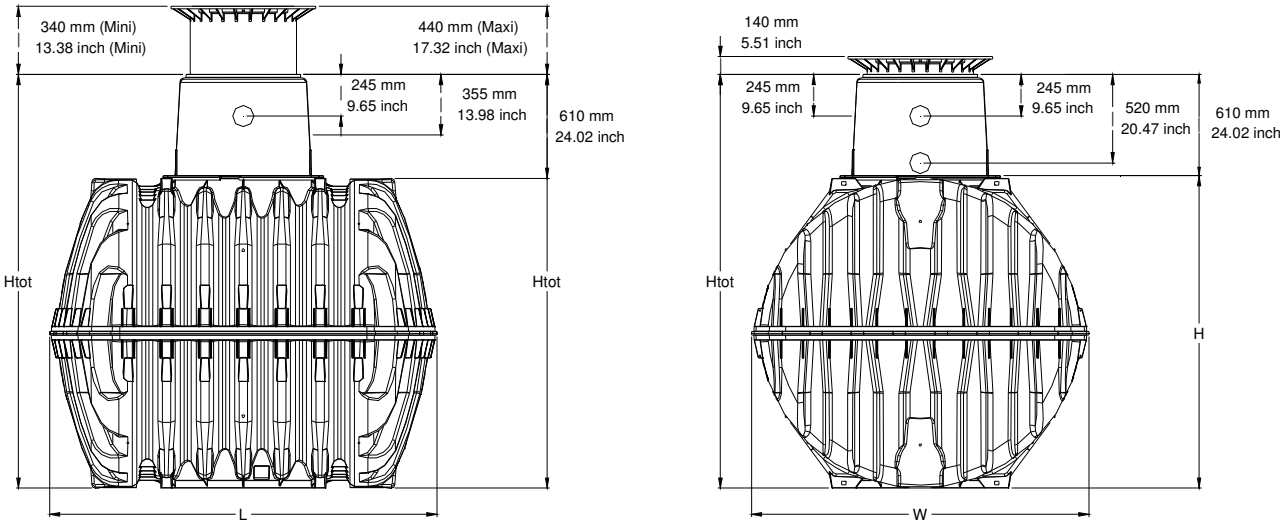


Coverage heights on installation in groundwater – the hatched area specifies the permissible immersion depth for the tanks.

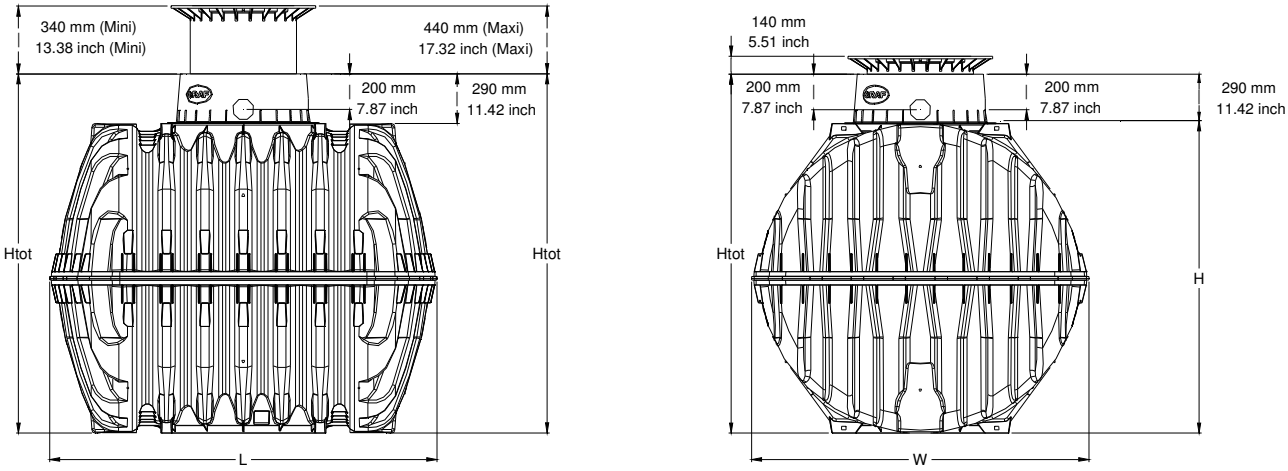
(not under areas used by passenger cars or trucks)



3. Technical data



with tank dome Maxi



with tank dome Mini

Tank	**700 US-gallons** **2700 litres**	**1000 US-gallons** **3750 litres**	**1250 US-gallons** **4800 litres**	**1700 US-gallons** **6500 litres**
Art. No.	370001	370002	370003	370004
Weight	120 kg / 264.55 lbs	150 kg / 330.69 lbs	185 kg / 407.86 lbs	220 kg / 485.02 lbs
L	2080 mm 81.89 inch	2280 mm 89.76 inch	2280 mm 89.76 inch	2390 mm 94.09 inch
W	1565 mm 61.61 inch	1755 mm 69.09 inch	1985 mm 78.15 inch	2190 mm 86.22 inch
H	1400 mm 55.12 inch	1590 mm 62.60 inch	1820 mm 71.65 inch	2100 mm 82.68 inch
Htot*	2010 mm 79.13 inch	2200 mm 86.61 inch	2430 mm 95.67 inch	2710 mm 106.69 inch
Htot**	1680 mm 66.14 inch	1870 mm 73.62 inch	2100 mm 82.68 inch	2380 mm 93.7 inch

* Htot = total height ** with mini tank dome

4. Tank structure

① Cover

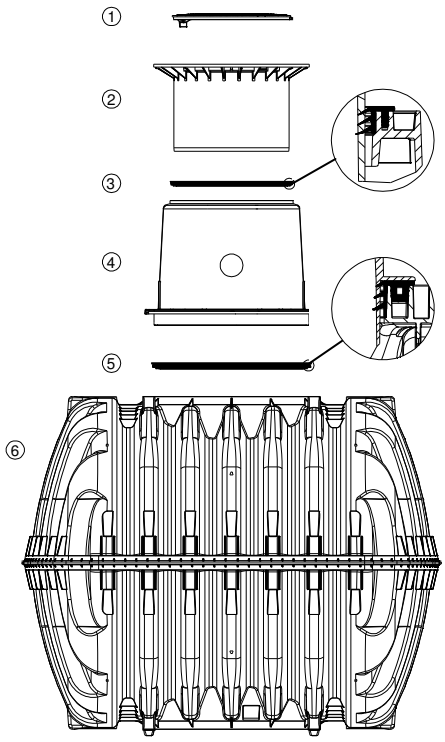
② Telescopic dome shaft (can be inclined by 5°)

③ Profile seal

④ Tank dome (can be rotated by 360°)

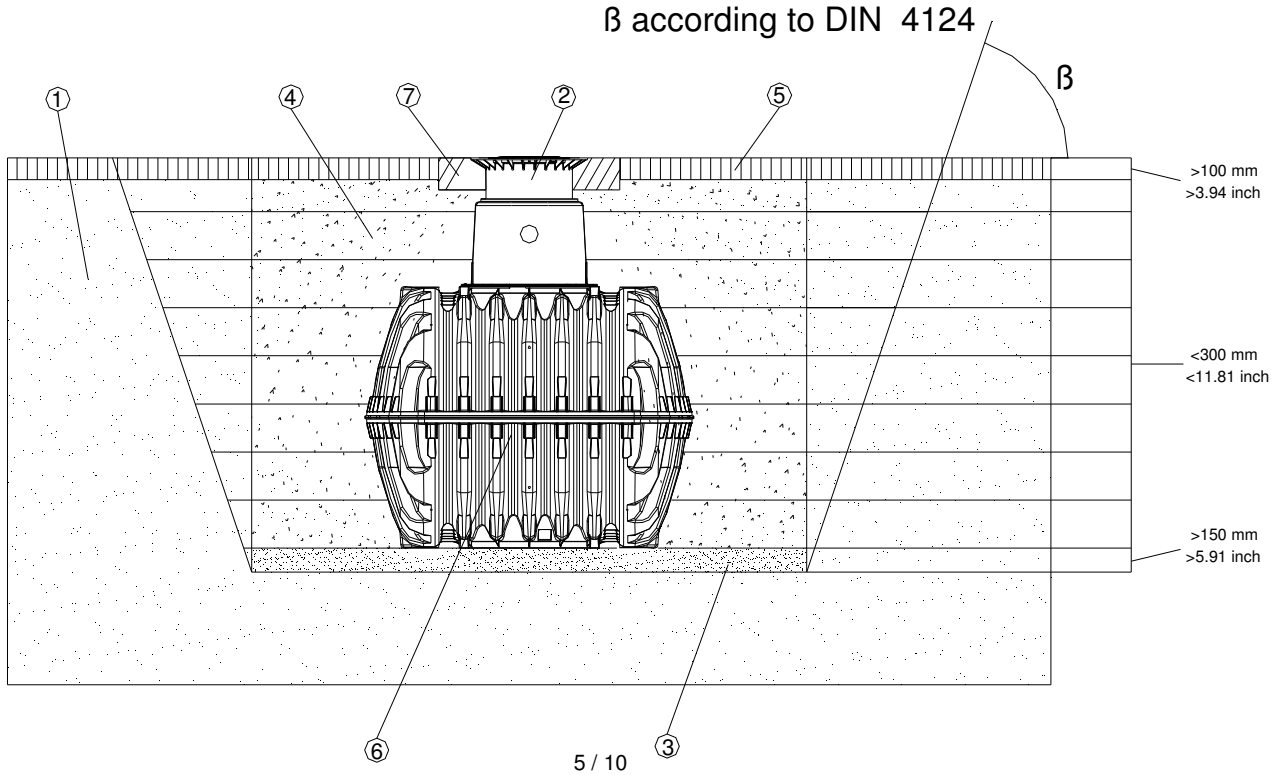
⑤ Tank - tank dome seal

⑥ Carat underground tank



5. Installation and assembly

① Subsoil
② Telescopic dome shaft
③ Compacted foundation
④ Surrounding (round-grained gravel, max. grain size 8/16 mm – 0.31/0.63 inch)
⑤ Covering layer
⑥ Carat underground tank
⑦ Concrete layer for surfaces used by passenger cars

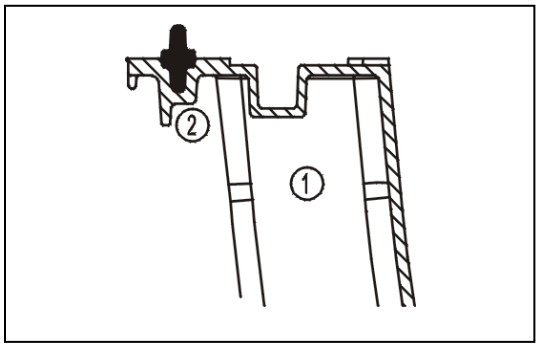


5. Installation and assembly

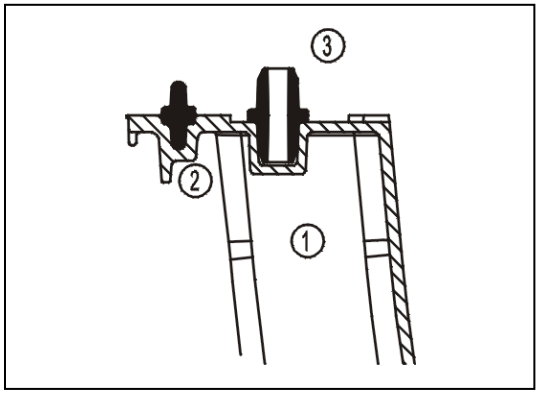
5.1 Tank assembly

First insert the circumferential profile seal ② into the sealing groove in the lower half shell ①. Lightly coat the seal with the enclosed soft soap.

Please take care: The soft soap must not get in contact with your eyes!



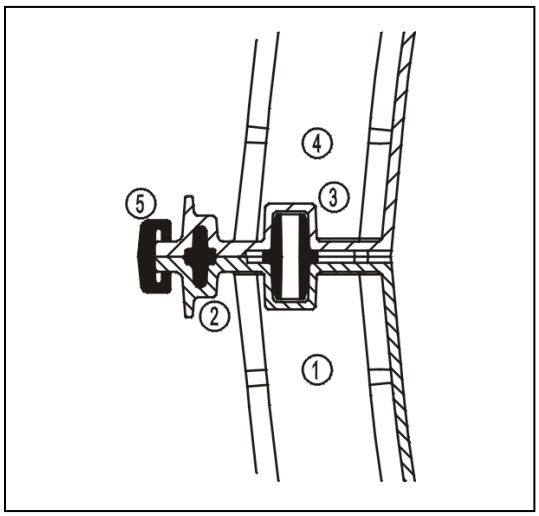
Then insert the centring pins ③ into the intended mountings around the circumference.



The upper half shell ④ is now positioned onto the lower half shell ① and the quick connectors ⑤ are installed. To do this, each 2nd quick connector is pre-adjusted in the 1st step and is secured with a hammer and a wooden support. The quick connectors engage in their end position. The remaining quick connectors are then installed.

Attention: When positioning the upper half shell, it must be ensured, under all circumstances that the seal does not slip out of the groove.

Please take care: Be careful when assembling the half shells of the tank. Don't pinch your fingers within the half shells!



5.2 Construction site

Under all circumstances, the following points must be clarified prior to installation:

- The structural suitability of the ground according to DIN 18196
- Maximum groundwater levels which occur and drainage capability of the subsoil
- Types of load which occur, e.g. traffic loads

An expert ground report should be requested from the local planning authority to determine the physical characteristics of the subsoil.

5. Installation and assembly

5.3 Trench

To ensure that sufficient space is available for working, the base area of the trench must exceed the dimensions of the tank by 500 mm (19.69 inch) on each side; the distance from solid constructions must be at least 1000 mm (39.37 inch).

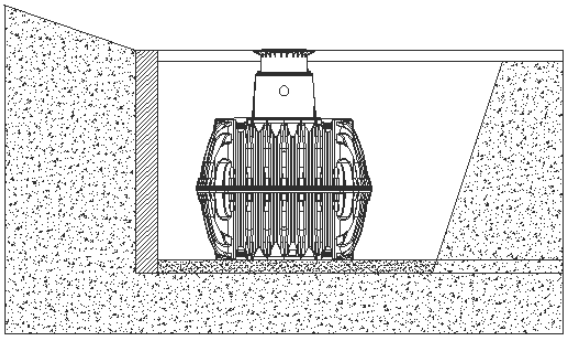
The trench embankment must be designed so that slippage or collapse of the embankment wall is not to be anticipated. The construction site must be horizontal and plane and must guarantee sufficient load-bearing capacity.

The depth of the trench must be dimensioned so that the max. earth coverage (see point 2 – installation conditions) above the tank is not exceeded. To use the system throughout the entire year, it is necessary to install the tank and those parts of the system which conduct water in the frost-free area. Precise information in this regard can be obtained from the responsible authority.

A layer of compacted, round-grain gravel (grain size 8/16 mm (0.31/0.63 inch), thickness approx. 150 – 200 mm; 5.91 – 7.87 inch) is applied as the foundation.

5.3.1 Slope, embankment, etc.

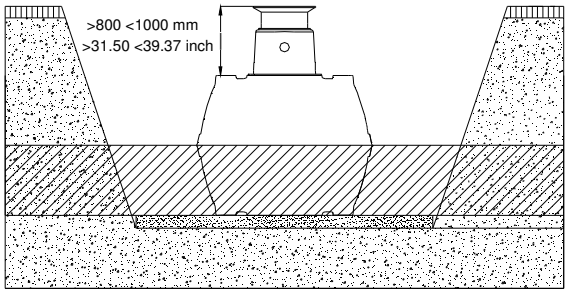
On installation of the tank in the immediate vicinity (< 5 m; 196.85 inch) of a slope, earthen mound or slope, a statically calculated supporting wall must be erected to absorb the soil pressure. The wall must exceed the dimensions of the tank by at least 500 mm (19.69 inch) in all directions, and must be located at least 1000 mm (39.37 inch) away from the tank.



5.3.2 Groundwater and cohesive (water-impermeable) soils (e.g. clay soil)

If it is anticipated that the tanks will be immersed deeper into the groundwater than is shown in the adjacent figure, sufficient dissipation must be ensured. (See table for max. immersion depth).

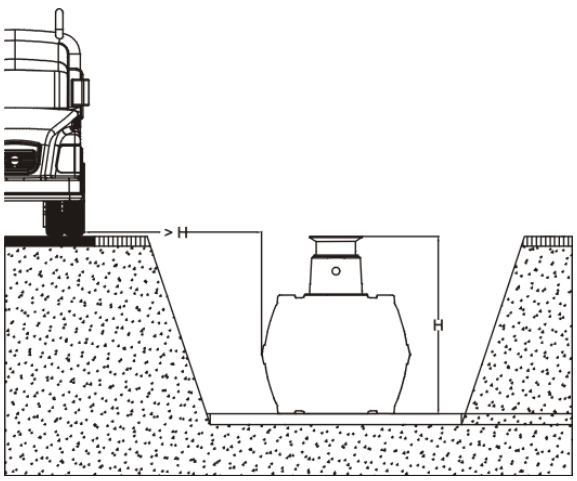
Dissipation of the drainage water (e.g. via an annular drainage system) is recommended in the case of cohesive, water-impermeable soils.



Tank size	700 US-gallons 2700 L	1000 US-gallons 3750 L	1250 US-gallons 4800 L	1700 US-gallons 6500 L
Immersion depth	700 mm 27.56 inch	795 mm 31.30 inch	910 mm 35.83 inch	1050 mm 41.34 inch

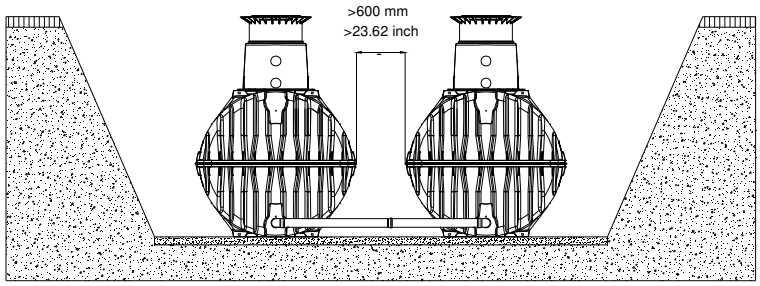
5.3.3 Installation adjacent to surfaces used by vehicles

If the underground tanks are installed adjacent to surfaces which are used by vehicles heavier than passenger cars, the minimum distance away from these surfaces is at least the depth of the trench.



5. Installation and assembly

5.3.4 Connection of several tanks



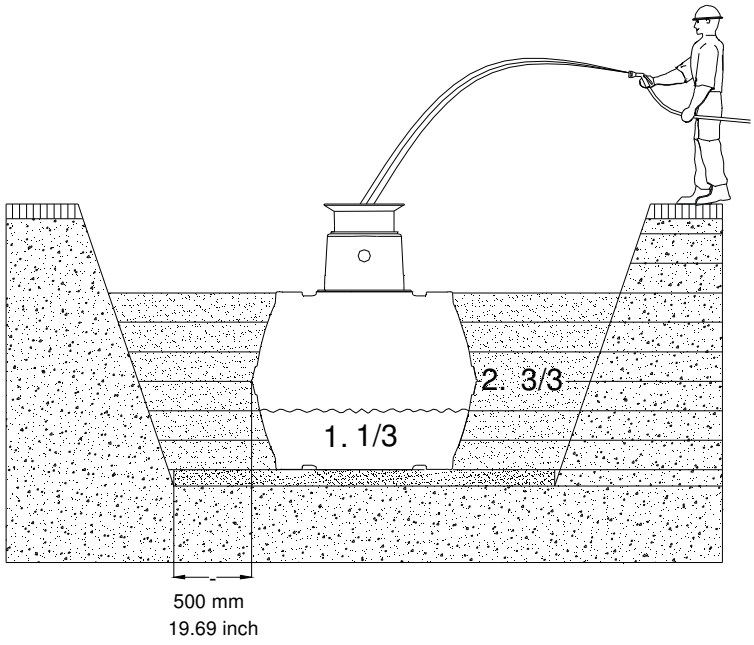
Two or more tanks are connected via the assembly surfaces by means of GRAF special seals and basic pipes (to be provided at construction site).

The apertures must be drilled to the corresponding size using only the GRAF special crown bit. It must be ensured that the distance between the tanks is at least 600 mm (23.62 inch). The pipes must project at least 200 mm (7.87 inch) into the tanks.

5.4 Insertion and filling

The tanks must be inserted, impact-free, into the prepared trench using suitable equipment. To avoid deformities, the tank is filled 1/3 with water before filling in the tank surrounding.

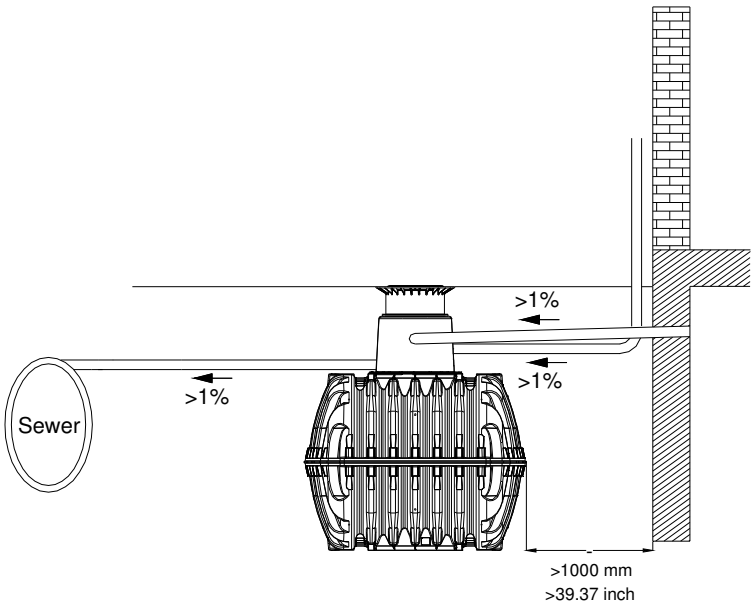
Afterwards the surrounding (roundgrain gravel, max. grain size 8/16 mm; 0.31/0.63 inch) is then filled in layers of max. 30 cm (11.81 inch) steps and is compacted. The individual layers must be well-compacted (manuel tamper). Damage to the tank must be avoided during compaction. Mechanical compaction machines must not be used under any circumstances. The surrounding must be at least 500 mm (19.69 inch) wide.



5.5 Routing connections

All feed and overflow pipes must be routed with a decline of at least 1% in the direction of flow (possible, subsequent settling must be taken into consideration in this case). If the tank overflow is connected to a public sewer, this must be protected against reflux by means of a lifting station (mixed sewer) or reflux seal (pure rainwater sewer) according to DIN 1986.

All suction, pressure and control lines must be routed in an empty pipe, which must be routed as straight as possible, without bending, to the tank with a decline. Necessary bends must be formed using 30° moulded sections.

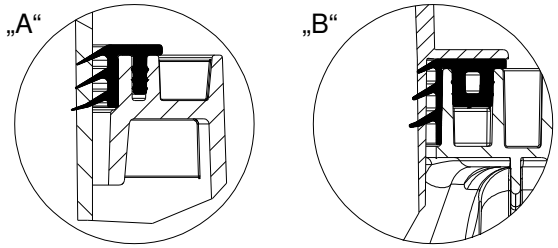


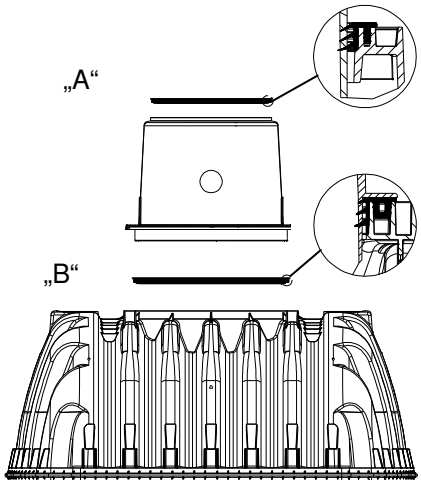
Important: The empty pipe must be connected to an aperture **above** the max. water level.

6. Assembling the tank dome and telescopic dome shaft

6.1 Assembling the tank dome

Prior to assembly, the enclosed seal is inserted into the tank domes' groove „B". The tank dome is then aligned with the piping connections and is locked to the tank neck. It is essential to make sure that the upper seal "A" is correctly installed.

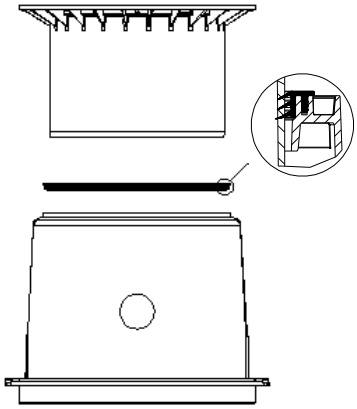




6.2 Assembling the telescopic dome shaft

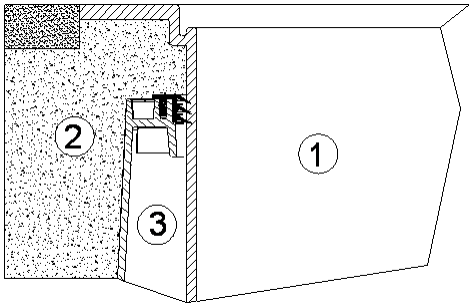
The telescopic dome shaft enables infinite adaptation of the tank to given site surfaces with earth coverage of between 750 mm and 950 mm (29.53 and 37.40 inch; Mini telescopic dome shaft) or 750 mm and 1050 mm (29.53 and 41.34 inch; Maxi telescopic dome shaft).

For assembly purposes, the enclosed profile seal (material EPDM) is inserted into the tank dome's sealing groove and is coated generously with soft soap (do not use mineral oil-based lubricants, as these attack the seal). The telescope is then greased, inserted and aligned with the surface of the site.



6.3 Telescopic dome shaft on which persons may walk

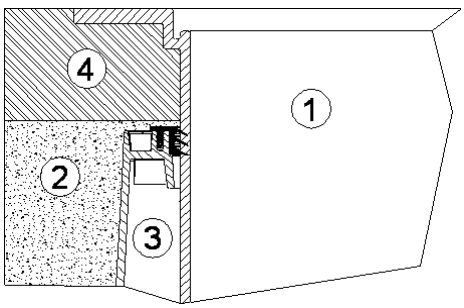
Important: To prevent loads from being transferred onto the tank, round-grain gravel ① (max. grain size 8/16 mm; 0.31/0.63 inch) is filled in in layers around the telescope ② and is evenly compacted. Damage to the tank dome ③ and telescope must be avoided during this step. The cover is then positioned and is sealed to prevent entry by children. **Tighten the threaded connection on the cover so tightly that it cannot be opened by a child!**



6.4 Telescopic dome shaft over which passenger cars may drive

If the tank is installed under areas used by passenger cars, the collar area of the telescope ① (colour anthracite) must be supported with concrete ④ (load class B25 = 250 kg/m²; 551.16 lbs/m²). The layer of concrete to be installed must be at least 300 mm (11.81 inch) wide and approx. 200 mm (7.87 inch) high all around. The minimum coverage above the shoulder of the tank is at least 800 mm (31.50 inch) – max. 1050 mm (41.34 inch) with telescope, coverage up to max. 1200 mm (47.25 inch) possible with intermediate section.

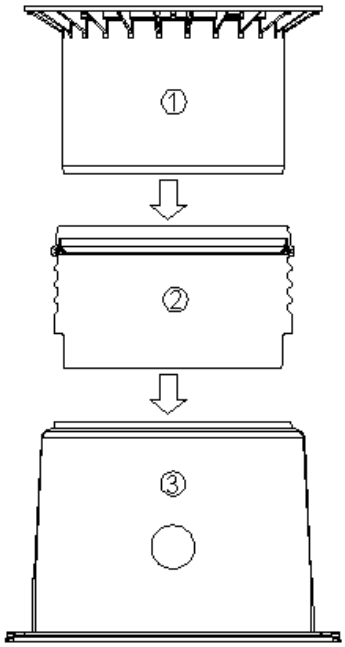
Attention: Use the cast cover under all circumstances.



6. Assembling the tank dome and telescopic dome shaft

6.5 Assembling the adapter

For lager coverage heights a adapter is needed. To insert the adapter into the tank dome, soft soap is needed. Into the highest groove of the adapter the profile seal is inserted an greased generously. Afterwards push the telescopic dome shaft into the adapter and adapt it to the planned area surface.



1 Adapter = max. earth-cover 1200 mm (47.25 inch)

(in each case in connection with the Maxi telescopic dome shaft)

① Telescopic dome shaft (can be inclined by 5°)

② Adapter

③ Tank dome (can be rotated by 360°)

7. Inspection and servicing

The entire system must be checked for leaks, cleanliness and stability at least every three months.

The entire system should be serviced at intervals of approx. 5 years. In this case, all parts of the system must be cleaned and their function checked. Servicing should be carried out as follows:

- Drain the tank completely
- Clean surfaces and internal parts with water
- Remove all dirt from the tank
- Check that all internal parts are firmly seated.

If there are any ambiguities, please don't hesitate to contact the Otto Graf GmbH via the below mentioned addresses, telephone numbers or our direct e-mail address: info@graf.info.

CE Declaration of Conformity

Manufacturer	Name:	Otto Graf GmbH Kunststofferzeugnisse
	Street:	Carl-Zeiss-Str. 2-6
	City:	79331 Teningen
	Country:	Germany

Represented by the signatury, declares that the following product

Carat S-tank

corresponds to all requirements of the construction material guideline 89/106/EWG.

Product description:	Clarification container made of PP for the underground treatment of domestic waste water
Applied harmonized standard:	EN 12566-3, Annex C.6 EN 12566-1/A1, Annex D.6 Pit-test Small wastewater treatment systems for up to 50 PT – Part 3: Packaged and/or site assembled domestic wastewater treatment plants
Notified organisation:	Certipro® Inspection and Certification Services, Vito Boeretang 200 B-2400 Mol, Belgium NB 1476
Test report No.	BES/N9902/PP/pp/09.142

Teningen, November 2009

Otto P. Graf
Chief Executive Officer

Otto Graf GmbH
Kunststofferzeugnisse
Carl-Zeiss-Straße 2-6
D-79331 Teningen

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Telefax: +49 (0) 76 41/5 89-50
mail@graf.info
www.graf.info

Institute for Wastewater Technology

PERFORMANCE RESULTS

Otto Graf GmbH

Carl-Zeiss-Str. 2-6
D-79331 Teningen

EN 12566-3
Annex C.3.1
„small wastewater treatment systems for up to 50 PT“

Carat S

Material	Polypropylene
Crushing resistance	pass

Performance tested by:
PIA - Prüfinstitut für Abwassertechnik GmbH
(PIA GmbH)
Hergenrather Weg 30
D-52074 Aachen

Certified according to ISO 9001:2000

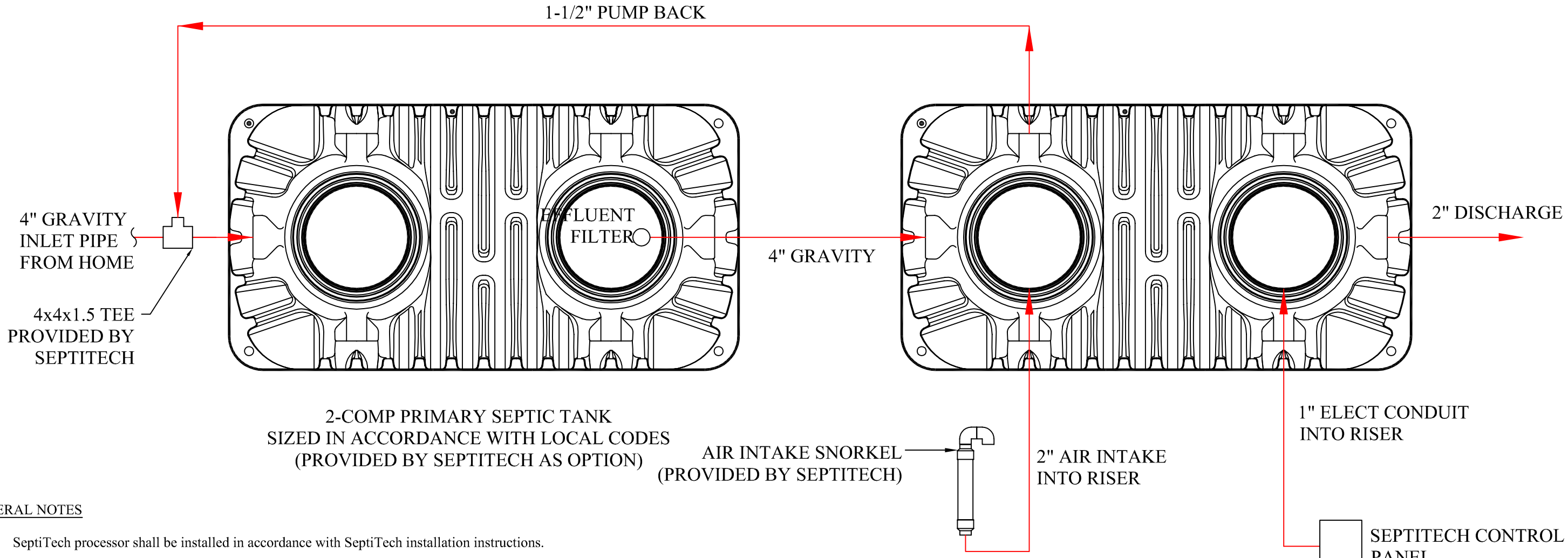
Notified Body number: 1739

This document replaces neither the declaration of conformity nor the CE marking.

Prüfinstitut für Abwassertechnik GmbH
geprüft - tested - testé

Elmar Lancé September 2008

REVISIONS		
DATE	DESCRIPTION	INIT
-	-	-



2-COMP PRIMARY SEPTIC TANK
SIZED IN ACCORDANCE WITH LOCAL CODES
(PROVIDED BY SEPTITECH AS OPTION)

GENERAL NOTES

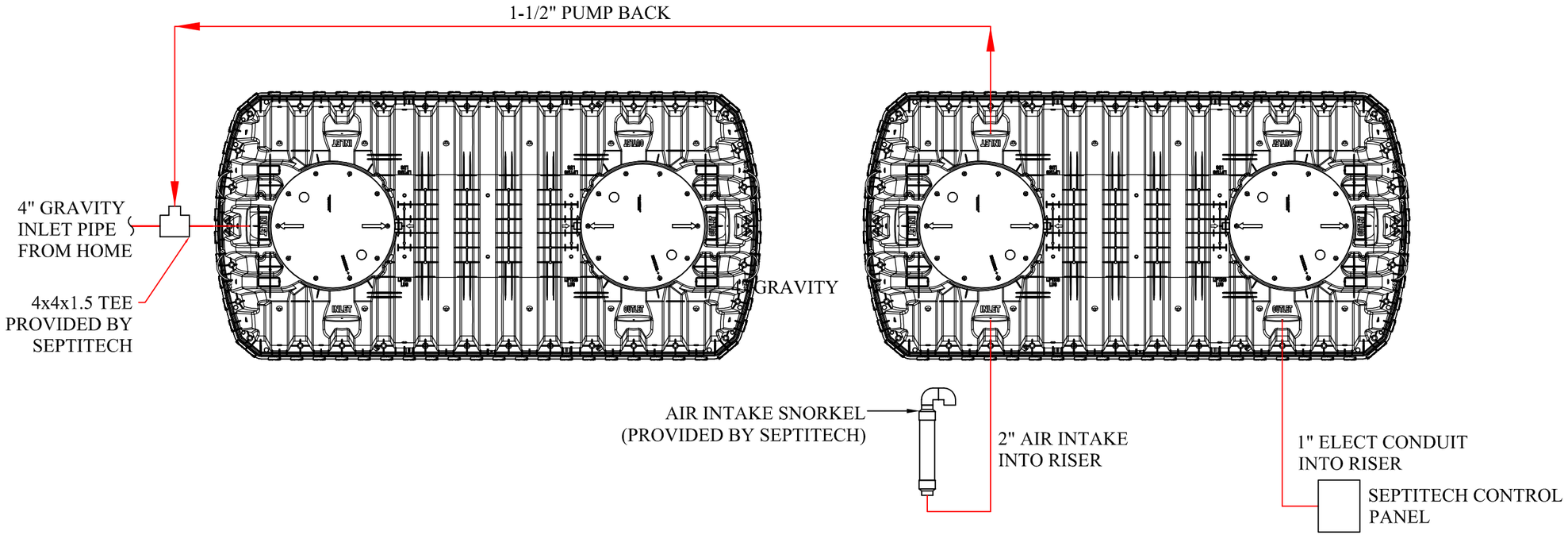
- SeptiTech processor shall be installed in accordance with SeptiTech installation instructions.
- Tank(s) shall not be installed at a depth any greater than 24-inches. Tank installations requiring a depth greather than 24-inches shall do so with prior approval by SeptiTech only.
- Tank(s) shall be installed with a minimum of 6-inches of compacted crushed pea stone or sand bedding. Select fill shall be used for backfilling around tanks.
- Exterior Piping: Contractor is responsible for supplying and installing all exterior piping per SeptiTech installation drawings.
- Air Intake Piping: Air intake snorkel shall be installed within 100 feet of the processor tank. Air intake piping shall be installed such that a positive pitch is provided back towards the processor tank such that any condenstaion build up is free to drain.
- Pipe Insulation: Contractor is responsible for insulating all piping exterior to the SeptiTech processor including the discharge line from the processor to the disposal field.
- Tank Insulation: After tank has been installed, contractor shall insulate the top and sides of the processor tank below frost depth (4-feet minimum) with 2" rigid foam (blue) board insulation and then complete backfilling.
- Electrical: All electrical work is the responsibility of the contractor's licensed electrician and is not provided by SeptiTech. System Controller can be installed indoors or outdoors. If installed outdoors, please notify SeptiTech, Inc. to determine if a heater needs to be installed within the enclosure.

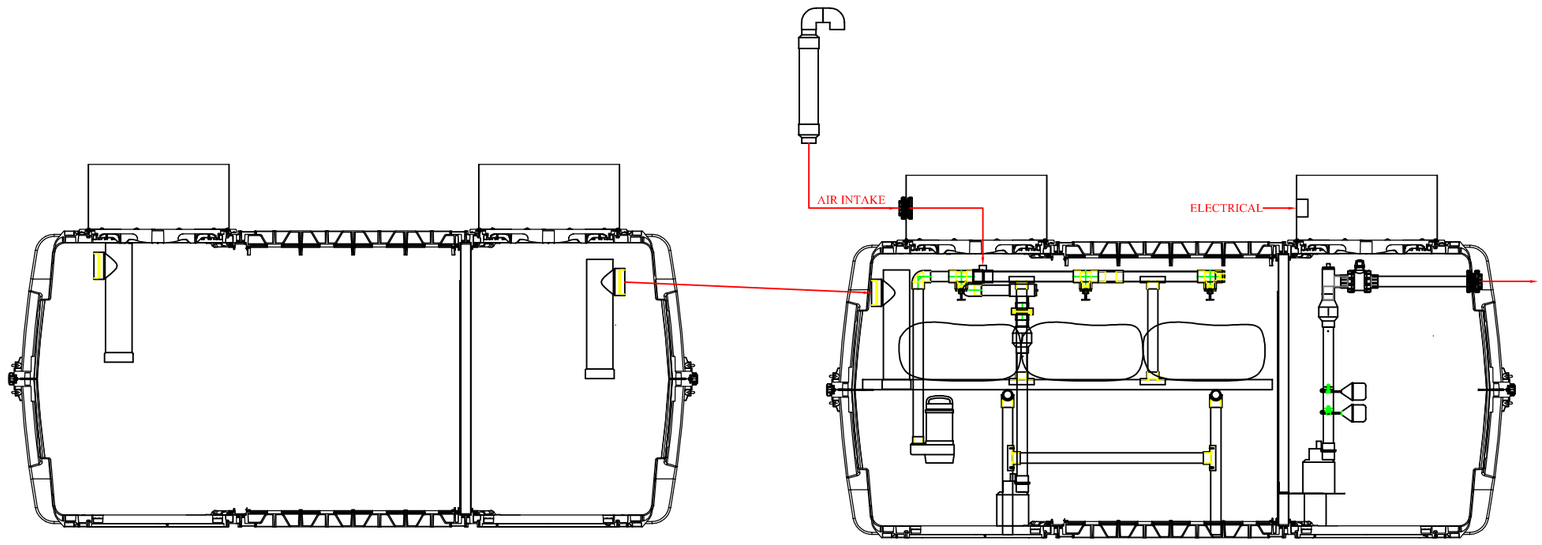
SeptiTech
Zero Pollution Waste Water Systems

DES.BY:	DRR
DR.BY:	JSC
CK.BY:	
PROJECT NO.:	

M400 FRALO
INSTALLATION SCHEMATIC

DATE:	05/2008	DWG. NO.:	
SCALE:	1/2"=1'-0"	REV.:	0





2-COMP PRIMARY SEPTIC TANK
SIZED IN ACCORDANCE WITH LOCAL CODES
(PROVIDED BY SEPTITECH AS OPTION)

SEPTITECH M400 PROCESSOR

ITEM	QTY.	DESCRIPTION
11	2	12" Plastic Riser and Lid
10	10	Media Bags (Large)
9	1	Inlet Pipe
7	1	Recirculation Pump
6	1	Spray Header Assembly
5	1	Pump Back Assembly
4	1	Spray Header Support Structure
3	1	Support Structure
2	1	Discharge Assembly
1	1	1000 Gal. INFILTRATOR IM-1060 Tank

SeptiTech — Zero Pollution Waste Water Systems

DES.BY:
DR.BY: JSC
CK.BY: JSC

PROJECT NO.:

INFILTRATOR IM–1060
INSTALL SCHEMATIC

DATE: 12/16/11
DWG. NO.:
SCALE: 3/4"=1'–0"
REV.: 0

From:	Ron Horton
To:	Jacobsen, James
Subject:	Request for Amendment to General Approval from Ron Horton,P.E. @ SeptiTech...GRAF Tank Use.
Date:	Friday, September 06, 2013 3:55:36 PM
Attachments:	JamesJacobsen.GRAF.TankRequestLtr.9.05.13.rjh.pdf Carat S - EBA GRAF (EN)_inch_USA.pdf

Good afternoon Jim,

Hope you had a good week.

Please find attached an official letter from SeptiTech requesting that our General Approval be amended to allow us to use the GRAF "Carat S" polypropylene tank as both septic and processor tank in our residential and commercial advanced wastewater treatment systems here in Maine.

In addition to the information provided to you in my email dated August 29, 2013, I have also included an Installation and maintenance manual for the GRAF tank for your file.

Let me know if there is anything else that you may need.

Thank you for all of your time and effort and assistance.

Ron Horton, P.E.
Design Engineer
SeptiTech, LLC
69 Holland St.,
Lewiston ME 04240

207-333-6940 x209

From: Jacobsen, James [mailto:James.Jacobsen@maine.gov]
Sent: Tuesday, September 03, 2013 8:07 AM
To: Ron Horton
Subject: RE: Hello from Ron Horton,P.E. @ SeptiTech...GRAF Tank Use.

Hi Ron,

It's a bit bureaucratic, but all we need is a letter (or e-mail) in which the change is formally proposed. We will treat it as an amendment to the original approval. The documents you already sent will suffice for the supporting exhibits unless there is something else you wish to add.

Jim

James A. Jacobsen
Project Manager, Webmaster
Division of Environmental Health

Drinking Water Program
Subsurface Wastewater Unit
286 Water Street, Augusta, ME 04333
Phone: 207-287-5695 Fax: 207-287-3165
http://www.mainepublichealth.gov/septic-systems
http://www.mainepublichealth.gov/cemeteries

From: Ron Horton [mailto:rhorton@septitech.com]
Sent: Thursday, August 29, 2013 2:46 PM
To: Jacobsen, James
Subject: Hello from Ron Horton,P.E. @ SeptiTech...GRAF Tank Use.

Hello Jim,

I hope you're having a great summer and even a better Labor Day weekend planned.

As you know I work for SeptiTech. On July 1 of this year we got purchased by a similar company in Kansas called "Bio-Microbics".

They have a process called "FAST" that you may be familiar with. There website is:

http://www.biomicrobics.com/

My associate Scott Samuelson, I am sad to report, no longer works for SeptiTech.

Prior to Scott's departure we were looking to contact you to discuss the process and submission requirements to get a different plastic tank approved for use with our system.

I would like to pursuit and seek approval from your department for the use of the "GRAF" tank as both Septic and Processor Tank.

I have attached some literature for your use on this higher quality German made tank for your review.

Currently we are able to use the FRALO and Infiltrator Tanks in our designs. (See Attached)

We would like to use the GRAF tank because it is better quality tank.

PLEASE PROVIDE ME WITH GUIDANCE ON HOW I SHOULD PROCEED WITH APPLICATION TO THE STATE.

Thanks for your assistance and timely reply.

Ron Horton, P.E.
Design Engineer
SeptiTech, LLC
69 Holland St.,
Lewiston ME 04240

207-333-6940 x209

From: Jacobsen, James [mailto:James.Jacobsen@maine.gov]
Sent: Tuesday, October 30, 2012 1:22 PM
To: Ron Horton
Cc: Scott Samuelson; Lee Verbridge
Subject: RE: Hello from SeptiTech...Clarification on Chp 241

Hello Ron,

The adjustment factor of 0.5 under Table 4B is appropriate for any device which can achieve a combined BOD5 and TSS of 30 mg/l, including SeptiTech.

The 12 inch separation is not part of the Subsurface Wastewater Disposal Rules. This was a special condition which SeptiTech (and a few others) specifically requested and which the Department approved.

With respect to your question about favorable design requirements, the Department does not recommend the use of any product over similar or competing products. We purposely distance ourselves from marketing and related concerns because we must remain neutral in these issues.

Jim

James A. Jacobsen
Project Manager, Webmaster
Division of Environmental Health
Drinking Water Program
Subsurface Wastewater Unit
286 Water Street, Augusta, ME 04333
Phone: 207-287-5695 Fax: 207-287-3165
http://www.mainepublichealth.gov/septic-systems
http://www.mainepublichealth.gov/cemeteries

From: Ron Horton [mailto:rhorton@septitech.com]
Sent: Tuesday, October 30, 2012 12:11 PM
To: Jacobsen, James
Cc: Scott Samuelson; Lee Verbridge
Subject: Hello from SeptiTech...Clarification on Chp 241

Hello Jim

My name is Ron Horton. I am an engineer working with Scott Samuelson here in Lewiston Maine at SeptiTech.

I have been with the company since early July 2012 and have become familiar with the Maine Subsurface Wastewater Rules – Chapter 241.

I do talk with many Site Evaluators and other Engineers working on projects here in Maine.

I hope that I am providing them with the correct facts as it relates to our "General Use" approval and the Chapter 241 Rules.

Here are a few questions that I have regarding the Chapter 241 Rules that I am hoping you can answer / clarify / confirm:

1. The SeptiTech Processor is considered by the Department as an "Aerobic Treatment Unit" as outlined in Section 6.K of the Rules?
2. Under Section 6.K.2 it states that…"Use of an aerobic treatment unit allows disposal area size modification pursuant to Section 4(H). Contained in Section 4(H) is Table 4B – ". Adjustment Factor for Wastewater Strengths Different From Typical Domestic Wastewater". Since the SeptiTech Processor produces levels of BOD + TSS of 30 mg/l or less, we convey to designers that the "Adjustment Factor – AF" is 0.5 when determining the "Adjusted Hydraulic Loading Rate – AHLR" as outlined in Equation 4A of the Rules. Please confirm that this is a correct understanding of the Rules as it relates to sizing the AHLR?

Here are a few questions that I have regarding our "Approval for General Use" (copy attached):

1. Under Items 1 & 2 of the approval letter it basically states that when using our SeptiTech Processor that one would only need to maintain 12 inches of separation distance from the bottom of the disposal area to the Limiting Factor (High Water / bedrock / other limiting factor). Could you confirm that this 12 inch separation distance is allowed with the "Adjustment Factor" of 0.5 as noted above?

2. Are there favorable design requirements that are associated with the SeptiTech System as it relates to “Replacement Systems”, “Expanded Systems”, or “Within the Shoreland Area”?

Thank you for taking the time to provide us with your clarification & confirmation on these noted items.

Ron Horton, P.E.
Design Engineer
SeptiTech, LLC
69 Holland St.,
Lewiston ME 04240

207-333-6940 x209

PIA
Institute for Wastewater Technology

PERFORMANCE RESULTS

Otto Graf GmbH

Carl-Zeiss-Str. 2-6
D-79331 Teningen

EN 12566-3
Annex A.3
„small wastewater treatment systems for up to 50 PT“

Carat S

Material	Polypropylene
Watertightness	pass

Performance tested by:
PIA - Prüfinstitut für Abwassertechnik GmbH
(PIA GmbH)
Hergenrather Weg 30
D-52074 Aachen

Certified according to ISO 9001:2000

Notified Body number: 1739

This document replaces neither the declaration of conformity nor the CE marking.

Prüfinstitut für Abwassertechnik GmbH
PIA
geprüft - tested - testé

Elmar Lancé July 2008