

BLACK HAT
systems



Modulus and Washceptor installation



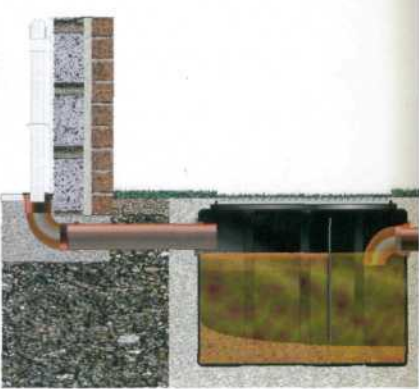
Illustrations directly below show standard installation in good ground using no formwork



Illustrations below show installation using timber shuttering as formwork



Grease Trap installation



Geoceptor and Silt Guardian Installation



Cover Slab

Sixth pour

This is the second pour around the access shaft of the geoceptor

Fifth pour

This is the first pour on the access shaft of the Geoceptor (See F app.)

Fourth pour

This pour will be the final pour on most of the product range. Except Geoceptor and Silt Guardian

Third pour

After this pour or next pour we suggest you leave concrete to set

Second pour.

Haunch concrete to just below water level inside and let it set

Base Slab

See B table opposite



Please read the list 1 to 7b carefully below before commencing installation.

1. Our products are not designed to be subjected to vehicle loading. Wherever this is likely to occur, a load bearing slab must be provided. You should consult a qualified civil / structural engineer if in doubt.
2. Our standard units are not designed to be completely full of water when unsupported in underground installations only (ie: when there is no backfill material around the sides of the tank). The guidance provided below regarding partial filling with water during the backfilling operation should be followed for all underground systems.
3. Sewage treatment systems should not be installed where ground water is constantly present or where a risk of flooding.
4. Wherever water is present in the excavation, the excavation should be de watered using suitable pumping equipment and this should continue until the installation is complete.
5. Ensure there is an adequate water supply to fill all units. This is essential in the installation. Tanks must not be installed without the water level in the tank in accordance to the instructions below.
6. It is intended that the tank should remain full of liquid during its entire life. Wherever the tank is emptied periodically for maintenance etc, it should be immediately filled again with water.
7. Where there is a risk of ground water table rising above the base of the tank, the tank must remain full at all times. Where this is not possible
 - 7a. Obtain advice from a qualified engineer regarding anti flotation measures
 - 7b. The entire excavation must be lined with a continuous layer of 1200 gauge polythene sheeting. This must be overlapped along the top and tied in to ensure that no water can penetrate the liner.

Excavation

A suitable excavation should be prepared to provide the minimum dimensions noted below.
See Fig 1 on opposite page

| Tank Diameters (A) | Base Slab (B) | Side Excavation (C) |
|-----------------------|---------------|---------------------|
| 610mm | 150mm | 150mm |
| 1260mm | 250mm | 150mm |
| 1560mm | 250mm | 200mm |
| 2150mm | 250mm | 250mm |
| Grease Traps GT1 to 3 | 100mm | 100mm |

Please Note : In unstable ground conditions, place and compact and additional 250mm depth of granular material to finish at formation level, as shown opposite.

Installation procedure

Ensuring all the above has been carefully read and all necessary advice on the ground conditions and loadings has been sought, you are now ready to install your product. Figure 3 opposite shows the stages of backfill.

- A.** Place concrete onto base slab/bed (concrete min grade 15 N/mm² / slump 25mm). Concrete bed should be a minimum thickness as detailed above, with suitable reinforcement to suit the ground conditions. Lightly tamp the concrete and then lower the product/products onto the wet concrete, ensuring that levels are correct and that connecting pipework is properly aligned.
- B.** Fill tank with approximately a third full of water. Haunch a substantial amount of concrete around bottom edge of tank to a height just below the water level. Care must be taken to ensure that the base of the tank is uniformly supported, thereby avoiding point loads.
- C.** Continue to backfill with concrete, proceeding in at least 2 pours /layers. Ensure that water level inside tank is always at least 50% more than the height of the level of concrete on the outside. Efforts should be made to ensure that there are no voids within the concrete.
Under no circumstances should a vibrating poker be used. Concrete should not be allowed to fall directly onto the tank.
- D.** We suggest that concrete is left to set at the fourth pour, which will be approximately 2/3rd's the level, before continuing with the pour, particularly on the larger 1560 and 2150 units (see above).
- E.** Before the next pour. Connect both inlet and outlet pipes with connecting pipework. This should be installed to manufacturers instructions
- F.** For our Geceptor's and Silt Guardian range. The top section should either be separately shuttered to give a 250 concrete surround. If shuttering is not used then the concrete should be poured in two pours from the invert of the pipework. (as shown opposite)
- G.** Extensions can be supplied to suit a variable finished ground level to a maximum of 1metre. For deeper inverts concrete ring should be used for access (see figure 2 opposite).
- H.** The concrete should finish level with the top of the unit/units. Manhole covers should be installed to manufacturers instructions using a suitably designed cover slab to suit appropriate loadings

For more information regard installation contact us on
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