
Earth Tub™ Installation Requirements

Effective June 2017

Delivery of the Earth Tub

The Earth Tub is typically delivered by tractor trailer with a bed height of 5 feet. The Earth Tub weighs approximately 800 pounds, so a forklift or similar equipment is required to remove the unit from the truck. The Earth Tub comes packaged with the filter and all components inside the Tub.

Siting the Earth Tub

The Earth Tub is designed to operate outdoors and provide year-round composting capabilities, even in cold climates. That said, we highly recommend installing your Earth Tub(s) in a shaded or covered location. There are several reasons for this:

- The Earth Tub employs a plastic vessel. Solar radiation affects all plastic overtime. Prolonged sun exposure can cause plastic to move, distort, fade and pit on the surface. By installing the Earth Tub in a shady or covered area, you can greatly extend the lifespan of your system.
- In cold or wet climates, the cover provides a protected area for loading and operating the Earth Tub in winter or rainy conditions. The cover keeps the area dry and prevents a build-up of snow and ice on the Tub and surrounding area. This prevents slippery conditions that could lead to an accident.
- It is easier to mount the overhead electrical service to the Earth Tub if there is an adjacent structure or overhead roof.

Good site locations for Earth Tubs are:

- Under a shed roof (walls are not necessary)
- Under the eaves or overhang of a building
- Directly adjacent to a building
- In a shaded or partially shaded area (such as near trees or on north side of a building)

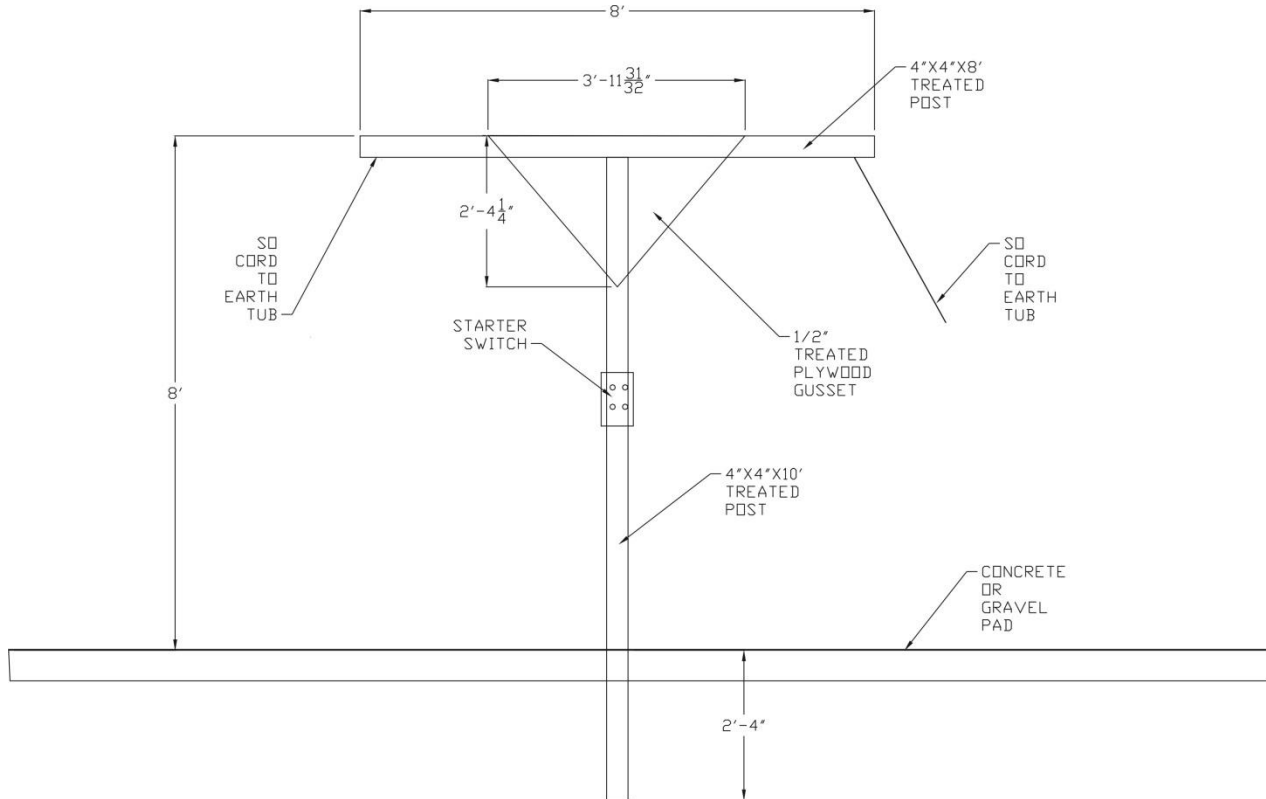
Choose a site near access to power that is also convenient for loading food scraps. Allow an area at least 12'x12' for the Earth Tub. A minimum of 24" clearance is recommended on all sides of the Earth Tub. Allow an area of at least 3'x3' for the Bio-filter (this might be in the corner of a 12'x12' space). The surface must be stable, level and well-drained. A gravel, asphalt or concrete surface is ideal. All surfaces must be able to support a full Earth Tub (weighing approximately 4000 lbs.) without appreciably sinking or sagging out of level. Make sure that the site is smooth with no rocks or roots protruding that could damage the bottom of the tub base. Position the Earth Tub so that the discharge door faces an open space to facilitate unloading of the tub.

Auger Motor Electrical Installation

The gearmotor driving the mixing auger is a 2 hp, 3-phase motor mounted on a helical gearbox. The voltage range is 208-230 AC and draws 6 amps per leg. The high voltage ranges is 460 volts, which we do not recommend due to higher electrical shock risk. We recommend that an overload motor contactor, VFD or starter be used to turn-on the motor. The motor contactor will provide variable overload protection to prevent motor burnout in the event of auger binding. A single starter can be used for several units if the customer wants to save money on installation. A twist lock plug can be installed on the bottom of the starter panel to allow the operation of both motors. GMT has an optional variable frequency drive (VFD) for converting single phase to 3 phase power for sites that only have single phase power. The VFD eliminates the need for the motor contactor and provides overload protection and more torque when starting the motor. The VFD should increase the life of the gear motor.

Auger Motor Wiring

Local electrical code may require additional disconnect switch to allow the service to the starter to be locked out. GMT supplies a twistlock plug and 16-4 retractable SO cord to connect the motor to the starter via an overhead junction box. The cord should be suspended from over the center of the lid where possible to prevent the cord from catching when rotating the lid. Below is a drawing of a post and cross for mounting the starter switches and supporting the SO cord over two Earth Tubs. The VFD is available as an option from GMT.



Blower Motor Wiring

The blower comes with 9' of cord and is mounted inside the biofilter. The blower requires a standard 120V ground fault outdoor receptacle. The blower draws less than 1 amp (100 watts) continuously.

Loading Platform

The loading height is 4 ft. Some customers prefer to build a platform or stairs to reduce the lift height for loading foodwaste into the tub. If desired, the loading platform should be 12-14" in height.

Leachate/Condensate Drains

The Earth Tub is outfitted with a 1" leachate drain near the base of the Earth Tub wall on the exterior. In addition, there are condensate drains on the 2" piping to the biofilter and from the base of biofilter itself. All of these drains are outfitted with 1" barbed fittings to allow 1" drain pipe or 1" tubing to be attached. GMT recommends that all liquids from the Earth Tub be directed to a sanitary sewer or to a collection tank. Because of this, care should be given to site the Earth Tub so that liquids can drain from the Earth Tub to a lower elevation (a drain point or collection tank). In particular, the leachate from the base of the tub can be very odorous and should be managed. A tank can be placed next to the biofilter to store the leachate or a well can be dug into the ground. Use 1" black pipe, 1" rigid PVC pipe or 1" tubing to direct the liquid to the appropriate drain. Make sure that the pipe is sloped at least 1/4" per foot to allow liquid to drain.