

Compost Tea System10 *Owner's Manual*



Growing Solutions
INCORPORATED

Distributed by

Martin Lishman

Congratulations on your purchase of a Compost Tea System10 from Growing Solutions!

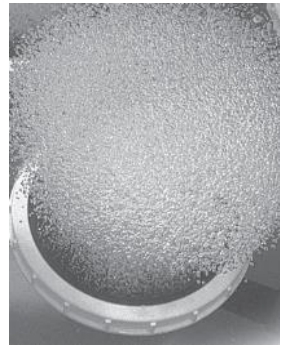


PLEASE READ COMPLETE INSTRUCTIONS BEFORE ASSEMBLY AND REFER TO THEM REGULARLY TO ENSURE OPTIMAL PERFORMANCE AND SAFETY.

CAUTION

Special care should be taken when operating any equipment using electricity. To avoid possible electric shock or risk to personal safety, please observe all electrical safety rules and tips:

- The System10 is designed solely for producing compost tea. Use of the System10 for any other purpose may cause damage to it, injury or death and is not covered by the product warranty.
- Do not expose the System10 to excessive sun, moisture or rain.
- Do not operate the System10 if it has a damaged electrical cord or plug, if it is not working properly, or if it has been damaged or dropped.
- To prevent any personal injury, or damage to the System10, operate it only in its fully assembled state.
- Close supervision is required when operating the System10 in the vicinity of children.
- The use of attachments not recommended or sold by Growing Solutions may cause unsafe operating conditions and voids warranty.
- Always unplug your System10 prior to cleaning or maintenance. Grasp plug to remove power cord from electrical outlet. Do not unplug by pulling on the power cord.
- Only use your System10 with a Residual Current Device (RCD) connected to a 230V 13amp power supply to prevent risk of electrical shock or equipment damage.
- Compost tea is not intended for human consumption. **DO NOT DRINK. KEEP AWAY FROM CHILDREN.**



COMPOST TEA SYSTEM10 OWNER'S MANUAL

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COMPOST TEA SYSTEM10 SPECIFICATIONS

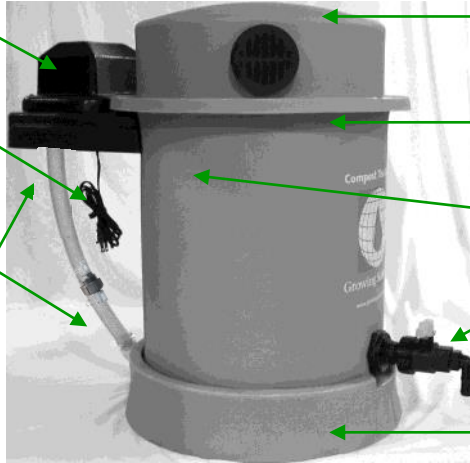
Tank capacity	10 gallons/40 litres
Aeration	Fine Bubble Diffusion
Air delivery	Piston air pump
Electrical	110V/220V
Tank/Stand	UV stabilised polyethylene
Valves/Fittings	Kosmos polypropylene
Fasteners	18-8 Stainless steel
Weight	27 pounds/12 kilos
Dimensions	20 x 20 x 27 inches/51 x 51 x 71 centimetres
Brew time	24 hours

Compost Tea System 10 Parts Identification

AIR PUMP,
COVER & SHELF

POWER CORD

AIR HOSE and
CONNECTION



TANK LID

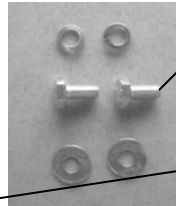
10 GALLON
TANK

FILL LINE

DRAIN VALVE

TANK STAND

MESH FILTERING
BAG



AIR PUMP SHELF
ASSEMBLY HARDWARE

AERATION DISK CAP



TANK FITTING PLUG



AIR PUMP,
COVER & SHELF



COMPOST BASKET



COMPOST BASKET TRAY



COMPOST TEA
CATALYST

Compost Tea System10 Assembly

STEP 1

Remove tank lid, compost basket and tray, and identify all parts of your System10. Locate the flat washers, lock washers and bolts to complete the air pump shelf assembly.



STEP 2

Turn your System10 upside down for easy assembly. Locate the two nuts attached to the back of the tank.



STEP 3

Align the slots on the pump shelf with the nuts. Place the flat washers on first, the lock washers on next, and the bolts last. Tighten firmly with a spanner.



STEP 4

Attach the hose from the pump to the hose from the base by tightening the connection by hand.



STEP 5

Place the compost basket in the compost basket tray, the compost basket tray onto the tank, and the tank lid onto the tank.



Your System10 is now ready for use.

Making Compost Tea with Your System10

The following 12 steps explain the basic operation of your System10.
For additional information on the process of making quality compost tea, see pages 10-11.



STEP 1

Place your System10 in a well-ventilated, weather-protected location with a level surface and easy access to a power source.

Use only with a Residual Current Device (RCD).

If needed, use a 12-14 gauge extension cord with a maximum length of 25 feet.



STEP 2

Remove the tank lid.



STEP 3

Remove the compost basket and compost basket tray and set aside.



STEP 4

Be sure the drain valve is in the closed position before you begin filling the tank with water.



STEP 5

Fill the tank with water to the (10 gallon) 37.8 litre fill line. *See page 10 for information on water quality and temperature.*



STEP 6

Plug in your System10 to a power source to begin aeration. **Use only with a Residual Current Device (RCD).**

If needed, use a 12-14 gauge extension cord with a maximum length of 25 feet.

Making Compost Tea with Your System10



STEP 7

Add 7x15ml scoops (7tbsp) of Compost Tea Catalyst to the water. See *page 10* for more information about microbial food sources.



STEP 8

Place compost in the compost basket. Use 1.5-2 litres of high-quality compost, loosely filled. (Quantity may differ depending on type of compost used. The compost basket should be 3/4 full). See *page 11* for more information on selecting compost.



STEP 9

Replace compost basket tray on tank. Place filled compost basket into basket tray.



STEP 10

Replace the tank lid and begin the 24 hour compost tea production cycle.



STEP 11

Prior to dispensing, place the mesh filter bag securely around the drain valve.



STEP 12

After 24 hours, continue to aerate the tea while dispensing it into a clean container for application. See *page 11* for information on application. Unplug your System10 when tank is empty. See *page 8* for essential cleaning instructions.

Cleaning Your System10

Proper cleaning is essential to maintaining your System10 and making quality compost tea. It is normal for biologically active compost tea to produce *biofilm*, a thin, slick film that adheres to a surface. Routine cleaning is necessary to prevent an accumulation of biofilm within your System10. Never use soaps, bleach, harsh chemicals or abrasives. Always clean your System10 immediately after each use.

ALWAYS unplug your System10 before cleaning.

NEVER submerge the air pump shelf assembly.

CLEANING (after every use)

Unplug your System10. Remove the tank lid, compost basket and tray and set aside for STEP 3.



STEP 1: Rinse tank thoroughly

Open the drain valve.

Use a garden hose with a spray nozzle to thoroughly rinse the inside of the tank until any remaining sediment has drained and the discharge water is clear. Be sure to spray the area around and underneath the aeration disk. Use a non-abrasive sponge to wipe away any remaining biofilm or residue and rinse again. Rinsing with hot water, if available, is ideal.



STEP 2: Aeration disk/tank cleaning

Remove the aeration disk by turning it counter-clockwise. Do not spray water inside the tank.



AERATION DISK



TANK FITTING

To prevent water from entering the air line, place the enclosed tank fitting plug into the exposed tank fitting and tighten.

Cleaning Your System10



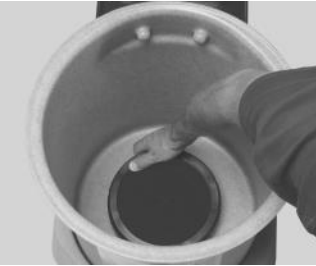
STEP 2: Continued

Place the enclosed aeration disk cap onto the aeration disk and tighten. With the air line secure, proceed with the cleaning process.

Rinse the tank again with the tank fitting plug in place. Rinsing with hot water, if available, is ideal. NOTE: If water should accumulate in the air line, it can be removed by disconnecting the air hose at the connector underneath the air pump, and tipping the System10 backward to allow the water to drain. Reconnect the air hose to continue.



With a spray nozzle, thoroughly rinse the underside of the aeration disk until any visible biofilm or residue is removed. Then, use a non-abrasive sponge to thoroughly clean the surface of the tank fitting. Wipe dry the aeration disk and the area around the tank fitting before replacing the aeration disk.



Remove the cap from the aeration disk and the plug from the tank fitting and store safely for future use.

Carefully re-thread the aeration disk onto the tank fitting, and hand tighten clockwise.

STEP 3: Rinse parts thoroughly

Empty the contents of the compost basket and place in your compost bin or garden.

With a spray nozzle, thoroughly rinse the compost basket, compost basket tray and tank lid. Wipe the outside of the tank with a damp sponge. NOTE: Do not spray water near the air pump cover and shelf or the power cord.

Tips for Making and Using Compost Tea

What is compost tea?

Compost tea is a biologically active liquid extract of compost that contains three essential components:

- Microorganisms (active and inactive)
- Plant nutrients (macro and micronutrients)
- Organic compounds (plant-growth compounds)

Your System10 is designed to provide optimal conditions for extracting these three components from compost.

What affects the quality of your compost tea?

1. Compost quality
2. Microbial food source (Compost Tea Catalyst)
3. Water quality and temperature

1. Compost quality

Smell: Rich and earthy, sweet, not sour.

Colour: Normally dark brown like rich earth, not black like charcoal.

Particle Size: Slightly coarse, not too fine. Fine material will compact in the compost basket when saturated. Slightly coarse compost floats freely in the compost basket during the production cycle.

Moisture: Moist, but not saturated. Optimum moisture content is 45-50%.

Data: Ask the compost producer for any available product data. Good microbial activity, pH in the neutral range, low salinity, and pathogen free are important characteristics of quality compost.

2. Microbial food source (Compost Tea Catalyst)

Growing Solutions Compost Tea Catalyst, a microbial food source, contains soluble kelp, rock powder and a blend of botanical ingredients formulated for optimal microbial growth and diversity.

3. Water quality and temperature

Chlorine: Present in many drinking water sources, chlorine may inhibit optimum microbial growth. If you use chlorinated water, you can dissipate the chlorine by aerating the water in the tank for 15 minutes prior to adding the compost.

Temperature: Optimum temperature range for compost tea production is 21°-24°C (70°-75°F) . Lower temperatures result in slower microbial growth. Higher temperatures result in lower dissolved oxygen levels in the tea.

Tips for Making and Using Compost Tea



Tips for using compost tea

When to use:

Apply compost tea throughout the growing season every 10 to 30 days. The rotation can be increased to once a week in times of plant stress (disease pressure, environmental stress, etc). Do not apply less than 7 days before harvesting edible produce. Avoid applying to soil during heavy rain. Do not apply as a foliar spray during wet weather or if rain is imminent.

Foaming:

The combination of compost, micro-organisms and Catalyst ingredients may cause foaming when used in your System10. The basket tray is designed to collect liquid from foam production, yet may not have the capacity for some ingredients. A few drops of organic olive oil may be used to control foaming

Shelf life:

Use aerated compost tea as soon as possible after the 24 hour production cycle as it contains living organisms. If not used immediately, keep your compost tea cool, out of the sunlight in an open container and stir frequently until used. Do not store in a sealed container for an extended period of time. The compost tea should be used within 24-48 hours after decanting from the System10.

Foliar applications:

Compost tea can be used undiluted as a foliar spray. Thorough leaf coverage is important. Apply the tea in early morning or late afternoon to minimize the harmful effects of ultraviolet rays to the micro-organisms.

Soil applications: As a soil drench, apply compost tea with enough water to ensure it reaches the root zone. A typical dilution ratio is one part compost tea to 5 parts of water.

Dilution rates:

Compost tea, made with high quality compost, can be used full strength or diluted with enough water to provide adequate coverage. A ratio of 1:1-1:5 (compost tea to water) is typically used. It cannot be over-applied because it is completely natural and organic. Always ensure the water has been aerated to remove chlorine, or use rain water.

Filtration:

Each batch of compost tea can have a varying degree of sediment and may require additional filtration.

Application equipment:

Use sprayers and watering cans that have NOT been previously used with chemical pesticides which can leave residues potentially harmful to the micro-organisms contained in compost tea.



SERIAL NUMBER: _____

DATE PURCHASED: _____

LIMITED WARRANTY

Growing Solutions Incorporated (“GSI”) guarantees that for the period beginning on the date of purchase and ending 12 months after that date, this System10 (the “Product”) will be free from defects in material and workmanship. If a defect in material or workmanship is discovered during the period of this limited warranty, GSI, in its discretion, may either provide a new Product to the customer or repair the customer’s Product. If the Product is to be shipped for repair, shipping arrangements and expense shall be borne by GSI.

In order for this limited warranty to remain in force, the Product must be used only for agricultural and related purposes and it must not be modified or altered in any way.

GSI does not guarantee the suitability of the Product for a customer’s particular purpose. This warranty is limited to the repair or replacement of the Product and in no event shall GSI’s liability be greater than the purchase price for the Product. GSI shall not be liable for consequential or special damages, for any damages relating to the use of the Product or any damages resulting from use of, or a customer’s inability to use the Product, including damages to plants, animals, persons or property. There are no warranties, express or implied, extending beyond those stated here.

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The Compost Tea System10 is manufactured by Growing Solutions Inc and distributed in the UK and Ireland by Martin Lishman Ltd

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