

සමුදායක සේවාවන්

#	නම
	<p>අධ්‍යක්ෂවරයාගේ අනුමැතියෙන් පසුව සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p>
1	<p>සමුදායක සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p>
1-2	<p>සමුදායක සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p> <p>2025 ජූනි 09 දින 12:00 ට පසු ඉල්ලුම් පිටපත් භාරදීමට අවස්ථාවක් ඇත.</p> <ul style="list-style-type: none"> • අධ්‍යක්ෂවරයාගේ : procurement@fuvahmulah.gov.mv • දුරකථන : 6862830, 6862812
2	<p>සමුදායක සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p>
2-1	<p>අධ්‍යක්ෂවරයාගේ අනුමැතියෙන් පසුව සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p> <p>2025 ජූනි 14 දින 10:00 ට පසු ඉල්ලුම් පිටපත් භාරදීමට අවස්ථාවක් ඇත.</p> <p>සමුදායක සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p>
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3-5	<p>අධ්‍යක්ෂවරයාගේ අනුමැතියෙන් පසුව සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p> <p>සමුදායක සේවාවන් සැපයීමේදී සහභාගී වීමට අවස්ථාවක් ඇති බවට සඳහන් කර ඇත.</p>

Features of KCE KWIK Composter: (Model: KCE 1000 Capacity 1000 Kgs/Day)

1. Micro-Organism-Based:

- The KCE employs advanced microbial technology for efficient and accelerated composting.
- Specially formulated microbial cultures facilitate rapid decomposition of organic waste, enhancing composting effectiveness.

2. In-Vessel Aerobic Composting System:

- Designed as an in-vessel fully automatic bio-mechanical composter, ensures a controlled and optimized aerobic composting environment.
- It converts organic waste added to the machine into nitrogen-rich compost by reducing its volume by almost 70-80% of the original.

3. Fully Automatic:

- Once the garbage is fed to the machine, mixing, curing, and composting will be automatically done inside the machine.
- The compost automatically comes from the outlet.

4. Retention Time – 13 to 15 Days:

- The composting process within the KCE is designed for a specific retention time of 13 to 15 days. This optimized duration allows for thorough composting, resulting in high-quality compost ready for use.

5. Energy Efficiency:

- KCE is designed with energy-efficient features, minimizing power consumption during the composting process.
- Environmentally conscious design aligns with global sustainability goals.

6. Deodorizer - Odour Control System

- Incorporates advanced technology for effective odour control during the composting process.
- Ensures a pleasant and environmentally friendly composting experience.

7. Compliance with International Standards:

- The KCE adheres to international quality and safety standards.
- Meets regulatory requirements, ensuring a reliable and compliant composting solution.

Standard Operating Procedure for KCE KWIK Composter:

Introduction:

KCE KWIK COMPOSTER Exports (KCE) is a fully automatic Bio-Mechanical Composter using In-vessel composting is a controlled organic waste decomposition method within a sealed container. Input includes organic waste and a carbon source like sawdust. Microbial cultures are added to accelerate the process. The vessel is closed to regulate temperature, moisture, and aeration. After 13 to 15 days, the output is nutrient-rich compost, as the microorganisms break down the organic material. This method minimizes odors, reduces greenhouse gas emissions, and produces a valuable soil amendment, promoting sustainable waste management and environmental conservation.

1. **Segregation of Non-Biodegradables:**

- Begin by segregating plastics and other non-biodegradable materials from the organic waste to ensure a pure composting feedstock.

2. **Sawdust Addition:**

- Add 20% to 25% sawdust to the food/organic waste, adjusting the quantity based on the moisture content in the waste. This aids in optimizing composting conditions. (*the **content of sawdust depends on moisture in the food, always remove excess liquid from input material to get dry compost output***)

3. **Composting Culture Addition:**

- Introduction of specialized microbial culture for accelerated decomposition. Add 0.1% of the composting culture (calculated based on feeding capacity).

4. **Waste Intake and Inlet Door Closure:**

- Inlet accessories like bin lifter and feeder should be attached (if purchased) as instructed and ensure the inlet is closed at all times when the machine is operational. Also, confirm that the composter is in AUTO mode.

5. **Composting Phase:**

- Controlled composting process transforms organic waste into nutrient-rich compost.

6. **Maturation:**

- Compost matures within the system, ensuring optimal quality.

7. **Automated Unloading:**

- Finished compost is automatically unloaded for use.
- Compost is automatically collected in the bin/collector if it is placed at the outlet.

Type of waste handled:

YES ✓	NO X
Household Kitchen Food Waste, chicken litter	Glass & metal items.
Bread & Bakery items.	Coconut shells
Vegetables, Fruits, and their skins	Pharmaceuticals, Newspapers & magazines.
Cooked uncooked meat, Bones, and Eggshells.	Plastic bags and bottles.
Garden waste, Flowers, Leaves, Shrubs.	Dog or Cat Droppings
Rotten vegetables, temple offerings	Sanitary pads/ Nappies

Technical Specifications:

A. Specification and Material of Construction for Composter Machine:

	Description		
Model	KCE KWIK Composter Export 1000 (Model:KCE1000)		
Capacity	1000 Kgs (per day) 365 MT (annually)		
Operation	Fully Automatic- In –Vessel Aerobic Composting without heaters		
Machine Dimensions	9208 mm(L) X 2340mm(W) X 2808mm(H)		
Voltage Requirement	3 phase 3 wire 415v/50Hz		
Connected Load (Including all accessories)	Items	Quantity	Connected Load
	KCE 1000 (machine only)	1	7.4 KW
	Feeder	1	2.23 KW
	Air Heater	1	3 KW
	Shredder	1	3.72KW
	Blowers X 2	1	036KW
	Bin lifter	1	1.5 KW
	Total		18.21KW
Volume reduction of garbage	70-80% of the input waste		
Retention Time	30 Days		
Output	Natural Compost in the form of dry powder when SOP followed. (SOP to be followed)		
	Usage: Soil conditioner, can be enhanced and used as organic fertilizer. The output can be used as a soil conditioner after testing the pH and other important parameters		

Key Technical Features	Make / Model / Material
Forced air system with bio-filter (deodorizer).	Make : Revolution Technology or equivalent;
	500 CFM ; 180 W ; Single Phase
Gear box with break motor	Beacon makes Gear box/ Equivalent
	CG makes motor/ Equivalent
Insulation	Standard Insulation to avoid heat loss
Gasket at Inlet and Outlet	SS316
Composting Drum	MS with Anti-corrosive FRP Lining
Outer Hood	SS316
Thickness of Drum	5+3=8 mm
Bio filter Piping	Flexible Pipe
Trays at Inlet and Outlet	SS316
Centrifugal Blower	Revolution Technology or equivalent
MCB/ Contactor/ Overload Relay	L & T or Schneider or equivalent
Connectors	Connect well
Tap drain Pipe at activated carbon filter.	1/2inch standard SS304
Operation	Fully Automatic (No touch once garbage is loaded)

Technical Specification & Material of Construction: Feeder in SS 316

Sr. No.	Key Technical Features	Make / Model / Material
1.	Inlet Hopper waste carrying capacity per stroke	350 liters
2.	Intake Material	Organic Waste
3.	Connecting Load	2.23 KW
4.	Feeder mechanism	Screw feeding type (Revers Forward mechanism)
5.	Feeder screw diameter in mm	300
6.	Operation	Fully Automatic

Technical Specification & Material of Construction: Bin Lifter

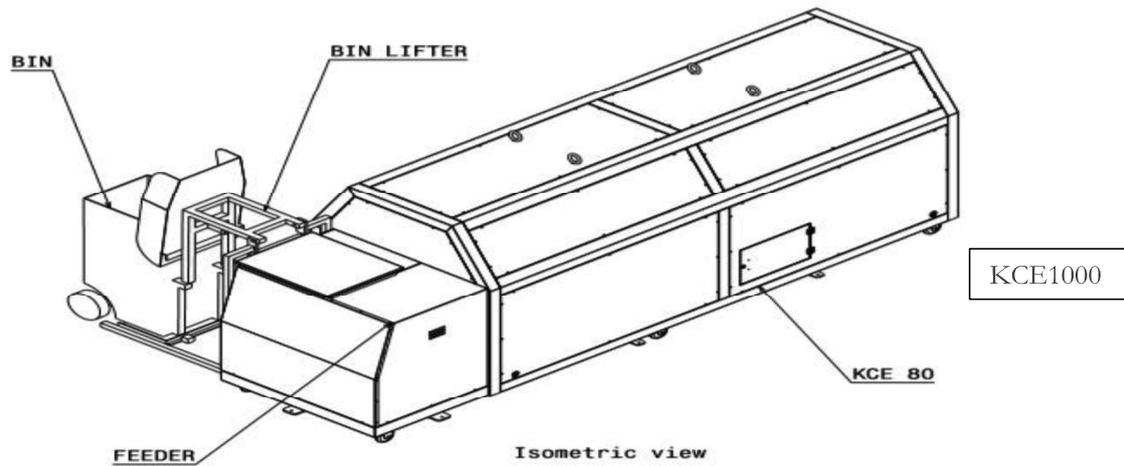
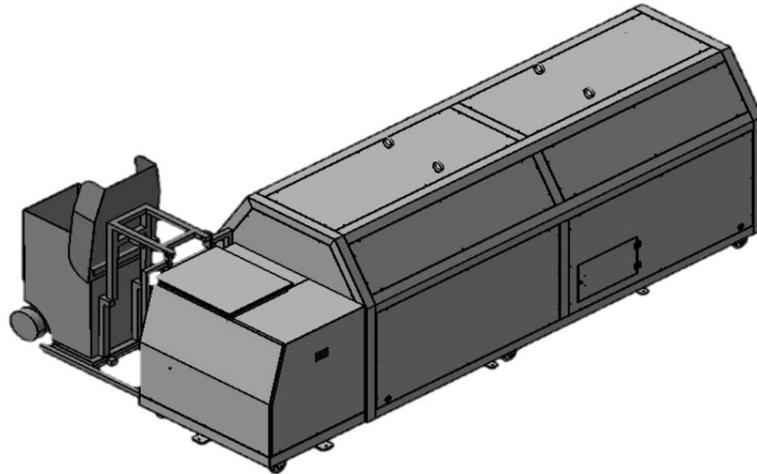
Sr. No.	Parameter	Description
1	Bin Lifter Dimensions (mm)	1000(L) * 770(W) * 1605(H)
2	Capacity	240 litre
3	Input	Segregated Organic Waste
4	Output	Segregated Organic waste
5	Contact Parts	SS316
6	Power Supply	3 phase
7	Connected load	1.5 KW
8	Motor	NA
9	Actuator	TI- motion
10	Operation and Processing	Automatic
11	Waste Removal	Automatic

Specifications and Material of Construction: Integrated Shredder 5 HP

Particulars	Shredder 5 HP
Input Motor Power	5 HP
Discharge Type	By Gravity
Material of Blade	SS316
Outer Cover	SS316
Painting of all MS parts	Coated with anti-corrosive Epoxy Primer and 2 Coats of Epoxy Paint
Accessories	Motor Stand
Feeding material	Food waste, bones, meat

Images:

Isometric view for reference:



Pre-installation and Maintenance details

Pre- Installation requirements:

- Civil Works -Concrete Platform construction (zero ground-level foundation)
- Civil Works-Shed construction. (After Installation of the machine)
- Water connection (for cleaning purposes only) and drainage for wastewater
- 3-phase electrical connection
- 1000 kg sawdust in stock (Recommended).
- 5 core 2.5 sq. mm wire (3 m) for electric supply.
- Connected Load: **18.21KW.**
- 4 Pole 32 AMP MCB.

Maintenance:

- Negligible maintenance is required for the Kwik composter.
- Greasing needs to be done every quarter to gear joints and roller assembly.
- Activated carbon filter needs to be replaced every 5 years.
- The motors in the gearbox are easily maintainable.
- A detailed preventive maintenance guide is provided with the machine.
- There are no moving parts inside the composting chamber that facilitate the inclusion of non-organic material in the composting tank to some extent.

Note:

- The equipment's container is equipped with multiple inspection windows located at the gearbox and rollers, facilitating easy equipment inspection and maintenance.
- The equipment is designed to operate efficiently within a temperature range of 10 degrees Celsius to 50 degrees Celsius.
- The equipment itself does not require an additional shed, but a covering shed is necessary for storing output and segregating the input area.
- To install the machine, a flat RCC ground level is essential.

