

DMS VENTURES COMPANY PROFILE AND
PRODUCT DETAILS WHITE PAPER
DOCUEMNT



DMS
ventures

MARCH 11, 2018

DMS VENTURES GENERAL TRADING LLC
Dubai, UAE



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Contact Details: 20

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Introduction

This document is prepared to give brief about DMS Ventures Gen Trd LLC Company profile and its primary product “Smart Bin - Organic Waste to Compost machines”.

Scope

The document provides the Company profile, features, technical specifications, warranty details, installations, required laboratory reports, trouble shooting and training associated with the proposed solution.

About Us

DMS VENTURES is a leading company in the field of Organic Waste Management providing advanced technology of recycling waste in to Organic Compost.

We have The world's largest Composting machine manufacturing facilities spread across India. It is India's most trusted manufacturer and exporter of organic recycling solutions and automotive components manufacturer in the country.

We have an impressive client portfolio in India, South Korea, Saudi Arabia and UAE where our world class Eco friendly Waste Management solutions are successfully implemented.

We are proud partners of "Government of India" initiative of "Swacch Bharat (Clean India)" campaign.

DMS Ventures offered eco-services are always done with the intentions of “CUSTOMERS FIRST”.



DMS VENTURES GENERAL TRADING LLC
[ISO 9001 / TS 16949 : 2016 Certified](#)

Our manufacturing unit and the associated products are **ISO 9001 / TS 16949 : 2016** certified.



We are an **ISO 9001 / TS 16949 : 2016** company through Engineering technology as a combination of man, machine and material. For superior product quality, it is essential for a manufacturer to make the best blend of these three factors. Our manufacturing unit was established about a decade ago with this simple principle and a drive to take up challenges, meet customer demands and go beyond in adding value and building relationships.

ISO/TS 16949 is an ISO technical specification aimed at the development of a quality management system that provides for continual improvement, emphasizing defect prevention and the reduction of variation and waste in the automotive industry supply chain. It is based on the ISO 9001 standard.

It was prepared by the International Automotive Task Force (IATF) and the "Technical Committee" of ISO. It harmonizes the country-specific regulations of quality Management systems.

Our **technology Patent no 201621009654** for the "Waste to Compost" machine is submitted and due for approval with USA authorities very soon. Our R&D department situated in Pune Maharashtra India is working dedicated to continuously enhance the technology and come up with latest versions of the products to enhance user experience.



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Why Compost? Benefits of Composting!

- Keeps biodegradable waste out of landfills and sewage plants.
- Environmentally Responsible.
- Alternative to burning.
- Saves money.
- Enables Organic Farming.
- Gives you a vibrant garden without chemical fertilizers.
- Contributes to the HH Sheikh Mohammed's Vision of "Zero food wastage", "Zero Landfills by 2030" and "Dubai Smart City" Project.

Scope of Waste Management

Types of Waste Generated

Canteen / Kitchen Waste

- Pre-Cooking Vegetable Cuts
- Processed (cooked) Leftovers
- Food Leftovers in the plates.

Composition of Canteen Kitchen Waste

- 15% of Oil/Greasy waste
- 55% of cooked leftovers
- 30% of pre-cooking vegetable cuts

Garden Waste

- Typically 30% of Lawns & 70% of fall-leafs

Ratio of Kitchen: Garden Waste Generation is approximately 7:3



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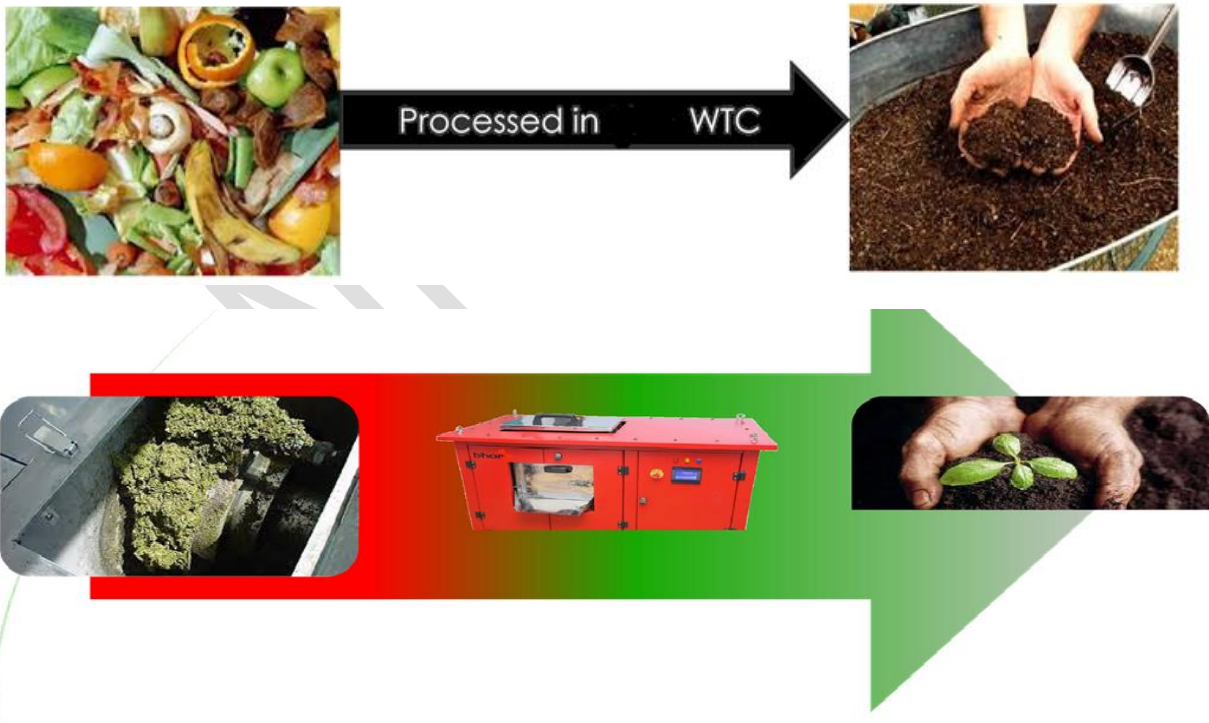
Current Resources and Costs Involved - Our Analysis

- The cost of transportation of the organic waste is recurring.
- The land-fills are at a distant location and often cause nuisance.
- The current procedure is not environment friendly.
- There is an indirect cost in mending the caused harm to the society and environment.

Disadvantages of the current situation

- The garden waste is accumulated and burnt down to ashes or is left to decompose which is a long process.
- The kitchen waste is dumped in landfills and decays faster causing scavenger menace leading to epidemic diseases.
- In either cases there are issues and problems caused to environment and has a long gestation period to dispose the waste.

Organic Waste to Compost – Sampling





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Smart Bin – Waste to Compost Fully Automatic Machine



“Smart Bin” is a unique and revolutionary product towards achieving the goal of Organic waste management.



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Features

Special Features

The “Smart Bin” **reduces the Organic waste volume of up to 90%** solving the major problem of Land Fills.

“Smart Bin” comes with the **built in Shredder** that enables the users to dump Big size animal bones, animal carcasses, skins, internal organs, dry tree leaves, roots and garden waste for composting. Also it increases the machines capacity to intake more organic waste, reduces composting time, achieves higher reduction in the dumped waste and provides best quality Organic Compost.

“Smart Bin” has **20 hours composting cycle** which is best in the business and much lesser than what is needed for other Composting products.

Entire process is **completely noiseless and odorless.**

“Smart Bin” provides **100% chemical free organic solution** that is Safe for your environment, safe for your City, safe for your community, Safe for you and your family.

“Smart Bin” is **fully automated solution** to organic waste management. There is no added labour cost for the purchaser to monitor the machine.

“Smart Bin” offers **2 Years Warranty** on the Product which is best in the business.

Technical Features

1. Fully Automatic.
2. Power Saving Mode.
3. Heavy duty Composting Chamber and agitator shaft.
4. All contact parts in stainless steel grade 304.
5. Compact, fully covered and attractive outer body
6. Odorless and Noiseless transformation of all organic waste to compost in 20 hours.
7. Overload function
8. Auto stop function when door in open
9. Digital Temperature display.



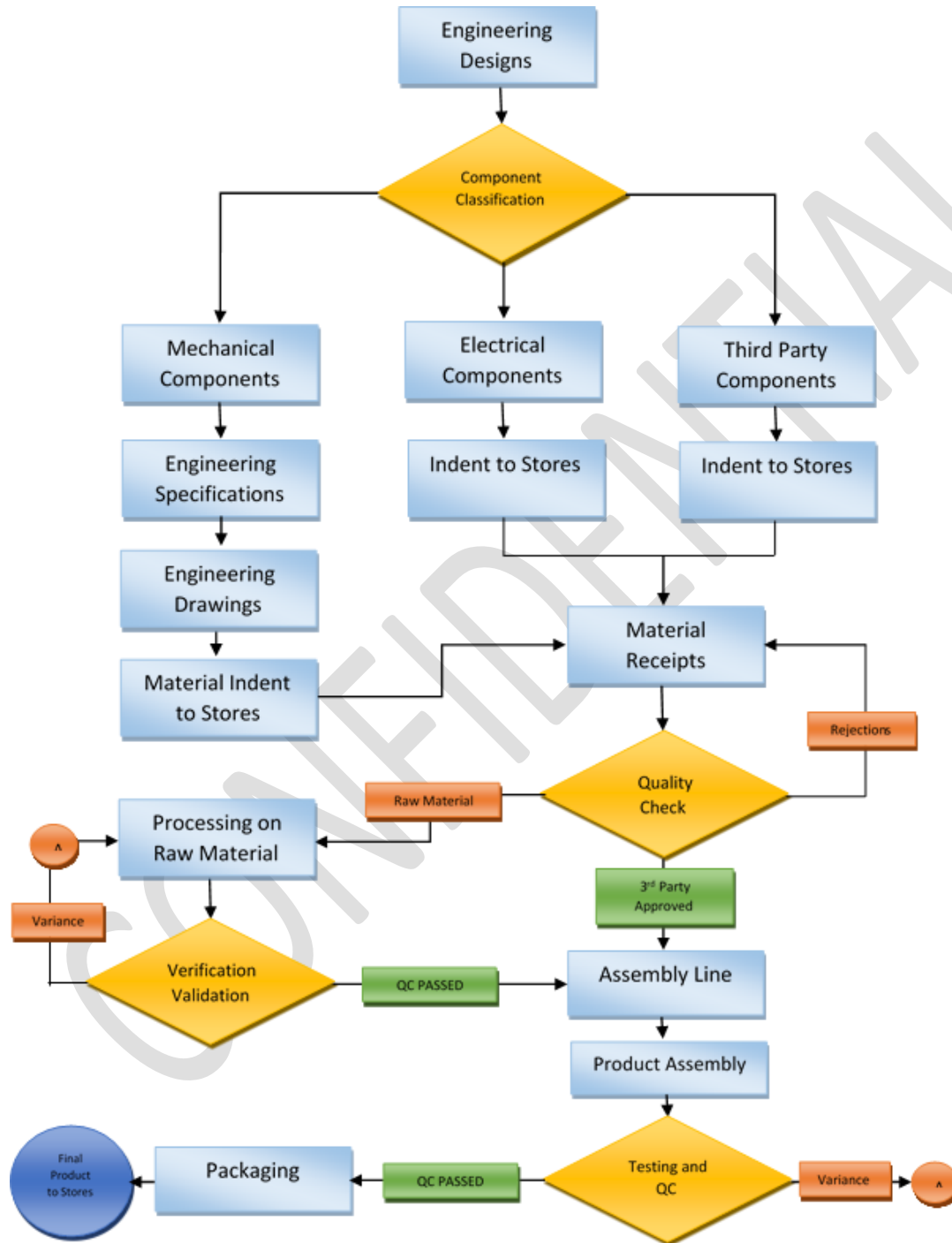
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10. Emergency Stop Button.
11. Non-intrusive accelerated natural and biological process.
12. Volume reduction is achieved through non-hazardous steaming of organic waste.
13. Self-mutating bacteria Thermophile with an age of 20 years is the main component.
14. PLC (Programmable Logic Controller) with HMI (Human Machine Interface) Touch Screen.
15. Low operation & zero Maintenance Cost.

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Process Flow for Manufacturing of "Smart Bin"





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Machine Process Step By Step

- 1) We Provide Input door, Output door, Blades for Mixing, So process in Noiseless and odorless.
- 2) Humidity sensor which sense the moisture in the wet waste, Heater, Saw dust with Micro-Organism, Air Ventilation, pipe which directly connect to the sewage system.
- 3) First step is to put organic Waste in the Machine from Waste input door then close the door.
- 4) Blades start mixing all the waste in the machine at 2RPM (Rotation per Minute) Clock wise and Anti-Clock Wise.
- 5) We provide Humidity Sensor in the machine, as we all knows organic waste content 70-80% water which sensor sense.
- 6) Once waste is sensed by the humidity sensor Heater will automatically turns On & Water gets evaporate, here we achieve 70-80% volume reduction and steam goes out through pipe which is directly connect to sewage system. And also we provide Air Ventilation for our Micro-Organism to be in live condition.
- 7) After that rest of material will decomposes by our Bacteria and here we Achieve 80-95% volume reduction.
- 8) Per day you will get 10% compost, but no need to remove on a daily basis once in a 7-8 days when compost reaches to Maximum Indicator Line of Machine.
- 9) Once by-product came out from the machine we sent it to Laboratory to check the Compost, as we have all the Lab Reports.
- 10) Microorganisms operate best under neutral to acidic conditions, with pH's in the range of 5.5 to 8. During the initial stages of decomposition, organic acids are formed. The acidic conditions are favorable for growth of fungi and breakdown of lignin and cellulose. As composting proceeds, the organic acids become neutralized, and mature compost generally has a pH between 6 and 8.
- 11) Zero Maintenance



Technical Specifications

250Kg Capacity Smart Bin

Sr. No.	Description	Details WTC-250 Kg
1	Dimensions in L x W x H (mm)	2500 x 1200 x 1500 mm
2	Weight	1200 kg (Approx).
3	Voltage	415 volt AC
4	Power rating	9.5 KW
5	Control system	PLC with Touch Screen HMI
6	Operation	Fully Automatic
7	Heating system	Ceramic Coil 3 KW
8	Processing time	20 Hrs
9	Composting method	Micro-organism based natural composting
11	Built In Shredder	Yes
12	Other features	<ul style="list-style-type: none">• Waste overload.• Indicators for Power mode, heater & power saving mode.• Machine automatically stops when input door is opened.
13	Treatable Items	Fruits, Vegetables, Meal Leftover, Bakery Food, Animal and Fish Bones, Egg Shells, Peels, Leaf's, Small Tree branches.
12	Untreatable Items	Plastic, Hard Material Like- Glass, Metal, Irons, Coconut Shell.
13	Warranty	2 years
14	Output	Dry Organic Compost



500 Kg Capacity Smart Bin

Sr. No.	Description	Details WTC - 500
1	Dimensions in Lx W x H (mm)	3300 x 1300 x 1800 mm
2	Weight	2200 kg (Approx).
3	Voltage	415 volt AC
4	Power rating	13 KW
5	Control system	PLC with Touch Screen HMI
6	Operation	Fully Automatic
7	Heating system	Ceramic Coil 3 KW
8	Processing time	20 Hrs
9	Composting method	Micro-organism based natural composting
10	Built In Shredder	Yes
11	Other features	<ul style="list-style-type: none">• Waste overload.• Indicators for Power mode, heater & power saving mode.• Machine automatically stops when input door is opened.
12	Treatable Items	Fruits, Vegetables, Meal Leftover, Bakery Food, Animal and Fish Bones, Egg Shells, Peels, Leafs, Small Tree branches.
13	Untreatable Items	Plastic, Hard Material Like- Glass, Metal, Irons, Coconut Shell.
14	Warranty	2 years
15	Output	Dry Organic Compost



1000 Kg Capacity Smart Bin

Sl. No.	Description	Details WTC-1000
1	Dimensions in Lx W x H (mm)	4200 x 1800 x 3000 mm
2	Weight	3200 kg
3	Voltage	415 volt AC
4	Power rating	35 KW
5	Control system	PLC with Touch Screen HMI
6	Operation	Fully Automatic
7	Heating system	Ceramic Coil 3 KW
8	Processing time	20 Hrs
9	Composting method	Micro-organism based natural composting
10	Built In Shredder	Yes
11	Other features	<ul style="list-style-type: none">• Waste overload.• Indicators for Power mode, heater & power saving mode.• Machine automatically stops when input door is opened.
12	Treatable Items	Fruits, Vegetables, Meal Leftover, Bakery Food, Animal and Fish Bones, Egg Shells, Peels, Leaf's, Small Tree branches.
13	Untreatable Items	Plastic, Hard Material Like- Glass, Metal, Irons, Coconut Shell.
14	Warranty	2 years



Gas Analysis and other component Report



Report No: PL-015-0904	Date: 11.04.2016		
Sample Identified As	Gas Sample		
Customer Name	Bhor Engineering Pvt Ltd		
Customer Address	Pune		
Work Order NO	Email Dated 07.04.2016		
Sampling Method	N/A		
Sample Description	Compost Gas.		
Sample Condition	Sealed		
Customer Sample ID	Not Mentioned		
Sample Register NO	015-0904-2016-17		
Sample Receive Date	09.04.2016		
Test Start Date	11.04.2016		
Test End Date	11.04.2016		
TEST	PROTOCOL	RESULT	Unit
Carbon dioxide(CO ₂)	ASTM D1945	0.06	% v/v
Oxygen(O ₂)	ASTM D1945	21.52	% v/v
Methane(CH ₄)	ASTM D1945	0.015	% v/v
Hydrogen Sulphide(H ₂ S)	ASTM D1945	ND	(Below Detectable Limit)MVD, 100.00 ppm TCD
Carbon Monoxide(CO)	ASTM D1945	ND	(Below Detectable Limit)MVD, 100.00 ppm TCD
Nitrogen(N ₂)	ASTM D1945	80.359	% v/v

For PACIFIC LABORATORIES

AUTHORIZED SIGNATORY

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This report is true under the company's general conditions of service. Attention is drawn to the conditions of liability, indemnification and jurisdiction given without limits. This report shall not be reproduced except in full without the written approval of the laboratory.

Laboratory will follow Address: 118 A, Chaudhary Chavhan Road, Near to Mahalaxmi, LPO, New, Thane (W) - 400 001
 Tel: 022-2502190/91 Fax: 022-2502188/89 www.pacificlabs.com



Compost Analysis Report

Date: 14/03/2016
 Sample type: compost
 Sample receipt date: 04/03/2016
 Number of sample: 1
 Sample quantity received: 200g
 Date of report generated: 14/03/2016

Sr.no	Laboratory analysis	Standard values for Compost	Composition as per analysis (in %)
1	Color	Dark brown to black	Dark brown to black
2	Odor	Absence of foul odor	Absence of foul odor
3	Particle size	> 4 mm	1-2 mm
4	Bulk density (g/cm ³)	> 1	0.59
5	Moisture	15-25	27.23
6	Total Nitrogen, % by weight, minimum	0.8	2.66
7	Total phosphates P ₂ O ₅ % by weight, minimum	0.4	1.29
8	Water soluble K ₂ O % by weight, minimum	0.4	1.6
9	pH	6.5-7.5	5.18
10	Conductivity (dSm-1) not more than	4	5.55
11	Total Organic Carbon, % by weight, Minimum	12	27.75
12	C/N ratio	Less than 20	1.04



Microbiological analysis Report

1	Total Bacterial count	1.2 x 10 ⁶ CFU/gm
2	Total Fungal count	NL
3	Total Cell count	NL

Thanking you.

For
 Team Vision Ecologica Pvt Ltd



Smart Bin Parts Description

DESCRIPTION OF PARTS

Waste Input Door :
Air tight door with door sensor for waste input. As a Safety Feature, the Machine stops when waste input door is open in running condition.

HMI (Touch Screen) Display

Waste To Compost

Within 20 hrs

Compost Removal Door :

Outlet Pipe :
For exhaust air and water vapour.

Emergency Stop Switch :

Safety Features

<p>Please do not install on year own. Allow an authorised and trained person to install it for you</p>	<p>Do not put plastic bags or any Inorganic material in the machine.</p>	<p>Do not pour water directly in the machine.</p>
<p>If the mixing blades keep moving even when you open the waste input door, stop power supply and contact us.</p>	<p>Make sure that the power cable is not pressed or damaged.</p>	<p>Do not disassemble, repair or rebuild if you are not an authorised person.</p>



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Warranty

DMS Ventures Gen Trd LLC will offer **24 Months free Warranty** from the date of Installation for 250 Kg, 500 Kg and 1 Ton Smart Bin Waste to Compost Machine.

Training

DMS Ventures will provide comprehensive on-site hands on training to the DSO Support Staff responsible for handling the Smart Bin machine. The trainees will be trained in day to handling of machine, Dos and Donts associated with machine operation, health and safety measures and other technical aspects related to the Smart Bin.

In additional details User Manual, Trouble shooting, health and safety measures documentation will be provided.

Technical Support

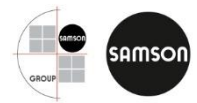
DMS Ventures Gen Trd Will provide a contact number which will be available 24x7 for client to call in case technical support is needed.



DMS VENTURES GENERAL TRADING LLC

Clients

SOFITEL
HOTELS & RESORTS
THE PALM, DUBAI



VULKAN





DMS VENTURES GENERAL TRADING LLC

Contact Details:

DMS Ventures General Trading LLC

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- **Sign Off:**

Rahul Dalwale

Pritam Deolekar

