Garbage to Green

Reddonatura

Sr. No	Description	Specifications	Remarks
1	Operating System	Fully Automatic Organic Waste Converter	
2	Composting Method	Aerobic Type	It's a 24-48Hrs food waste accelerated decomposition process
3	Capacity of the System	800KG	The system has an overall capacity to process 800KGs of waste. This system will include a Pre -Treatment Machine comprising of a Shredder and Dewaterer and an OWC Machine. The Pre-Treatment is capable to process 800Kgs within 2 Hours and the OWC should be designed accordingly to accomodate the Output from the Pre-Treatment.
4	Processing time	Within 24 to 36 Hours	24 Hours to 36 Hours has been mentioned because, different types of food waste take more time for processing. The Reddonatura Machines process the waste wherein it is not burning the content and due to advanced sensors that it uses, the process completes at a time when the decomposition is complete.
5	Proposed Model	RN800 PT	
6	Approximate Dimensions of the machine	2471 X 1158 X 1554 (mm)	Additionally 5 ft clearance is required from all the side for maintenance. Additional area would be required for the dry waste segregation
7	Dewatering system	This comprises of a shredder and a dewaterer. Both the shredder and the dewaterer are built into a single unit. The dimensions of the unit is 1300m x 800mm x 1200 mm. This machine is capable to process from 300kg to 500kgs per hour and the connected load of the unit does not exceed 6KW. The input feed should only be pre cooked food, post cooked food, and food left overs from the plates. Bones like fish bones and chicken bones will be allowed to added inside the unit. During the shredding & dewatering all the particles that would be lesser than 2mm in its size would be drained out along with the water. For purpose of operation, the unit will be connected to a water line wherein it would require about 10 to 12 liters of water per minute. The water will be drained automatically and the entire operation is automatic type with only manual intervention for the adding the waste inside the machine and to remove the food waste that would get collected automatically in a small bucket.The water outlet is connected to the stormwater drain or can be discharged to the STP wherein it can be interfaced with a grease trap	
8	Heat Produced during the process	Between 60°C ±10°C	
9	Material of Composting Tank	Stainless Steel 304 Gauge - 3mm	
10	Material of Exterior Panels	Stainless Steel 304 Gauge 1.6mm	
11	Material of Top Panel	Stainless Steel 304 Gauge 2mm	
12	Material of Shaft & Mixing blades	Solid Shaft Stainless Steel 304. Mixing blades are made of SS 304	
13	Control System	PLC OPERATED With 7.7" Touch Screen HMI, Make - DELTA.	

Sr. No	Description	Specifications	Remarks
14	Heater system	Thermic Heater / Ceramic Heater	For the purpose of heating the machine has the most optimised method. The heating is not direct type by fixing heaters to the vessel but rather it is indirect heating. Energy efficiency playing an imporrtant role, this heating has high thermal efficiency and to reduce thermal losses, ceramic wool insulation is done. The densityof the ceramic wool used is 64 KG density and 100 mm thickness
15	Drying System	In Built	
16	Volume reduction	80% to 90%	Atleast 80% to 90% volume reduction is achieved.
17	MS Treatment	All MS materials are shot blasted along with 2 coats of primer and epoxy with black paint for a longer life.	
18	Switch Gears	L&T/Siemens/Schneider	
19	Power Supply / Voltage	220 / 440 V	
20	Power Rating	8KW + 6KW	To have the most energy efficient system, the overall system comprising the pre treatment and the OWC does not exceed more than 8KW
21	Waste input & compost removal provision	Available	
22	Waste Overload Function	Available	
23	Door Sensors	Available	
24	Indicators for Power mode, heater & power saving mode.	Available	
25	Weather-proof Exteriors	Stainless Steel 304, However, shed needs to be provided if kept outdoors	
26	Gear Box	SEW/ D D Drive	Shaft Mounted Parallel Shaft
27	Gear Motor	SEW/ D D Drive	The gearmotor is IE2 & in compliance with the international norms pertaining to safety and efficiency. IE3 can also be offered additionally if required.
28	Blower	SS Impeller Type	
29	Blower Motor	0.5HP	
30	Wheels	Breakable Wheels	The offered wheels are very compact in size. The load bearing capacity of each wheel is atleast 600 KG each. The nuts and bolts of the wheels are galvanised .
31	Weight of Machine	1700Kgs	The weight of the Pre Treatment machine is within 192 Kgs and the weight of the OWC machine is 1500Kgs Approx.

Sr. No	Description	Specifications	Remarks
32	Treatable items	Pre cooked food, post cooked food, food left over from plates & garden waste. Hard & long bones & coconut shells cannot be added into the machine. Branches more than 1.5" dia should be shredder before adding	
33	Untreatable items	Inorganic Hard Materials	
34	Safety Features	Over current, under current, Reverse power, Phase failure, Over temperature	
35	Other Additional Features	Humidity controller, drive failure sensor, Top door, front door sensor, Light indicator with tower lamp, annuciation sound, compost process complete indicator, Password protected HMI panel. The HMI panel also offers a log histrory of any problems / failures in the machine	
36	Lechate & harmful gases	Not Allowed	There is no harmful gases or lechate bieng emitted or discharged from the system.
37	Raw Compost Removal	6 to 7 days	Raw Compost removal is subject to the kind of waste that is added into the machine. Please note that if the input is only leafy vegetarian waste or high in moisture but low in oil content, the volume reduction will be greater giving us more days within the vessel
38	Control Panel & Electrical switch gear	Asthetically designed control panel, with individual safety door for the panel & ventilation provided. All internal components are schneider / equivalent. The entire machine operation is easily done thru the touch screen panel on the machine.	
39	Tower lamp with Annuciation	The machine has a tower lamp by which any faults or errors are indicated . Further more there is also be an annuciation sound informing of any abnmormalities in the machie. The machine also indicates as when the process is completed.	
40	Connection to BMS	The machine can be connected to BMS via RS 485 port if required. The charges will be additional for the same	
41	Shed Required	Yes, in Outdoor shed is required to protect from Rain and connection to drain along with 3 Phase Power required.	If placed indoor, requires ventilation and exhaust system along with connection to drain line and 3 Phase power to Protect from Rain
42	Operational Equipments	Shovel and stand	2 steps of MS provided.
43	Operators / Man power Required	A part time laborer	To segregate the waste, collect organic waste and dump it to the OWC for processing.Collect the compost as and when required.
44	Piping / Exhaust for Moisture	Pipe connection system from exhaust to underground sewage line	Standard piping system. (Connection from machine to pipe in customer scope)