

Green Waste Reprocessor for Green Rejects / Waste

The pace of urban plantation is commendable and has started showing its result in visibly increased urban green cover as well. Our Metro cities have most beautiful green areas around. A huge amount of green waste generating from parks, forests, private gardens, vegetable markets, temple flowers, hotels, hostels, industrial catering unit etc. needs to be managed in such a way to create minimum pollution.

Green Waste Reprocessor (GWR) machine unit has very small size of 10'x10'x10' with less than 4 ton of weight. The unit is capable of reprocessing up to 3 MTD of green waste on site. The end product is a solid biomass, and liquid compost for various usages, primarily in energy and organic manure. GWR is a one stop solution for 'Total Elimination' of the entire organic reject at the place of its generation. The by-product of this machine can be used for green energy solutions. Once the capex is met for the installation of unit, the entire operation is self-sustainable. The unit is capable of recovering the cost of manpower.

GWR unit was procured by CPWD and Horticulture Department, NDMC for their green waste to manage the green waste at source in decentralized manner. GWR unit is presently available in 3 different variants for re-processing different types of wastes viz. Vegetable mandi waste, Temple waste and Garden waste.

Process: The plant works in reprocessing mode to take continuous input and gives continuous selectable output. Manual worker segregates all inorganic materials from input content and put into a bin ready to go at machine input. Worker put input content at hopper by checking the right mix contents to maintain moisture balance. It takes load of more than 2 ton per day in 8 to 10 hours at top loading input hopper manually feed through stairs. Sensors inside reprocessor unit check and maintain right moisture into granules and tiny particles at input and process within by providing right temperature and steam into all content therein. There is provision of optional add-on-content also. Since one section of processor works continuously, and other section of processor works in interruption mode to allow timings to worker to provide input and works to conserve electricity as well. Within this time, processed output is available at reprocessor output to feed into low noise densifier unit, through operator friendly AQC unit to control and minimize the frequent trip time of advanced densifier and to minimize the operational load of operator, with help of sensor controlled electronic modules.

Design: Low electricity consumption, low noise during operation, steam router, fully automated control panels, by product weighing mechanism, bio-metric system based operation are some of the aesthetic and user friendly elements in the designing aspect of the plant. All above component are made of different grade of stainless steel, galvanized steel and mild steel, and durable indigenous components, are assembled on rigid & strong structure and whole assembly are compacted into soundproof enclosure aesthetically. Regular operation and maintenance assure its long life.

Utilisation: The machines are required by all PWD/ Corporations/ CPWD/ Development Authorities of all States/ Cities. All of them have a separate horticulture department which faces major issues. Most of the big parks are managed by these bodies and any big park

shall require a machine to re-process green waste. At the same time, if parks are small enough then one machine can take care of all the parks in a colony and RWA's can be utilised to make sure all green waste is re-processed. At the same time this solution can be implemented by Agriculture Mandi's/ Food Parks, Cow Sheds, and Big temples as a lot of vegetable waste, cow-dung, and flower waste is available from these places respectively.

Costing: While the machine is self sustainable in itself and the sale of produced energy sticks/ compost shall make sure that project breaks even in 5 years, additional benefits like employment, reduction of dependance on fossil fuels, drastic reduction in landfill requirement area, carbon credits etc are some of the advantages which cannot be quantified. One machine costs approximately Rs. 30.0 lakh which includes first year of operation & maintenance, and 1 year warranty.

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