



## **DOMESTIC BIOGAS PLANT USER MANUAL**

**APPLICATION**

**DOMESTIC BIOGAS PLANT FOR THERMAL APPLICATION**

**PREPARED**

**BY**

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## **Types of Waste**

### ***Do's***

Use only wet organic biodegradable waste such as Food waste, Vegetable waste, Fruit waste, green leaves, Rice wash water & Rice Kanji etc.,

### ***Don'ts***

Do not use Papers, Plastics, Glasses, Sand, Stones, Chemicals and Metal particles, Bones, Dry leaves, Stems & Sticks, Pseudo stem (Banana stem), Egg shells, Fibres (like Drumstick skin, climbers, etc.).

## **Waste Handling**

### ***Do's***

- Wet organic waste fed into the bio-digester should be in semi solid or liquid form.
- Solid waste (Such as Food wastes, vegetable wastes, rotten fruits, etc.) should be mixed with water in a ratio of 1:1.

### ***Don'ts***

- Do not dump solid waste without adding water into the bio-digester.



## Installation

- The portable biogas plant should be properly unloaded from vehicle without any damage.
- The Biogas plant can be kept anywhere (open space where sunlight is exposed) either on the ground floor or in the terrace or underground (either partially or fully buried into the soil).
- The platform where the biogas plant is kept should be an even surface in order to avoid any damage in the bottom of FRP made biogas portable model.

## Bio-Digester Application

- After placing the biogas plant in a proper location/position, start feeding the initial start up (Cow dung mixed with water in a ratio of 1:1) through the inlet pipe.
- Initial start up (Cow dung) should be fed into biogas plant until it overflows out of the outlet pipe.
- Then fill water in the water jacket portion of the biogas plant.
- Close the gas outlet line gate valve fitted on top of the floating drum in the biogas plant.
- Wait for the completion of retention time (30 days) so that the biogas generated is stored in the floating drum.
- Expel the first filled gases out, by opening the gate valve. Do not use the first filled gas.

- Connect the gas outlet line to the biogas stove with the help of flexible compressor air hose after completely expelling out the first filled gas.
- From next day onwards, start feeding the organic waste into the biodigester and start using the biogas from the floating drum for thermal application.
- Do not over feed the biodigester. Feeding Limit is as mentioned below.

Capacity of the Biodigester	Feeding Limit in kg/Day
0.5m <sup>3</sup>	2
1m <sup>3</sup>	6
2m <sup>3</sup>	15
4m <sup>3</sup>	30
5m <sup>3</sup>	35
6m <sup>3</sup>	40

- Collect the manure from outlet pipe and use it for garden as Organic Manure for plants growth (Fertilizer).



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