

# FOOD WASTE BIOGAS PLANT

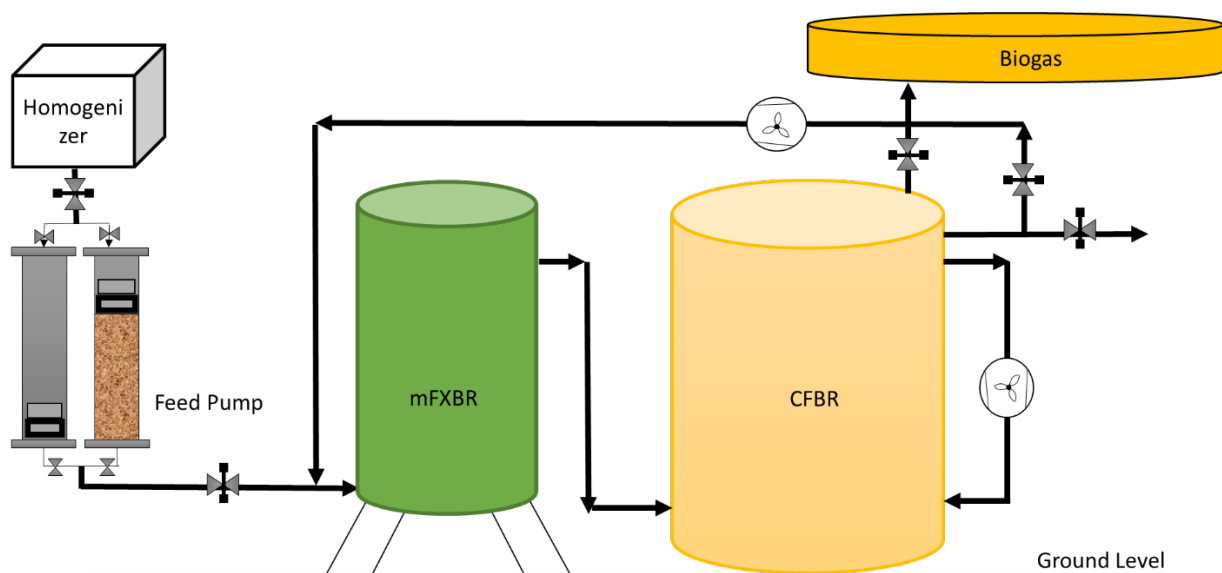
## BIOGAS PLANT

The solution comes pre-fitted with all the components, thereby minimising installation time. Unlike traditional solutions, it is a complete solution consisting of an input system with shredders, a gas storage system, sludge collection system and gas piping to the kitchen along with burners and generator.

The Kitchen & food Waste Biogas Plant is designed to treat organic household food waste & water, rather than Cattle dung as in conventional Biogas plants. The main feedstock for bio-gas plant is leftover cooked food, peels of fruits & vegetables or other organic waste generated in kitchen or fruit & vegetable market on daily basis. Waste water like water used for cleaning vegetables or pulses or rice or waste water from domestic RO system is used as feed stock. No extra culture or enzymes is required on daily basis to get biogas. Food waste and waste water is poured into the inlet of the Biogas plant. Biogas is gradually collected in the gas holder as the waste decomposes and a pipe is used to take it to a special biogas stove in the kitchen or generator. A valve is used to open & shut the flow and regulate the flame. The effluent from the plant is virtually odourless and nutrient rich manure with high contents of Nitrogen, Phosphorous & potassium, which can be used as a garden fertilizer.

## FOOD WASTE DIGESTER TECHNOLOGY

The food waste digester is a combination of novel circulating FLOATING BED REACTOR (CFBR) AND MICROBIAL FIXED BED REACTOR (MFXBR) TECHNOLOGY which can handle any quantity of food waste and digest it onsite. Food waste digester is an innovative and efficient design for digesting food waste efficiently. For better efficiency and performance the Food waste digester consists of specially designed plastic carrier with different size distribution which effects the methanogens accumulation thus increasing the methane production. The biomass accumulation and retention in the system was practically estimated during specialized in-house R & D activities.



**BENEFITS**

- No solids to manage
- Easy, on-site food waste solution
- Food waste digested to Methane and waste water
- Labour & money saving
- Water from food waste totally reclaimed
- Better waste stream separation & recycling, plus effective food waste management
- Environmentally-sound solution
- Safely disposes of all food waste at source, no transportation
- Works all year round
- Help to keep wheelie bins clean
- East to set up and maintain
- Do not attract vermin
- Reduced greenhouse gases

**SIZES OF THE BIOGAS PLANT ITEMS**

FOOD WASTE REQUIRED UP TO (KG per day).	1000	2000
BASIC SIZE OF THE PLANT (Biogas production capacity in Cubic Meter)	100	200
<b>OPERATING PARAMETERS</b>		
BIOGAS PRODUCTION (Equivalent to KG LPG in KG per day)	40	80
WATERY SLURRY (Cubic Meter per day)	3	6
<b>ACCESSORIES PROVIDED WITH THE PLANT</b>		
BIOGAS HOLDER BALLOON	100 CUM	200 CUM
BIOGAS BASED GENERATOR OF CAPACITY (KVA)	15	30
<b>AREA AND OPERATION</b>		
AREA REQUIRED (SQ. FEET)	10 X 40	10 x 40
PLANT COST (RS. IN LAKH)	23	30

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