



“DO IT YOURSELF BIOGAS KIT”

Introduction

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- Dhi Mahi Sustainable Solutions wants to expand our collaboration with the Government of India, Local and International NGOs, Private Sector and Stakeholders in Renewable Energy by bringing in solutions for –
 - Providing reliable access to clean renewable energy, organic fertilizer for agriculture use, waste management and sanitation solution
 - Provide waste management infrastructure and gas production to improve the GDP of the poor in the country
 - Reducing negative environment impact
 - Reduce deforestation
 - Reduce GHF emissions caused by charcoal and wood fuels for cooking
 - Improving health and save lives and decrease the risks of respiratory and ocular infections among women and children
 - Increasing agricultural and crop production through use of organic fertilizer
 - Empowering farmer widows and facilitating an additional source of income for them

“Do It Yourself BioGas Kit”



Different than Traditional BioGas System



- Smaller Footprint
- Compact and Integrated
- Off-Grid System (No Power Consumption to operate)
- Completely Integrated
- Easy to Install (setup time – maximum 1 to 2 hours)
- One-Time Activation using -
 - The Natural way using Animal Manure, **OR**
 - Bacteria Setup Kit
- Uses an anaerobic process
- Can be made Mobile, if required (Can be loaded on a Vehicle)
- “Near Zero” Maintenance Costs
- Available as –
 - 2.1 Cubic Meter Biogas Kit Solution,
 - 4.0 Cubic Meter Biogas Kit Solution (**LAUNCH by JUNE 2020**)
 - 7.0 Cubic Meter Biogas Kit Solution

“Do It Yourself BioGas Kit” Components



“Do It Yourself BioGas Kit” – Environmental Impact



- One (01) Kit **Reduces 6 tons of Carbon Emissions per year**
- Equivalent to taking One (01) Car Off the Road!!



Product Technical Specifications for 2.1 Cubic Meters Solution



- Daily Waste Input
 - Up to 06 liters (qt) of Food Waste or
 - Up to 20 liters (qt) of Animal Manure
- Output Gas
 - Clean Biogas (approx. 65% CH₄, 35% CO₂) Nominally 700 liters (approx. 3 hours of Cooking)
- Fertilizers
 - Treated Natural Liquid Fertilizer
- Nominal Gas Pressure
 - 10 Mill bars
- Temperature (Day / Night / Average)
 - Above 20 Degrees Celsius for Consistent Gas Production
- Distance of the System from the Kitchen Stove – 6 metres / 20 feet
- Dimensions
 - 125H / 210L / 115W cm (49'H x 83'L x 45'W)

Product Technical Specifications for 4.0 Cubic Meters Solution



- Daily Waste Input
 - Up to 12 liters (qt) of Food Waste or
 - Up to 40 liters (qt) of Animal Manure
- Output Gas
 - Clean Biogas (approx. 65% CH₄, 35% CO₂) Nominally 1200 liters (approx. 3 hours of Cooking)
- Fertilizers
 - Treated Natural Liquid Fertilizer
- Nominal Gas Pressure
 - 10 Mill bars
- Temperature (Day / Night / Average)
 - Above 20 Degrees Celsius for Consistent Gas Production
- Distance of the System from the Kitchen Stove – 6 metres / 20 feet
- Dimensions
 - 130H / 300L / 150W cm (51`H x 118`L x 59`W)

Product Technical Specifications for 7.0 Cubic Meters Solution



- Daily Waste Input
 - Up to 20 liters (qt) of Food Waste or
 - Up to 70 liters (qt) of Animal Manure
- Output Gas
 - Clean Biogas (approx. 65% CH₄, 35% CO₂) Nominally 2500 liters (approx. 6 hours of Cooking)
- Fertilizers
 - Treated Natural Liquid Fertilizer
- Nominal Gas Pressure
 - 10 Mill bars
- Temperature (Day / Night / Average)
 - Above 20 Degrees Celsius for Consistent Gas Production
- Distance of the System from the Kitchen Stove – 14 metres / 40 feet
- Dimensions
 - 130H / 400L / 150W cm (51` x 157` x 59`)

Safety & Certificates



- There are no issues on as regards the Safety of the “Do It Yourself Biogas Kit”
 - The “Do It Yourself Biogas Kit” uses an anaerobic process to generate Biogas.
 - The “Do It Yourself Biogas Kit” generates Clean Biogas (approx. 65% CH₄, 35% CO₂)
- The Liquid Fertilizer produced is tested by a Recognized National Testing Laboratory in Chennai
- “Do It Yourself Biogas Kit” is a product from HomeBiogas, Israel and has been sold in 90 countries worldwide till date.
- The “Do It Yourself Biogas Kit” is –
 - tested by and received the **European Community CE stamp of approval for safety**
 - received two ISO certifications: **certification 9000 for Quality Management** and **14000 for Environmental Management**
 - tested by and **approved for safety and health by the Israeli Ministry of Environmental Protection** and the **Ministry of Energy Infrastructure**

Testing Report for the Liquid Fertilizer in India



- The Liquid Fertilizer generated by the Biogas kit has been tested in India (vide Test Report No. F02-1902270447) by the Interstellar Testing Centre (ITC Labs) in Chennai found to be safe
- Test Result Parameters -
 - Chemical Parameters
 - pH Value – 8.40
 - Nitrogen (mg / L) – 0.03
 - Solubility in Water – Soluble
 - Temperature (in Celsius) – 25.2
 - Heavy Metals
 - Lead as Pb (mg / L) – BLQ (LOQ: 0.01)
 - Potassium as K (mg / L) – 522.06
 - Phosphorus as P (mg / L) – 2.2
 - Mycotoxins
 - Total Aflatoxin (B1), (B2), (G1), (G2) (ug / L) – BLQ (LOQ: 0.50)
 - Microbiological Parameters
 - Total Plate Count (CFU / ml) - 650000
 - E.coli (CFU / ml) – 10
 - Listeria monocytogenes (Per 25 ml) – Absent
 - Fecal Coliform (MPN / ml) – 46
 - Vibrio cholerae – Absent
 - Salmonella – Absent
 - Clostridium perfringens (CFU / ml) - < 1

“Do It Yourself Biogas Kit” and NNBOMP



The "DO IT YOURSELF BIOGAS KIT" solution supports the Objectives of the New National Biogas & Organic Manure Programmer (NNBOMP) of the Ministry of New and Renewable Energy (MNRE) of the Government of India as it –

- Provides **clean cooking fuel** for kitchens, lighting & meet small power needs of farmers / dairy farmers / users including individual households & it also aids & helps to improve organic manure system from our biogas solution in rural & semi urban areas.
- **Mitigates drudgery of women** & time saving for them for other livelihood activities & reduce pressure on forests & accentuate social benefits;
- Can **improve sanitation in rural & semi-urban areas** including linking sanitary toilets including cow dung with our biogas solution;
- Provides **enriched liquid organic bio-manure to help reduce use of chemical fertilizers** such as urea. The liquid organic bio-manure can be linked with enrichment units such a vermicomposting, Phosphate Rich Organic Manure (PROM) plants & other organic enrichment facilities as a source of value addition.
- Helps **meet "lifeline energy"** needs for cooking as envisaged in "Integrated Energy Policy" of NITI Aayog.
- **Helps in combating & reduction in causes of climate change** by preventing emissions of Green House Gases (GHGs) such carbon dioxide & methane into the atmosphere.

“Do It Yourself Biogas Kit” and NNBOMP Contd...



Under the **New National Biogas & Organic Manure Program (NNBOMP)** of the Ministry of New and Renewable Energy (MNRE) of the Government of India, the **subsidy available for the “Do It Yourself Biogas Kit” Solution is as follows (as per notification of 30th May 2018) -**

- **NER (NE Region) States including Sikkim and including SC & ST Categories of NER States. - Rs. 22,000/-**
- **Special Category States (Jammu & Kashmir, Himachal Pradesh, Uttarakhand and Andaman & Nicobar Islands) and Scheduled Castes / Scheduled Tribes of all States. - Rs. 13,000/-**
- **All Other States (General Category) - Rs. 12,000/-**

BioGas Installations...



People from **90 countries** around the world are embracing **HomeBiogas** in their backyards! By treating their waste locally, reducing greenhouse gas emissions and creating renewable energy, these biogas users are today's noble change makers.







**Thank you
and
Looking forward to partnering with YOU
for the BioGas Kit**

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