



# Energy from Solid Bio Waste

## Technology provided by BARC

The modern cities of the World generates mind numbing quantities of wastes, a substantial part being bio degradable solids, which need to be Processed and Recycled properly to maintain the natural balance of essential elements in the environment.

Improper Disposal of these bio degradable wastes may lead to disruption of biogeochemical cycles of several elements and will have long term effects on biosphere.

The process Involves segregating the Bio waste and

turning it into a slurry form in a mixer. The aerobic digestion of the slurry is carried out in a Pre-digester tank using thermophilic bacteria and hot Water. This is followed by anaerobic digestion by methanogenic bacterial consortium in the Main Digester Tank. The biogas (mainly methane) is tapped from the floating head of the Main Digester Tank and the residual slurry is sent to manure pits where the nutrient-rich water from Manure separates out. This water can be recycled for gardening purposes.

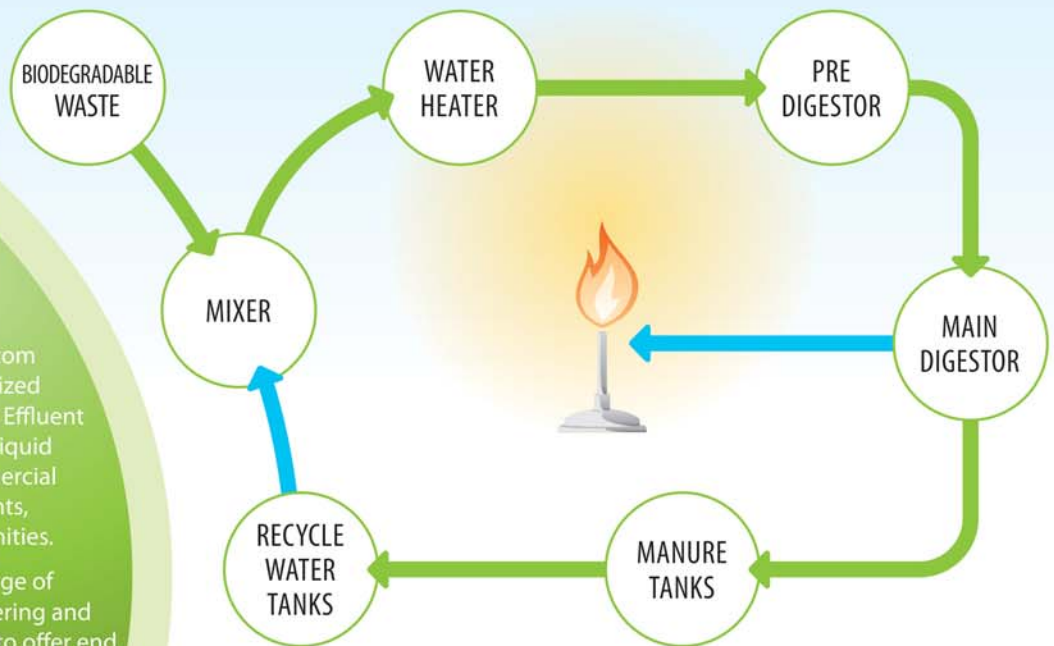
### About QUALICOM

Qualicom specializes in Environment Engineering and Water Resource Management.

For last more than 15 years, Qualicom has been innovating highly optimized solutions in Raw Water Treatment, Effluent Treatment and Recycle and Zero Liquid Discharge to Industrial and Commercial Institutions, Defence Establishments, Municipalities and Urban communities.

Qualicom integrates extensive range of technologies with design, engineering and project management capabilities to offer end to end solutions to the industry.

The essence of research and development in Qualicom is to make the resource recyclable and to make the entire waste management scheme energy positive while optimizing both the capital and life cycle cost of the treatment schemes. In Qualicom, we believe in building an environment of Sustainable and Inclusive growth.



### ENSO offers a "Zero effluent" method for management of solid waste.

Miles ahead of the other prevalent ways of handling solid waste like:

- 1) Incineration : Causes respiratory illness
- 2) Landfill & Dumping : Health-hazard-insects, rodents etc. Creates air pollution, Ground water and run-off pollution.
- 3) Composting : Mostly unviable because of the space requirement.



Model	Suitable for	Bio gas (M <sup>3</sup> / day)	LPG Equivalent (Kg/ day)	Manure (Kg/ day)	Space (Mtr. x Mtr.)
EN 25	50 persons	1.5-3	0.7-1.5	2.5	1.5 x 2.5
EN 50	100 persons	3-5	1.5-2.0	5.0	2.0 x 4.5
EN 100	200 persons	7-10	3.0-4.0	10	3.0 x 7.5
EN 200	400 persons	15-20	6.0-8.0	20	4.0 x 10
EN 500	1000 persons	40-45	18-20	50	5.0 x 15
EN 1000	2000 persons	80-90	36-40	100	10 x 10

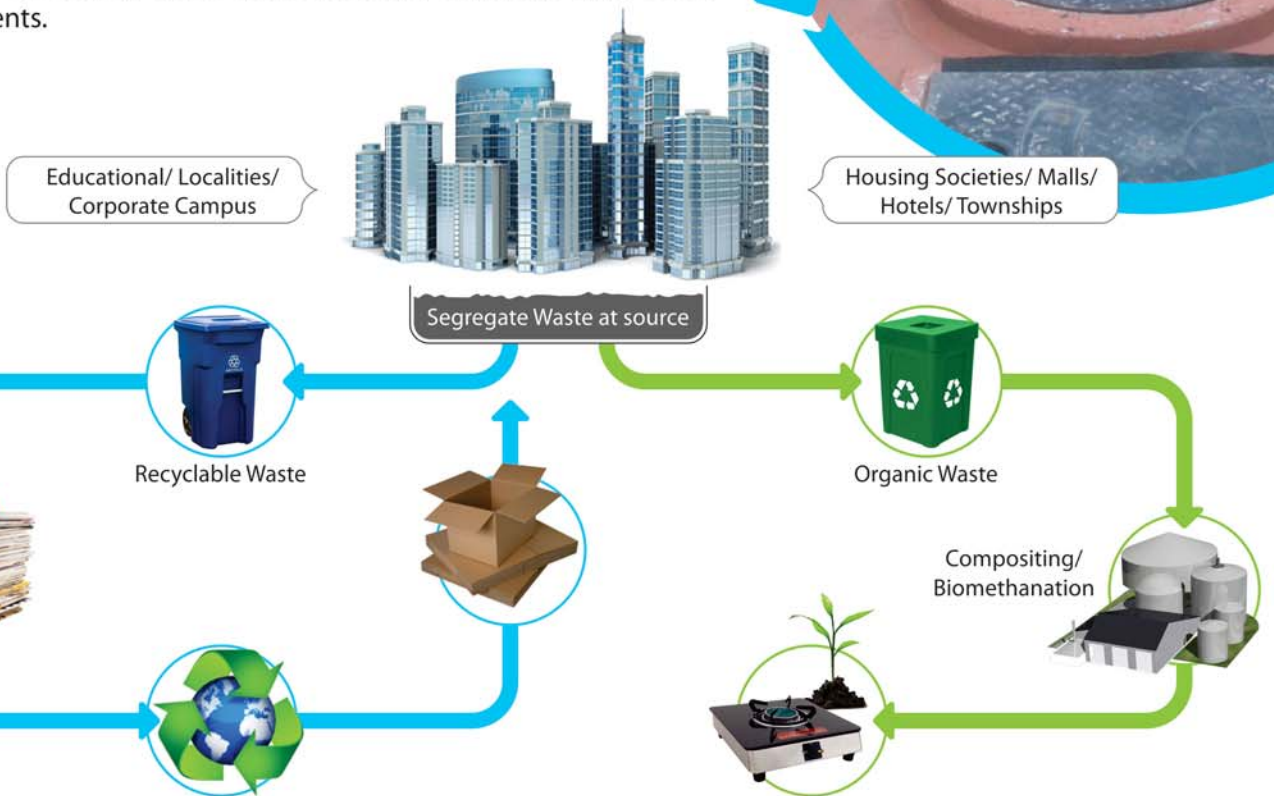
\*All models are available in civil and below EN200 prefab also.

## The ENSO Advantages

- 1) Most Environment friendly disposal of solid bio waste.
- 2) Generation of fairly good amount of biogas, which can be used as an alternative to LPG as domestic fuel.
- 3) Generation of high quality, weed free manure, which is an excellent soil conditioner.

## Applications

ENSO is specially designed for Hospitals, Hotels & Restaurants, Hostels & Housing Societies, Office and Industrial Canteens and Govt. Establishments.



## QUALICOM SOLUTIONS (P) LTD

### Regd. Office :

C-68 Palaspalli, Bhubaneswar 751 020, Odisha, INDIA.  
Phone : 0674 259 4474 / 75, Fax : 0674 259 4476

### Head Office :

31 C R Avenue, 2nd Floor, New Asiatic Building, Kolkata 700 012,  
West Bengal, INDIA. Phone : 033 2211 0031

• Bhubaneswar & Raipur: 0 94382 00491 • Siliguri, Guwahati & North East: 0 94382 00494 • Kolkata: 0 70440 78069 • Pune: 0 75950 52199  
• Hyderabad & VIZAG: 0 76040 34371 • Jamshedpur, Ranchi & Patna: 0 70447 01913 • Bangladesh: 0 83369 43480

Website : [www.qualicomindia.com](http://www.qualicomindia.com)

