Flycatcher® Technologies

Flycatcher Technologies LLP

Rhino Biodigester

India & waste

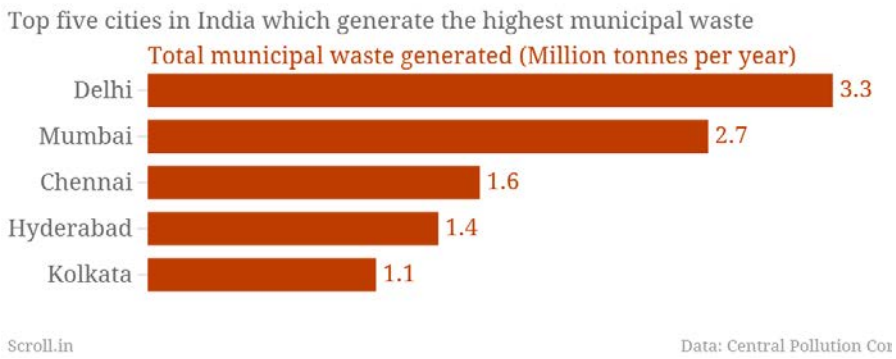
Municipal solid waste has become one of the largest contributors of pollution globally, and especially in developing economies like India. Landfills have marred our city-scapes and polluted our air and water.

Landfills are no more a solution.

- Hazardous Emissions & frequent fires!
- Ground water contamination
- Very poor sanitation condition, Slums all around
- Air quality degrading day by day
- Breathing problems and Poor Health

Swaach Bharat

Government of India, issued SWM. Rules 2016, Making it Mandatory to Segregate waste at source into bio-and non-biodegradable fractions.



Key Points of SWM 2016
II Sec 3(ii) Rule 4

(1) Every waste generator shall
(a) Segregate and store the waste generated by them in 3 separate streams namely biodegradable,Non Bio degradable, Domestic Hazardous wastes in suitable bins and handover segregated waste to authorised waste pickers or waste collectors as per direction or notification by local authorities from time to time
(2) No waste generator shall throw, burn or bury the solid waste generated by him on streets, open public spaces outside his premises or in a drain or water body.

(7) All gated communities and institutions shall ensure segregation of waste at source, collection of segregated waste, handover of recyclable material to authorized waste pickers/recyclers, The biodegradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises.

Bio-degradable fraction to be treated via Bio-methantion & Composting method -Refer Clause 15(V).

Incineration of only Non recyclable RDF (Refuse Derived Fuel), having calorific value of1500 Kcal/kg or more - Refer Clause 21(1).
Higher Calorific value waste (RDF) to be supplied for co-processing to Power plants and Cement kilns - Refer clause 15 V (b), 21 (2).

Emission standards include Carcinogenic compounds like Dioxin, Furan & Heavy metals with mandatory online sampling (C).

Fly ash, Residue & Bottom ash to be sampled and disposed in Hazardous Waste Handling facility - (Note d).

Other measures include Odor control, Effluent treatment, Proper enclosed sheds, health & hygiene safeguards.

Our Story

Waste lying by the roadside is a common sight in our cities across the country, the foul odor from the putrefying waste bothers all those who pass by, the toxic liquid that leaches out pollutes the environment, and yet there appeared no working solution.

Dr. Kabir Udeshi believed this was unacceptable and set out to design and build a machine that could treat the wet biodegradable waste and convert it into useful byproduct's this was the beginning of what is today flycatcher Technologies LLP.

Flycatchers are birds found in almost every part of the world – yet each one is unique. We celebrate this diversity in life while uniting for the common values that we share as part of the planet.

The business model aims to create a platform for all connected (employees, business partners, and clients) to be disciplined, challenged, responsible, and free to express their individual creativity.

Team

Flycatcher is a motivated team on a mission! A wide range of experience and high quality technical skills results in products that are one of a kind and reliable. Each product has over 250 unique parts that are chosen for their quality and ability to be recycled after the operation life of the product. Anything that we put out has a positive impact on the ecology. We invite you to be part of the growing extended family of people committed to making India a true “Swaach Bharat”.

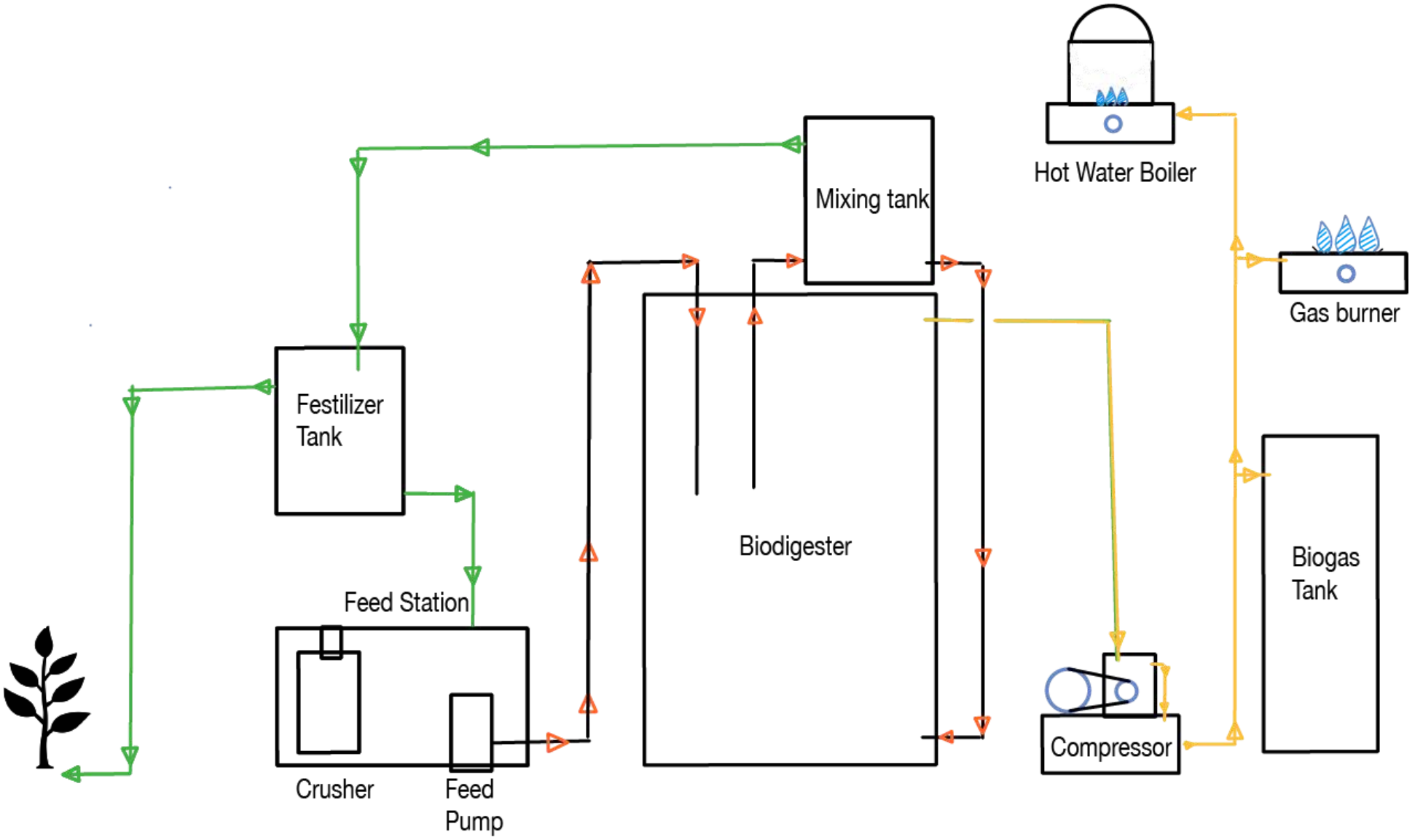
Dr. Kabir J.Udeshi

An inventor who loves getting his hands diry creating elegant systems. This highly trained engineer has developed system from micro to mega, some of which are being used in the largest refineries in the world. He has an un- dergraduate degree from the University of Pune and a Masters and Doctoral degrees from the University of Michi- gan, Ann Arbor. Kabir took on the challenge of processing waste by making his house zero waste in 2010. He founded Flycatcher Technologies LLP as a vehicle to realize the vision of a sustainable future where every house and organization processes its solid waste into resources.

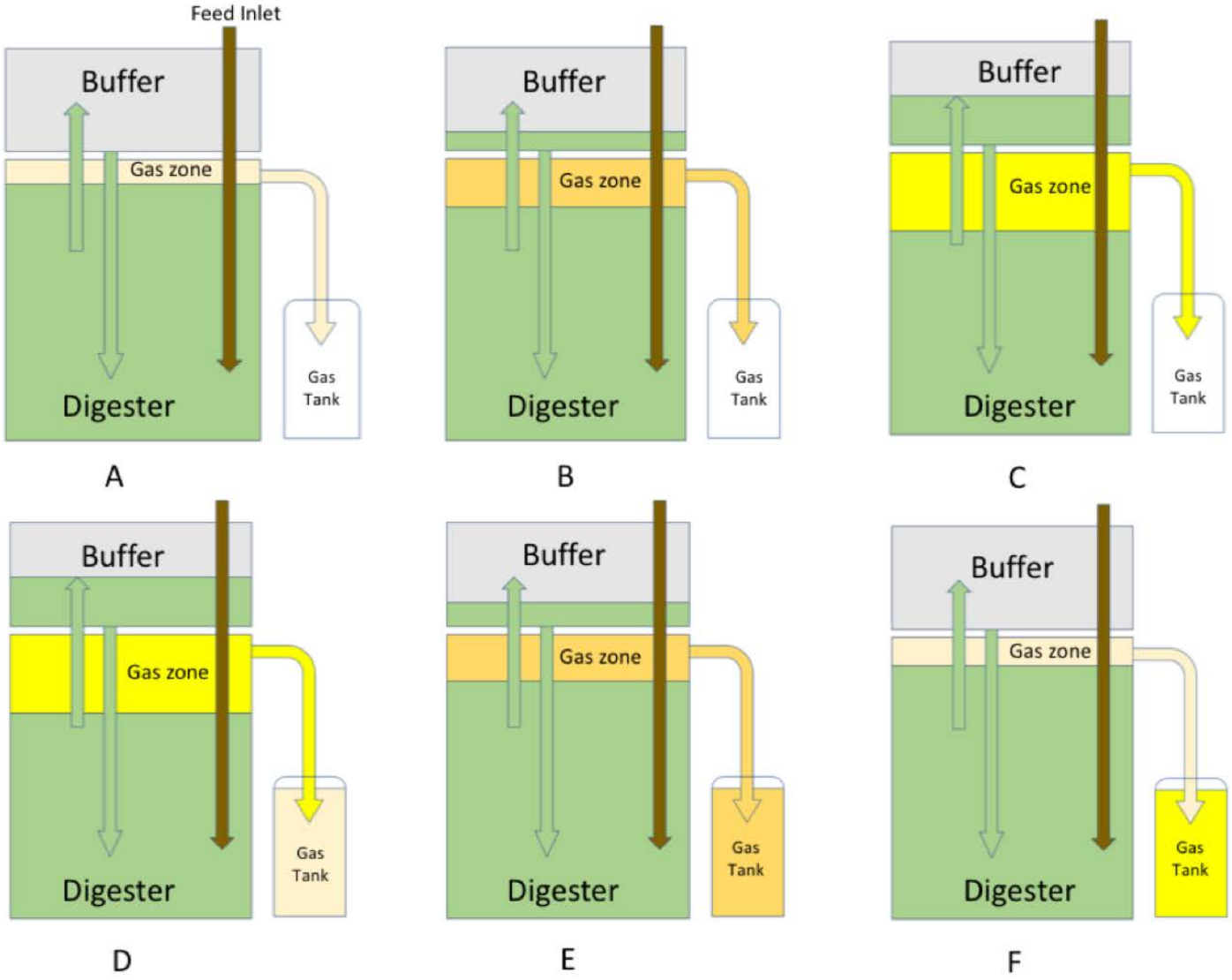
Richard Dias

Richard is a key figure driving responsible waste management in India. He has been advocating the principles of “Zero Waste” since early 2000’s, and was instrumental in setting up and managing the Integrated Waste Management facility at Saligaon, Goa. His experiences in the field have resulted in creation of the tools needed for conveniently processing food waste at source. This approach is agreed to be the most economical and ecologically sensitive method forward and has been incorporated into the laws of India. Richard joined team flycatcher as a Founder in 2018

Process Flow



How It Works


Feed Inlet
Buffer
Gas zone
Digester
Gas Tank
A
Buffer
Gas zone
Digester
Gas Tank
B
Buffer
Gas zone
Digester
Gas Tank
C
Buffer
Gas zone
Digester
Gas Tank
D
Buffer
Gas zone
Digester
Gas Tank
E
Buffer
Gas zone
Digester
Gas Tank
F

Unique Features

The Rhino Digester is an indigenous patented technology that uses high quality material and processes to ensure you get a robust and dependable machine.

- FEED & FORGET
- AUTOMATED MICROPROCESSOR CONTROLLED SYSTEM
- IOT Based REMOTE MONITORING
- COMPLETELY SEALED PLUG & PLAY DESIGN - NO ODOUR
- INTEGRATED FEED STATION WITH CRUSHER.
- PROFFESSIONAL AFTER SALES SERVICE
- COMPACT DESIGN NEEDS MINIMUM SPACE

Advantages

- CONVERT THE WASTE INTO A READY TO USE FUEL (BIOGAS)
- THE LIQUID OUTPUT IS A NUTRITIOUS PLANT GROWTH PROMOTER
- REQUIRES MINIMUM MANPOWER FOR OPERATIONS
- COMPACT DESIGN REQUIRES MINIMUM SPACE
- WASTE CAN BE PUMPED TO THE DIGESTER FROM THE KITCHEN
- NO ODOUR AND RODENTS.

Specifications

Rhino Model	Biogas Kg/day	Power Supply	Power KWh/Day
75	7.5	415	10
150	15	415	15
300	30	415	25
500	50	415	40

Specifications	
Control System	• Microprocessor based • ATmega328
Maximum Waste Processing Capacity	• 75 to 500 kg/day -*Under standard test conditions
Type of waste	Mixed Kitchen Waste
Bio-gas generated	Approx 10% of waste input
Typical bio-gas composition	60%-70% Methane + 30-40% CO2 + Traces of H2S and Moisture
Bio-gas storage	Integrated
Organic fertilizer generated	Liquid Fertilizer, quantity is equal to the input feed
Water Requirement	Minimal, only for cleaning, water must be free of chemicals
Manual Log	Waste Feed Quantity
Feed station	Yes Integrated
Warranty	1 year.

Awards

Maharashtra State Innovation Society

महाराष्ट्र शासन

Maharashtra Startup Week 2019

CERTIFICATE OF APPRECIATION

Presented to

Flycatcher Technologies LLP

for being one of the top 100 finalists of
Maharashtra Startup Week,
held from 28th January to 1st February 2019.

MAHARASHTRA STARTUP week

#MahaStartupWeek

Maharashtra State Innovation Society

VIRENDRA SINGH, IAS
CEO, Maharashtra State Innovation Society

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE & INDUSTRY
DEPARTMENT OF INDUSTRIAL POLICY & PROMOTION

Swachch Bharat Grand Program 2018

स्वच्छ भारत

एक कदम स्वच्छता की ओर

CERTIFICATE OF AWARD

Second Prize Awarded to

Flycatcher Technologies LLP
(Mr. Kabir J. Udeshi and Ms. Carrie Ann Udeshi)

in

The Waste Management Category

The startup has created a storage-unit to process and convert waste material into bio-gas to be used in household kitchens.

Date: 26th December 2018

Ramesh Abhishek, IAS
Secretary to Government of India
Department of Industrial Policy & Promotion

#startupindia

Our Clients

FORTUNE
MIRAMAR
GOA
Member ITC's hotel group

Municipal Corporation of Greater mumbai

birac
Ignite Innovate Incubate

HANDS THAT CARE
CORPORATION OF THE CITY OF PANAJI

GSUDA

VALPOI MUNICIPAL COUNCIL

HFH
HOLY FAMILY HOSPITAL &
MEDICAL RESEARCH CENTRE
Bandra , Mumbai

- ITC Fortune - Miramar
- Municipal Corporation of Greater Mumbai
- BIRAC
- Corporation of the city of Panaji
- Goa State Urban Development Agency
- Holy Family Hospital - Bandra, Mumbai
- Valpoi Municipal Council