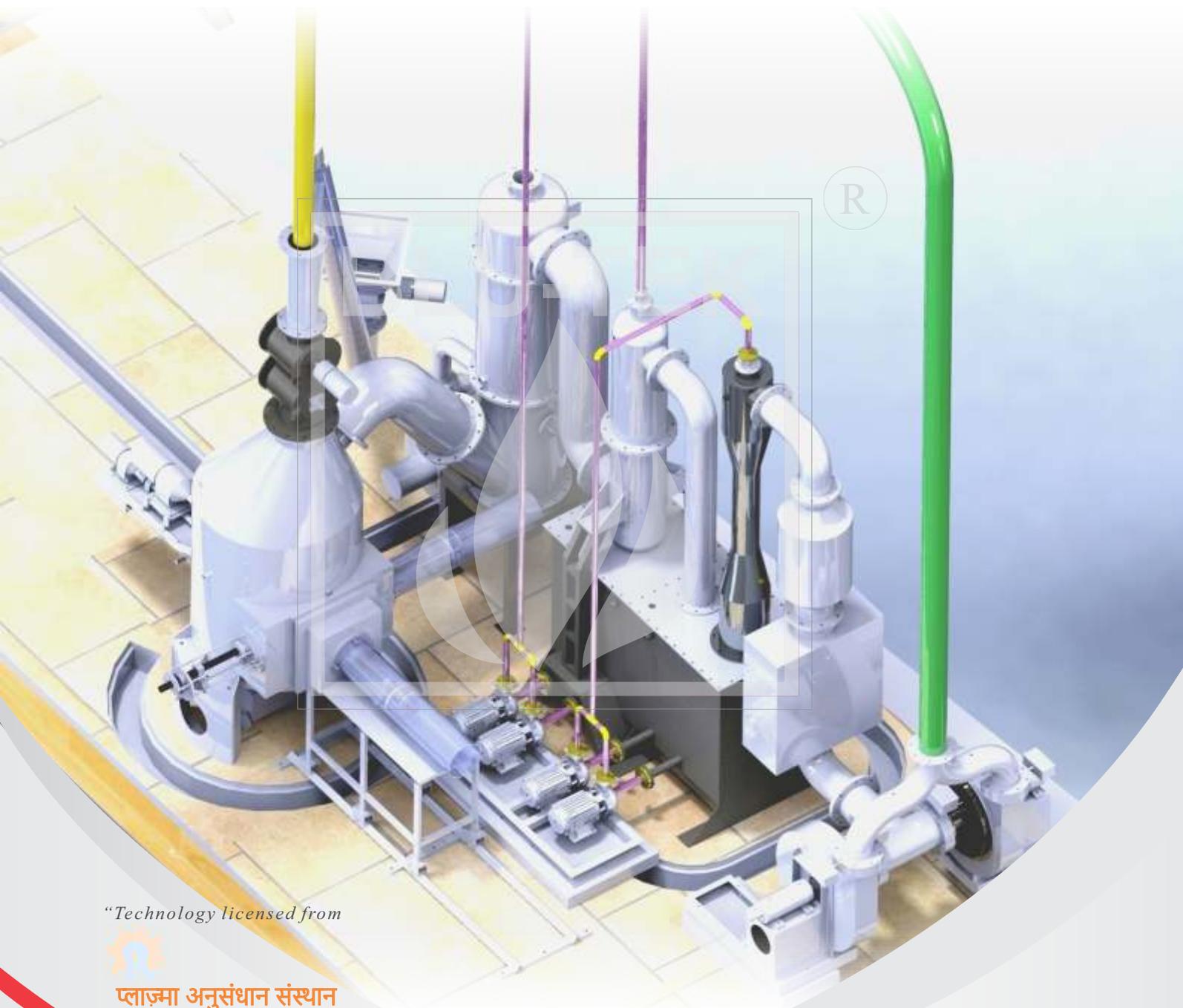


# PLASMA PYROLYSIS SYSTEM

## RANGE: 5 - 500 Kg/Hr



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**Institute for Plasma Research**

*“Department of Atomic Energy  
Government of India”*



एक कदम स्वच्छता की ओर



**B L ENGINEERING**

बी एल इंजीनियरिंग

# PLASMA PYROLYSIS SYSTEM

## RANGE: 5 - 500 Kg/Hr

Pyrolysis process is a thermal disintegration of organic material into lower hydrocarbons particularly in the absence of oxygen. It results in the formation of combustible gases, organic liquid, char and tar in varying quantity depending upon the feed composition, heating rate, temperature of pyrolysis and residence time. The amount of char and tar formation reduces as the pyrolysis temperature increases. The temperature of plasma zone is approx. 10,000°C and the surrounding temperature is 600°C–1200°C.

In plasma pyrolysis the most likely compounds which are produced include carbonaceous matter, methane, carbon monoxide, hydrogen, carbon dioxide and water molecules. These product gases are combustible. The exhaust gases generated on combusting the product gases include CO<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub>O.

The product gases recovered has calorific and commercial values. These gases can be used as a heat source or as fuel. The amount of gas recovered depends solely upon type of waste and amount of waste. As the system can recover energy from the waste while safely disposing it, plasma pyrolysis can be treated as the ultimate waste management and recycling technology.

Type of Waste	Capacity Range
Solid	5-500 kg/Hr
Biomedical	5-500 kg/Hr
Pharmaceutical	5-500 kg/Hr
Municipal Solid Waste	50-500 kg/Hr
Industrial Waste	25-500 kg/Hr
Hazardous Waste	5-500 kg/Hr

### Key Points

- Waste to energy
- Low operational cost
- Sterilization of residue
- Low carbon foot print
- Minimized ash generation
- No generation of dioxin & furan
- Less time to heat waste
- Volumetric weight reduction
- Low foot print
- Emission norms as per USEPA & MoEF norms



AGRO WASTE TO ENERGY



ANIMAL CARCASS DISPOSAL



BIOMEDICAL WASTE DISPOSAL



RECOVERY FROM FMCG WASTE



ENERGY RECOVERY FROM BAGASSE



ENERGY RECOVERY FROM TAR SAND & OIL



RADIO ACTIVE WASTE



SAFE DISPOSAL OF MSW

Specifications subject to change without prior notice due to continuous technical development.