



INNOVATIVE PYROLYSIS TECHNOLOGY FOR SUSTAINABLE VALUE CREATION

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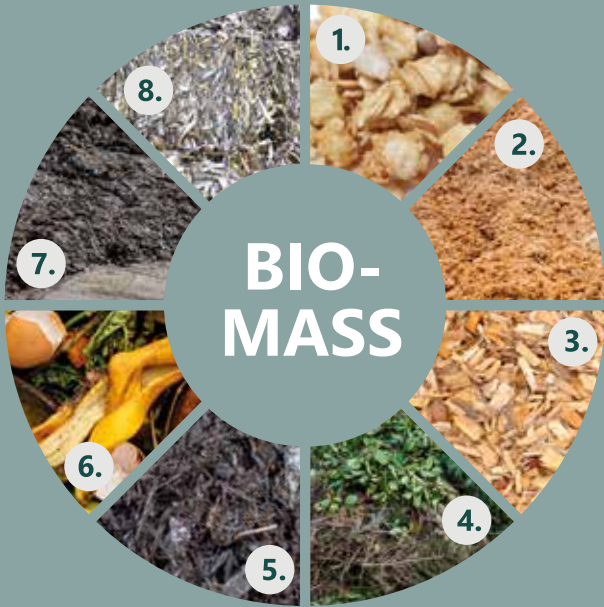


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THE INPUT

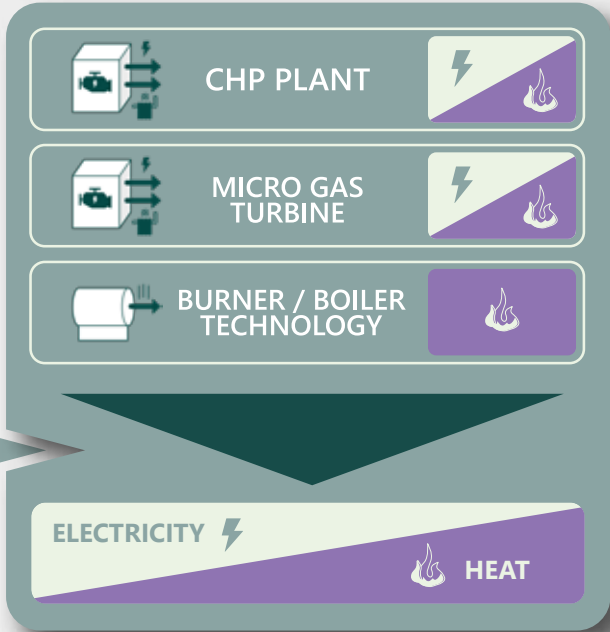
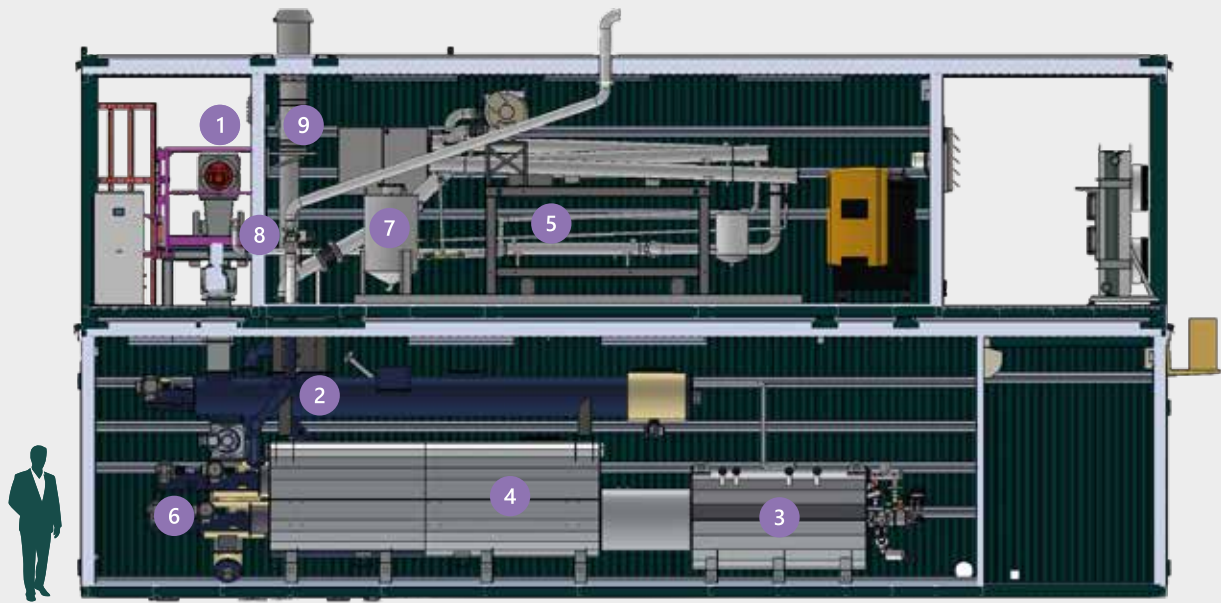
In our pyrolysis process, biomass is carbonised and gas is produced. Suitable feedstocks include all carbon-containing materials such as pomace, digestate, sewage sludge, green waste, milling residues, and waste or scrap wood.



1. Food industry residues
(milling residues such as oat husk bran, nut shells, etc.)
2. Digestate
3. Wood residues
4. Green waste
(e.g. roadside greenery)
5. Screening residues
(composting)
6. Organic waste
7. Sewage sludge
8. Other biomass
(DM min. 80 %, edge length max. 45 mm)

THE PROCESS

1. Biomass Input
2. Biomass preheating & pyrolysis gas pre-cleaning
3. Combustion chamber
4. Biomass carbonisation
5. Gas conditioning
6. Biochar output
7. Separated condensate for self-sufficient plant operation
8. Pyrolysis gas for tailored energy generation
9. 60-100 kWth through exhaust gas heat exchanger



THE BENEFITS

- High-energy pyrolysis gas
- Strong economic performance
- Premium biochar
- Innovative gas conditioning
- Long-term CO₂ revenue via CDR certificates
- Base-load and peak-load capable
- Low-maintenance system
- Compatible with standard gas technology
- Compact size
- Wide variety of input materials
- Short regulating times
- Digital integration – IoT and AI

Based on 8,000 operating hours and wood chips as input. *Assuming exhaust gas heat exchanger and CHP with an efficiency of 45% thermal / 40% electrical.

autarkize M

INPUT

< 1,0 MW fuel input capacity
2.000 t annual throughput

OUTPUT

450 kW Pyrolysis gas outout
205 kWth *thermal output**
180 kWel *electrical output**
400 t biochar / year
1.000 t CO₂ removed per year

SIZE FOOTPRINT: ~75 m²
in technical containers

autarkize L

INPUT

2,4 MW fuel input capacity
4.500 t annual throughput

OUTPUT

1.000 kW Pyrolysis gas outout
450 kWth *thermal output**
400 kWel *electrical output**
900 t biochar / year
2.500 t CO₂ removed per year

SIZE FOOTPRINT: ~115 m²
in technical containers

