



## NEXT GENERATION PRODUCTS

Unique, simple, clean, economical, efficient and sustainable waste and biomass energy recovery with zero emissions

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# HOW IT WORKS?

Raw material stock	Raw material	Process heating	Separation	Purification	Pure synthetic gas
<p>In the system, sorted and / or non-classified waste and / or biomass with moisture content of approx. 20-30%, roughened in pieces approximately in size 25 mm<sup>3</sup> (5 mm x 5 mm x 5 mm).</p>	<p>In the first silos, oxygen is extracted from the raw material through a pump. The second silos eliminate all the residual oxygen by chemical means. The raw material in the chamber does not contain any oxygen.</p>	<p>The raw material passes slowly through chamber and, due to its extreme temperature, in a non-oxygenated environment, converts to synthetic gas. The chamber temperature is between 400° C and 900° C.</p>	<p>In synthetic gas, only organic material is transformed. Inorganic material (metal, glass, sand, etc.) is ejected in a clean and sterile form similar to sand.</p>	<p>Produced synthetic gas is purified, cooled and stabilized through simple chemical and mechanical processes.</p>	<p>This technology produces fuel, synthetic gas, carbon-based reactants, in raw materials, at high temperatures in a no-oxygen environment. Regardless of the fact that the chamber is injected with carbon, the end result is synthetic gas. Produced synthetic gas is very clean, free of tar, environmentally friendly and ready to use.</p> <p>This systems produce clean, ready-to-use gas, and there is no comparable technology. The produced gas is stored in containers and is carried out in special</p>

# SYNTHETIC GAS VERSUS NATURAL GAS ?!

STRUCTURE	SYNTHETIC GAS	NATURAL GAS
H <sub>2</sub>	40 - 70 %	0 %
CO	10 - 45 %	0,5 - 1 %
CH <sub>4</sub>	2 - 15 %	80-88 %
CO <sub>2</sub>	1 - 2 %	0 %
C <sub>2</sub> H <sub>6</sub>	0 - 2 %	2 - 6 %
C <sub>3</sub> H <sub>8</sub>	0 %	0,5 - 2 %
N <sub>2</sub>	0 - 5 %	2 - 14 %



# WHAT CAN BE CONVERTED INTO SYNTHETIC GAS?

HOSPITAL WASTE



INDUSTRIAL WASTE



PURIFIER SLUDGE



SLAUGHTER-HOUSES WASTE



MUNICIPAL WASTE



CONSTRUCTI-ONAL WASTE



SPOILED FOOD



OILY SAND & HEAVY OILS



# WHAT CAN BE CONVERTED INTO SYNTHETIC GAS?

LANDFILL  
WASTE



TIRES & CAR  
SCRAP



PLANT  
WASTE



ELECTRONIC  
WASTE



MARPOL &  
HARBOR SLUDGE



OUTDATED  
MEDICATION



PROCESSING  
WASTE



TANNING  
WASTE

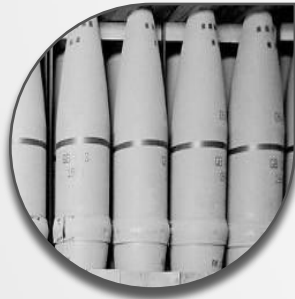


# WHAT CAN BE CONVERTED INTO SYNTHETIC GAS?

FRUIT CRUST



BATTLE POISON



HEMP STEMS



OLIVE PROCESSING WASTE



OILSEEDS WASTE



OLD DYES & CHEMICALS



PHOSPHATES



INDUSTRIAL SLUDGE



# COMPARISON TO OTHER TECHNOLOGIES

- Burning
  - Oxygen + Fire
    - Simple and very dirty
      - Destruction of carbon from raw materials
      - Ashes and poisonous remains
      - Smoke
      - Harmful by the environment
- Different Oxygen Conversion Processes
  - Pyrolysis, rotary-band devices, plasma, etc.
    - Complicated and dirty
      - Destroying carbon from raw materials
      - Ashes and poisonous remains
      - Smoke
      - Collected gas collection
      - Minimal energy gains
      - Very expensive
      - Inefficient



## COMPARED TO OTHER TECHNOLOGIES

- Hydrolysis on extremely high temperatures
  - High, oxygen-free, temperature
    - Simple, clean, smart
      - Complete conversion of carbon
      - No toxic residues
      - No smoke and burning
      - Simply collecting gas
      - Great energy gain
      - Favorably
      - Efficiently
      - Ecological





# SIZING OF SYSTEMS

- Capacity ..... 25 mt daily
- Length / Width / Height ..... 25 m / 4.5 m / 10 m
- The amount of synthetic gas ..... 7.2 – 24 Mil Nm<sup>3</sup> daily
- Amount of electricity produced ..... 8 - 25 MW daily



# LIFE SIZE PHOTOGRAPH OF PLANT



environmental  
power environmentalist  
recyclable  
flayer  
warning reuse  
global  
recycling  
saving industry  
nature  
pollution  
spring  
plant  
recycle  
energy  
earth  
foliage  
eco-friendly  
modern  
recycled  
globe  
tree reduce  
climate  
electricity  
leaves preserve healthy  
blue life  
danger choice day  
improve safe  
ozone natural  
grass growth friendly  
planet  
world  
GO GREEN!  
health smart growing city carbon technology  
product CO2 help  
save  
light  
sky message  
fresh  
conserve  
eco  
growth  
friendly  
industrial live movement increase  
ecology