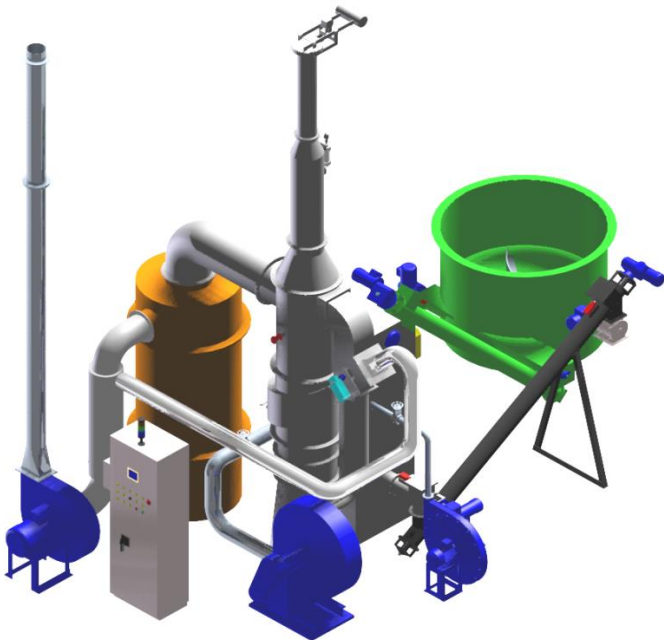




## GREEN ENERGY

## PYRO-GASIFICATION SYSTEM FOR BIO-MASSSES WITH STEAM GENERATOR AND SUPERHEATED CONDENSING STEAM TURBINE # PF - B



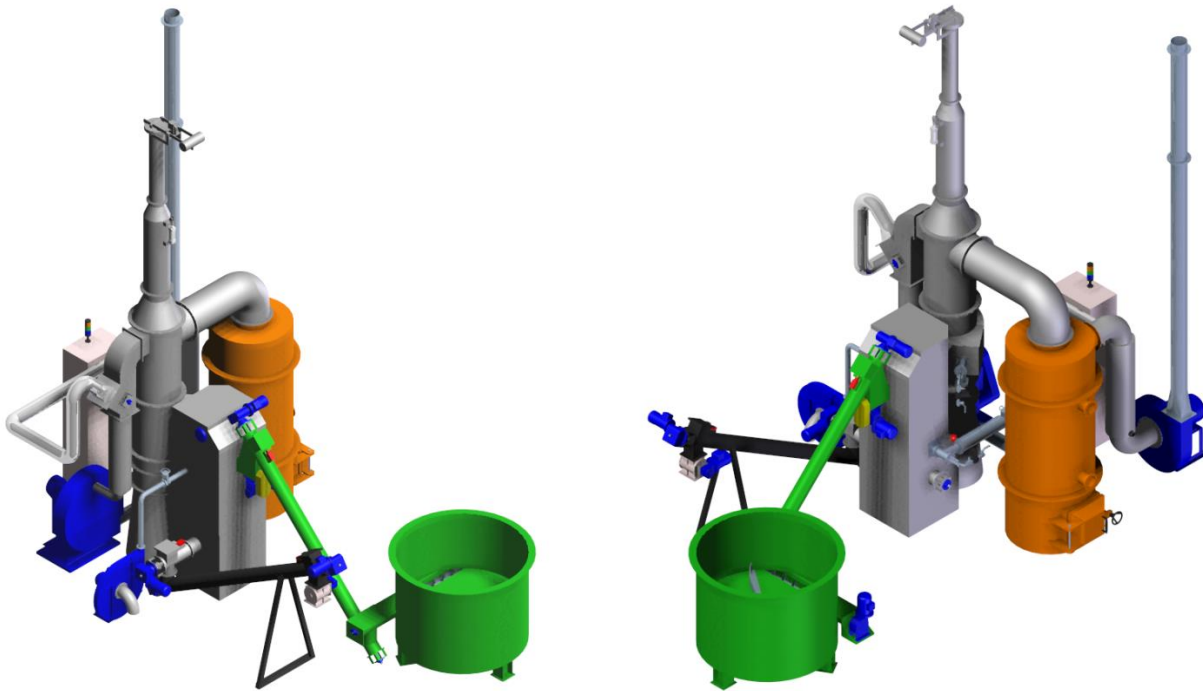
MODEL	PF-B
TREATED WASTE TYPE	BIOMASSES (WOODEN RESIDUES BOTH TREATED AND UNTREATED, PRUNING, STRAW AND HUSK, OLIVE POMACE AND PITS, POULTRY DUNG)
INCINERATION CAPACITY	CAN VARY IN ACCORDANCE WITH THE BURNED MATERIAL
COMBUSTION CHAMBER	<b>PATENT PENDING</b>
OPERATION	CONTINUOUS
FEEDING	AUTOMATIC
OPERATION HOURS PER DAY	24 h.
WASTE HEAT VALUE	13,4 – 16,3 MJ/Kg – MAX HUMIDITY 20 / 30%
HEAT RECOVERY	SUPERHEATED STEAM OR HOT WATER
ELECTRIC POWER IN CONDENSATION	50 / 100 / 200 KWe
FLUE GAS CLEANING	DRY SCRUBBING WITH BAGS FILTER (Bicarbonat + activated carbon)

The proposed pyro-gasification plant is designed to comply with the emission limits required by current regulations on emissions and environment.

The proposed system is based on a combustion plant with the following features:

- Continuous automatic feeding system with screw conveyor
- Counter-current static gasification chamber at controlled temperature (*virtually a pyrolysis under sub-stoichiometric conditions*) complete with burner and control board. Unloading of ashes is automatic and continuous.
- Reactor chamber designed to grant:
  - Temperature 850/1.050 °C.
  - Combustion gas residence time > 0,5 seconds for biomasses.
  - Swirl chamber to improve combustion's efficiency.
  - Oxygen content > 6%
 Complete with burner, control board and emergency chimney.
- Heat exchanger for the production of both superheated steam (20 bar T=350°C) or hot water at 160°C.

- Flue gas cleaning – for biomasses
- Flue gas cleaning system for the abatement of pollutants – acid fumes, dioxins and heavy metals – dry scrubbing type using bicarbonate and activated carbons. The system is supplied complete with reactor, reagent's dosing and bags filter.
- PLC control unit complete with dedicated operating system and net connection for online assisted technical support  
Condensation steam turbine or ORC system, complete with power supply generator, condenser, evaporation tower and accessories.



Note: The technical data are only indicative and need to be checked in the design phase.