

PYREG[®]

Innovative recycling of biomass

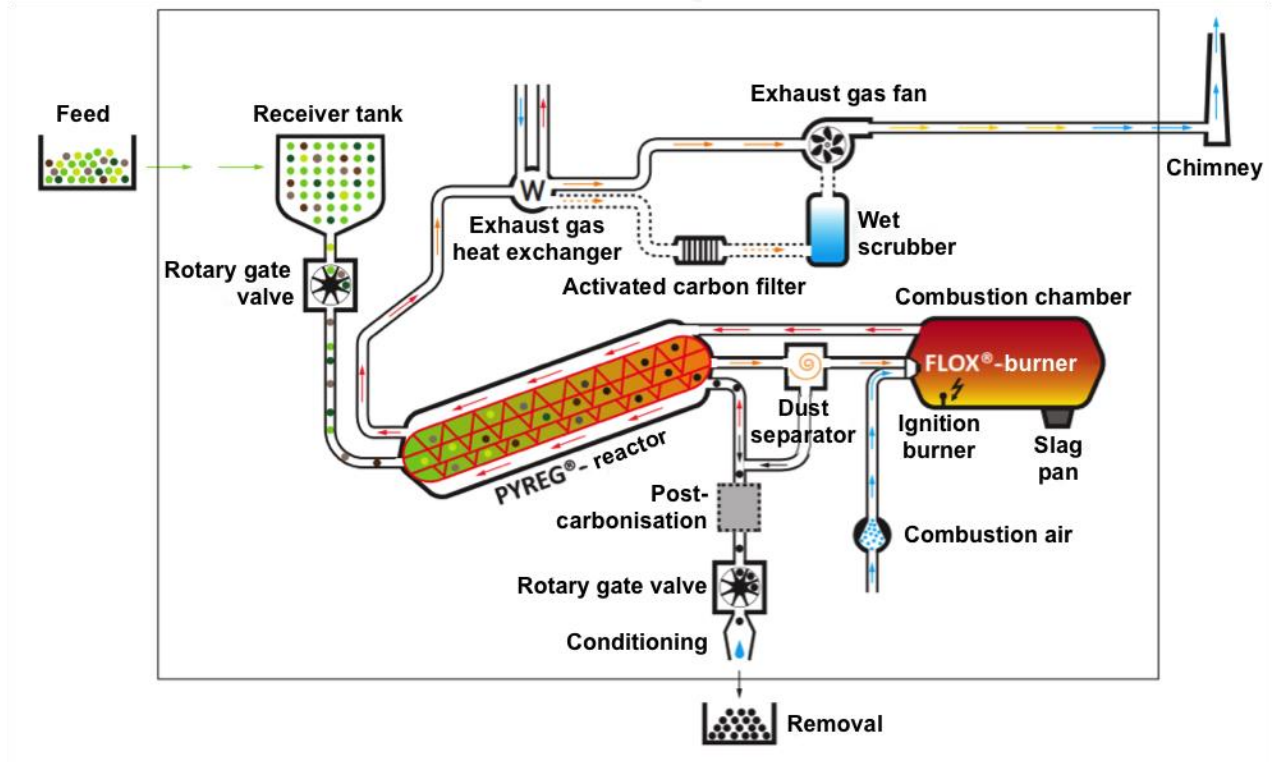
Production of high-quality biochar



Biochar
Raw material of the future

The PYREG[®] process:

Dry carbonisation



A reliable technology

The PYREG[®] system operates according to the principle of dry carbonisation. In the two-stage process, the biomass is first heated up to 650°C in the PYREG[®] reactor. In the process; the biomass is not incinerated; but it is carbonised to biochar. In a second stage the syngas produced in the reactor

is completely burnt at about 1,250°C in the combustion chamber. In the PYREG[®] process, no substances of concern (SOC), such as condensates, tars, are produced as the syngas does not cool down, but is thermally oxidised.

clean

profitable

safe

Biomass to biochar

The biochar produced by PYREG® module stands out for its long-term storage stability. The biochar can be certified in keeping with the conditions of European Biochar Certificate (EBC).

Biochar, because of its material characteristics, is marketed primarily as soil conditioner, additive for compost, as well as generally for the production of substrates. In addition, there is a multitude of different application possibilities.

Requirements on the biomass

- Dry Substance content (DS) of at least 50 %
- Maximum size of 30 mm
- Pourable and free flowing
- Minimum calorific value of 10 MJ/kg

Quantity balance of a PYREG® module

- Input: 1,000 t p.a. OS = 2,000 t p.a. Original Substance (OS) with 50 % DS
- Output: approx. 300 t p.a. Biochar

➔ References with more than 25,000 operating hours document the economic and ecological success

clean

Unique characteristics of PYREG®500

Continuous:

Automated process with low manpower requirement.

Recuperative:

The thermal processes are self-perpetuating using the energy of biomass feedstock.

High-quality biochar:

Certifiable in conformity with the EBC criteria & UK Biochar Quality Mandate (BQM).

Clean:

Low exhaust emissions and no harmful by-products.

Decentralised:

On-site installation with little space required.

Spare renewable energy:

Up to 150 kW_{th} can be used for example for drying moist biomass or for heating.

Advantages for the operator

- Sustainable economic efficiency
- Utilisation of moist substances
- Long-term planning stability on account of autonomous utilization
- Reduction of transport by up to 70 %
- Modular container sized footprint
- Simplified procedure in keeping with the German Federal Immission Control Act

profitable

PYREG GmbH produces plants for decentralised recycling of organic material.

Provide us with accurate data analysis of your biomass, we can provide first statements on recycling. In a second step, we will be pleased to offer a discrete feasibility study of your material.

Make an appointment and learn how a PYREG® plant can be integrated successfully in your process cycle of materials.

We are looking forward to meeting you!



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