

Pyrotherm

technical specifications

- ◆ 300 kg/h residual wood from wood floor production < W10
- ◆ 2 parallel direct-current-packed-bed-gasifier
- ◆ Approx. 170 kW_{th} from raw gas cooling
- ◆ Dry gas cleaning with adsorbent agent lime
- ◆ Gas scrubber with rapeseed oil methyl ester (RME)
- ◆ Gas engine approx. 350 kW_{el}
- ◆ Engine waste heat approx. 230 kW_{th}
- ◆ Exhaust gas heat recovery approx. 200 kW_{th}

fuel

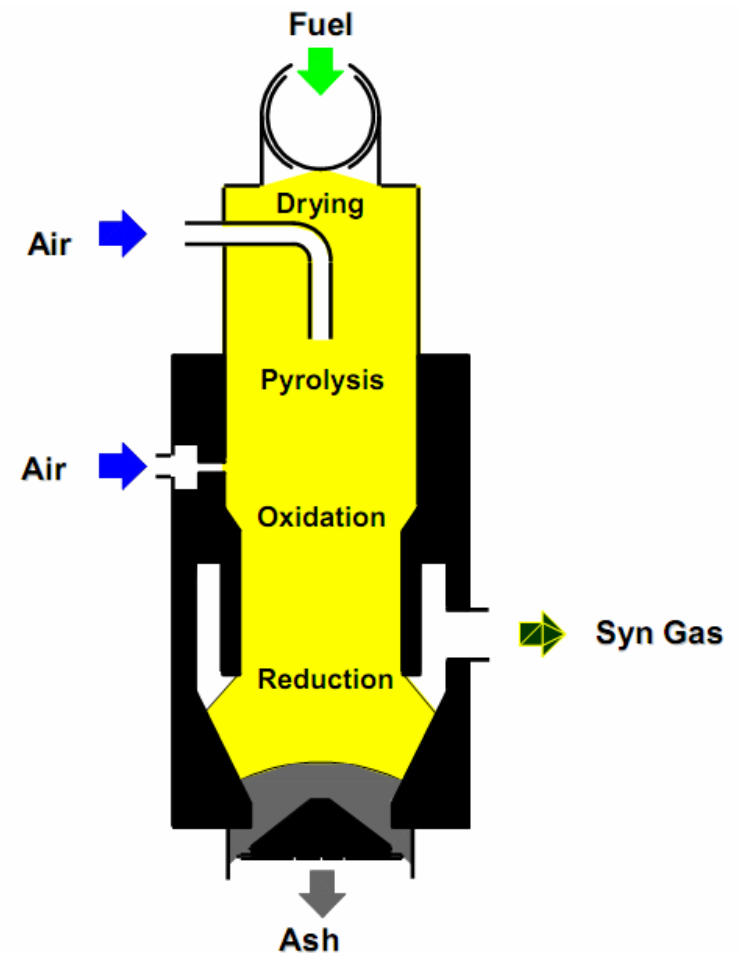
- ◆ Untreated residual wood from wood floor production (shredding)
- ◆ storage in a half underground silo, approx. 1 week hold back time
- ◆ Transportation with live bottom discharger and screwsystem to a buffer store
- ◆ Transportation to the reactor with a downpipe and locking system

Pyroforce[®]-gasifier

Gasification takes place in 2
Pyroforce[®]-Gleichstrom-fixed bed
gasifier

-pyrolysis and gasification

-Temperature producer gas: 600
– 650° C.



Dry gas cleaning

- ◆ Gas cleaning via hot cyclone.
- ◆ Gas/air heat exchanger to cool down the producer gas to 170°C, heat is transferred to the grid
- ◆ Injection of CaOH₂ removal of dust and particles via bag filter.
- ◆ Cleaning of the filter by injection of nitrogen

Scrubber, Tar removal

- ◆ RME - scrubber
- ◆ Waster water free system, if fuel water content is below 12 %
- ◆ Recycling of Biodiesel
- ◆ Cooling of the producer gas to 40°C

Gas engine – Wood Gas

- ◆ Turbo Charger
- ◆ Type GEJenbacher 312
- ◆ Adjusted for Wood Gas
- ◆ 350 kWel via direct coupled Generator to the 400V-grid
- ◆ 230 kW of utilizable thermal power in cooling water
- ◆ Exhaust box with catalyst
- ◆ 200 kWth of utilizable thermal power in the exhaust gas

Basic principle

