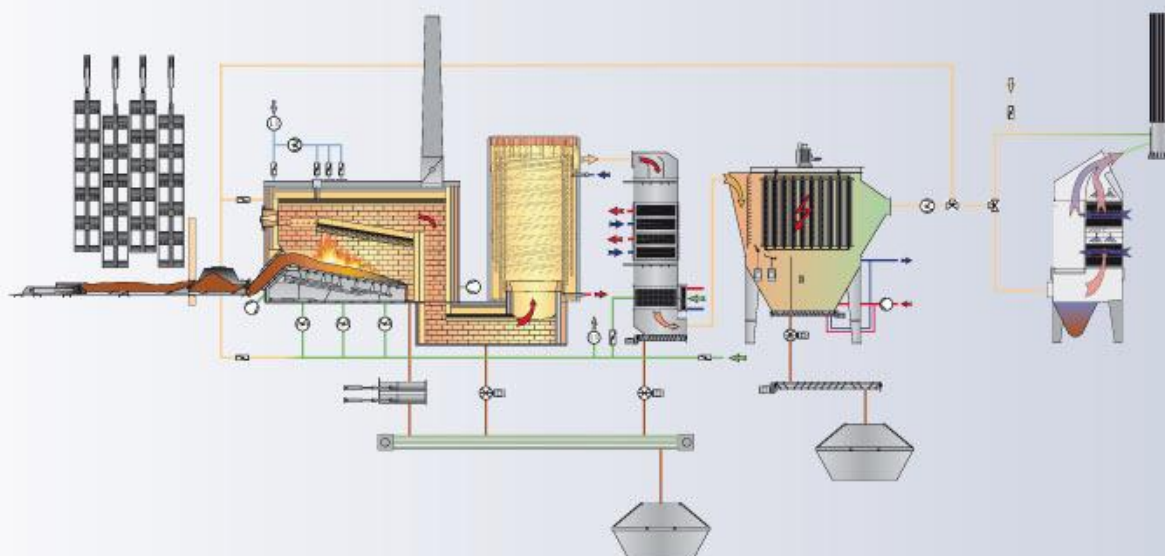


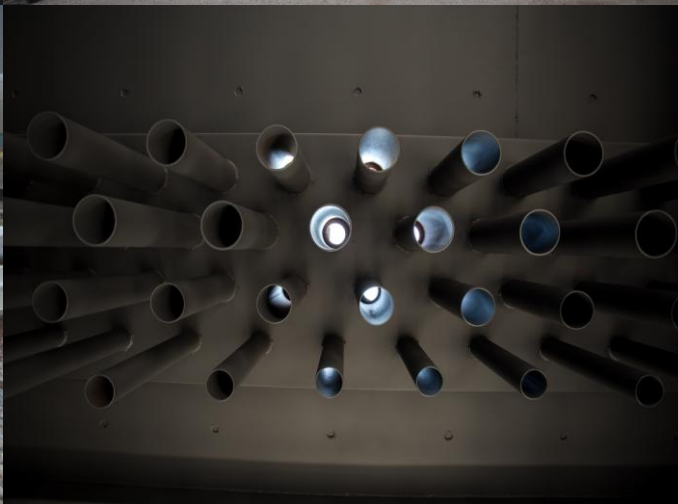
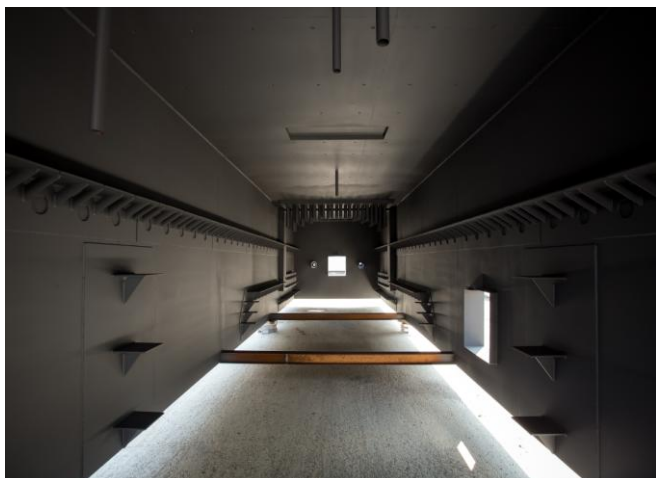
Biomass Energy

Thanks to long years cooperation with our Austria partner we are able to produce main parts of technologies for power plant, biopower plants and technologies for producers of biomass energy of power 2-25 MW

VAS BIOMASSEFEUERUNG









Projects 2012

Biomasseheizkraftwerk Lario Green Energy/Italien/ 1 MW Hochdruckdampfturbine 6,00 MW

Biomasseheizkraftwerk Allasia Plant/ Italien/ T10 Split/ ORC-Anlage/ 6,00 MW

Biomasseheizkraftwerk EPP Power Plant (EPP) Polen/T18 Split/ORC-Anlage/12,0 MW

Biomasseheizkraftwerk Krosno/Polen/ORC-Anlage 1,4 MW el./ 7,5 MW

Biomasseheizkraftwerk SIA-Energija / Lettland / ORC-Anlage 1,8 MW el. / 12,0 MW

Biomasseheizkraftwerk Heathrow Airport Energy Center / United Kingdom / ORC-Anlage 1,8 MW el. / 12,0 MW

Projects 2011

Biomasseheizkraftwerk British Sky / United Kingdom / ORC-Anlage 1,0 MW el. / 6 MW

Biomasseheizkraftwerk Cavalese / Italien / ORC-Anlage 1,0 MW el. / 7,5 MW

Biomasseheizkraftwerk Fiera di Primiero / Italien / ORC-Anlage 1,0 MW el. / 7,5 MW + 9,0 MW

Biomasseheizkraftwerk Bruneck IV / Italien / ORC-Anlage 1,0 MW el. / 6,5 MW

Projects 2010

Biomasseheizkraftwerk Oberstaufen / Deutschland / ORC-Anlage 0,8 MW el. / 3,8 MW

Biomasseheizkraftwerk Gossau / Schweiz / ORC-Anlage 1,0 MW el. / 6,5 MW

Biomasseheizkraftwerk Cosmo / Italien / ORC-Anlage 0,9 MW el. / 4,6 MW

Biomasseheizkraftwerk Nesslau / Schweiz / ORC-Anlage 0,6 MW el. / 3,6 MW

Projects 2009

Biomasseheizkraftwerk Ritten / Italien / ORC-Anlage 1,1 MW el. / 7,3 MW

Projects 2008

Biomasseheizkraftwerk Vahrn / Italien / ORC-Anlage 1,0 MW el. / 7,3 MW

Biomasseheizkraftwerk Stelmet / Polen / ORC-Anlage 1,5 MW el. / 12,0 MW

Biomasseheizkraftwerk Schlanders / Italien / ORC-Anlage 1,0 MW el. / 7,5 MW

Biomasseheizkraftwerk Ruderatshofen / Deutschland / ORC-Anlage 2,5 MW el. / 25 MW

Biomasseheizkraftwerk Arta Terme / Italien / ORC-Anlage 0,5 MW el. / 3,5 MW

Biomasseheizkraftwerk Schilling / Deutschland / 7,0 MW

Heathrow Biomass Energy Center powered by virgin wood

As part of Heathrow Airport expansion concept and realization of the new Terminal 2, Heathrow Airport Ltd. also included a self-sufficient and CO₂ reduced power generation.

Therefore Heathrow Airport Ltd. choose technology of a solid biomass powered thermal oil plant with 11,5MW_{th}.

Produced energy is used to power an ORC unit (Organic Rankine Cycle) to generate 1,8MW_{el} power. Remaining heat of 7,8MW_{th} after process of electrical power generation is used for Terminal 5 (opened in year 2008) and new Terminal 2 (opens in June 2014). Terminal 5 and 2 are connected by two new installed thermal conductions (both running below the two runways of the airport) to the within the south of airport area located Biomass Energy Center.

Heathrow Biomass Energy Center covers it's fuel demand (2,8tons @ W30 per hour at full load) of the near forests around greater London area and signed a fuel delivery contract with a local supplier for next 15 years.

Technical Data

Thermal input	11,5 MW
Thermal output	7,8 MW
Electrical output	1,8 MW
Fuel	virgin wood chips
Permission	TÜV
	Pressure Equipment Directive 97/23/EC



Scope of Supply by VAS

Fuel handling
Biomass plant
Thermal oil plant
Deashing
Dedusting by electrostatic precipitator (↓ 10mg/Nm³)
Condensation (to avoid plume down to -5°C outdoor temperature)

First deliver of heat

December 2012

Heathrow
Making every journey better

