AGRO POWER – THE ONE STOP SHOP

* … preko tehnoloških partnera

EVROPSKI LIDERI U TEHNOLOGIJI

SPECIJALISTA SAGOREVANJA

- ✓ “Ključ u ruke” rešenja u jednoj ruci
- ✓ Preko 25 godina iskustva u AGRO goriva
- ✓ Preko 100 kotla u radu

ORC SPECIJALISTA

- ✓ CHP modul iz jedne ruke
- ✓ Preko 30 godina iskustva
- ✓ Preko 150 pogona u operaciji

AGROPOWER GmbH & Co OG
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AGROPOWER

Obnovljiva energija iz poljuprivrednih ostataka

AGRO POWER PLANT ORC

IDEALNO RESENJE ZA SVA BIOMASS GORIVA

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POGODAN ZA MNOGE POTROŠAČE

POLJOPRIVREDA

- Velike do srednjih farma za proizvodnju angro - goriva
- Grejanje za zgradu farme, zelenih kuća, sušači zrna itd.

INDUSTRIJA PRERADE

- Mlekare, pivare, prerada mesa , itd.
- Prostorija za grejanje, hladjenje i skladištenje

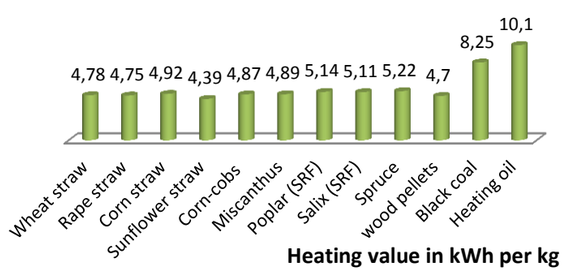
INDUSTRIJSKI PARKOVI

- Novi parkovi u razvoju, i modernizacija postojećih
- Prostorija za grejanje, hladjenje i skladištenje

CENTRALNO GREJANJE/OPŠTINSKE ZGRADE

- Novo parno grejanje/sanacija starih mreža
- Grejanje i hladjenje za gradove (od 6.000 stanovnika)

POGODAN ZA VEĆINU BIOMASS GORIVA



AGRO GORIVA

- ✓ Zitarice: pšenica (~ 2.5 t/ha.a), kukuruz (~4.5 t/ha.a)
- ✓ Drška kukuruza (~ 2.0 t/ha.a)
- ✓ Energetska postrojenja:. Miscanthus (~ 15 t/ha.a)
- ✓ Poljoprivredno djubre: kokošiji otpaci/djubrivo

ČVRSTA GORIVA

- ✓ Pilane/šume: Piljevina ,trina, kora
- ✓ Kratko rotirajući zasadi (~18 t/ha.a)

KONCEPT AGRO ELEKTRANE

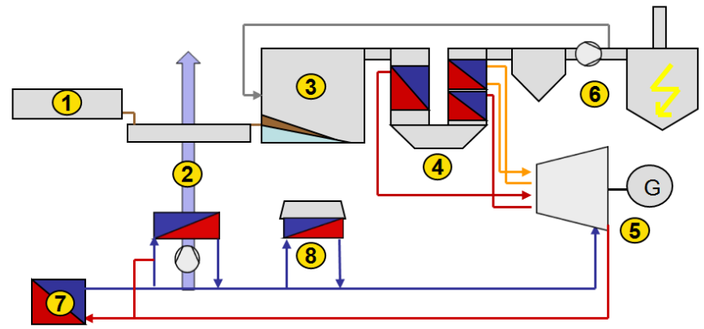
Process overview

1 bunker / biomass infeed
- automatic biomass infeed
- push or cargo floor
- storage turn over 2 – 3 days

2 dryer
- pre-drying of biomass
- innovative vibrating biomass dryer
- reduction of fuel consumption
- optimization of electrical efficiency
- high flexibility in hot water system

3 fire box / combustion
- optimized fire box and grate for different biomass blends
- modern combustion control systems
- low emissions and high fuel utilization

4 thermal oil boiler
- high oil temperature (310 – 320°C)
- two heating circuits (high / low temp)
- highest possible efficiency (~ 80%)



6 air cleaning device
- multi-cyclone and ESP
- fulfills all EU and national regulations

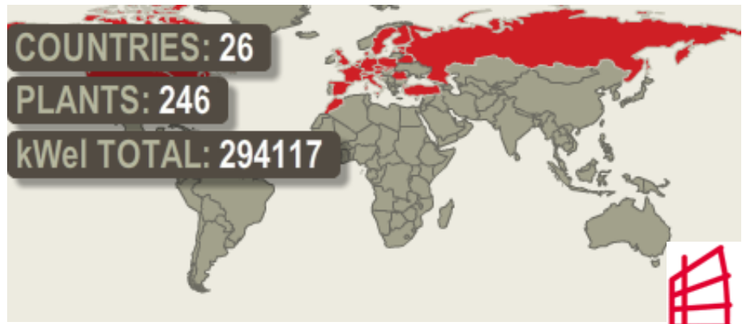
5 ORC
- Power and heat production
- Good efficiency and part load ability

7 distribution net
- distribution net and heat consumers of the customer

8 cooling device
- high power production when heat demand is low (i.e. summer)
- high electrical efficiency (reduction of return water temperature)

PLANT	FIELD DEMAND (ha)			POWER PRODUCTION (kW)	HEAT PRODUCTION * (kW)
	Wheat straw	Corn cobs	Short rotation		
ORC 6	2.800	3.700	400	**600**	**2.600**
ORC 7	3.400	4.400	450	**700**	**3.000**
ORC 10	4.500	6.000	650	**1.000**	**4.200**
ORC 12 (high efficiency)	4.250	5.800	630	**1.150**	**Low temp.****
ORC 18	8.500	11.000	1.200	**1.850**	**7.800**
ORC 24 (high efficiency)	9.200	12.000	1.300	**2.250**	**Low temp.****

* … fuel pre-drying might reduce heat production ** … low temperature can be used i.e. in green houses



clean energy ahead
TURBODEN
A PRATT & WHITNEY POWER SYSTEMS COMPANY

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