Transforming low-cost straw into high-value heating

Highly automated straw-fired biomass boilers help enhance farm income and rural economies

Reduced heating bills
Independent energy source
Readily available fuel

Minimal manual intervention
Flexible, modular design
Boosts rural economies
The challenge
How to further enhance usability and efficiency of straw-fired biomass boilers

For farmers, rural businesses and local communities looking for cost-effective heating systems, straw-fired biomass boilers offer significant advantages. Straw is thermally efficient, and cheaper than all fossil fuels and other forms of biomass. It is readily available as a by-product of agriculture and requires minimal processing to be used as a fuel.

MetalERG has manufactured straw-fired boilers since 1993, refining its designs in response to customer demand. Its latest model, Bio-Eco-Matic, offers greater automation at every stage to further enhance both ease of use and financial savings.

The solution
Low-cost heating from highly automated, modular and flexible designs

The Bio-Eco-Matic boiler from MetalERG is a fully automatic straw-powered batch boiler with an energy range of 200kW to 995kW.

The boiler delivers significant cost savings by using a readily available, independent and low-cost fuel. Its automatic loading system means it can use whole straw bales for combustion without additional manual intervention. It can also be fitted with an automatic ash-removal system and heat-exchanger cleaning system to minimise maintenance requirements.

It has a modular design that makes it suitable for heating a wide variety of agricultural, commercial and residential buildings. The final configuration of the boiler is tailor-made for each customer, taking into account energy requirements, the type of straw, and space availability.

Key features
The Bio-Eco-Matic boiler features:

- Low-cost, independent, convenient and efficient heating for a variety of commercial, agricultural or residential settings
- Minimum manual intervention in fuel loading, operation, maintenance and cleaning processes
- Competitively priced fuel compared with other forms of biomass and fossil fuel-powered boilers
- Modular design featuring standard combustion and loading chambers and adaptable feeding table and heat exchangers to meet individual needs
- Optional automatic ash-removal and heat-exchanger cleaning systems to minimise manual maintenance

The value
Minimum manual intervention for maximum energy output

The Bio-Eco-Matic boiler offers a local and completely independent source of low-cost and carbon-efficient heating for all users. For farmers and landowners, it creates an additional market for straw that would otherwise have been incinerated as waste. The boiler has eliminated heating costs for many agricultural users, and increased local trade – with a consequent increase in local employment and income.