

METITRON 560

Self-propelling pelletizer



PASSION FLEXIBILITY

The METITRON560 is a compact vehicle with all the merits of an established brand of self-driving forage harvester. With the difference that the METITRON560 is a pelletizer and not a forage harvester.

The operator can use the machine in two ways: firstly, field use and secondly, stationary use. A continuously variable hydrostatic engine on all four wheels considerably simplifies driving in the field, even on rough terrain. This design concept makes it possible to use the entire range of front attachments such as a maize head for miscanthus, as well as grain and alfalfa via direct cutters. The basic machine manufacturer's PICK UP can be used for other materials.

As the trials have been completed under real conditions with the raw material miscanthus, straw, hay and spelt husks, the METITRON560 is now going into series production.



PASSION HAY AND STRAW



Hay pelletizing directly on the field.



Straw pelletizing directly from the square bale. (Straw)

PASSION MISCANTHUS



Miscanthus harvest



Pelletizing



Pelletizing

UNIQUE FEATURES

- ▶ compact structure with the self-propelling agricultural machine
- ▶ automatically controlled material feed through the power regulator of the pelleting press engine
- ▶ direct press engine from a diesel motor via the power belt to the pelleting press
- ▶ Pellet transport after the pelleting press via a pellet bucket conveyor, the pellets being cooled and transported gently
- ▶ no pre-warming from the emissions in the pressed product
- ▶ patented material crushing integrated in the direct flow of material
- ▶ no conversions or attaching to a tractor is necessary



BALE SHREDDER AND AUTOMATIC TWINE REMOVER

The new bale shredder can be docked directly onto the METITRON560, just like the usual pre-attachment devices. The module has been kept very compact, so that the maneuverability of the METITRON560 is not restricted during drive. This makes it possible to break up the bales directly at the yard via the vehicle control and immediately feed the material to the pelletizer. This means that pelletizing can be carried out regardless of weather and harvesting time.

When folded, the unit measures 2.5 x 2.7 x 2.8 meters. When erected, the bale shredder measures 6.8 x 2.9 x 2.8 m, with the shaft width corresponding to 1.5 m.

This means that two square bales can also be placed on edge in parallel. Assembly and disassembly can be carried out conveniently from the driver's seat, as the bale shredder is simply connected to the METITRON control system via a central plug. The system automatically recognizes the new pre-attachment device and an active control panel appears on the display in the cockpit.

Once the module is unfolded and ready, only one other person is needed to load the bale shredder - for example, with a front loader or telescopic handler. Once the bale is in place, only the twine needs to be removed. This can be done by an automatic twine remover or manually.



PERFORMANCE DATA

Pellet capacity:	up to 6 t/h
Axle load:	front 11 t, rear 8.5t
Turning radius:	12.5m
Working speed:	depending on material and soil conditions approx. 1 - 10 km/h
Location:	field work / yard work
Pellet size:	standard size 8mm; 6-12mm possible by changing the die (time required approx. 2 hours)
Hopper system:	raw material bunker with a capacity of approx. 2m ³ ; pellet bunker with a capacity of approx. 3m ³ and discharge belt
Humidification gauge:	auto. / continuous
Humidification system:	automatic
Pellet press:	ring die press with double roller
Basic machine:	Claas Jaguar 960 Tier 4
Engine:	MB OM 502 LA 15.93l V8 with 458KW
Press engine:	power belt connection directly from the motor via coupling
Auxiliary drives:	hydraulic / electric
Fuel tank:	approx. 1,500 l / AdBlue tank 160 l
Additional tank:	300l of water for humidification system
Front heads:	PICK UP from Claas for hay, straw, alfalfa, sainfoin, etc.
Optional:	Corn head from Claas for miscanthus, sida, etc. Direct Disc from Claas for whole plant pelleting Bale shredder from CSP (optional with automatic twine removal)
Energy consumption:	from 15l/t

THE PELLET

Pelletizing the material can offer various advantages:

Increasing the bulk density

By pressing the pellets, the bulk density can be significantly increased compared to the starting material. At around 650 - 700 kg/m³, hay and straw pellets, for example, have a much higher bale density than high-pressure bales of around 100 - 160 kg/m³. As a result, storage and transport expenses are significantly lower and the transport worthiness is enhanced.

Improving the handling of the material

By converting the small material (e.g. dust/powder, sawdust) into pellets, dust formation during storage, transport or use is avoided. This prevents contamination with toxic materials and prevents dust explosions with flammable materials.

Standardization of material size

By converting the starting material into pellets of a certain size, a uniformity of the size-related properties is achieved. Conveyor systems (screw conveyors, etc.), for example, can then be operated reliably. This also improves dosability.

Improving transportability

Material that has to be transported in large quantities, such as firewood or animal feed, can be transported quickly and efficiently in pellet form by blowing it via an air stream, e.g. from a truck into a storage silo.

Avoiding separation

If the starting material is a heterogeneous mixture of different substances (e.g. animal feed), pelleting can prevent separation.



PELLETS AS BEDDING

From many years of experience, we know how important the right bedding is for optimal stable management, whether in the horse stables, in the pigpen, in the cowshed or in the poultry house. Therefore, there are no compromises on quality. So, what could be more obvious than processing domestic straw or even your own straw into pellets.

Further advantages are 75% less work in the barn compared to conventional straw, a reduction in disposal as 15 times more absorption power is achieved compared to long-stalk straw, it is 100% degradable, and has a high fertilizer value.

The manufacturing process in the METITRON560 retains the pellets' **sterility** as it is approx. 80° C during the pressing process, making it **ideal for veterinary clinics**. Straw pellets can also be used in pig farming and can be mixed with the liquid manure for disposal.



PELLETS AS FEED

For feeding purposes, whole plants, such as grains, can also be pelletized using the Metitron mower head. Pellets are used as an all-in-one feed or as a supplement. Advantages of pellet feeding are a lower dust load than with grain, no need to separate the individual feed components and good use opportunities for transponder feeding in groups.



PELLETS FROM ANIMAL EXCREMENT

Animal excrement are not to be neglected. Depending on the type of animal, animal excrement contain nutrients such as nitrogen, phosphorus, sulfur or potassium. When the excrement are pelletized these nutrients are bound. The pelletizing process and the resulting heating up to 80°C, germs such as salmonella are killed, but the nutrients are retained.

Pellets made from excrement can be used as fertilizer. This has the great advantage that when spreading the fertilizer pellets on the fields, the amount can be dosed more precisely. Losses due to wind also become marginal with the help of pellets.

The storage of the pellets is also odorless and space-saving.



HEATING WITH BIOMASS

Plants are renewable raw materials and can significantly contribute long term to the security of supply in one 's own country. Using one 's own arable land, the regional supply reliability, and the comparably minimal production costs make biomass an extremely economical and pioneering alternative. Straw and miscanthus pellets can be burned in pellet heating systems from 60 kW, used in wood chip heating systems and even mixed in.

Benefits of Biomass Heating:

- ▶ environmentally friendly, CO2-neutral combustion
- ▶ reduces heating costs
- ▶ low production and transport costs
- ▶ secures jobs and strengthens the region
- ▶ virtually unlimited renewability
- ▶ significant contribution to the energy revolution
- ▶ outstanding alternative to fossil fuels



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