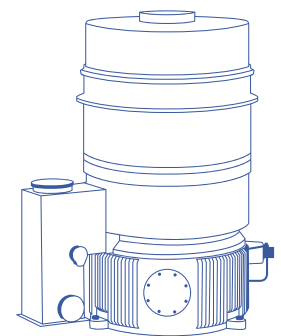




WOOD PELLETING PLANTS



**BESPOKE FOR CAPACITIES
UP TO 8000 KG/H PER PRESS**

INPUT PRODUCTS FOR WOOD PELLETING PLANTS

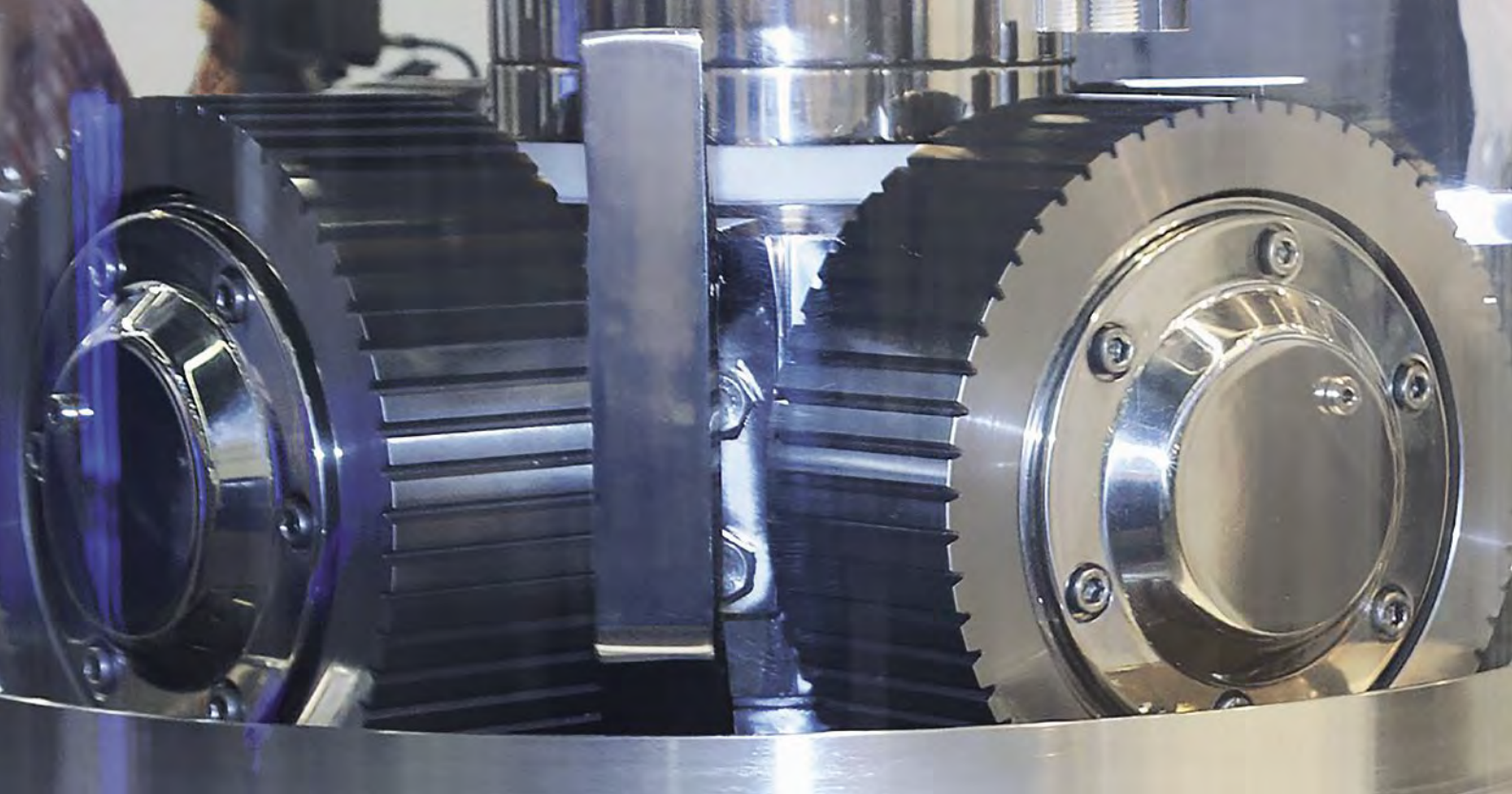
Depending on the input product, which can be dry wood shavings, wet sawdust, wood chips or even whole tree trunks, different process steps are required.

Depending on the requirements on the finished wood pellets, we need for example a product with a granular size of approx. 4 mm and a residual moisture content of approx. 10 % directly before the pelleting press.

This means tree trunks require the maximum process steps: debarking, wet chipping, drying, dry grinding, pre-conditioning, pelleting, cooling, storing or loading.

If wet sawdust is available, for example, drying will be the first process step. In case of dry, pre-crushed product, the actual pelleting plant starting with pre-conditioning will be sufficient.





WOOD PELLETS: THE BEST-SELLING AND HIGH-QUALITY PRODUCT

For decades, KAHL pelleting plants have been applied successfully for compacting organic products of different particle sizes, moisture contents and bulk densities.

We are constantly developing our machines in order to improve their capacities and economic efficiency. KAHL pelleting presses are particularly appropriate for products which are difficult to pellet.



OUR SERVICES

- *Consultation, assistance in obtaining approval, engineering, commissioning, installation, and after-sales service.*
- *KAHL supply turn-key plants for the recycling sector.*
- *For product testing and feasibility studies an on-site pilot plant is available.*

POSSIBLE APPLICATIONS OF THE KAHL PELLETING PRESS

- *Wood waste:
Wood shavings
Wood chips
Sawdust
Wood and sanding dust*
- *Straw:
Miscanthus
Bagasse*
- *Other biomasses*

KAHL PAN GRINDER MILL: WOOD GRINDING (WET AND DRY)

- *Capacity range from a few hundred kg up to 40 t/h and more*
- *No ATEX problems*
- *Low energy consumption*
- *No noise protection measures*

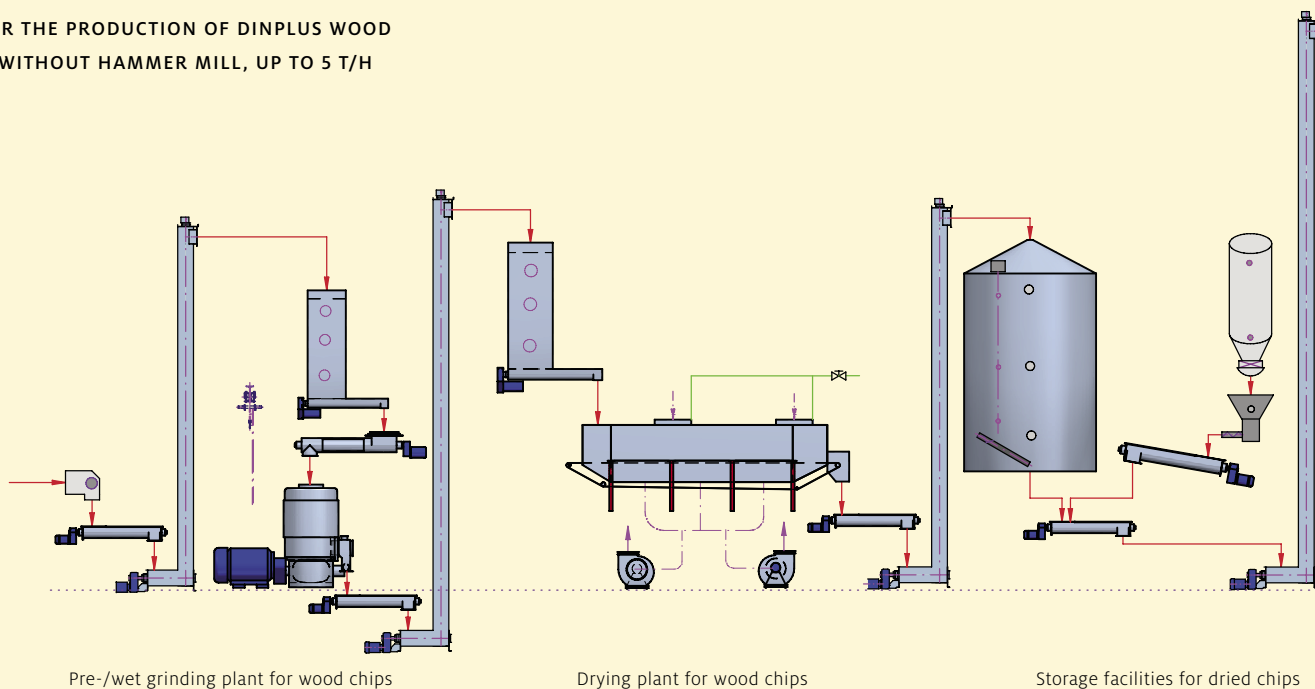


Soft wood pellets

KAHL WOOD PELLETING PLANTS

AMANDUS KAHL offer pelleting presses with a drive power from 3 kW to 500 kW. In total, 11 different sizes are available. The production capacities of most plants range between 1.5 and 8 t/h per press. Smaller plants work efficiently, too. Larger plants of up to 40 t/h are provided for industrial production of pellets.

PLANT FOR THE PRODUCTION OF DINPLUS WOOD
PELLETS, WITHOUT HAMMER MILL, UP TO 5 T/H



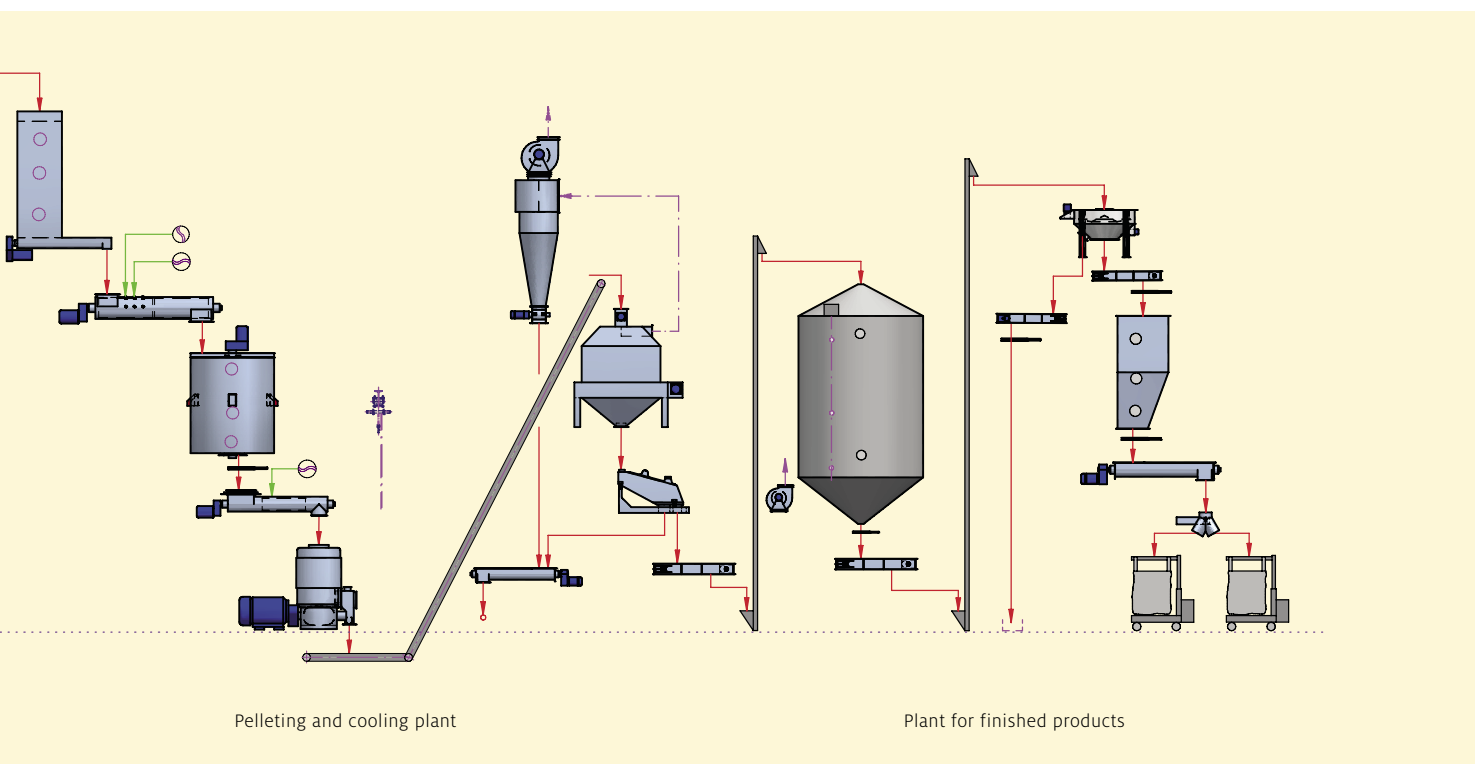


Hard wood pellets

QUALITY CAN BE RECOGNISED AT FIRST GLANCE!

HIGH PELLET QUALITY = HIGH BULK DENSITY
HIGH BULK DENSITY = BETTER COMBUSTIBILITY

Due to the great variety of input products and the different plant sizes available, we plan and calculate KAHL plants according to the requirement of the customer considering the capacity and the local conditions. There is, for example, the small pelleting plant for only 300 kg/h for the cabinetmaker's workshop pelleting its own dry wood waste. Such a plant only works 4 hours a day and still is economically efficient.



HIGH-PERFORMANCE PRESSES OF KAHL

COMPETENCE FOR INDUSTRIAL WOOD PELLETING PLANTS

Since 1925 AMANDUS KAHL have built pelleting plants. We attend to our customers with maintenance and service throughout the service life of the plant. These are generally several decades. Our own technical service is available for our customers on site.

Thanks to the state-of-the-art control and regulation technique, we use all possibilities for remote maintenance of our plants via Internet connections.

The biomass is pressed through a die by pan grinder rollers, formed into endless strands, and then cut to the desired particle length by means of knives.

Prerequisites for optimum operation are continuous product feeding into the press and a homogeneous, sufficiently pre-crushed product. Due to the large volume reduction when compacting wood and wood shavings, particularly sawdust from about 100 to 650 kg/m³, the capacity of the machine, i.e. the press interior, must be as large as possible.

Further requirements made by the wood industry are a robust machine construction and a high availability of the plant.

Heavy machinery pays off when it comes to processing of these products. The result is a high operational safety and availability for continuous operation of the plant.

KAHL FABRIC BELT DRIERS

Normally, an industrial pelleting plant is equipped with one or several driers and ideally works round the clock, up to 8,000 operating hours per year. KAHL belt driers can be operated with the most different forms of thermal energy: Hot water, steam, gas, oil or wood can be used as energy source.

ROLLER SHELLS – OUR CONTRIBUTION TO SUSTAINABILITY

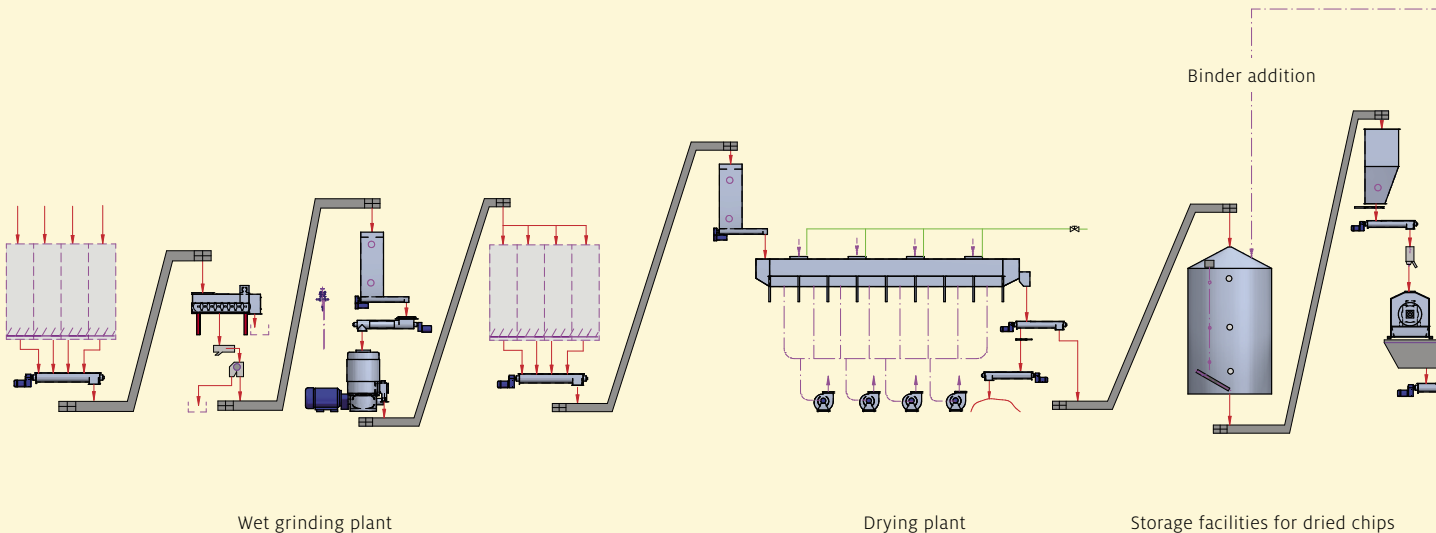
The roller shells are directly pushed on the roller rim and fastened by means of a conical clamping ring. When changing the roller shell, the rim with integrated bearing assembly must not be dismantled.

THE SHELLS ARE APPLICABLE FOR THE FOLLOWING MACHINES FROM OUR PRESS SERIES:

- 39 – 1000
- 45 – 1000
- 45 – 1250
- 60 – 1250
- 60 – 1500
- 65 – 1500



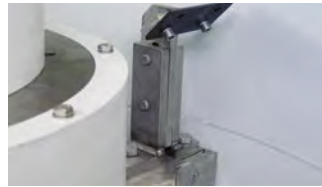
PLANT FOR THE PRODUCTION OF WOOD PELLETS, CAPACITY 10 T/H



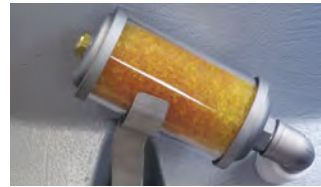
KAHL FLAT DIE PELLETING PRESSES DEMONSTRATE QUALITY IN ALL DETAILS



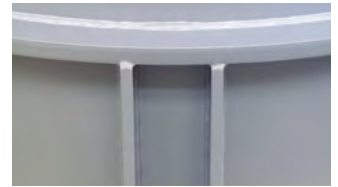
Pan grinder head with guide plates for the exact product distribution



Reinforced cutting devices



Breathing air filter prevents moisture in the gear interior



Reinforced press chamber



Cutting device for smooth edges and less fines



Reinforced die supports



Oil filter with flow meter



Hydraulic nut with quick-action coupling



Pan grinder head stop for optimum adjustment of rollers and die



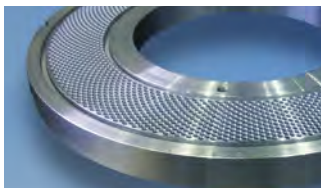
Gear oil spraying plant protects against overheating



Insertion of the clamping ring



Large bearings = long service lives
Long service lives = less wear costs



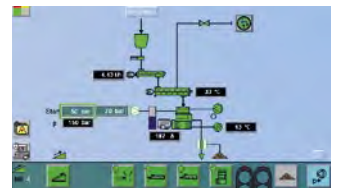
Good pellet quality, long service lives and fast die change ensure productivity



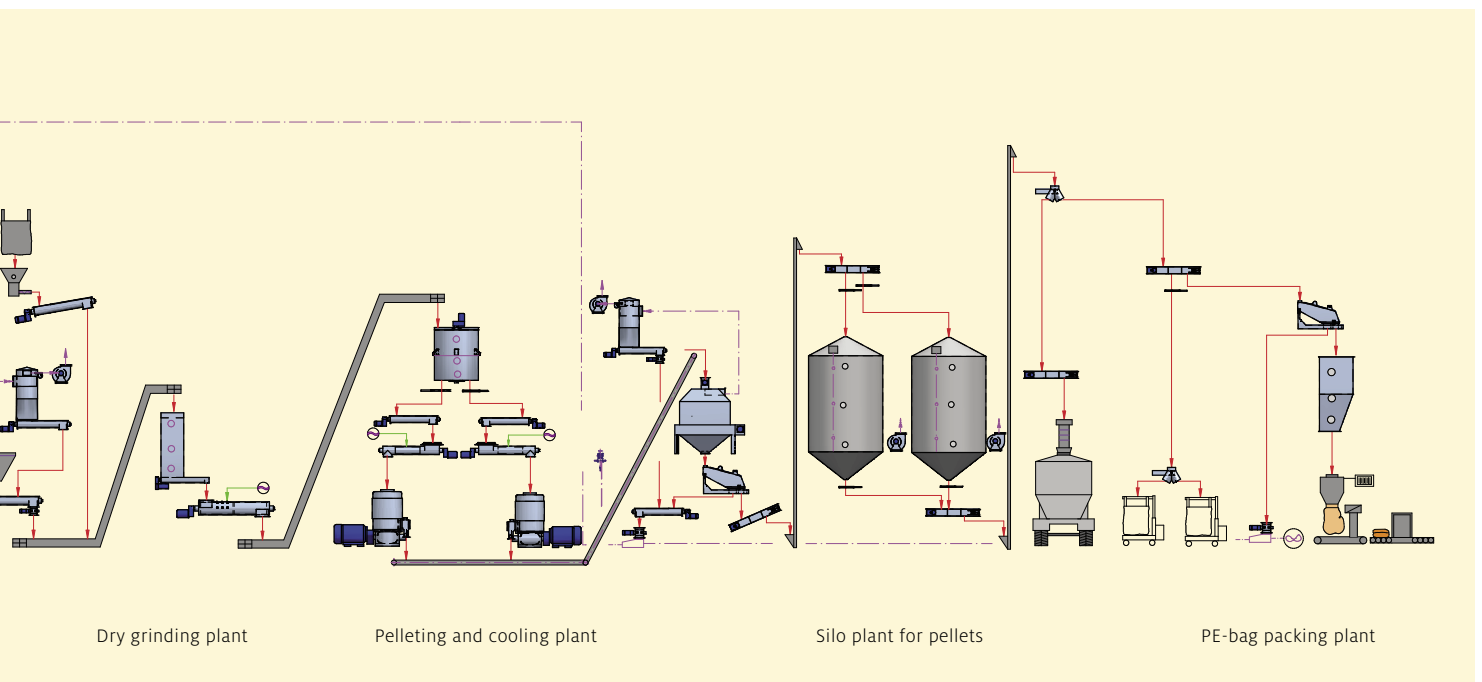
Fully assembled shell



Overflow flap



Traffic light control for long service lives



Dry grinding plant

Pelleting and cooling plant

Silo plant for pellets

PE-bag packing plant



BESPOKE PLANTS FOR HIGH-QUALITY PELLETS

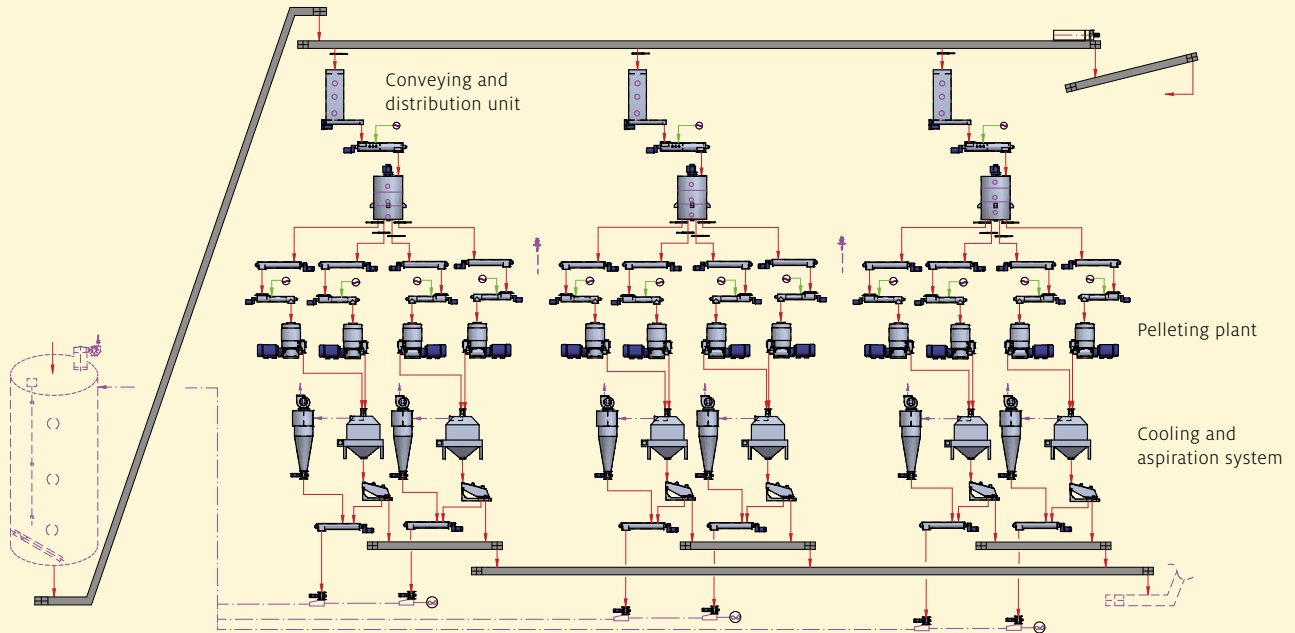
OUR OWN PRODUCTION LINE GUARANTEES QUALITY

All main machines of the pelleting plant, i.e. pan grinder mills, hammer mills, belt driers, pelleting presses and coolers, are produced in our factory at Reinbek near Hamburg. Here, we also have our own pilot plant for carrying out pelleting tests with the most different products, realising feasibility studies and generating a reliable data base for future scale-up.



PRESSES FROM KAHL: CONSTRUCTION OF HEAVY MACHINERY PAYS OFF

PELLETING STATION UP TO 60 T/H



MACHINE AND PLANT OPTIMISATION

As for energy efficiency, we consider the complete plant, from the reception facilities to the finished product silos. With an improved press control, clear machine monitoring and the use of a so-called traffic light control system, downtimes can be avoided and the service lives positively influenced.





KAHL AS PARTNER OF THE RECYCLING INDUSTRY

KAHL PELLETING PRESSES ARE EXTREMELY SUITABLE FOR COMPACTING A LARGE VARIETY OF PRODUCTS.

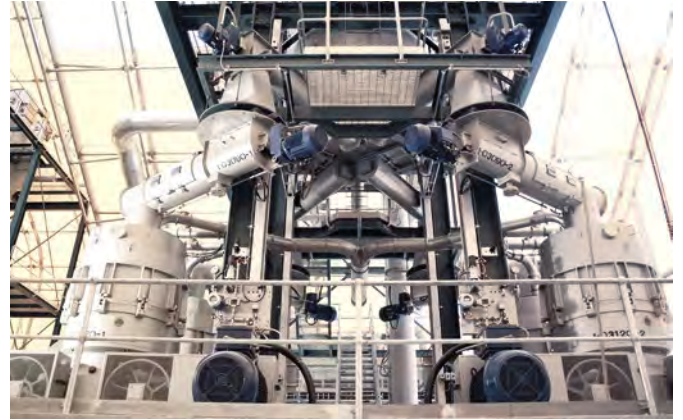
Pelleting of renewable raw materials for energy recovery has been a topic for KAHL for more than 30 years, after receiving corresponding research assignments following the energy crisis in the 1970's. Straw and dried forage pelleting plants have formed part of our delivery programme since then, too. So, we can rely on long-standing experience.



POSSIBLE APPLICATIONS OF THE KAHL PELLETING PRESS

- Wood waste
- Sawdust
- Wood and sanding dust
- Straw
- Agricultural biomass
- Waste paper
- Municipal and industrial waste
- Waste tyres
- Sewage sludge
- Plastic waste
- and many more ...

PLANT EXAMPLES





AMANDUS KAHL GmbH & Co. KG
Dieselstrasse 5-9 · 21465 Reinbek
Hamburg, Germany

+49 (0) 40 72 77 10
info@akahl.de
akahl.de