



**AMANDUS KAHL**

[www.akahl.de](http://www.akahl.de)

**NEUHAUS NEOTEC**

HEINEN DRYING®

[www.neuhaus-neotec.de](http://www.neuhaus-neotec.de)

**SCHULE MÜHLENBAU**

[www.schulefood.de](http://www.schulefood.de)

**HEINEN FREEZING**

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Four strong, competent partners provide plant and mechanical engineering solutions. From individual engineering to after-sales service.

Our four companies offer sophisticated solutions for process engineering, machine and plant construction as well as the erection of complete factories for many industries. Research, planning, and development are essential functions of the companies.

The most important machines and plant components are fabricated in the central factories at Reinbek near Hamburg and Ganderkesee near Bremen. So they are "made in Germany". More than 600 motivated employees of the Group guarantee smooth and perfect service.

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Drilling machine



Production hall



Chipping machine



Pelleting press production



Training



Die blanks

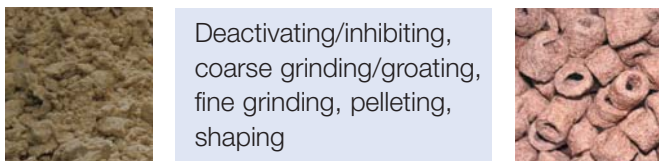
From processing of the raw material to the requests of the end user – the know-how of the Kahl Group flows into the development of intelligent process engineering solutions for customers in various industries.



FOOD INDUSTRY  
ANIMAL FEED  
PETFOOD



Cleaning, sorting,  
dehulling, steaming,  
flaking, hygienizing,  
stabilizing



Deactivating/inhibiting,  
coarse grinding/groating,  
fine grinding, pelleting,  
shaping



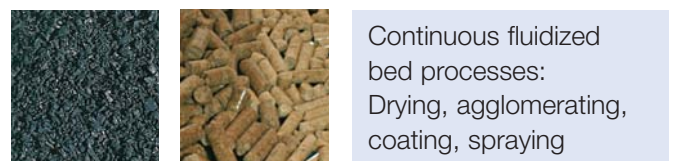
RECYCLING  
DISPOSAL  
BIOMASS



Extruding, expanding,  
spraying, roasting,  
proofing, drying, cooling,  
freezing, pasteurizing



CHEMICAL &  
PHARMACEUTICAL  
INDUSTRY



Continuous fluidized  
bed processes:  
Drying, agglomerating,  
coating, spraying



Our pelleting processes are used successfully in many different industries, such as the food and feed industry, the chemical and pharmaceutical industry as well as the disposal and recycling industry.

For these sectors, we offer the following solutions:

- |             |                  |              |
|-------------|------------------|--------------|
| ■ Treating  | ■ Conditioning   | ■ Compacting |
| ■ Pelleting | ■ Extruding      | ■ Expanding  |
| ■ Crushing  | ■ Drying/cooling |              |

Mechanical engineering for the future. We are particularly committed to developing new technologies for the waste disposal and recycling industry and for the treatment of biomass.



Feed mill in Russia



Extruder OEE in a petfood plant



Pelleting press in a compound feed factory



Crushing roller mill



Feed mill in Oman



Fabric belt drier

Plant with conditioner and annular gap expander in Russia



Wood pelleting plant in Australia



The central factory of the KAHL Group  
in Reinbek near Hamburg



Domestic-waste pelleting plant for the production  
of pellets or fluff



Factory for wood pelleting



Pelleting plant for biomass  
in South Africa



Waste tyre recycling plant in Spain



Recycling plant



Rotospray® – micro-proportioning  
system for liquids



Fabric belt drier

#### KAHL plants for:

- Animal feed industry
- Sugar industry
- Chemical and pharmaceutical industry
- Disposal and recycling industry
- Food and nutrient industry

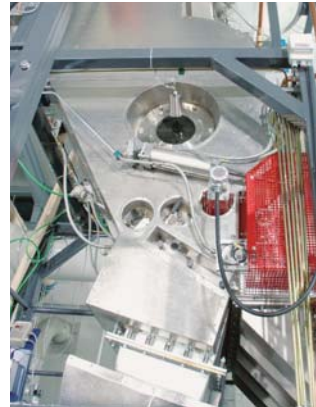
#### KAHL individual machines:

- Proportioning and weighing units
- Mixers
- Pan grinder mills
- Hammer mills
- Aspiration systems
- Liquid proportioning systems
- Rotospray®
- Conditioners
- Bioreactors
- Annular gap expanders
- Pelleting presses
- Driers/coolers
- Crumbling units
- Process visualisation and control, hardware and software
- Cleaning machines
- Mechanical and pneumatic conveying plants
- Crushing machines
- Screening and sifting machines
- Proportioning systems
- Mixing machines
- Compacting and crumbling machines



We supply machines, plants, and turnkey factories for the food industry, mainly for the treatment and processing of coffee, cocoa, nuts and seeds (e.g. sunflower seeds). Thanks to a long-standing expertise in this field, one main focus of the company lies in the refinement of coffee – from process development, design to commissioning of plants.

The constant development of new processes, machines, and environmentally friendly technologies has made us one of the market leaders in this industry worldwide.



RFB roasting chamber



Drum roaster



Reception of bulk products  
from container



Bag reception system



Green coffee distribution in the silo



Cleaning machines



Green coffee centre in Hamburg



Green coffee centre in the U.S.



The NEUHAUS NEOTEC batch roasters have been used successfully for decades



Laboratory grinder LMW 100

#### Plants:

- Green coffee centres
- Coffee roasters
- Silo plants for all bulk products
- Mechanical and pneumatic conveying plants

#### Individual machines:

- Bag emptying machines
- Screening machines
- Cleaning machines
- Intake, proportioning, and roasting loss control weighers
- Mixing machines for green and roasted coffee
- Dry stoners
- Filtering plants
- Degassing bins for ground coffee
- Pelleting plants for coffee chaff
- Roasting plants for coffee, cocoa beans, nuts and seeds
- Coffee grinders
- Process control
- Data processing



Colour measuring instrument for the quality control of roasted coffee



Coffee grinder WMK

The business area "Particle Technology" of NEUHAUS NEOTEC offers a proven know-how for the development, construction and design of fluidised bed processes and plants.

From individual drying applications up to the refinement and instantisation of powders and the agglomeration of granulates.



Fluidised bed plants on a laboratory, pilot plant and production scale



Grinders for the precise and efficient grinding process



Spray granulation

#### Plants:

- Pharmaceutical industry
- Chemical industry
- Food and luxury foodstuff industry

#### Individual machines:

- Fluidised bed driers and coolers
- Agglomerators
- Spray granulators
- Coaters
- Grinders



Fluidised bed plant Mobatch



Quality in the food industry – we have been well acquainted with the methods of cereal treatment for over 100 years. We have long-standing global specialist experience in the processing of cereals, rice and legumes.

With our machines, plants and turn-key factories we provide product purity, high quality and modern processing methods, also for legumes, oilseeds, tea and spices.



Bulgur plant in the Emirates



Table separator TH3 in an oat plant in Belarus



View into a parboiling plant in Spain



Rice mill



Complete parboiling plant in Greece



Dehulling machines in a rice mill in Peru

#### Plants:

- Rice mills
- Parboiling plants
- Oat plants (breakfast cereals)
- Sunflower seed plants
- Plants for the food industry (extruder)

#### Individual machines:

- Cleaning machines
- Dry stoners
- Weighers
- Shelling machines
- Shell separators
- Table separators
- Whitening machines
- Polishing machines
- Plansifters and indented cylinders
- Extruders



High-capacity square plansifter PLS



With a comprehensive product portfolio of industrial pasteurizing, proofing, cooling and freezing systems, HEINEN Freezing has been a competent partner for the international food industry for more than 25 years. We supply spiral systems, fluidised bed and buffer freezers as well as special plants which are tailor-made for the freezing, cooling and proofing processes in your company.

Development, sales, construction, assembly and servicing of machines and plants for pasteurizing, cooling and freezing.



Complete freezing plant



Freezing of bakery products

**Plants for the international food industry:**

- Bakery products
- Meat and poultry products
- Vegetable and potato products
- Pizzas
- Hamburgers
- Convenience food

**Individual machines:**

- Spiral cooler
- Spiral freezer
- Active spiral cooler
- Spiral proofing
- Spiral pasteurizer
- Fluidised bed cooler
- Fluidised bed freezer
- Multilevel buffer cooler
- Multilevel buffer freezer



Continuous freezing with the HEINEN spiral freezer



Arctic spiral freezer



Spiral proofing Proofline

## Pilot plants for developing new products and processes

Our test departments are responsible for the development of new processes and machines. We have extensive pilot plants with laboratory, production machines, and measuring equipment for the most important process stages of the conditioning technology.

The plants are available to prospective buyers and customers who want to have their own products tested. On the basis of the results achieved plant designs and offers can be prepared.



SCHULE pilot plant with continuous cooking plant for grain, parboiling, food, bulgur, etc.



KAHL chemical pilot plant



HEINEN Drying pilot plant for the fluidised bed technology



KAHL pilot plant: Proportioning unit, continuous mixer, hydrothermal reactor, annular gap expander, extruder OEE, flat die pelleting press, belt drier/cooler, Rotospray, crumbler, crushing roller mill

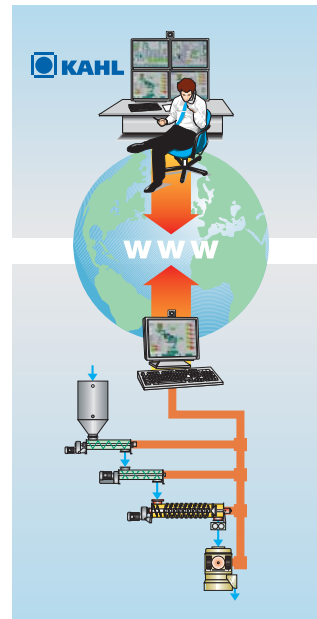


NEUHAUS NEOTEC pilot plant at Ganderkesee near Bremen for coffee processing, fluidised bed agglomeration, and roller mills

## Service world-wide



- Remote maintenance and hotline
- Repair and maintenance of machines and plants
- Service and maintenance contracts
- User training on technology and operation
- Spare parts service



On-line service via internet

