AKANA Hammer Mills

Crushing of Individual Products and Product Mixtures

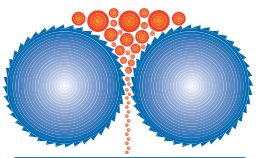
The AKANA hammer mills are appropriate for crushing individual products as well as product mixtures. With our mills, feed components, feed mixtures, all grain types, straw, wood, and similar soft to medium-hard products can be ground. Their special feature is the high throughput.

- The particle size is determined by the screen hole diameter and the mill speed.
- The product only leaves the grinding chamber when it is smaller than the screen hole diameter. In case of standard products about 95 % are smaller than half the screen hole diameter.

Advantages:

- Applicable for different products.
- Easy to operate.
- Due to the use of different screen perforations, beater designs, beater arrangements and speeds, the mills can be adapted to the customer requirements, for example on structure and fineness.
- The hammer mills work according to the principle of crushing by multiple impacts.
- By means of the direct blow of the hammer mill beater on the product, the most efficient crushing is reached.
- The circumferential speed of the beater point is about 100 m/s corresponding to abt. 360 km/h.

KAHL Crushing



The programme includes crumblers, crushing roller mills, grinders and hammer mills for small, medium, and large production capacities.

AKANA Hammer Mills

Fields of application

In compound feed plants it is distinguished between grinding of individual components (pre-grinding) and grinding of component mixtures (post-grinding).

Pre-grinding system (grinding of individual components):

- Only few components in the formula
- High percentage of individual components in the formula, e.g. 60 % of maize
- In plants for conditioning of components
- In roughage plants for voluminous products, e.g. straw, bagasse

Advantages of pre-grinding:

- The screen perforation can be adapted to the product
- Easy to operate
- Downtimes due to troubles or for maintenance works do not impede continuous production
- Lower energy consumption, since mealy components do not pass through the hammer mill

Post-grinding system (grinding of component mixtures):

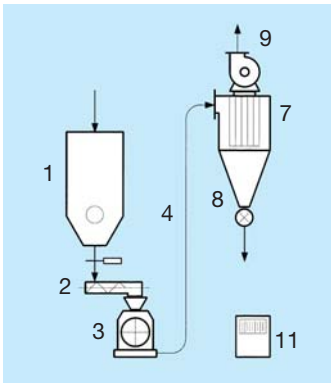
- Many different grain components or components to be ground in the formula
- Pelleted and "lumpy" components
- Mealy components with lumps and coarse particles

Advantages of post-grinding:

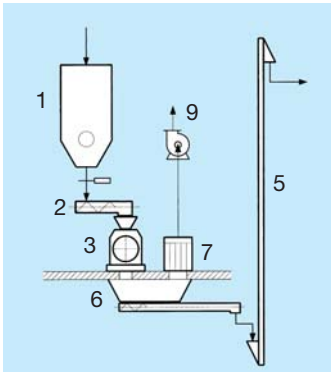
- No additional silo cells required
- No additional conveying elements required
- As all components are ground, the granular size distribution in the mixture is more uniform
- A defined particle size spectrum can be produced when using control screens

Grinding plant diagrams

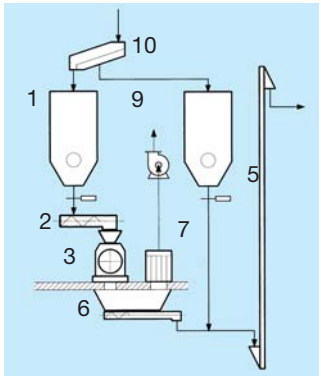
1 Bin with level indicator and shut-off element
2 Feeder with magnet and heavy-particle separator
3 Mill
4 Pneumatic conveying element
5 Mechanic conveying element
6 Bin following the mill
7 Filter
8 Cyclone with lock
9 Fan
10 Screen
11 Control system



Grinding plant with pneumatic discharge unit



Grinding plant with mechanic discharge unit



Grinding plant with preliminary screening system

Types and rough dimensioning

Kahl type	AKANA	Grinding chamber Width mm	Ø mm	min. kW	Motor standard kW	max. kW	Screen surface gross m^2	Length mm	Width mm	Height mm	Aspiration air quantity m^3/min
HM S / R	**07.05**	500	700	55	90	110	0.71	2,200	1,200	1,200	50
HM S / R	**07.08**	800	700	90	132	160	1.1	2,400	1,200	1,200	80
HM S / R	**07.10**	1,000	700	132	160	200	1.5	2,700	1,200	1,200	100
HM S / R	**13.06**	600	1,250	160	200	250	1.8	2,600	1,800	1,800	120
HM S / R	**13.10**	1,000	1,250	200	250	355	2.9	3,000	1,800	1,800	180
HM S / R	**13.12**	1,250	1,250	250	315	400	3.6	3,200	1,800	1,800	220

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