

GD Hammer Mill

Process

The GD hammer mill is designed for the animal feed industry, to grind raw materials into small particles and meal. The hammer mill range covers capacities from 10–100 tons per hour, depending on the types of raw materials, formula and required grinding structure. The hammer mill can be incorporated in both a pre-grinding and a post-grinding system, as a complete grinding solution; including pre-bin, feeder, magnet cleaner, hammer mill, discharge hopper, aspiration filter, fan and control system.

Lowest operational costs per ton

The GD hammer mill offers the lowest operational costs per ton feed by combining a high capacity with a customer specific production, low maintenance costs and low energy consumption.

Benefits and Features

High Capacity

- ▶ Largest grinding surface in the industry
- ▶ Big breaker plates in upper part of grinding chamber
- ▶ Unique design with staggered hammer positioning to increase hammer hitting surface
- ▶ Compact shaped feeding device with frequency controlled dosing roller for optimal feeding speed of the different types of raw material.
- ▶ Increased capacity due to quick screen exchange by automatic screen exchange (optional)

Energy efficiency

- ▶ Low energy consumption (down to 7 kWh/ton)
- ▶ Frequency controlled main drive for energy cost reduction
- ▶ Energy efficient motors with direct coupling to hammer mill rotor, according latest European standards

Low maintenance costs

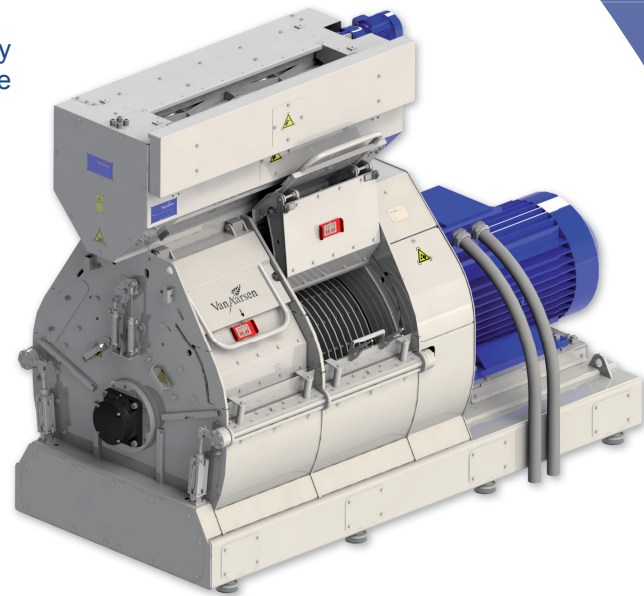
- ▶ Minimal wearing costs due to unique designed breaker plates and long lasting hammers
- ▶ Perfect balance of the hammer mill rotor due to precise tolerances of the hammers
- ▶ Bi-directional inlet flow director and two-direction rotor for optimal use of the hammers on all 4 sides
- ▶ the hammers can be replaced by one operator in a short maintenance action which decreases the service down time
- ▶ Shock absorbers minimizing vibrations to the building (on concrete as well on steel floors)
- ▶ Integrated magnet with automatic cleaner

Easy and safe operation

- ▶ Easy access by large special designed doors opening to the top for changing hammers or inspection
- ▶ Hammer mill enables only 1 person to replace hammers safely in a short period of time
- ▶ Hopper under hammer mill with optional explosion relieve panel (optional)
- ▶ Low noise level (about 94dB) by the unique design with staggered hammer positioning
- ▶ Designed and constructed according to CE and ATEX safety regulations

High feed quality

- ▶ Excellent feed structure for individual recipes
- ▶ Magnet and collecting bin for automatic Ferro parts separation included in the feeding device



- ▶ Aspiration system (optional)
 - Filter integrated in hopper below hammer mill (less contamination)
 - Filter separated from hopper below hammer mill in case of limited space

Flexible production

- ▶ Customer specific structure milling by the use of frequency converter
- ▶ Automatic screen exchange for 3 different screen sizes (optional)

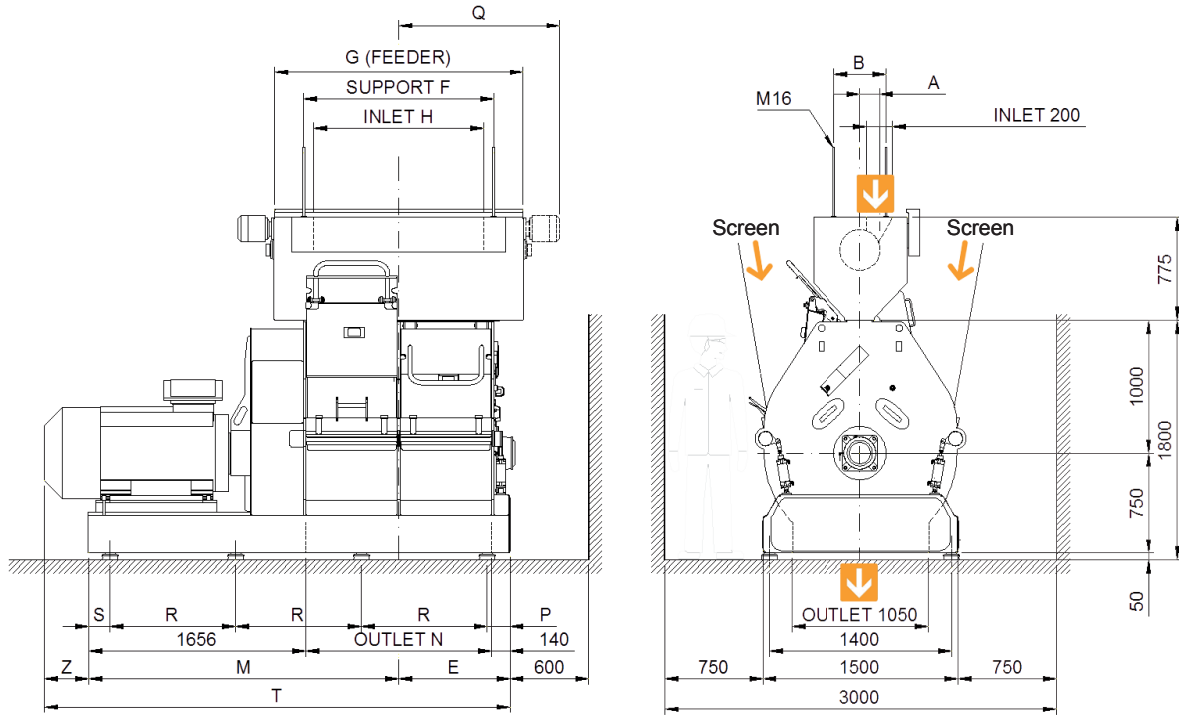
High automation level

- ▶ Complete control of the hammer mill by a Siemens PLC including a multi panel touch screen
- ▶ Highest safety by amongst others temperature monitoring and overflow sensors
- ▶ Vibration detection on the bearings for early detection of wearing (optional)

Design

- ▶ Compact design. The GD hammer mill fits in the existing space in case of a replacement
- ▶ Durable and robust design by use of high quality materials, lifetime up to 30 years

Datasheet



Type	Dimensions for sketch in mm												
	A	B	E	F	G	H	M	N	P	Q	R	S	T max
700 GD	150	400	490	730	1155	580	2020	700	180	925	2x1075	180	2595
1400 GD	150	400	850	1450	1900	1300	2380	1420	175	1230	3x960	160	3570

	Hammer Mill 700 GD	Hammer Mill 1400 GD
Max. dimensions of input material	Ø 20 x 20 mm	Ø 20 x 20 mm
Installed power at 50Hz / 60Hz (depending on voltage)	132 up to 200 kW	200 up to 405 kW
Weight (static / dynamic)	± 5,200 / ± 8,000 kg	± 7,500 / ± 11,500 kg
Hammer dimensions	220*/240** x 60 x 8 mm	220*/240** x 60 x 8 mm
Rows of hammers on circumference	8	8
Number of hammers	120	240
Number of screens	2	4
Screen diameter	1250 mm	1250 mm
Grinding surface	2.57 m ²	5.14 m ²
Nett screen surface	1.37 m ²	2.74 m ²
Breaker plate surface	1.2 m ²	2.4 m ²
Fan air flow	60 - 90 m ³ /min	90 - 180 m ³ /min
Fan power	7.5 - 11 kW	11 - 22 kW

* Normal grinding, ≥ Ø 2 mm

** Fine grinding, < Ø 2 mm

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Automatic Screen Exchange

Increased capacity

The hammer mill can be refurbished with an automatic screen exchange for 3 different screen sizes. With this option each screen exchange is brought back from 20 minutes to just 1 minute. The exchange takes place while the mill is running stationary in the time between two batches, increasing the capacity of the hammer mill.

Return On Investment

Very high Return On Investment, even with only 1 or 2 screen exchanges per hour.

Benefits and Features

High Capacity

- ▶ The automatic screen exchange will minimize the down time of the hammer mill, due to quick screen exchange during operation

Low maintenance costs

- ▶ Use of straight, cost efficient screen plates
- ▶ The system can handle even severely damaged screens.

Easy and safe operation

- ▶ Automatic exchange, ergonomic working conditions
- ▶ Cassettes can be moved aside for easy access the hammer mill top doors
- ▶ No dust release during screen exchange
- ▶ Screen cassettes have been equipped with covers that shield off all moving parts

Flexible production

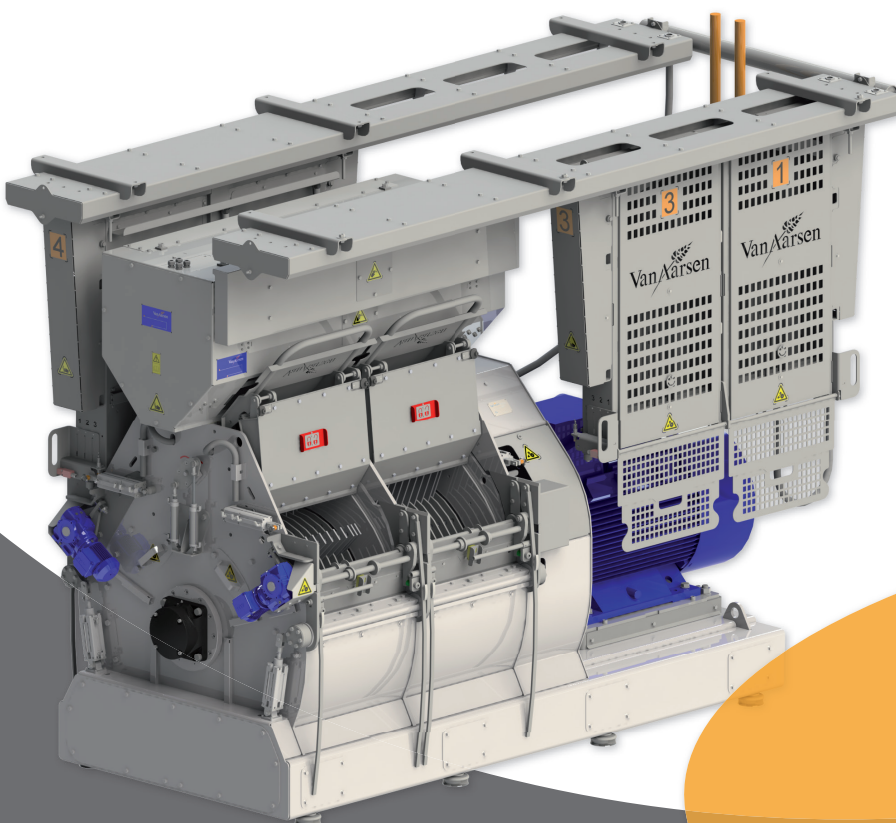
- ▶ Automatic screen exchange of 3 different screen types in combination with the frequency controlled motor enables easy milling of a wide range of structures

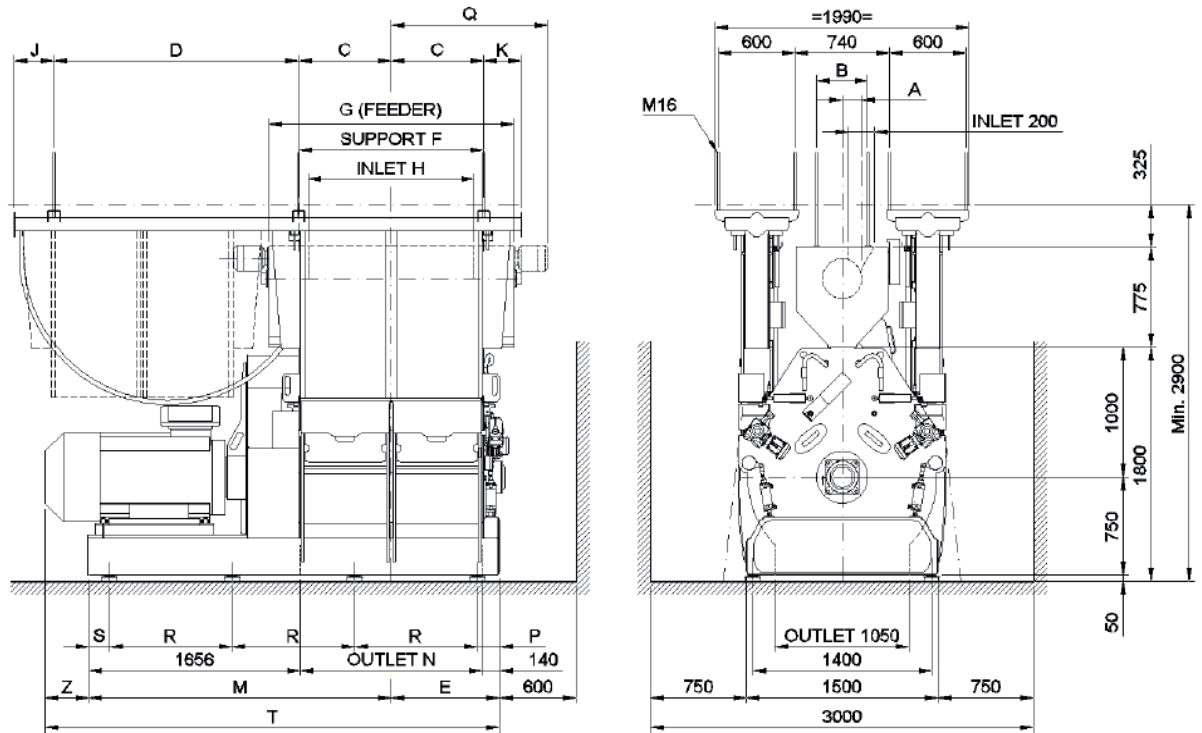
High automation level

- ▶ The control of the automatic screen exchange is executed with a Siemens PLC including a multi-panel touch-screen.
- ▶ The control system automatically selects the screen required for the recipe in use
- ▶ During Inspecting or replacing the screens the control system indicates the required actions step by step on the touch- screen

Design

- ▶ Compact design, the surface area required remains the same





Type	Dimensions for sketch in mm																
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T _{max}
700 GD	150	400	365	1135	490	730	1155	580	505	440	2020	700	180	925	2x1075	180	2595
1400 GD	150	400	725	1915	850	1450	1900	1300	310	295	2380	1420	175	1230	3x960	160	3570

