I-GRIND

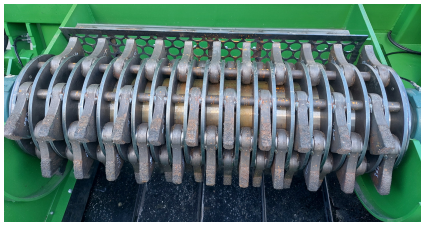
Produced in DK

I-GRIND shreds straw, hay, beet, potato, grain, corn, manure and basically all forms of biomass, with the help of a robust hammer mill, so the utility value of the individual components increases significantly.

I-GRIND 2.0 HD · NEW GENERATION

HAMMER MILL

The hammer mill consists of a powerful cylinder with 88 hammers distributed with 11 pcs on 8 rows. The hammers hits/pulls the material down through some bars in the tube bottom, and tears it, until the wanted pieces can pass through the screen and transported away via the unloading belt.



SPECIAL DEVELOPED HAMMERS

The special developed hammers are much wider at the root, than at the striking point. Hereby the risk of tear in the bearings from the wear of the hammers are avoided, which increases the lifespan on both the hammers and axles in the hammer mill. Simultaneously reduces the noise level significantly. The hammers are coated with high strength steel at the tips.

Tube

I-GRIND's tube rotates, but the bottom stands, while the material runs over the hammer mill. The tube rotation speed is controlled by the operator. When the tube rotates around with material, the settings can be overridden by the hammer mill. The operator sets the tube's rotation speed on the machine, with a simple click on a bottom. Thereafter, you will be able to change the machines settings from 0 to the ideal speed with a wireless remote control. If the hammer mill's rotation speed falls under 1.800 rpm, then the tube's rotations speed will be reduced or fully stop, until the hammer mill is again up in speed. Hereby we avoid overload and stoppage of operation. When the I-GRIND's grain input (option) is mounted, the hydraulics will instead of being lead through the tube oil engine, it would be led up to the grain inputs feeding auger, which also goes down in speed/stops, if the hammer mill loses speed.

ONE MAN OPERATOR

One operator can easily perform all work functions from the loading machine – loading, surveillance, change of the loading belts direction and adjustments of the machine's operation will fast become routine. Thanks to the automatic control of the tube's rotation speed and the hammer mill's rotations, an overload on the machine won't happen, so the operator can focus on loading and use the I-GRIND's huge capacity. This results in in a very high productivity pr. manhour.

Simple, robust, and unbelievable productive

I-GRIND is a simple, but incredibly effective machine for tearing, hitting and hammer most forms of biomass down to a size and simultaneously open their fibres.
In principle, the machine consists of a chassis, drive, hammer mill, screen, rotating tube, unloading belt and steering – all which is made from strong material and dimensioned for hard work
.

FLEXIBLE UNLOADING

I-GRIND's unloading belt can be regulated in both height and direction with a remote on the machine itself, or with a wireless remote. It's flexible and minimise the need of for example exit or levelling in floor silos.
The mobility is +/- 2 meters to each side

SCREEN IN ALL SIZES

The hammer mill processes the material, until it can come through the screen under the mill and on to the unloading belt. The design of the screens is adjusted accordingly to the task and can easily be changed without any recruitments for special tools.

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DANISH DESIGN BY GRONNING

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TECHNICAL FACTS

Product name ..... I-GRIND 2.0 HD
Manufactured in Denmark for the Grønning Smede- og Maskinforretning
Width..... 300 cm
Height with folded unloader belt..... 400 cm
Length with folded unloader belt..... 690 cm
Length unloader belt..... 730 cm
Turning off the unloading belt (horizontal)..... +/- 200 cm
PTO..... 1.000-1.100 rpm
Gearing..... 1:2
Operation of the hammermill, belts..... 10 pcs.
Oil engine, hydraulic hydrostat..... 265 I/min.
Hammers..... 88 pcs.
Screen, minimum diameter..... 0,5 mm
Screen, largest diameter..... By request
Remote ..... Standard
Grain hopper ..... 3m³ Capacity
Transport speed..... 40 km/h
Air trailer brakes..... Standard
Requirements for the tractor
HP ..... From 200 HP
Power plug..... 12 V
Hydr. equipment..... 2 double function oil outlet
The tractor hydraulics is used to manoeuvre the unloading belt and possibly tip the tube.

FOLDABLE UNLOADING BELT

The operator can easily unfold the unloading belt with the help of the hydraulic pistons and after use fold them in again and place the machine in transportation mode. A customized frame maintains the belt during transportation.

CAPACITY

The capacity is of course dependent of the basic material, the degree of crushing and which HP-capacity the tractor provides. In dry straw, the approach/departure speed can be limited factor, because it takes no longer than about 2 minutes to convert a big bale to quality bedding.

GRAIN HOPPER

The I-GRIND can be equipped with a grain hopper, which is easily mounted in the vessel. The input stands at the bottom of the vessel and feeds using a feeding auger the loose goods down over the hammer mill, which thereafter breaks down the material. In corelation with the mounting, the hydraulics is switched from the tube rotation to the operation of the feeding auger. Therefore, can lose goods be loaded in as whole bucketful, due to the feeding auger doses the material automatic, according to the hammer mill's capacity. The corn input is sold separately.

CHASSIS FOR ROAD TRANSPORT

The I-GRIND has an enormous capacity and is often used at many locations. Therefore, its built on a robust chassis, developed for road transport at high speeds. Brakes help to advance safety during transportation.

DESIGNED AND PRODUCED IN DENMARK

I-Grind is produced and designed in the highest quality in Denmark and has therefore also been awarded the quality stamp. To maintain our high standard, we have carefully selected European suppliers with whom we are in ongoing dialogue.

The choice of sub-suppliers for hydraulic equipment, controls etc. is also European, so no matter where you drive, there is easy access to wear and spare parts.

SERVICE FRIENDLY

The I-GRIND is constructed for intense use, long workdays, and high productivity. Therefore, its important, that the ability for daily service checks is easily completed, control the belts and hydraulic hoses, check the hydraulic oil, lubricate the bearings etc. To make it easy and give the user unhindered access to all vital parts, you can tilt the vessel with help of the hydraulic pistons. The same facility is used, when the screen under the hammer mill needs to be removed or changed for a different size.
I-GRIND is manufactured with quality components from acknowledged brands. They can mostly be bought at all well known distributors, which ensures low service costs and fast service.

The I-GRIND has many possibilities of use, as of the robust construction and unique work principle makes it capable of breaking down and processing almost all forms of biomass – whether it needs to process straw for bedding, feeding material or waste products for biogas facilities isn't essential, just as the soldes and the vessel's rotation speed is adjusted accordingly.

BIOGAS

The physical property for mechanical handling improves at breakdown of the biomasses, no matter if its straw, manure, corn, beets, green mass, or something else. At the same time, the value of several materials is promoted in the gasification through the crushing. I-GRIND has already proven, that it can quickly convert wet and useless big bales into valuable biomass.

CO-INSILING

When crushing/interference of beets/potatoes/corn/straw etc. can the different feeding value of forage crops be promoted and loading of countless different feeding materials in the complete feed mixer is reduced.

STRAW FEED

crushed straw/hay cannot be unsorted by animals and therefore includes a uniformly amount in all feed rations. When the I-GRIND has prepared the straw feed is it quickly to mix compact feed in the complete feed mixer, no matter the mixing type or product.

BEDDING

Straw is crushed quickly to quality bedding with optimal properties for subsequent manure handling. I-GRIND's work principle, where the individual straws are not simply cut lengthwise, but also gets fierce blows on the sides in the hammer mill, ensures maximum bedding absorbency and minimizes straw consumption.

CRUSHING OF FEED

Grain/corn/peas/horse beans/turnip pills/rapeseed cakes etc. can quickly be crushed to a uniform mass. Crushing the feed materials, minimizes the animal's opportunity to sort in mixed feed, and the absorption/digestion of the individual feed materials is promoted.

EARNINGS OPPORTUNITIES

The production of straw bedding yesterday, processing of fodder today, crushing beets for ensiling with corn tomorrow and manufacturing of homogeneous semi-finished products to biogas the next day. I-GRIND have many possibilities of use, and therefore achieves many operation hours during the year. This results in an absolute affordable hourly rate for the customers and good earning opportunities for machine stations and contractors.

GRØNNING SMEDE- OG MASKINFORRETNING

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The original I-GRIND was manufactured in the US, but after several considerations we moved production to Denmark and changed the specifications to European standards. The choice of sub-suppliers for hydraulic equipment, controls etc. is also European, so no matter where you drive, there is easy access to wear and spare parts.