

NEW AT LINDNER!

**Impact Crusher for Processing
of Substrates for Biogas Plants**



LIMATOR
Impact Crusher

*The ART of innovative
SHREDDING!*

we reduce it.
LINDNER
Recyclingtech

LIMATOR for Processing of Substrates for Biogas Plants

- ✓ Renewable Resources and Bio-Energy Crops
- ✓ Maize- and Grass-Silage
- ✓ Roots and Bulbs
- ✓ Green Waste and Feed Remains
- ✓ Straw und Foliage
- ✓ Landscaping Material
- ✓ Manure from Livestock Farming
- ✓ Expired Food
- ✓ Slaughterhouse Waste
- ✓ Liquid Manure and Chicken Droppings



Description of System and Functions

Charging of the LIMATOR impact crusher with solid substrates can be directly effected with any conveying equipment like e.g. feed screw, floor conveyor or conveyor belt. For charging with grippers or loaders an intermediate hopper with adequate discharge is required.

From the input at the top of the LIMATOR, the substrate is directed to the crusher bin of the machine. The substrate falls on the quickly rotating multi-element bracket to which the movable crusher plates with crusher tools are attached. In addition to that, two rows of crusher tools at the head of the multi-element bracket on top of each other effect an initial pulping of substrates.

The substrates charged are broken up by the movable crusher plates and the crusher tools, as well as the momentum of the rotating substrates. Optionally available and variable mountable crusher tools or different coatings of the crusher bin ensure sufficient pulping even for substrates that are difficult to break up. This impact crusher system accomplishes gentle, yet maximum possible break-up of substrates and therefore a high gas yield.

A special feature of the LIMATOR crusher tool is the movably fitted crusher plates. If rocks, parts of harvest machinery or other extraneous materials are charged, these crusher plates swing back and prevent major damage to the machine.

The LIMATOR can be operated continuously or in batch processing mode. The discharge of the material is effected by time-controlled opening of the discharge slider in batch processing, or by the open, variably adjustable discharge slider in continuous operation. When processing solid substrates with the LIMATOR, including expired food and slaughterhouse waste, liquid and soft substrates like semi-liquid manure can be charged separately.

The LIMATOR can optionally also be fitted with a double-wall crusher bin. That way, substrates can easily be pre-heated or cooled. To achieve that, the LIMATOR is operated at very low rotation speed in batch processing mode for a while – that way warming up and cooling occurs, but no pulping of substrates yet.

The pulped substrate is fed to the fermentation tank by means of a discharge conveyor or feed screw, or directly handed over to the hopper of the entry pump.

Advantages of Substrate Processing with the LIMATOR

- Increase of gas yield by improved pulping of substrate
- Extended range of substrates can be processed because of improved pulping
- Lower stirring times result in lower energy consumption
- Extensive prevention of floating layers
- Shorter pauses and therefore shorter fermentation times
- Increase of substrate throughput without change of plant technology
- Stabilized processing in fermentation tank by more homogenous substrate feed
- Fewer additives for fermentation process required
- Reduction resp. prevention of floor residue in fermentation tank
- Improved handling of digestate in fermentation tank and at discharge
- Possibility of pre-heating and cooling of substrate

Applications



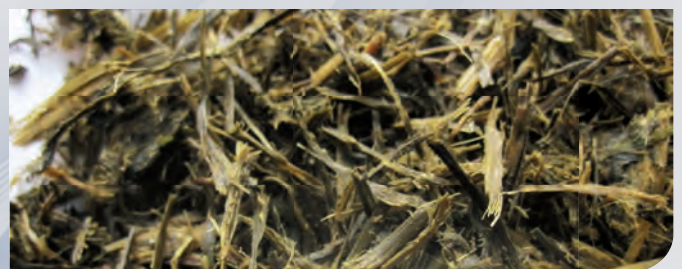
Maize Silage Original Substrate



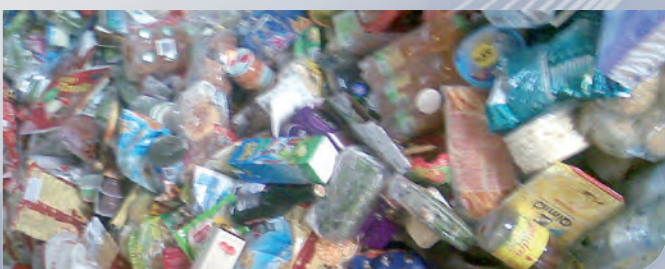
Maize Silage processed



Grass-Silage Original Substrate



Grass-Silage processed



Expired Food



Expired Food processed

LIMATOR L 900 – L 1200 – L 1600

Impact Crusher

The LIMATOR is a versatile modular impact crusher to break up renewable resources, waste and foods.

Technical Data	LIMATOR L 900	LIMATOR L 1200	LIMATOR L 1600
Weight	5 t	6,5 t	14 t
Measurements (L x W x H)	1900 x 1800 x 1700 mm	2500 x 2400 x 2250 mm	3400 x 3200 x 3000 mm
Crusher Bin Diameter x Height	900 x 1000 mm	1200 x 1200 mm	1600 x 1600 mm
Drive Power	37 to 55 kW	75 to 90 kW	160 to 200 kW
Opening for substrate intake	400 x 400 mm	600 x 600 mm	800 x 800 mm
Speed of Rotor	up to 1200 Rpm	up to 1100 Rpm	up to 1000 Rpm
Throughput*	0,5 to 3 t/h	1 to 6 t/h	4 to 10 t/h

* Throughput depends on substrate and mode of operation (continuous or batch processing)

Technical Details

- Compact space-saving design
- Leak-proof und closed construction
- Very simple cleaning and maintenance
- Low sensitivity for extraneous material
- Low noise operations
- High wear-protection of tools
- Low-wear coating of crusher bin

Options

- Various non-corrosive designs
- Adaptable design of substrate charging and discharging areas
- Controls for changing rotor speed
- Various options for charging of crusher tools
- Several different designs for coating of crusher bin
- Special model for semi-mobile deployment with combustion engine



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