NEW AT LINDNER!
Impact Crusher for Processing of Substrates for Biogas Plants

LIMATOR
Impact Crusher

The ART of innovative SHREDDING!
**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.

<table>
<thead>
<tr>
<th>Technical Data</th>
<th>LIMATOR L 900</th>
<th>LIMATOR L 1200</th>
<th>LIMATOR L 1600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>5 t</td>
<td>6.5 t</td>
<td>14 t</td>
</tr>
<tr>
<td>Measurements (L x W x H)</td>
<td>1900 x 1800 x 1700 mm</td>
<td>2500 x 2400 x 2250 mm</td>
<td>3400 x 3200 x 3000 mm</td>
</tr>
<tr>
<td>Crusher Bin Diameter x Height</td>
<td>900 x 1000 mm</td>
<td>1200 x 1200 mm</td>
<td>1600 x 1600 mm</td>
</tr>
<tr>
<td>Drive Power</td>
<td>37 to 55 kW</td>
<td>75 to 90 kW</td>
<td>160 to 200 kW</td>
</tr>
<tr>
<td>Opening for substrate intake</td>
<td>400 x 400 mm</td>
<td>600 x 600 mm</td>
<td>800 x 800 mm</td>
</tr>
<tr>
<td>Speed of Rotor</td>
<td>up to 1200 Rpm</td>
<td>up to 1100 Rpm</td>
<td>up to 1000 Rpm</td>
</tr>
<tr>
<td>Throughput*</td>
<td>0.5 to 3 t/h</td>
<td>1 to 6 t/h</td>
<td>4 to 10 t/h</td>
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</tbody>
</table>

* 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

LINDNER Recyclingtech
Lindner-Recyclingtech GmbH
Villacher Straße 48 | A 9800 Spittal/Drau
T +43 4762 2742-0 E office@l-rt.com
F +43 4762 2742-32 W www.l-rt.com

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