Thöni Screw Press (TSP 350-C)
High performance dewatering unit
With our help you can turn waste into energy.
Thöni – Your competent partner!

Functional description:
The Thöni screw press (TSP 350-C) is very well suited for the dewatering of fermentation residues of various composition and different dry substance contents.

The machine separates the material into a solid and a liquid fraction. In the process, the incoming substrate is fed through the press against a hydraulically operated flap gate. Due to the counter pressure created this way, the dewatering takes place in the screening section.

Depending on the substrate, the degree of dewatering can be varied by variably setting the individual parameters (flap gate pressure, speed of the press screw) or by variably fitting the screw press (gap widths and/or hole diameter of the screws). The system is driven by a flat gear motor with 22.0 kW.

The design pays special attention to easy maintenance and resistance to wear (uncomplicated installation and removal of wearing parts, easy cleaning etc.). The Thöni screw press is manufactured in the company’s own machine and plant construction facility. Over 130 presses are currently used in organic waste fermentation plants worldwide.

Machine data
- Dimensions: L/W/H: approx. 5,500 / 1,200 / 1,300 mm
- Weight: approx. 3,500 kg
- Drive: Gear motor 22.0 kW
- Speed: max. 11 rpm
- Designed for the operation with a frequency converter

Press screw
- Screw diameter: approx. 350 mm
- Conical screw core
- High-quality plating
- Special gear tooth coupling for optimum power transmission

Screening section
- Screens in stainless steel design
- Variable fitting of slotted or perforated screens possible
- Various slot and borehole dimensions

Flag gate
- Hydraulic pressure at the flag gate can be adjusted from 10–140 bar
- High resistance to wear
- Energy-saving hydraulic unit with pressure accumulator

Power / performance / benefits
- High drive power
- Robust, wear-resistant design
- Optimum dewatering behaviour due to a special screw geometry
- Optimum feed of substrate, since the substrate is directly entered into the screening section
- High efficiency (ideal content of dry substance in the press cake)
- Easy maintenance
- Uncomplicated installation and removal of wearing parts
- Easy cleaning

Precision
In certain areas of the machine, the function and performance are determined by tenths of a millimetre. Therefore, the gap widths between the screw and the screens and/or wear ring have a significant effect on the dewatering performance.

The design of the swimming seal and the coupling teeth also require precision. We achieve the required degree of precision using special manufacturing machines in our plant.

Robust design
The high drive power and the counter pressure at the flap are causing enormous mechanical loads in the machine. We therefore pay special attention to a solid dimensioning of the components.

Corrosion resistance
All components that come into contact with the substrate and the press water are made of stainless steel. All frame components are coated with a high-quality 2-component epoxy resin coating.

Resistance to wear
Due to the consistency of the substrate (the content of contaminants such as sand, stones, glass etc.) and the high dewatering forces, a high resistance to wear of the material is required.

The solid dimensioning of the components as well as the careful selection of high-quality materials in connection with the state-of-the-art production technology make sure that the Thöni screw presses feature the highest possible resistance to wear.

Efficient dewatering operation
The Thöni screw press represents the best and optimum compromise between price, performance and stability when it comes to the dewatering of the substrate.

Due to the typical substrate properties, no flocculating agent is required.

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