



# BIOGENIC WASTE

## Composting





## OVERVIEW

# Think green!

Komptech is a leading international technology provider. We plan, build and supply machines and systems for the mechanical and biological treatment of solid waste and biomass, and the processing of woody biomass for use as a renewable fuel.

### Composting of biogenic waste

We've focused intensively on the composting of biogenic waste since our founding. Our close collaboration with scientists, agricultural users and mechanical engineers results in products and solutions that ensure maximum ecological and economic efficiency, when adapted to local conditions.

25

years of experience  
in composting

Ø 1,000

cubic metres per hour  
throughput per turner

4,000

satisfied  
customers

60

countries to which we  
deliver our products

APPLICATION

# Wide application area

The goal of composting is to convert organic substances into stable, plant-friendly humus as quickly and odourlessly as possible. Composters try to get a high-quality product with the shortest possible rotting time and lowest possible emissions.

Our products and services range from mobile machines for open composting systems, to large plants with stationary machines for preparing and packaging the final product. Komptech offers the necessary knowledge and machines or systems for every application, to get the highest quality output possible in closed material cycles and to save resources.



01 Biowaste

02 MSW  
Residual waste

03 Green waste  
Yard waste

04 Manure  
Agricultural waste  
Sewage sludge

PROCESSES

Mechanical preparation

Shredding and mixing creates a starting mixture that is ideal for the rotting processes. If necessary, contraries can be sorted out by screening.

01 Shredding Page 8

02 Contrary removal Page 10

Biological treatment

The decomposition and conversion processes performed by microorganisms are controlled from the outside through ventilation, mixing and irrigation. We use open solutions like windrow composting, as well as closed processes in rotting tunnels, or combinations of both.

03 Rotting process Page 12

Post-processing

It starts with screening of the cured compost to the desired particle size. Further separation steps may be necessary, depending on the degree of contamination. Following removal of contaminants by sifting, the screen overflow can be reused as structural material or biomass fuel.

04 Screening Page 14

05 Separation Page 16



01

**Crambo**  
Mobile and stationary slow-speed dual-shaft shredders

**Axtor**  
Mobile high-speed shredder

02

**Multistar SE**  
Stationary star screens

**TS 18/45...25/120 (optional)**  
Stationary drum screens

**Flowerdisc (optional)**  
Stationary disc screen

03

**Topturn X**  
Self-propelled turner for triangular windrows

**Tunnelrotte**  
in cooperation with external suppliers

04

**Primus/Maxx/Nemus/Cribus**  
Mobile drum screens

**TS 18/45...25/120**  
Stationary drum screens

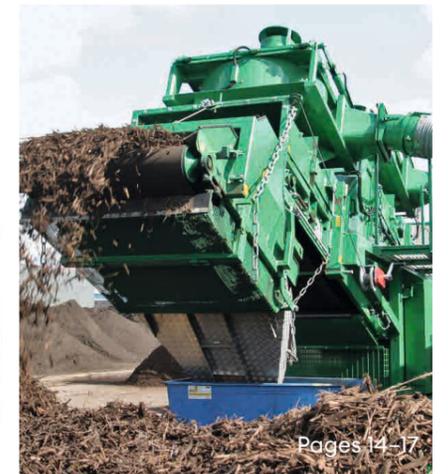
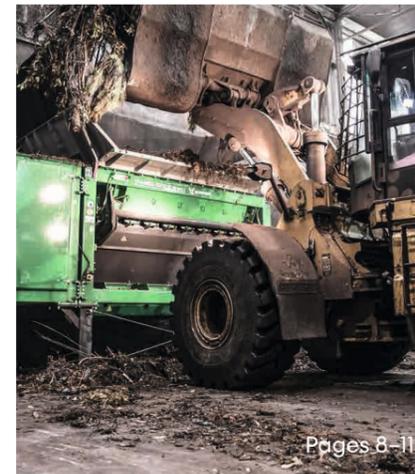
**Multistar S3/L3/XL3 (optional)**  
Mobile star screens

**Multistar SE (optional)**  
Stationary star screens

05

**Hurrikan S**  
Mobile and stationary wind sifters

**Stonefex (optional)**  
Mobile stone separator





### Crambo

The Crambo is one of the best machines there is for shredding all types of wood and green cuttings. Two low-speed drums with teeth minimize the fines component, as well as noise and dust emissions, and are resilient against contraries. The degree of shredding can be set flexibly. Just change the screen basket to get the ideal grain range for further processing.

### Axtor

Compact dimensions and high flexibility make the Axtor the ideal machine for green waste treatment. Other features are a wide feed area with tilt hopper, tough and aggressive intake system, and roomy service platform with excellent access to engine and drum for maintenance.

Crambo stationary



Axtor 4510

Crambo mobile



The stationary Crambo direct has a mechanical drive with load-dependent automatic transmission. That means higher efficiency for lower energy consumption. It retains full functionality, like overload protection, reversing and two shredding speeds.

# 01 Shredding

Low-speed shredders like the Crambo or high-speed chippers like the Axtor can be used for shredding. Either way, the right tool setup gives the desired particle size. Prepping takes place indoors or outdoors, depending on the input material and local conditions.

Two almost 3 meter long counter-rotating toothed drums in the Crambo's extra-large shredding chamber ensure active feed.





**TS 18/45...25/120**

There is the right stationary drum screen model for every system size. Directly driven heavy-duty support wheels provide smooth drum operation and top efficiency, with reduced energy consumption and noise emissions.

**Flowerdisc**

This tough disc screen efficiently separates contraries as overs in the 80-100 mm range.

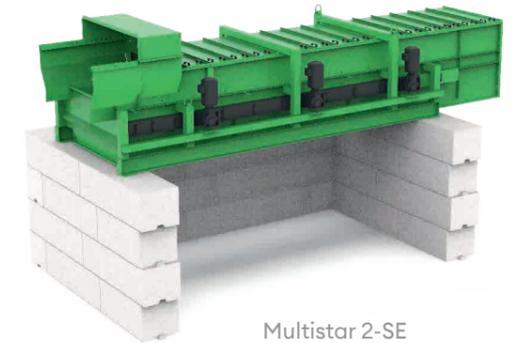
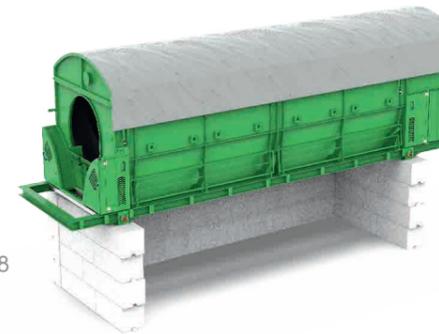
**Multistar SE**

Stationary Multistar star screens are among the most effective separation options for organic waste. Contraries are separated out as overs in the 60-100 mm range, depending on the screen deck configuration. With the Multistar's modular design, the screen decks, feed hopper, wind sifter and stone/magnetic separation can be set up perfectly for the job at hand, generating up to four fractions in one operation.

FD 80



TS 22/78



Multistar 2-SE

Variable configuration of the mounting substructure, service access, enclosure and drive simplify adaptation to on-site conditions.

## 02 Contrary removal

To meet quality criteria for the final product even with highly contaminated feedstock, screening before composting is an option, with subsequent disposal or sorting of the overlengths. Drum screens and Multistar star screens can be used for this coarse screening, which is typically done in a stationary setting. Flowerdisc screens and spiral shaft separators are also suitable.

The Multistar 2-SE star screen has a screening area of about 7 metres, and with its compact design it's easy to integrate with other machines, in new processing lines or as a retrofit.





**Topturn X**

With a sturdy frame, powerful hydraulics and large drum, the Topturn X is ready for any work situation. Further plus points are the comfortable cabin that lowers hydraulically for easy entry, and roomy maintenance platforms that fold out, likewise hydraulically. The chassis comes in a choice of wheeled or tracked versions. Additional options are available like a hose system for watering, a patented scraper device for catching the lowermost material layer and a fast version for quick manoeuvring.



Topturn X5000

**Topturn X Wheel**

The wheeled chassis is a top performer on asphalt and concrete.



Wheel

**Topturn X Track**

The tracked chassis is the ideal option for difficult areas.



Track

Tunnel composting is a modular, completely encapsulated and individually controllable process, that runs fully automatically due to pressure ventilation.



At the Topturn X4500, a large turning drum with a diameter of 1.2 metres gives high throughput and excellent mixing.

# 03 Rotting process

The feedstock and the associated overall conditions determine whether the rotting process is best done enclosed, i.e. in an indoor part of the system, or in open-air windrows.

**Windrow composting**

In windrow composting, structure fill is often added and the material then homogenized with a windrow turner. Turning with a Topturn compost turner improves ventilation, enables re-watering and ensures mixing of the different rotting areas in the windrow.

Optionally there might be a ventilation system in the floor underneath the material. Under certain climate conditions it may be advantageous to cover the windrows. The process is generally complete after 6 to 12 weeks and is followed by curing, the duration of which depends on the intended use of the compost.

**Closed systems**

The first phase of the rotting process is often done in a closed system with ventilation and exhaust treatment.





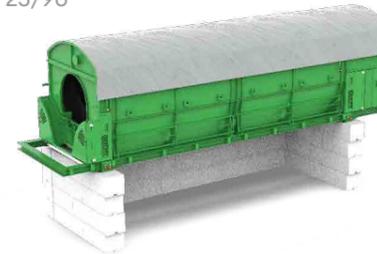
### Mobile and stationary drum screens

Our wide range of drum screens deliver almost any desired performance level. The Primus and Maxx screens have proven their value for many years in the medium performance range. The Nemus adds innovative details to these tried and true solutions. The Cribus machine series includes three electrically powered models. Seven more sizes are available in stationary versions, with drum lengths of up to twelve metres.

### Multistar S3/L3/XL3

With Multistar star screens, high throughput and selectivity are assured even with materials of varying moisture content and composting stages. Versions and configurations are available for virtually any application and plant size. The electric drive makes screening quiet, efficient and economical.

TS 25/90



Multistar L3



Nemus 2700



Stationary star screens are likewise available for virtually any application and plant size. Magnetic separation, wind sifting and removal of rolling fractions make star screens multi-functional – almost anything is possible.

## 04 Screening

To meet quality criteria for the final product even with highly contaminated feedstock, screening before composting is an option, with subsequent disposal or sorting of the overlengths. Drum screens and Multistar star screens can be used for this coarse screening, which is typically done in a stationary setting. Flowerdisc screens and spiral shaft separators are also suitable.



A feed worm inside the screen drum of the Nemus gives ideal loosening and active turning of the material. This boosts throughput and screening quality.





### Hurrikan

Hurrikan wind sifters provide effective removal of plastic film from screen overs. They work with a patented pressure-suction process that gives a separation efficiency of up to 95 percent on the Hurrikan S. Electric drive of all components ensures top efficiency, while offering many control possibilities. Magnetic and roller separators can further enhance the quality of the recyclable overs.

### Stonefex

The Stonefex stone separator reliably and very effectively removes stones and inert items from biomass fuels. A patented system of pressure and suction blowers generates exactly the right air flow in the expansion chamber to separate the stones and the organic fraction.

Hurrikan S



Stonefex 3000



The Hurrikan S has an enlarged suction zone with two suction blowers. An integrated power unit makes this wind sifter completely independent of grid power.

## 05 Separation

Screening results in a useful fraction and screen overflow. After removal of light materials in a Hurrikan wind sifter, this overflow can be used as a structural material. After stone removal in a Stonefex, the overflow is also usable as biomass fuel.

The pressure-suction system gives extremely effective removal of light materials from screen overs. First, the pressure blower separates the material. Light materials settle onto the remaining fraction. In a second step, the light materials are pulled away by a suction blower.





## SERVICE

# Das Komptech-Plus



### Beste Beratung

Auf Basis unserer Erfahrung und umfangreicher Datenanalysen zeigen wir Ihnen Möglichkeiten zur Optimierung Ihrer Prozesse.



### Gesamtlösungen

Von der mobilen Einzelmaschine bis zur komplexen, stationären Anlage – Sie erhalten von uns die passende Prozesslösung.



### Service in Ihrer Nähe

Ein kompetentes Team ist schnell vor Ort und sorgt dafür, dass Ihre Maschinen laufen.



### Produktivität im Blick

Per App und integriertem Monitoring behalten Sie Betriebsdaten und Wirtschaftlichkeit unter Kontrolle.



### Ersatzteile stets verfügbar

Intelligente Lagerhaltung sorgt für die schnelle, wirtschaftliche Bereitstellung hochwertiger Ersatzteile.



### Bedarfsgerechter Service

Wartungs- und Serviceverträge sowie Verlängerungen der Gewährleistung richten sich nach Ihren individuellen Ansprüchen.

# Never waste an opportunity

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## We create value for you



### Waste-stream expertise

Because you need a  
setup that's tailored to  
your waste stream.



### Innovative technology

Because you need to  
adapt your output to  
your market needs.



### Flexible sales models

Because you have the  
choice between new, rental  
and used machines.



### Service excellence

Because you always  
need to keep your  
system running.