



COMPOSTING

Treatment of
biogenic waste





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, contaminants can be sorted out by screening.

01 Shredding Page 8

02 Contaminants removal

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

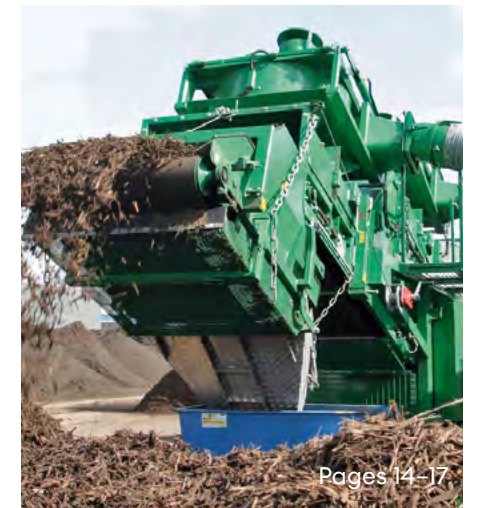
Multistar S3/L3/XL3 (optional)
Mobile star screens

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 contaminants. 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 contaminants as overs in the 80-100 mm range.

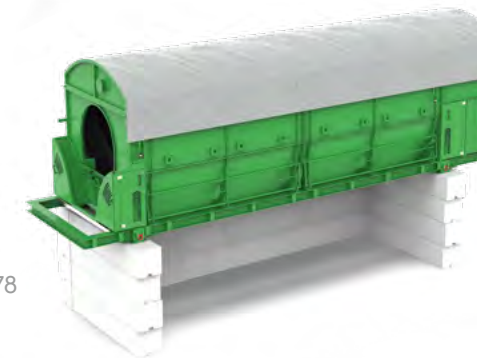
Multistar SE

Stationary Multistar star screens are among the most effective separation options for organic waste. Contaminants 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 Contaminants 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.





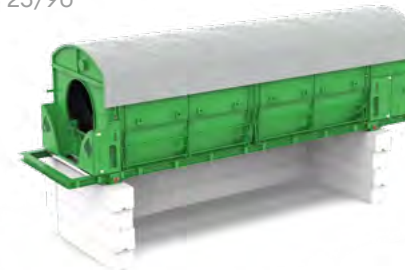
Mobile and stationary drum screens

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

The Komptech plus



Top advice

We'll show you how to optimize your processes, based on our experience and extensive data analyses.



All-in solutions

From individual mobile machines to complex stationary systems, with us you get the right process solution.



Service near you

Expert technicians are on-site quickly to make sure your machines keep running.



Productivity in view

Apps and integrated monitoring let you keep an eye on operating data and economy.



Spare parts always available

Intelligent stocking for the fast, economical provision of high-quality spare parts.



Need-based service

Our maintenance and service agreements, as well as extended warranties, are aligned with your needs.

Never waste an opportunity.

KompTech GmbH
Kühau 37
8130 Frohnleiten, Austria
+43 3126 505 - 0
info@komptech.com

© 2023 KompTech GmbH. No liability accepted for changes, errors and misprints. Printed on PEFC-certified paper, which was produced in Styria, Austria.

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.