KOMPTECH

SOLUTIONS AND PRODUCTS

What we offer

OVERVIEW

Think variety!

Our solutions for your success

With our solutions for mechanical and biological waste recycling and processing woody biomass, we help our customers make the best use of opportunities, both economic and ecological.

Our products range from individual machines to entire processing lines, consisting of mobile and stationary machines, in some applications supplemented by products from our network partners. This flexibility makes us an expert partner for every requirement, be it replacing individual machines, upgrading complete system sections or constructing an entire new facility.

The spectrum of our technologies' applications is far-reaching, from compact systems for waste wood processing to the mechanical pre- and post-processing of household, commercial and organic waste, to special tasks in splitting and recycling. Talk to us! We'll help find the right solution for you.

Flexible sales models

What you need is what matters to us. Depending on your situation, you can rent our machines, buy them Certified Used or invest in new ones. We offer what's right for you. That's our motivation.

New machine

- Most innovative
- Highest reliability
- Most advanced operation

"Certified Used" machine

- Lower purchase costs
- High economy
- High reliability

Rental machine

- Maximum flexibility
- No long-term investment
- Fast availability

Advisory Services

01 **Business analysis**

To find the right solution for the requirements of our customers all over the world, we analyze their plans together with them.

02 **Know-how**

Our employees have wide-ranging expertise in the field of waste treatment – and we're happy to share it.

03 **Planning service**

We develop the correct machine or system concept for each of our customers.

04 **Financing support**

We assist our customers with the planning of their financing, and provide extensive know-how in the field of export financing.

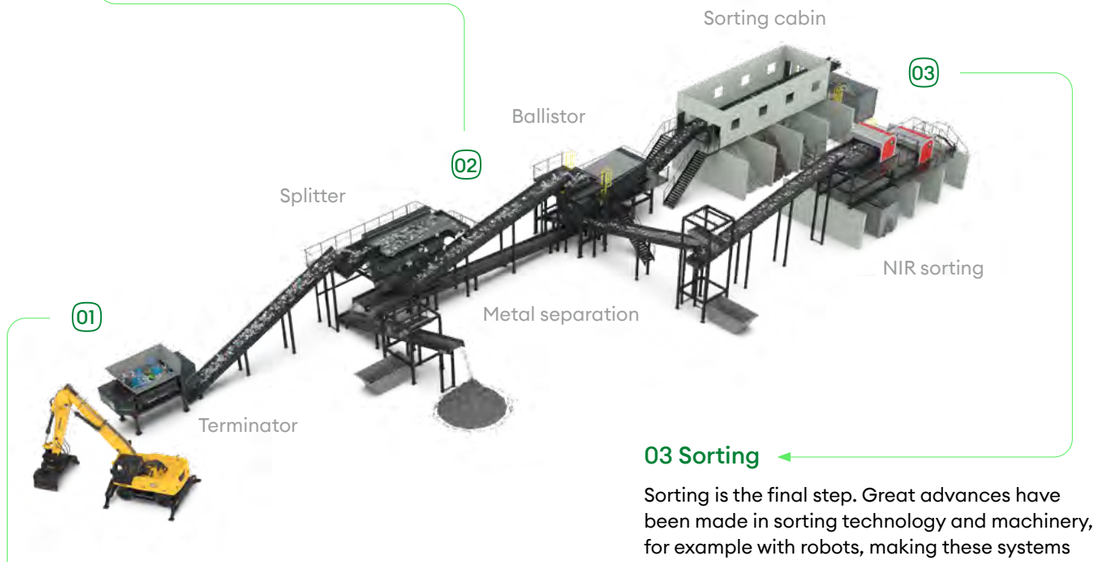
Waste processing for material reclamation

The goal of reducing our material footprint through a reuse-centric economy with high recycling rates presents new challenges for the waste industry. Processing lines for mixed municipal waste need to allow for dynamic processes, in order to deliver the most efficient, recyclables-oriented performance.

At Komptech we design and dimension recycling facilities to the requirements of the job. The most important factors are the feedstock composition and the sales opportunities for the recyclables. Komptech builds efficient solutions for complex tasks with its comprehensive line of key components for shredding, screening and separating, plus market-proven components by well-known manufacturers.

02 Separation

Separation is performed by the technology that is most appropriate for the situation, whether maintenance-free spiral shaft separator, compact disc screen or all-purpose drum screen. This step removes the fines, and the remaining material is then ballistically separated into a 2-D and a 3-D fraction. Ferrous and non-ferrous metals are likewise removed from the separated material streams.

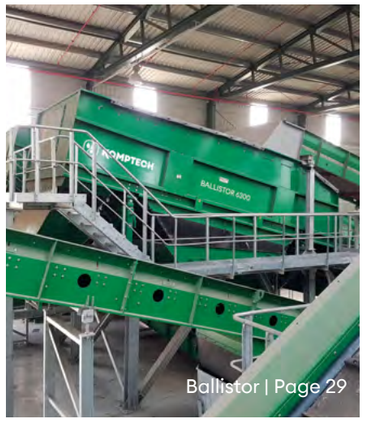


03 Sorting

Sorting is the final step. Great advances have been made in sorting technology and machinery, for example with robots, making these systems suitable for both 2-D and 3-D fractions. Manual sorting of the recyclables is also a viable solution.

01 Shredding

The first process step is selective shredding, to open up the material and homogenize the input stream. Low-speed shredders with adjustable shredding degree generate a continuous material stream at the desired particle size. The machines can be driven by hydraulics or high-efficiency mechanical systems.



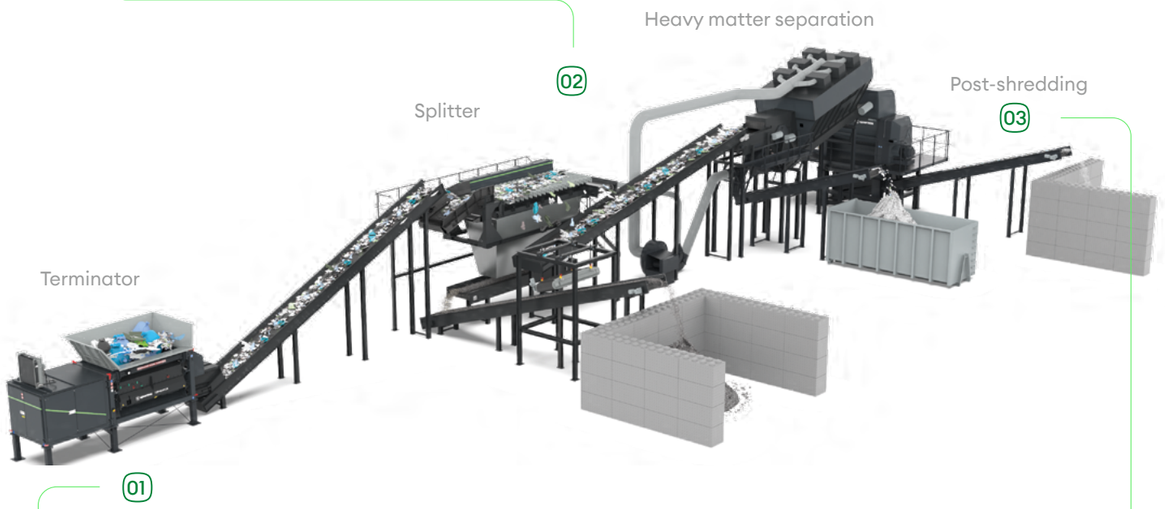
Refuse-derived fuel production

The production and use of refuse-derived fuels (RDF) is central to modern waste management. As legal requirements increasingly restrict the landfilling of untreated waste and at the same time demand higher recycling rates, the use of waste as fuel has become an important factor alongside recycling. We design and build refuse-derived fuel production plants that are configured for the individual requirements of our customers.

In system design our focus is either exclusively on making refuse-derived fuels, or also includes the separation of certain recyclable fractions. A plant designed to make only refuse-derived fuels (see next page) generally consists of the process steps of pre-shredding, screening or separation, and post-shredding.

02 Screening and separation

Fines (usually < 100 mm) obtained from separation by spiral shaft screener can be used as-is as RDF (if in fluidized bed quality), or must first undergo biological treatment, depending on their composition. The remaining high-caloric fraction is freed of glass and stones in a heavy matter separator.

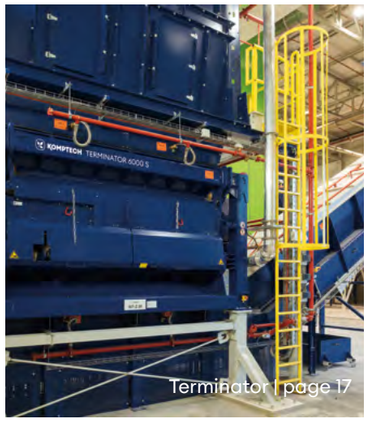


03 Post-shredding

In the final process step, a post-shredder generates a finished RDF fraction in the particle size requested by the customer (cement industry, RDF power plant, etc.). Depending on requirements, contaminants such as items containing chlorine (like PVC) can be removed in a post-treatment step.

01 Pre-shredding

Pre-shredding with a low-speed shredder opens up the material in an ideal way for downstream screening and separation steps.



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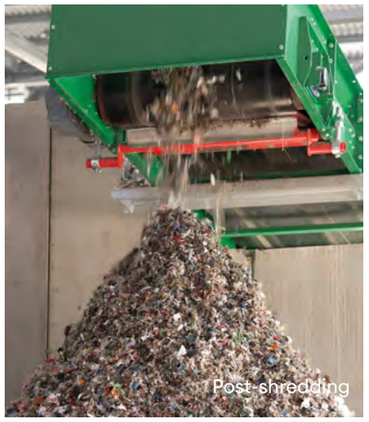
Splitter | page 29


Post-shredding

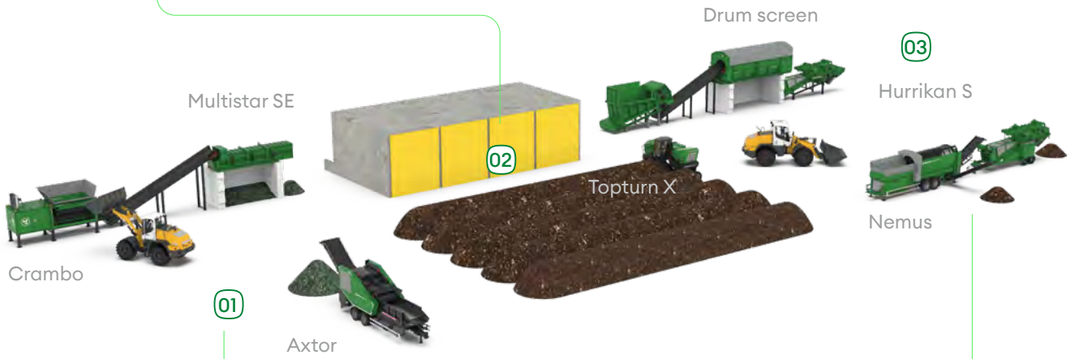
Composting biogenic waste

Since our founding, we've focused intensively on the composting of biogenic waste and residual materials. Our close collaboration with people who work and research in science, agriculture and mechanical engineering results in machines that ensure maximum ecological and economic efficiency, when adapted to local conditions.

Our product line extends from mobile machines for open composting plants, to large systems with stationary machines for preparing and packaging the final product. For each case, Komptech offers the necessary knowledge and machines or systems.

02 Rotting process

The decomposition and recomposition processes performed by microorganisms are controlled from the outside through ventilation, mixing and irrigation. Composting can be in open-air windrows with regular turning, or indoor in ventilated rotting tunnels, or a combination of the two.

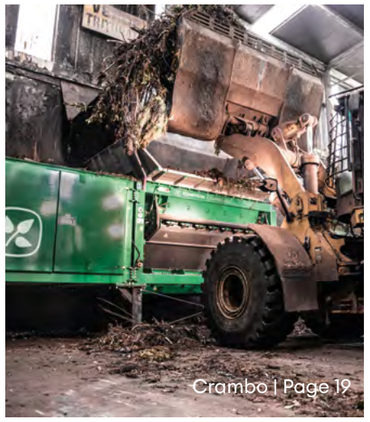


01 Processing

Shredding and mixing create a mixture that is ideal for the rotting processes. This can be done with low-speed shredders, or high-speed chippers in the case of green waste. If the input material is highly contaminated feedstock, screening with a star or drum screen before composting is an option, in order to meet quality criteria for the final product.

03 Post-treatment

This starts with screening of the cured compost to the desired particle size. Further separation steps may be necessary, depending on the degree of contamination. A wide range of mobile and stationary drum screens, star screens and wind sifters are available for the purpose. Following removal of contaminants by sifting, the screen overflow can be reused as structural material or biomass fuel.



Preparation for dry anaerobic digestion

Anaerobic digestion is an economically and ecologically viable treatment method for organic waste with higher moisture. Proper preparation of the feedstock is the key to efficient operation. Biowaste can be turned into energy and compost, often through a combination of anaerobic digestion and subsequent composting.

Processing starts with low-speed shredding, typically followed by magnetic separation and screening by star screen. In screening into two fractions the under-size fraction (mostly <60 to 90 mm) becomes the input material for anaerobic digestion. If the source material is heavily contaminated with plastics, 3-fraction screening including optical sorting can give good results.

01 Pre-shredding

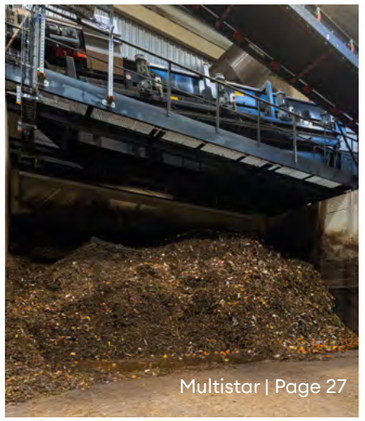
By selecting the right combination of teeth, screen baskets and drum speed, the Crambo dual-shaft shredder can be configured to give exactly the desired shred, opening up all bags and packages as completely as possible while minimizing the shredding of these contaminants. A modular system for setup, material feed, discharge and control offers numerous options for almost any requirement.

02 Screening

A Multistar star screen downstream of the shredder can be set for exact separation of the shred, by simply adjusting the speed of the star shafts. This allows fast reaction to fluctuations in the properties of the feedstock, for choosing which materials remain in the process and which are removed from it. A wind sifter can be positioned at drop points to boost contaminant removal.

03 Separation

The nature of fresh biowaste makes it a challenging feedstock for automatic sorting systems. However, separating it into fine and coarse fractions creates a material stream that is narrowed down in terms of volume and particle size, making sorting easier. Material distributors isolate objects on the conveyor, so specially positioned blow-off bars with compressed air valves can remove a large proportion of the foreign matter detected.



Processing biomass into renewable fuel

Woody biomass plays a key role in the transition from fossil fuel to renewable energy. With the right machinery, waste wood, agricultural and forestry waste can all be turned into marketable fuels. Companies formerly working in disposal can use this to add energy production to their portfolio.

Low- or high-speed shredders, flexible star screens and – where needed – high-performance stone separators are the key components for efficient fuel production. The customers are biomass heating and cogeneration plants, who need a low-cost fuel with a specific calorific value and grain size.

02 High-speed chipping

The Axtor or Lacero can turn woody green cuttings, clean forestry residue and untreated used wood into a coarsely structured fuel. This fuel can go directly to a heating plant, or be further conditioned through screening for more exacting demands. The Axtor turns trunks right into high-quality chips.

01 Low-speed pre-shredding

Making fuel from green cuttings usually requires coarse pre-shredding to separate out the woody components in subsequent screening, possibly after a short rot for drying. The Crambo, a tough shredder, is ideal for the task. With its large screen baskets it outputs the right grain size for further processing.

03 Screening and separation

Star screens give a fine, medium and coarse fraction in one screening pass, with the medium fraction generally giving a usable fuel. The fine fraction is further processed as compost, while the coarse fraction is cycled back to repeat shredding. A Stonefex stone separator reliably removes stones and similar items.

Waste wood processing for reclamation of materials and energy

In modern waste management systems, waste wood is collected separately and processed for material or energy use. Untreated waste wood is often used to make wooden materials like chipboard. Used wood that is not suitable for recycling as material can be used as fuel to generate electrical energy or heat.

Our product range can handle almost any task in waste wood processing. If it's about volume reduction, we offer our Crambo and Terminator shredders in numerous mobile and stationary versions. For a higher degree of shredding, a flexible combination of low-speed shredder and star screen is the way to go. An even finer grain is possible by combining a Crambo for pre-shredding with an Axtor for post-shredding.

02 Screening/returning

A Multistar star screen downstream of the shredder outputs a defined useful fraction, while returning overlengths back to the shredding process. The low-wear screen deck and electric power keep operating costs low. The output particle size can be precisely adjusted, simply by adjusting the rotational speed of the star shafts.

01 Pre-shredding

On the Crambo, two drums with special teeth give very effective shredding. The stationary version is offered with hydraulic or mechanical drum drive. A modular system for setup, material feed, discharge and controls offers numerous options for almost any requirement.

03 FE/NF separation

Metallic contaminants in the output product are undesirable, so an overbelt magnet pulls ferrous metal items out of the shred stream. It is installed in the line of material flow, for maximum effectiveness. A further option is the addition of an eddy flow separator to remove non-ferrous metals.

Low-speed single-shaft shredder

The processing of waste for materials recycling or energy production usually starts with shredding, to condition the material stream for further process steps. This is exactly what the Terminator is built for. As a tough, low-speed shredder it can be used on almost all types of solid waste. The hydraulic drum drive with load-dependent speed control develops the highest shredding forces.

Stepless cutting gap adjustment allows sizing of the output for its intended purpose. On the mobile machines, hydraulic drive with load-dependent speed control ensures full use of the engine power. On the stationary versions, there is also the option of electro-mechanical drive for the highest efficiency. Numerous configurations and modifications are possible for all versions.

Terminator

Terminator mobile

Type range	3400(S)/5000(S)/6000S
Power	250-447 kW
Max. throughput	45-100 t/h
Design	Hook/Trailer/Track

Terminator xtron

Type range	5000S
Power	340 kW
Max. throughput	80 t/h
Design	Hook/Trailer/Track

Terminator e-mobile

Type range	3400(S)/5000(S)/6000S
Power	160-280 kW
Max. throughput	30-100 t/h
Design	Hook/Trailer/Track

Terminator stationary

Type range	2200/3400(S)/ 5000(S)/6000S
Power	132-280 kW
Max. throughput	30-100 t/h
Design	Separate/Combined

Terminator direct

Type range	1700/2200/3400(S)/ 5000(S)/6000S
Power	75-320 kW
Max. throughput	35-75 t/h
Design	Combined

Terminator direct SL

Type range	5200/6200
Power	220-264 kW
Max. throughput	60-100 t/h
Design	Combined

Diesel | Electric | Mechanical | Hydraulic

Low-speed two-shaft shredder

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 adjusted flexibly, by changing the screen basket. Thus, the Crambo can shred to exactly the size range best suited for further processing.

Both the mobile and the stationary versions are offered with a choice of hydraulic or mechanical drum drive. Integration in a processing line is straightforward, and a modular system for setup, control technology, and material feed and discharge offers numerous options for almost any requirement.

Crambo

Crambo mobile

Type range	3400/5000/6000
Power	250-447 kW
Max. throughput	45-100 t/h
Design	Hook/Trailer/Track

Crambo direct mobile

Type range	4200/5200/6200
Power	250-447 kW
Max. throughput	55-120 t/h
Design	Hook/Trailer/Track

Crambo e-mobile

Type range	3400/5000/6000
Power	160-280 kW
Max. throughput	55-100 t/h
Design	Hook/Trailer/Track

Crambo stationary

Type range	3400/5000/6000
Power	160-280 kW
Max. throughput	45-100 t/h
Design	Separate/Combined

Crambo direct stationary

Type range	4200/5200/6200
Power	160-280 kW
Max. throughput	55-120 t/h
Design	Combined

High-speed shredder

The Axtor is a versatile machine for processing wood and green cuttings. With a 340 kilowatt engine and a total weight under 19 tonnes in the trailer version, the Axtor 4510 is an exact fit for the requirements in the light and medium-duty categories. If more is needed, there is the powerful Axtor 6210 with 430 kilowatt: Throughputs of 300 cubic metres and more are not uncommon.

The Lacero 8010 extends our product portfolio for processing woody biomass. This high-speed shredder has a large intake and 812 hp power – enough for a throughput of up to 400 cubic metres per hour. For operators who place high demands on throughput and material quality, the Lacero is one of the best-performing machines for processing virtually all materials involved in landscaping.

Axtor and Lacero

Axtor 4510

Type range	–
Power	340 kW
Max. throughput	250 m³/h
Design	Trailer/Track

Axtor 6210

Type range	–
Power	430 kW
Max. throughput	300 m³/h
Design	Trailer/Track

Lacero 8010

Type range	–
Power	597 kW
Max. throughput	400 m³/h
Design	Track

Turner for triangular windrows

In windrow composting, regular turning is critical for proper processing. The Topturn X is one of the most widely used compost turners in the world, with a line of turners configured for the most common windrow sizes. With a 4.5 m windrow width, the Topturn X4500 is the right entry-level turner for smaller composters. Next larger are the Topturn X5000 and X5500, designed for five and five and a half metre windrows.

At the top is the Topturn X6000. With 310 kW engine power and sized for windrows 6 m wide and up to 2.6 m high, it provides faultless mixing. With their sturdy frames, powerful hydraulics and large drums, the Topturn X's are ready to handle any work situation. Comfortable cabins with power lift, and maintenance platforms that fold out hydraulically, are further plus points of the series.

Topturn X

Topturn X

Type range	4500/5000/5500/6000
Power	151-310 kW
Max. throughput	3,000-5,000 m³/h
Design	Wheel/Track

Topturn X63

Type range	–
Power	287 kW
Max. throughput	4,500 m³/h
Design	Wheel/Track

A sustainable future for generations to come, as well as the business success of our customers, are important to us.

Hydraulic and electric drum screens

Our wide range of drum screens deliver almost any desired performance level. In addition, customers can choose between diesel-hydraulic or electric drive, with power from the grid or from an on-board generator. The hydraulic machines feature tough, proven technology, with the Primus and Maxx for medium volumes and the Nemus, whose performance meets the highest demands.

On the Cribus series the operating costs are in focus. Everything is electrically powered, from the hopper to the discharge conveyors. This, along with many innovations, minimizes energy, wear and maintenance costs. The variable design of the substructure, maintenance access, housing and drive placement simplify adaptation to local conditions for the stationary models.

Drum screens

Primus

Type range	–
Power	36 kW
Max. throughput	70 m³/h
Design	Trailer

Maxx

Type range	Maxx/518
Power	55 kW
Max. throughput	120 m³/h
Design	Trailer

Maxx E

Type range	–
Power	55 kW
Max. throughput	120 m³/h
Design	Trailer

Nemus

Type range	2700/620
Power	55-75 kW
Max. throughput	170 m³/h
Design	Trailer/Track

Cribus

Type range	2800/3800/5000
Power	55 kW
Max. throughput	170-270 m³/h
Design	Trailer/Semi-trailer

Drum screen stationary

Type range	1845/2055/2255/2278/ 2290/2590/25120
Power	15-37 kW
Max. throughput	120-300 m³/h
Design	Stationary

Electric star screens

The Multistar mobile star screens can separate material into up to three fractions in one pass. As the material passes over the rotating stars, clumps are literally knocked off. This ensures a high-quality usable fraction. The press of a button is all it takes to adjust the particle size – the machine does the rest. Thanks to its electric drive, screening is quiet, efficient and economical.

The screening system becomes multifunctional with additions like magnetic separation, wind sifting or roller separation. On the mobile machines the series ranges from the hook lift One and S3 versions to the high-performance L and XXL machines. On stationary Multistar star screen systems, the feed hopper, screen decks, wind sifter and magnetic separator are tuned exactly to the separation task at hand.

Star screens

Multistar One

Type range	–
Power	25 kW
Max. throughput	200 m³/h
Design	Hook

Multistar S3

Type range	–
Power	55 kW
Max. throughput	100 m³/h
Design	Hook/Trailer

Multistar L3

Type range	–
Power	55 kW
Max. throughput	250 m³/h
Design	Trailer

Multistar XL3

Type range	–
Power	80 kW
Max. throughput	300 m³/h
Design	Semi-trailer

Multistar XXL2

Type range	–
Power	55 kW
Max. throughput	500 m³/h
Design	Semi-trailer

Multistar 2-SE

Type range	–
Power	22 kW
Max. throughput	250 m³/h
Design	Stationary

Multistar 3-SE

Type range	–
Power	40 kW
Max. throughput	250 m³/h
Design	Stationary

Mobile and stationary screening and separating

The development of new separation techniques precisely tailored to market requirements has been a focus of our research for many years. The tough Flowerdisc disc separator is suitable for pre-screening pre-shredded commercial, bulky and organic waste. The Hurrikan wind sifter provides effective removal of plastic film from screen overflow in composting.

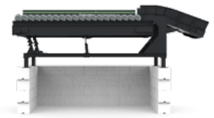
Likewise using the wind sifting principle, the Stonefex stone separator increases the quality of biomass fuel by removing stones and inert objects. The Ballistor uses physical criteria to separate usable fractions out of waste and recyclables mixes. The Metalfex adds a mobile ferrous and non-ferrous-metal separator to the line-up.

Separation technology

Splitter mobile

Type range	–
Power	34 kW
Max. throughput	150 m³/h
Design	Hook/Track

Splitter stationary



Type range	–
Power	10 kW
Max. throughput	150 m³/h
Design	Stationary

Hurrikan S

Type range	–
Power	55 kW
Max. throughput	60 m³/h
Design	Trailer

Stonefex

Type range	–
Power	35 kW
Max. throughput	100 m³/h
Design	Trailer

Ballistor

Type range	4300/6300/8300/10300
Power	5-11 kW
Max. throughput	60-160 m³/h
Design	Stationary

Metalfex

Type range	–
Power	34 kW
Max. throughput	120-300 m³/h
Design	Hook/Trailer

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.

KOMPTECH

Never waste an opportunity.

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We create value for you

Waste-stream expertise

Because you need a setup that is 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.