



Machines and Processes

# The Eggersmann Philosophy

Recycling is sustainability in practice. We are passionate mechanical engineers with a clear mission for the environment – we therefore define ourselves as EcoEngineers. We take a holistic approach to waste treatment and offer mobile machines for the entire process chain. With the Eggersmann Recycling Technology, we also stand for the realisation of entire plants including stationary process technology.

We are experts in the recovery of recyclable materials and in mechanical as well as biological waste treatment processes. We are also pioneers in the production of biogas and substitute fuels. Within the Eggersmann Group, we even build and operate our own composting plants, including biogas production.

By completing our range of emission-free electric variants in the areas of shredding, screening and sifting, we have taken another important step towards greater climate protection in recycling. The particularly efficient electric drives protect the environment and also significantly reduce operating costs. They are also perfect for indoor use.

We want to use less paper in future. We will therefore be providing more additional information online.

Please visit our homepage and get a detailed overview of our solutions!



# Content

4     **Mobile Recycling Machines**

**Shredding**

6     FORUS – Dual-Shaft Shredders

12    TEUTON – Single-Shaft Shredders

18    FORUS / TEUTON – Comparison

**Screening and Sifting**

20    TERRA SELECT – Trommel Screen Machines

26    STAR SELECT – Star Screen Machines

30    AIRFIX – Windsifter

32    TERRA SELECT / STAR SELECT – Comparison

**Turning**

34    BACKHUS – Windrow Turners

38    Solutions and Options

**Eggersman Recycling Technology**

54    Stationary Solutions

56    Eggersmann Service

58    Eggersmann ESA app

60    CONVAERO Membrane – Drying / Composting

62    Eggersmann FUEL – Refuse Derived FUEL

64    Plant Engineering / Biogas / Stationary Machines

# Mobile Recycling Machines



## Eggersmann GmbH

Our machines impress with their performance, reliability and best results –our brand with its particularly wide product range. We at Eggersmann offer you machines for all stages of the recycling process. Thanks to a large selection of different sizes and additional options, you will find exactly the right solution for you.

### Shredding

Regardless of whether you want to screen and sift the material directly on site or simply transport it away. Our single- and dual-shaft shredders prepare your material perfectly for further processing and significantly reduce the volume.

### Screening and Sifting

The precision of separating by size and material is decisive for the market value. We can provide you with the right machine for your material. We offer trommel and star screens as well as wind sifters.

### Turning

Windrow turners are essential for professional composting and efficient biological drying. Our machines guarantee short process times and homogeneous end products.

With a machine that is precisely customised to your requirements, you can produce perfect, high-quality end products.







FORUS

## SHREDDING

Applications

Waste Wood

Green Waste

Photovoltaic Modules

Electronic Waste

Industrial Waste

Glass



## FORUS F 25

Shredding in a wide range of applications, with precise results and outstanding machine availability in a compact size – that's the **FORUS F 25**.

### Versions:

- › Hook Lift
  - electro-hydraulic
  - diesel-hydraulic
- › Tracks
  - diesel-hydraulic

### Special Features:

- › Individual shredding programmes
- › Asynchronously running shafts (adjustable)
- › Hydraulically liftable and lowerable hopper
- › Various after breaker bars (optional)



Hydraulically adjustable magnet (also F 38)



After breaker bars replaceable within 10 minutes (also F 38)



Waste Wood up to 25 t/h

Household Waste up to 20 t/h

Green Waste up to 22 t/h

Industrial Waste up to 15 t/h

\* Depending on material, weather and machine condition

## FORUS F 38

Even more intake volume, even more power and consequently even more throughput. The **FORUS F 38** is the solution for higher performance requirements.

### Versions:

- › Hook Lift
  - electro-hydraulic
  - diesel-hydraulic
- › Tracks
  - diesel-hydraulic
  - electro-hydraulic

### Special Features:

- › High maintenance accessibility
- › Height-adjustable neodymium overband magnet (option)
- › Screen basket system
- › High hopper volume



Screen Basket



Individually adjustable shaft speeds  
(also F 25)



Waste Wood up to 50 t/h

Household Waste up to 40 t/h

Green Waste up to 40 t/h

Industrial Waste up to 35 t/h

\* Depending on material, weather and machine condition



TEUTON

## SHREDDING

Applications



Waste Wood



Green Waste



Roots



Bulky Waste



Industrial Waste



Tyres





# TEUTON Z 50

The Eggersmann **TEUTON Z 50** is a reliable and safe powerhouse with high accuracy in the final grain size.

**Versions:**

- › Trailer
  - diesel-hydraulic
- › Tracks
  - electro-hydraulic
  - diesel-hydraulic

**Special Features:**

- › Double bolted rotor tools
- › Automatically reversing rotor (resistant to disruptive material)
- › 4,7 m wide feed area
- › 6 different cutting gap settings (tool-free)
- › Choice of different rotor tools
- › Variable screen basket system (option)



Long-life marathon rotor (also Z 60)



Powerful neodymium magnet with discharge on both sides (also Z 60)



\* Depending on material, weather and machine condition



## TEUTON Z 60

The **TEUTON Z 60** is the heavy-duty version of our all-purpose shredders with finished final product in just one pass.

**Versions:**

- › Semi-Trailer
  - diesel-hydraulic
- › Tracks
  - diesel-hydraulic

**Special Features:**

- › 600 hp drive train
- › Infinitely adjustable discharge height (max. 5 m)
- › 11 different cutting gap settings (tool-free)
- › Particularly robust shredding unit
- › Variable screen basket system (optional)



Adjustable cutting gap for final grain size (also Z 50)



Insensitive to disruptive material due to reversing rotor (also Z 50)



Waste Wood up to 65 t/h

Household Waste up to 115 t/h

Green Waste up to 80 t/h

Industrial Waste up to 60 t/h

\* Depending on material, weather and machine condition

## FORUS

### Dual-Shaft Shredders

Thanks to their synchronously or asynchronously adjustable shafts, the **FORUS** shine particularly well with bulky, brittle and ball-shaped materials. The shafts are self-cleaning, which also reduces the risk of winding. In addition, the quickly exchangeable secondary crushing bars allow precise size determination of the end product. Their compact dimensions make them particularly space-saving and easy to transport. Thanks to their sophisticated overall system – consisting of an efficient drive train and a slow-running crushing unit – they are very low in emissions.



Definition of the final grain size via various after breaker bars and screen baskets

## TEUTON

### Single-Shaft Shredders

With their higher engine power, the **TEUTON** reliably shred even robust and resistant material. A selection of different rotor tools, cutting gap settings and screen baskets enables exceptionally precise definition of the final product. They are a particularly safe choice as the slow-running rotor automatically reverses in the event of disruptive materials. Low wear and fuel consumption as well as easy maintenance also characterise the **TEUTON**.



Definition of the final product via screen baskets and cutting gap



Scan for more  
information



To reduce paper consumption, we will be presenting more and more information online. Get familiar with our website today!





TERRA SELECT

## SCREENING

Applications

Compost

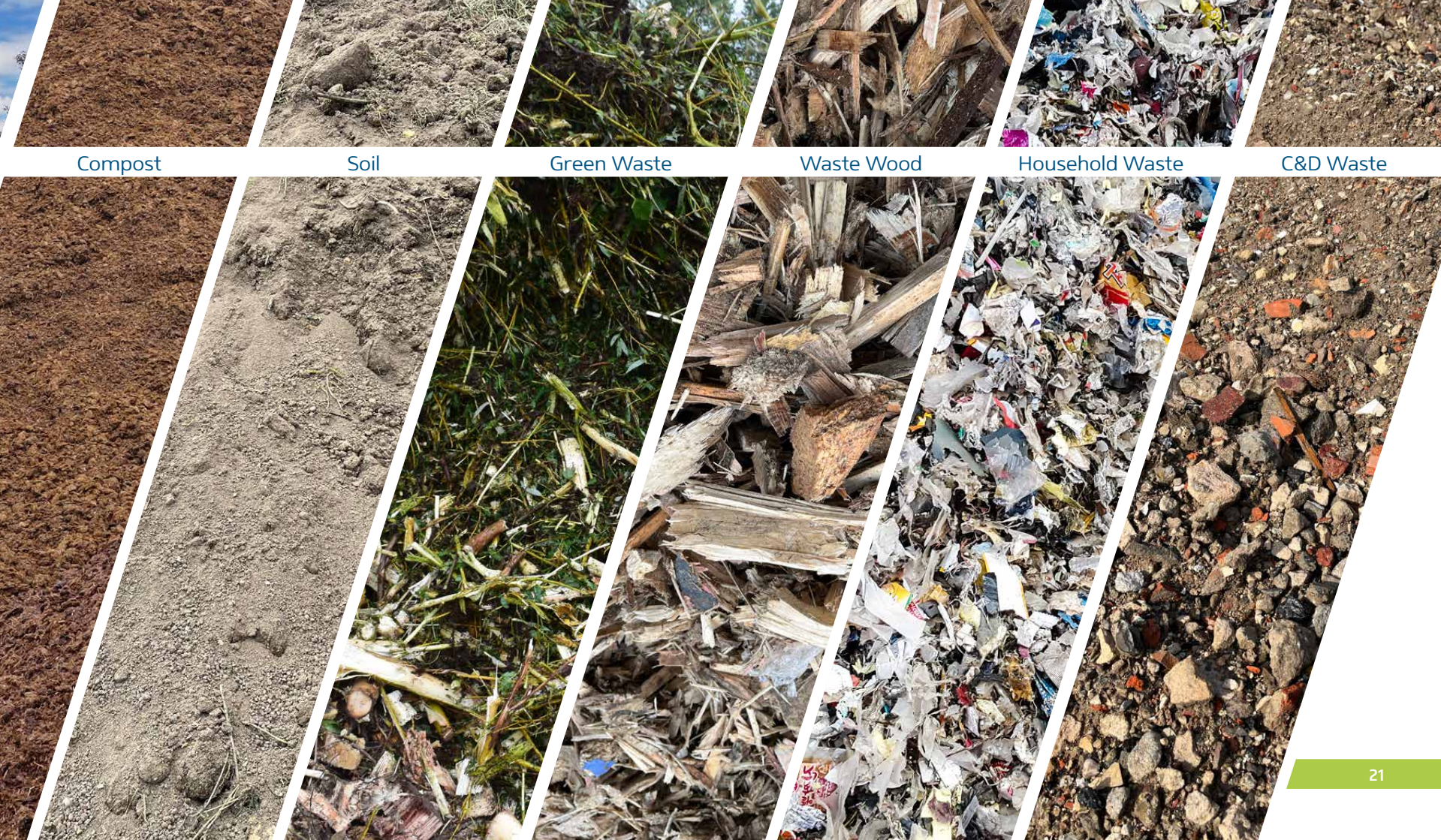
Soil

Green Waste

Waste Wood

Household Waste

C&D Waste





# TERRA SELECT T 50 / T 60 / T 70

The **TERRA SELECT** trommel screening machines are robust universal solutions for precise separation into two fractions with high throughputs at the same time.

**Versions T 50:**

- › Trailer
  - diesel-hydraulic
  - diesel-electro
  - electro



Quick and easy changing of the screening trommel

**Versions T 60:**

- › Trailer
  - diesel-hydraulic
  - diesel-electro
  - electro
- › Tracks
  - diesel-hydraulic



Extended coarse grain conveyor, discharge height up to 3,800 mm

**Versions T 70:**

- › Tracks
  - diesel-hydraulic

**Special Features:**

- › Above-average screening surface (+10 %\*)
- › Powerful drive concept
- › Extra long discharge conveyors (option)
- › Magnetic rollers and/or stone belts (option)
- › Use of competitor trommels (T 60 chain option)
- › Tracked with level balancing (T 60)



\* In comparison to the competitors

\* Depending on material, weather and machine condition



STAR SELECT

## SCREENING

Applications



Green Waste



Waste Wood



Wood Chips



Bark Mulch



Compost



Grate Ash





## STAR SELECT S 60

The **STAR SELECT S 60** enables maximum separation efficiency into three pre-definable fractions. With a hopper volume of > 7 m<sup>3</sup> and a throughput rate of up to 300 m<sup>3</sup>/h, it processes even large quantities exceptionally quickly.

### Versions:

- › Trailer
  - diesel-electro
  - electro
- › Tracks
  - diesel-electro
  - electro

### Special Features:

- › Centrifugal conditioner for homogeneous material feed (coarse screen deck)
- › SplitSpeed system for homogeneous material carpet (fine screen deck)
- › Duramax cleaning elements on the screen fingers (self-cleaning)
- › QuickChange system for quick screen shaft change
- › Efficient drive concept
- › Magnetic rollers and/or stone belts (optional)



Eggersmann Quickchange system for the screen shafts



Available as a hybrid machine or as a fully electric version





# AIRFIX V 60

Screening and windsifting in one step: Effective cleaning of the grain during the screening process.

The **AIRFIX V 60** mobile windsifter is mounted at the end of a discharge conveyor to minimise the proportion of impurities (lightweight plastics such as plastic bags or films) in the throughput as far as possible. The material is blown under to make it easier to extract the impurities. This extraction is achieved with a 20.5 kW suction/pressure blower. The blower can be conveniently placed on the floor next to the screening machine. The extracted lightweight plastics are transferred to a container.

The mobile windsifter can be driven either hydraulically or electrically.

## SIFTING

## Applications



Lightweight Plastics



Plastic Bags



Films



# TERRA SELECT

## Trommel Screen Machines

In addition to the high throughput capacity and cost-effectiveness of our **TERRA SELECT**, a major advantage lies in the screening trommels themselves. These can be easily exchanged on our machines and thus adapted to the desired application. Solid, punched steel trommels prove to be particularly robust, even in difficult applications such as pre-shredded construction waste. On the other hand, finer segmented versions with all types of wire mesh produce the most precise results with light materials such as green waste or compost. This allows you to customise your **TERRA SELECT** precisely to your material.



Extra large trommel with at least 10 % more screening surface compared to the competitor trommels

# STAR SELECT

## Star Screen Machines

High separation efficiency, high throughput and high machine availability with three fractions – this is what characterises our **STAR SELECT**. The screening results can also be predefined:

Coarse Grain	0/60 mm to > 150 mm
Medium Grain	0/25 mm to 150 mm or 40 to 150 mm
Fine Grain	0/10 mm to 25 mm or 15 to 40 mm



Star screen deck version in durable PU-material (optional)



Scan for more information



To reduce paper consumption, we will be presenting more and more information online. Get familiar with our website today!



BACKHUS

TURNING

Applications

Stable Manure

Green Waste

Digestate

Biological Drying

Soil Remediation

Biowaste





## BACKHUS A 30

The robust **BACKHUS A 30** is the solution for composting on a smaller scale. With a maximum windrow width of 3 m and a turning capacity of up to 700 m<sup>3</sup>, it is perfect for farms with a focus on livestock, for example.

The **BACKHUS A 30** has all the advantages of a self-propelled machine and thus enables the space-saving foot-to-foot placement of the windrows. It therefore does not require a tractor or an external drive. On top of that, the extremely easy-to-handle machine can also be placed very simply on a trailer, which makes it ideal for cooperatives and contractors in inter-site use.



Adjustable track clearers



Intuitive operation through manual control



Turning capacity

up to 700m<sup>3</sup>/h



## BACKHUS A 38

Our **BACKHUS A 38** stands for an excellent balance of high turning performance and comfort at minimised costs. It already enables peak turning capacities of up to 1,500 m<sup>3</sup> per hour in a wide variety of applications and windrow widths of 3.8 m maximum.

### Special Features:

- › Height-adjustable and reversible rotor
- › Track clearer with ground contour adjustment
- › Eggersmann TRACK Control



Hydraulic Rear Flap



Fold-out Track Clearers



Turning capacity

up to 1,500m<sup>3</sup>/h



## BACKHUS A 45

The **BACKHUS A 45** marks the beginning of our mid-range range – yet it shines as a true powerhouse in a market comparison: with a windrow width of up to 4.5 m and a maximum windrow height of 2.3 m, it achieves a turning capacity up to 3,000 m<sup>3</sup> per hour, depending on the material.

### Special Features:

- › Height-adjustable and reversible rotor
- › Track clearer with ground contour adjustment
- › Eggersmann TRACK Control
- › Panoramic cabin



Panorama Cabin



On-Board Computer



Turning capacity

up to 3,000m<sup>3</sup>/h



## BACKHUS A 50 / A 55

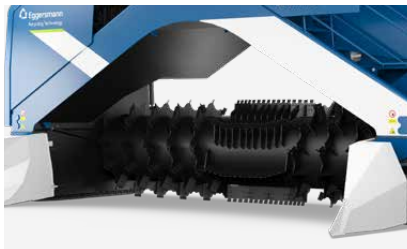
Our **BACKHUS A 50** and **A 55** are suitable for windrow widths of 5 m to 5.5 m and cover a wide performance segment with their transfer capacities of up to 4,000 m<sup>3</sup> and 4,500 m<sup>3</sup> respectively.

### Special Features:

- › Height-adjustable and reversible rotor
- › Track clearer with ground contour adjustment
- › Eggersmann TRACK Control
- › Panoramic cabin



Maintenance Platforms



Versatile Rotor Properties



Turning capacity

A 50 up to 4,000m<sup>3</sup>/h

A 55 up to 4,500m<sup>3</sup>/h



## BACKHUS A 60 / A 65

The **BACKHUS A 60** and **A 65** represent our upper performance class and are therefore perfect for plant operators who need to move large quantities of material. The size and performance do not restrict the **BACKHUS A 60** and **A 65** in their transport mobility. They are still ideally suited for inter-site use.

### Special Features:

- › Height-adjustable and reversible rotor
- › Track clearer with ground contour adjustment
- › Eggersmann TRACK Control
- › Panoramic cabin



Mobile Cabin



Fleece Winder



Turning capacity

A 60 up to 5,000m<sup>3</sup>/h

A 65 up to 5,500m<sup>3</sup>/h



## BACKHUS A 75

The world's largest series-produced windrow turner on the market impresses with an unbeatable turning capacity of up to 7,000 m<sup>3</sup> per hour. Whether it's large-scale processing of biomass into compost or the industrial production of substrates - our **BACKHUS A 75** is the choice for operators of industrial-scale plants of all kinds.

### Special Features:

- › Height-adjustable and reversible rotor
- › Track clearer with ground contour adjustment
- › Eggersmann TRACK Control
- › Panoramic cabin



Irrigation System



Side Conveyor



Turning capacity

up to 7,000m<sup>3</sup>/h



# BACKHUS

## Solutions

### Irrigation System

The automatically winding and unwindingBACKHUS HD hose drums allow you to easily irrigate your material.

### Concentrate Spraying System

With the concentrate spraying system, you can spray in specific additives during the turning and thus accelerate the start of the composting process.

### Eggersmann Management System

The system recognises the load on the hydraulics and adjusts the engine speed. This not only enables smooth turning process for you, but also reduces fuel consumption by up to 10 %.

### Side Conveyor

For a continuous flow layout, you can equip your machine with a side conveyor. The machine then shifts the material by one windrow width each time it passes.





# BACKHUS

## Solutions

### Housing

The safety and dust protection curtain significantly reduces the emissions that occur during turning – especially dust formation and uncontrolled material ejection are significantly reduced.

### Fleece Winder

A fleece prevents the windrow from soaking, drying out or cooling down. With a fleece winder, you can wind up a fleece and unwind a new one during turning – this saves time and the windrow remains protected.

### Camera Package

With the new concept comprising a total of four cameras, you have an excellent view of the area behind the machine at all times. This offers you additional safety at work.

### Mobile Cabin

The panorama cabin is also available as a mobile version. The side exit significantly reduces the effort required for transport preparation. It also makes it easier for you to get in and out.





# BACKHUS

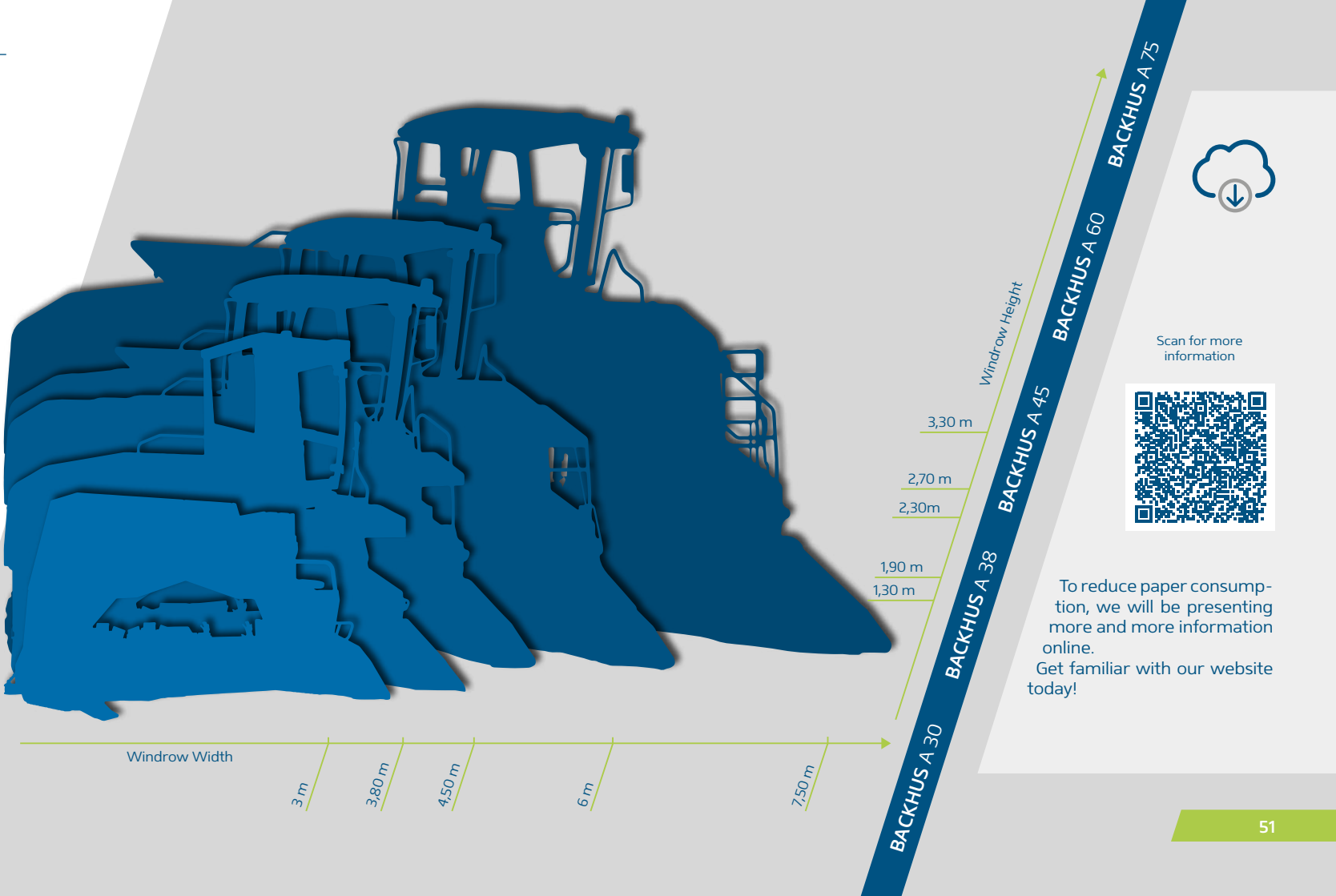
## Solutions

### XL Track Clearer

The maximum windrow width can be increased by 0.3 m using an XL track clearer. This enables optimum space utilisation.

### Landfill Version

With the massive track clearers and the wider undercarriage of the landfill version, you have good traction and a clear track even in the most adverse conditions.





## Stationary Solutions

### Standardised small-scale plants

Many of Eggersmann GmbH's mobile machines are also available as stationary versions. The FORUS FS 25 dual-shaft shredder as well as the TEUTON ZS 55 and TEUTON ZS 50 single-shaft shredders are already available as standard. To round off the scope of services, a package with appropriate process technology can also be included. For the shredders, there is a standardized concept consisting of conveyor belts and our own steel construction for the overbelt magnet. Stationary solutions for the screening machines are also possible upon request.

In addition to plant engineering for the planning and implementation of complex projects and BRT HARTNER as a specialist for stationary key machines, Eggersmann also offers you standardised small systems and individual solutions.



## Service

Reliable · Fast · Worldwide

Our new Eggersmann Service GmbH and our extensive global dealer network are always at your side with competent and regularly trained colleagues. Thanks to the standard integrated Telematic System, we are informed directly by the machine in the event of a service incident. We can also check all relevant parameters and start analysing them remotely. This enables optimum preparation for on-site deployment – many cases can be successfully resolved over the phone. Due to our large central warehouse, we can supply our field service technicians quickly with our high-quality original parts at any time.

### **Eggersmann Service in detail:**

- › Commissioning, assembly & machine instruction
- › Preventive maintenance
- › Maintenance
- › Troubleshooting
- › Modernisation and upgrading of machines
- › Expert advice

### **Maintenance and Overhaul**

To ensure the longevity and availability of your machine, we monitor the maintenance intervals for you via the Telematic system. During the inspection of your machine by our trained service personnel the entire condition of is assessed. You will then receive a service checklist and a service report. To ensure that your day-to-day business is not affected by the inspection, you can easily arrange a suitable date with us at any time. For even more planning security, we recommend that you contractually determine the maintenance dates. You will then receive maintenance including UVV test seal for a fixed price at particularly favourable conditions. We would also like to offer you general overhauls or inspections during the winter months so that your machine is fully operational for the coming season.

**No maintenance contract yet? Contact your Eggersmann service partner now.**





# ESA app

## The digital Eggersmann Platform

The ESA app is the new digital platform for all Eggersmann customers. It is a series of different modules that are aimed towards a single goal: maximising efficiency in all your processes. In concrete terms, this means less paperwork, the optimised use of resources, reduction of downtimes and increased throughput. Select and combine the following modules according to your individual needs:

### Maintenance Management

Planning, allocation, monitoring and documentation – all this is made clearer and simpler. For example, through push notifications to the maintenance team.

### Performance Monitoring

Detailed overview of all relevant performance data. Whether for the interaction of all components in a plant or for individual machines.

### Anomaly Detection

Previously unused background information in your system is constantly checked for deviations by statistical and AI-based models – disturbances can thus be avoided from the outset.

### Academy

Here you will find training courses on various topics and machines. The function also provides an overview of completed training courses and offers accompanying material.

### Logbook

Create event logs of your work process and send them directly by email from your app.

### Spare Parts & Stock

The ESA app not only offers an uncomplicated search for spare parts, but also the creation of an inventory list and much more. In the warehouse module, you can record and monitor precise stocks – even of products you have created yourself.

The interaction of different modules results in unique synergy effects and additional potential for optimising operations. For example, improved maintenance cycles can be created from the maintenance and machine data.

### To the app:



# CONVAERO

## Membrane-Covered Composting and Biological Drying

The **CONVAERO** membrane in combination with pressurised aeration allows maximum pro-cess control with greatly reduced emissions. At the same time, the system can be adapted flexible to budgets, schedules and space availability. Energy consumption is very low.

### Composting

Oxygen supply, temperature, humidity – the **CONVAERO** system creates optimum conditions for the microorganisms required for composting. The decomposition time is minimised and the compost is sanitised by the natural process heat of 55 to 65° C.

### Biological Drying

Biological drying with the **CONVAERO** system is particularly suitable for commercial waste and household waste. Temperatures of up to 70° C can be achieved without the addition of heat. The water is evaporated and removed from the system through the membrane. A final water content of less than 20 % is thus possible. Dry-stabilising of the material in process, increases the calorific value (substitute fuel / RDF), reduces the volume and simplifies the separation of various components.

### High Efficiency through Automation

The **BACKHUS CON 60 / CON 80 / CON 100** turners are automated versions of the **BACKHUS** windrow turners with an integrated membrane cover winder. Specially designed for drying or composting in lanes with concrete walls, they turn the material inside the lane while driving along the lane. The turner winds up the current membrane at the front and place back a new cover at the rear – with the new encapsulation of the turning area a quasi enclosed system is achieved even during turning. The material is homogenised in the best possible way. The operating costs are reduced enormously compared to turning with a wheel loader and the manual changing of the membranes.

The **CONVAERO** system has proven itself for both small and very large throughputs. Even temporary facilities and pilot plants can be operated economically.





# Eggersmann FUEL

## Production of refuse derived fuels (RDF)

The core of the **Eggersmann FUEL** process is biological drying using the **CONVAERO** system, which is implemented before the usual mechanical processing. The proven and robust process is designed for treating small as well as very large quantities of waste.

The treatment time depends on the required calorific value of the substitute fuel (RDF). By modifying the treatment time, the net calorific value can be adjusted to the customer's requirements via the drying process: The lower the residual water content, the higher the net calorific value. The dried biomass itself is transformed from a problem into a fuel. The harvested energy amount from initial waste is far higher

compared to mechanical processes only. The waste to energy concept enables extremely efficient, holistic utilisation of municipal waste. It is particularly interesting for cement production. As considerably less water vapour is produced during incineration, a significantly higher amount of RDF can be used to substitute standard fossil fuel.

The consistently standardised process also enables affordable waste treatment in emerging and developing countries. The remaining landfill mass is only 20 % of the initial waste mass and emissions from uncontrolled decomposition are avoided. Fossil fuels can also be saved.



## Plant Engineering / Biogas / Stationary Machines

### BEKON

Through BEKON, Eggersmann is the technology leader in biological waste-to-energy concepts. BEKON is the only supplier in the world to offer both a continuous and a discontinuous dry fermentation process,

depending on the customer requirements. Both processes are characterised by robustness, process reliability, flexibility through modular design and high biogas yields.

### Eggersmann Anlagenbau

Eggersmann Anlagenbau realises mechanical and biological waste treatment plants all over the world. From planning to steel construction, assembly, commissioning, control systems and digital process

optimisation Eggersmann Anlagenbau covers all services as a general contractor. Eggersmann can even operate the plant on request.

### BRT HARTNER

With over 30 years of experience, BRT HARTNER is the first address for stationary recycling machines for mechanical processing and material recovery. The robust and reliable machines are key components

in state-of-the-art plants all over the world. The portfolio covers the areas of opening, dosing, sorting, mixing and shredding.







**Eggersmann GmbH**  
Rothenschlatt 18  
26203 Wardenburg  
Germany

sales@f-e.de  
www.f-e.de



1. All information, descriptions and illustrations are subject to technical changes in the interest of further development.
2. Illustrations and descriptions may include options that are not part of the standard equipment