LINDNER

APPLICATION SOLUTIONS ALTERNATIVE FUELS & WASTE MANAGEMENT

MAXIMUM ENERGY.

LARS JENNISSEN | N+P GROUP READY FOR THE FUTURE OF HIS BUSINESS

BE A WASTE TRANSFORMER. READY FOR THE FUTURE OF YOUR BUSINESS.

#WASTETRANSFORMER



MAKE THE **MOST OF** WASTE.

SHREDDING TECHNOLOGY AND SYSTEMS ENGINEERING FOR THE RECYCLING INDUSTRY OF TOMORROW.

We believe in transforming waste into precious materials. That's why we invest all our knowledge and innovative power in shredding machines and system solutions that are highly efficient, robust, reliable and easy to maintain. So our clients can transform waste into a valuable and reusable resource - efficiently and reliably.

In-house research and development

Production on state-of-the-art machines, using the latest robotics & automation technology

In-house electrical engineering department

Export countries



>500

INNOVATION AS A PRINCIPLE – QUALITY PROMISED AND DELIVERED

Josef Lindner founded our family business in 1948. He started by planning and producing machines and systems for the wood industry. Today, more than 70 years later, the company is still familyowned, employs over 500 people worldwide and exports to more than 90 countries.

Production still takes place in Austria. In 2022, we moved into our home of recycling, the new company headquarters in Spittal an der Drau in Carinthia, Austria. We manufacture in line with trailblazing production standards on a 14,000 m2 facility using the latest robotics & automation systems. This way, we are able to manufacture the majority of components in-house, guaranteeing our proven Lindner quality and the rapid availability of machines, systems and spare parts.





POWER HOUSE.

TURN WASTE INTO A VALUABLE RESOURCE.



Premium solid recovered fuels (SRF) are mainly used for co-incineration in the main burners of rotary kilns and contribute to conserving fossil fuels. To be a valid alternative to primary fuels such as oil, coal or gas, the solid recovered fuel must fulfil many quality criteria. A particular challenge is posed by the differently composed input materials that have to be transformed into a highquality, homogenous output. State-of-the-art inline sensors are used to consistently control the parameters that are most important for the production of SRF – including, for example, calorific value, water, ash and chlorine content.

throughputs.*

Requirements for high-calorific solid recovered fuels**

Particle size Calorific value

FOR CALCINERS

Requirements for medium-calorific solid recovered fuels**

Particle size Calorific value

Output for use as high-calorific SRF



* University of Leoben, (2017). Independent report on the performance of different drive systems for shredding machines

SRF HIGH IN CALORIFIC VALUE FOR MAIN BURNERS

Lindner's processing systems and shredding equipment are in great demand because the output's material properties can be relied upon to meet the highest standards in terms of calorific value, uniform particle sizes and constant

d ₉₅ ≤ 30 (bis zu 35)	[mm]
18 – 25 [MJ/kg]	

MEDIUM CALORIFIC SOLID RECOVERED FUELS

In addition to the production of high-calorific solid recovered fuels, secondary firing and with it the production of medium-calorific SRF is becoming increasingly important. The coarser particles and the higher percentage of three-dimensional particles create advantages in terms of the processing as well as making simpler processes and facility layouts to produce SRF possible.

d ₉₅ ≤ 80 [mm]
12 – 18 [MJ/kg]

Output for use as medium-calorific SRF

**The exact requirements may vary depending on the design of the cement kiln.

MAXIMUM **PERFOR-**MANCE.

MULTI-STEP PROCESSING OF PREMIUM SOLID RECOVERED FUELS (SRF) Lindner has perfected the multi-step processing of mixed municipal solid waste, commercial waste and industrial waste into a high-calorific premium solid recovered fuel. An ideal combination of high-end machines is responsible for primary and secondary shredding as well as efficient separation and extraction, making SRF processing almost maintenance-free, extremely robust and reliable. The resulting SRF is free from non-shreddables such as metals, stones or glass - guaranteeing the highest throughput and maximum output quality. Thanks to NIR technology, analysers digitally analyse the material in real time, ensuring the output material's optimum calorific value. Optical sorting equipment also makes use of this technology to extract recyclables such as plastics from the material stream and return them to the recycling process.



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LINDNER ATLAS 5500 AS

Commercial & Industrial waste (C&I)





APPLICATION NOTE - ATLAS 5500 AS:

Shredder	Atlas 5500 AS
Drive	Electromechanical belt drive
Cutting system	AS 4.8
Screen	
Material	C&I
Throughput*	Up to 35 t/h
Particle size*	90 % < 300 mm

going.

*Depending on input material, shaft condition and configuration

Mercilessly efficient: Productivity from start to finish.

Based on the proven belt concept, the Lindner's Atlas 5500 AS twin-shaft primary shredder sets new efficiency standards with its high-performance planetary gears, innovative DEX (Dynamic Energy Exchange) energy recovery system and asynchronous shaft control. Delivering consistently high throughput, built for tough applications and equipped with the innovative FX fast exchange system, this shredder provides maximum uptimes and can be relied on to keep the line



PRIMARY SHREDDING AT ITS B

particle sizes.

The Lindner Jupiter single-shaft primary shredder combines everything you need for efficient 24/7 operation: a powerful countershaft drive, a well-engineered machine design and high manufacturing quality. Undefeated by non-shreddables, our triedand-tested technology ensures a long service life and low maintenance coupled with the necessary power to shred even the toughest materials - year after year and ton after ton.

Mixed municipal solid waste (MSW)





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JUPITER 220

APPLICATION NOTE - JUPITER 2200:

Shredder	Jupiter 2200
Drive	Countershaft drive
Cutting system	145 P
Screen	SD 148
Material	MSW
Throughput*	Bis zu 35 t/h
Particle size*	90 % < 300 mm

*Depending on input material, shaft condition and configuration







EXTREME PORTECT SOURCE

THAT'S HOW TO RECOVER

When recovering municipal, commercial and industrial waste, it is important to first shred it coarsely. Reducing the volume and directly removing ferromagnetic metals makes material handling much easier and reduces the transport costs incurred between decentralised recycling collection centres to larger SRF processing and materials recycling facilities. Shredding the material makes further separation possible, which is always much easier with coarser particles and loose, i.e. not bagged material. In addition, it is important to keep the fine particles content as low as possible, as these are very difficult or impossible to sort.

Mixed municipal solid waste (MSW) | Commercial & Industrial waste (C&I)





APPLICATION NOTE:

Shredder	Urraco 95 DK
Engine	Diesel hydraulic
Cutting system	HW 8.10 C&D
Screen	
Material	MSW, C&I
Throughput [*]	Up to 80 t/h
Particle size [*]	90 % < 300 mm

*Depending on input material, shaft condition and configuration



REABLE & DRECISE

The Lindner Komet sets new standards in single-shaft shredding. Whether you are processing municipal or bulky refuse, industrial or commercial waste, textiles, waste paper or other materials – the Komet ensures smooth processes 24/7 thanks to its robust design, high-precision tools and smart features. Benefit from its first-rate particle quality and superb efficiency.

Mixed municipal solid waste (MSW)





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APPLICATION NOTE - KOMET 2800 HP:

Shredder	Komet 2800 HP
Engine	Single-step belt drive
Cutting system	172 R5
Screen	D 20
Material	MSW
Throughput*	Up to 6 t/h
Particle size*	90 % < 20 mm

*Depending on input material, shaft condition and configuration

Precision that's a cut above the rest.



GOESIT ALONE

and only one step.

Nothing can withstand the enormous power of the Lindner Polaris single-shaft shredder. Made for one-step processing of untreated municipal, industrial and commercial waste to obtain mid-calorific fuels (40 - 120 mm) ideal for co-incineration in calciners at cement works. Sturdy design and low operating costs are the hallmarks of this highly specialised shredder: enjoy uninterrupted shredding excellence 24 hours a day, seven days a week. With maximum efficiency throughout, as demonstrated by a field test: thanks to the countershaft drive, the Lindner Polaris shreds twice as much material as comparable machines in the same period of time.*

* University of Leoben, (2017). Independent report on the performance of different drive systems for shredding machines.

Commercial & Industrial waste (C&I)





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APPLICATION NOTE - POLARIS 2200:

Shredder	Polaris 2200
Engine	Countershaft drive
Cutting system	172 RP
Screen	SK 80
Material	C&I
Throughput*	Up to 13 t/h
Particle size*	90 % < 60 mm

*Depending on input material, shaft condition and configuration

Makes short work of shredding: Costefficient, highly reliable



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Universal shredding t throughput.

The Universo series with its robust, high-quality engineering ensures a long service life with consistently high throughput rates. Whether you are shredding different types of plastic or waste, with its heavy-duty gearbox drive and robust cutting system there is no job that this shredder cannot handle. As has been proven by thousands of operating hours in different fields of application.

Textiles





APPLICATION NOTE - UNIVERSO 2800:

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Shredder	Universo 2800
Drive	Gear drive
Cutting system	43 P
Screen	D 40
Material	Textiles
Throughput*	Up to 4 t/h
Particle size*	90 % < 40 mm

*Depending on input material, shaft condition and configuration



Universal shredding to the extreme: robust, reliable and high





CREATES VALUE.



Lindner NEXUS. The service platform that connects.

Real-time machine data, performance monitoring & maintenance.

With Nexus, the new Lindner service platform, you have an overview of all relevant machine data. Using the Nexus Gateway, real-time machine data is transferred to the digital platform and summarised in customisable reports. The platform also provides all documentation relevant to the system or the individual shredders, as well as updates. The Lindner service and support team can also be reached via Nexus. In urgent cases even 24/7.

Service à la Lindner:

- Lindner Nexus digital service platform for customised performance monitoring
- Available 24/7 worldwide
- Remote assistance rapid support with remote maintenance
- High availability of spare parts thanks to extensive in-house production
- Original Lindner spare parts made in Austria for that extra level of quality

Maintenance – to keep everything running smoothly:

- Flexible maintenance offers for high machine availability
- Spare part packages for every application
- Qualified shaft reconditioning & hardfacing in line with the highest international standards

Lindner-Recyclingtech GmbH