M&J PreShred Stationary

from M&J Recycling

RECYCLING

M&J Recycling – the waste shredder expert

The M&J PreShred stationary

M&J K160

M&J Recycling specializes in the design and manufacture of heavy-duty shredding equipment for waste and recyclable material. Through more than 1,000 installations worldwide and continued focus on R&D, M&J Recycling is one of the world's leading suppliers of shredders for the recycling industry. Our position also stems from our customer focus. To supply you and your business with the best shredder solution, we always do our best to understand your current situation, and your future needs.

All M&J Recycling shredders share certain basic features and an exceptionally robust construction. We use components from internationally recognized suppliers, to ensure maximum performance and durability.

Our customers include companies within:

- Mechanical Biological Treatment (MBT) plants
- Incineration plants for heat/electricity generation
- Refuse Derived Fuel (RDF) plants based on commercial and industrial waste
- Hazardous waste plants
- Biomass plants – straw and wood
- Recycling plants

Key advantages of the M&J PreShred stationary models

- Open cutting table reduces wear to the bare minimum
- Bi-directional shredding results in a consistent flow of shredded material onto down-stream conveyors
- Asynchronous shredding keeps waste constantly moving, thus improving shredding efficiency. With our aggressive knife design, no pushing device is required
- Central lubricating system is standard on all machines
- Power pack and cutting table that can be mounted separately, to keep more delicate components away from dust etc.
- Automatic reversal, if knives encounter large or tough steel or cement objects
- Intelligent shredding routines automatically adapt to processed material characteristics. The PLC control system is equipped with six standard programs, including two that can be individually programmed
- Hardox steel used in all parts of the cutting table exposed to wear
- Bi-directional shredding with equal speed and torque reduces wear and improves shredding capability and capacity

M&J PreShred 4000S

The best performance in shredding material

The M&J double hydrostatic drive is very reliable under heavy loads and shocks

All bolts and bearings are mounted away from the cutting area for easy and safe access

Operates at variable speeds, and shred asynchronously in both directions, monitored and controlled by a Siemens S7 PLC

Open cutting table allows stone and metal parts to fall through, resulting in less wear

All knives are made of wear resistant steel for less wear and less down time

Bi-directional shredding with equal speed and torque reduces wear and improves shredding capability and capacity

Well-proven belt conveyer

Large aggressive knives – large capacity and grabability, pusher device not required

Specifications

Ninja star

Dragon sword

Classic

Tomahawk

Butterfly

Tachi

Samurai

Grain size

The grain size of shredded material is determined by the number of rotating knives. So, for an M&J PreShred 4000, a 6-knife configuration offers wider openings between counter knives in the cutting table, resulting in a larger grain size. Similarly, a 12-knife configuration has narrower openings between the knives, and therefore produces a smaller grain size.

BY FAR THE BEST

Cutting table K-210-7 knives

Cutting table K-210-11 knives

Technical data	M&J K160	M&J K210	M&J PreShred 2000S	M&J PreShred 4000S	M&J PreShred 6000S
Number of shafts	2	2	1	2	2
Rotation speed*	Up to 51 / 51 rpm	Up to 41 / 51 rpm	16-41 / 27-56 rpm	16-41 / 27-56 rpm	11-32 rpm
Cutting area	1552 x 1600 mm	2062 x 1600 mm	2420 x 1273 mm	2420 x 2000 mm	3461 x 2400 mm
Number of knives	5 / 6 / 7 / 8	7 / 8 / 9 / 11	6 / 8 / 9 / 10	6 / 8 / 9 / 10 / 12	9 / 12 / 14 / 16
Drive power pack	2x55 / 2x75 / 2x110	2x55 / 2x110 / 2x132	1x110/1x132/ 1x200	2x132 / 2x160 / 2x200	2x200 / 2x250
Capacity per hour household waste**	Up to 35 t/h	Up to 45 t/h	Up to 70 t/h	Up to 100 t/h	Up to 200 t/h
Capacity per hour demolition wood**	Up to 25 t/h	Up to 40 t/h	Up to 40 t/h	Up to 70 t/h	Up to 100 t/h
Capacity per hour industrial waste**	Up to 15 t/h	Up to 20 t/h	Up to 20 t/h	Up to 35 t/h	Up to 50 t/h
Capacity per hour bulky waste**	Up to 20 t/h	Up to 25 t/h	Up to 25 t/h	Up to 50 t/h	Up to 70 t/h

* Standard / HDC ** Depending on loading, grain size and density of the input material

Advanced waste and applications technology

M&J Recycling's shredding technology is based on extremely aggressive knife designs and open cutting tables. These distinct technical advantages ensure our shredders provide outstanding performance when dealing with mixed and challenging materials.

These key features also make M&J PreShred units extremely resistant to wear caused by materials and waste normally considered as nonshreddable; including solid steel, rein-forced concrete and rocks.

M&J PreShred units tackle most forms of waste – even the nonshreddable kind.

We have developed special models to perform efficiently on specific types of material. These differences in capability are determined by – for example – the size of the cutting area, the number of shafts, the design of the rotating knives and the available motor power.

Versatility

All M&J PreShred units feature a modular design approach combining a range of well-proven components to meet your specific application and shredding performance. M&J Recycling's range of stationary shredders includes five machine types covering a wide range of capacities. Each model is available in a variety of shredding performance levels. Our stationary units are suitable in a wide range of different applications.

Recycling

M&J Recycling shredder equipment is often used for processing waste. As waste flows can be heterogeneous with unpredictable and varying characteristics, there is heavy demand on stationary pre and fine shredding equipment. With their well-proven ruggedness, versatility and reliability, M&J Recycling systems are the equipment of choice for waste processing installations globally, and well qualified for input material such as, Bulky, Industrial (C&I), Household (MSW), Wood, Construction and Demolition (C&D)

RDF lines

Waste is considered a potential energy source and an important growth market for stationary shredders. Most plastic and paper waste Refuse Derived Fuel (RDF) plants have specific requirements regarding shredding capacity, grain size and operating reliability to ensure reliable and consistent production. The RDF technology is used at e.g. Waste-to-Energy (WTE) plants, gasification plants, cement kilns etc.

Biomass

Companies engaged in biomass processing are increasingly adopting stationary shredders to increase the delivery of consistent, specific carbon-neutral biomass energy products. This selected fuel is attractive to operators of incineration facilities who are keen to reduce their overall carbon emissions.
The benefits of M&J PreShred series in biomass processing include:

- Non-sensitive to impurities in the input material
- Reliable technology for 24 hour operations
- Specially designed knives for maximum capacity and minimum power consumption
- Extensive experience of different straw types and moisture content – installations in Europe and China

M&J PreShred 2000S

INDUSTRIAL

HAZARDOUS

PLASTIC BALES

WOOD

BULKY

HOUSEHOLD

CARPETS

Waste-to-Energy (WTE)

Worldwide focus on recovering as much energy out of waste as possible, has led to waste processing being an important growth market for shredder technology at WTE plants. Numerous technologies now exist to produce fuelsand energy from waste. Incineration is the most common WTE conversion but to maintain a consistent flow, increase combustion efficiency, improve emis-sion and reduce costs, it is essential that the waste is pre-shredded. Input could be Bulky, Industrial (C&I), Hazardous, Household (MSW), Wood, Construction and Demolition (C&D), Biomass as well as baled materials like straw.

The benefits of M&J PreShred-series in waste-to-energy processing include:

- The versatility to enable different waste types to be processed
- Low wear costs
- High availability factor
- Slow turning with low dust and noise emissions
- Worldwide experience from different applications
- Non-sensitive to impurities in the waste stream

Transfer stations

The cost of waste transportation is an important factor. To save money it is important to shred waste to a manageable size at or near the point of collection. Due to their versatility, M&J stationary and mobile pre-shredders are perfect for reducing the particle size and therefore volume of material prior to trans-portation. Transfer stations is handling Bulky, Industrial (C&I), Hazardous, Household (MSW), Wood, Construc-tion and Demolition (C&D).

MBT plants

Due to ever increasing landfill costs, fewer landfill op-portunities and the need to reduce carbon emissions, more waste processing companies are looking to optimize recyclable material extraction and maximize RDF recovery.

Mechanical Biological Treatment (MBT) companies can increase recycling opportunities when using M&J shredders. By combining M&J stationary pre-shred-ders with M&J fine-shredders, a perfect RDF can be produced, thus ensuring a maximum recovery of material.

Different kinds of machines for different applications

The **M&J K160** and **M&J K210** are designed and optimised to provide a competitive low cost/tonne for production sites that have capacity requirements of between **5 and 45 tonnes/hour.**

With superior performance, unbeatable uptime and easy maintenance, they are the obvious choice for those who prioritise performance with less hassle.

The HP version of the **M&J PreShred 2000** is the equipment of choice for shredding or bag opening of huge amounts of household waste that contains only a limited amount of complicated material.

The **M&J PreShred 4000** is designed to meet the special needs of plants in which the incoming material is extremely varied in terms of size and composition and can contain unknown quantities of steel, stones and concrete.

The **M&J PreShred 6000** is one of the largest pre-shredders on the market, and is capable of shredding large volumes of any kind of waste. The unit is ideal when there is a need for very high capacities or for shredding material that is either extremely bulky or very heavy.

M&J PreShred 4000S

M&J PreShred 6000S

M&J K210

Demonstrations and tests
Exceeding your expectations

At M&J Recycling, we'll help you achieve the ultimate return on your investment.

On-site test

The very best way to provide you with information and insight about what an M&J pre-shredder high-quality shredder can do for your operation, is to arrange an on-site demonstration and test using our mobile unit operated by our skilled operators.

Performance confirmed

The aim is to provide you with a clear idea of the performance and efficiency of our pre-shredder, and offer you a unique opportunity to validate these performance figures using your particular type of waste.

This ensures everyone concerned has the relative information required to discuss the most effective shredder solution for each project.

We go anywhere in Europe

We can offer you a demonstration and undertake test runs throughout Europe. At these tests we can demonstrate the performance of M&J pre-shredder units using different types of material and in different applications.

Arrange an on-site demonstration

To contact us directly, please find our details on the back page of this brochure or contact your local M&J Recycling dealer. We will need basic information about the kind of material you need to process, your site, the means of loading and your requirements regarding capacity and grain size.

Apart from that, all you need to provide is some appropriate waste, a loader and a place where we can clean the shredder after the test.

Our personnel evaluate every test and we provide a complete report, to give you the best possible basis for your future project.

Why not ask other users?

If neither approach suits you, we can recommend one or more users of M&J pre-shredder units whose operations resemble yours, so that you can either visit or contact them by phone.

Reliability also means service

E.ON currently operate four M&J PreShred 6000 units:

"We were looking for the most robust shredder on the market. A good working environment for our employees was also a high priority. Our processing operations mean we can't avoid dust completely, but we do aim to keep it to a minimum. We've found that the best way for us to achieve this is by using low-speed shredding machinery like the M&J PreShred 6000 units we currently operate. We also experience that these units wear less than most – as well as keeping fire risks down."

Benny Broman, E.ON

M&J pre-shredder units are normally the first step in treating mixed and difficult waste. They are often directly exposed to all the impurities and unwelcome surprises in the incoming waste stream.

As a result, M&J pre-shredder units often have to deal with extremely tough operating conditions. Even the sturdiest machines have to be maintained and serviced properly to make sure they perform at maximum efficiency and to keep expensive downtime to a minimum.

To achieve this, we provide an exceptionally strong service concept that focuses on meeting our customers' needs for rapid response service programs that meet the changing needs of the future.

Our service team will make sure you and your staff are completely satisfied with the M&J pre-shredder unit we have delivered. We do this through excellent customer communication and by updating and optimizing the shredder's performance.

The M&J Recycling service team commitment:

We will:

- Provide accurate, easy-to-use information and instructions at start-up, service visits and customer enquiries. Our aim is to make it easier for you to operate and run your pre-shredder as efficiently as possible
- Handle all aspects of after sales service. In addition to technical support, this includes delivery of spare parts from stock, undertaking both preventive and curative service visits, rebuilding shredders when needed, training of operators and local maintenance teams
- Ensure that our service know-how is focused, correct, and delivered promptly. Parts are delivered within 24 hours and you can contact us 24/7/365 via a special service phone line

Our proud heritage

Established in 1857 in Horsens, Denmark, as a foundry under the name "Møller & Jochumsen", the M&J Recycling of today has a long tradition of designing and manufacturing industrial components and equipment.

Throughout our long history, we have played an active part in many technical "revolutions". Up until the First World War, the company was one of Denmark's leading manufacturers of steam engines: we also produced industrial diesel engines. We have also manufactured turbines, petroleum engines, generators and complete water towers, plus a wide variety of machinery and equipment for railways and other industries.

The anvil has long since been replaced by fully automatic, efficient manufacturing equipment. And the craftsmanship of the blacksmiths has been supplanted by manufacturing by other trained specialists and skilled machinery operators. The result is advanced-technology products and outstanding quality of service.

Let's work together

The basis of any good co-operation lies in an in-depth understanding of our customers' requirements and respect for individual preferences. We believe that close co-operation with customers and suppliers, based on mutual respect and trust gives the best results – to the benefit of all concerned.

The advanced production engineering equipment now available makes it possible to manufacture items that are nearly perfect. But it is our committed employees and their know-how and craftsmanship that ensure we can consistently achieve a unique level of quality.

What now?

If you are interested in our PreShredder series you can read more about it on mjrecycling.com

About M&J Recycling

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Our customers include companies that work with hazardous waste, waste-to-energy, recycling, landfills, cement production and composting.

All M&J Recycling shredders share certain common features, including exceptionally robust construction.

We use components from internationally recognized suppliers, to ensure maximum performance and durability.

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