PRALL-TEC



YOUR MATERIAL OUR ROTARY SHEARS

TOP PERFORMANCE IN CUTTING TECHNOLOGY

PRALL-TEC GMBH

OVER 40 YEARS OF CRUSHING EXPERTISE



Prall-Tec GmbH, located in 49525 Lengerich, Germany was founded in May 2007 by Ralf Teepe, who has more than 40 years of experience in manufacturing recycling equipment. This knowledge, combined with new innovations, is reflected in the machines of Prall-Tec GmbH. In 2012, Frederik Teepe started at Prall-Tec, who is also the managing director today and is constantly expanding the development of new recycling machines and systems. The company's core business is the production of Impact Crushers, Hammer Mills, Shredders, Rotary Shears and other recycling machines. The machines are sold individually to partners and customers, but it is also possible to plan and manufacture entire mobile or stationary systems.

It is not a question of company size that determines today's business, but rather the special know-how and experience of successful crushing and machine construction that make the difference.

ROTOR SHEARS (PTRS)

ROBUST VERSATILITY FOR EVERY TASK

We proudly present our state-of-the-art rotary shears, which are capable of tackling any task thanks to their impressive performance and versatility. Our two- or four-shaft shears, equipped with powerful torque, are designed to handle even the most challenging materials with ease.



YOUR MATERIAL - OUR ROTARY SHEARS (PTRS)

THE STARTING POINT FOR EFFICIENT RECYCLING

Our rotary shear technology offers a highly efficient solution for the pre-cutting of a wide range of materials, particularly in the context of electronic waste recycling.
Pre-cutting plays a crucial role within the central process cycle of e-waste recovery. Through precise material breakdown, the extraction of valuable resources is optimized while significantly reducing environmental impact by enabling the safe handling of hazardous substances.





ELECTRICAL & ELECTRONIC WASTE (WEEE)

The pre-cutting of small household appliances, lithium-ion batteries, cables and wires, circuit boards, photovoltaic systems, and other electronic waste products is a crucial step in preparing these materials for the subsequent recycling process with our PTV Balling Mill.



CABLE

In cable recycling, we use our rotary shear for the efficient pre-cutting of cables. This process optimally prepares the materials for further processing in our PTV Balling Mill, which specifically liberates valuable raw materials such as copper, aluminum, and plastics, making them ready for recycling.



TIRES

The optimal cutting of tires is a crucial step in efficiently recovering valuable resources such as rubber, steel, and textile fibers. This process can be achieved through various technologies and methods designed to break down the materials into their individual components. After pre-cutting, further granulation is carried out using cutting mills.

YOUR MATERIAL - OUR ROTARY SHEARS (PTRS)

FURTHER FIELDS OF APPLICATION



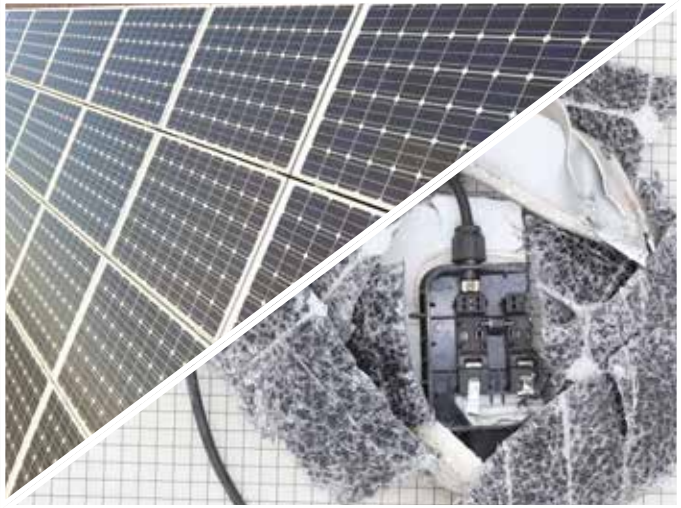
VEHICLE INTERIOR COMPONENTS

Our technology enables the effective size reduction and cutting of vehicle interior components such as dashboards, seat foams, and trim parts. By using powerful rotary shears, these materials are optimally prepared for recycling and transport.



VEHICLE PARTS

Our rotary shears efficiently and precisely processes vehicle parts, preparing the materials optimally for the next steps in the recycling process. Equipped with state-of-the-art technology, each vehicle part undergoes a careful cutting process that ensures even the toughest components are broken down into manageable pieces.



PV PANELS

Our rotary shears efficiently processes PV panels and specifically prepares them for our Recyglass® system. During this process, materials such as glass, aluminum, and silicon are precisely separated and shaped for optimal reuse, ensuring an efficient and resource-conserving recycling process.



STAMPING SCRAP

By using our powerful rotary shears, stamping scrap is cutting into manageable pieces, ensuring optimal preparation for transport and further recycling processes.

INNOVATION IN CUTTING TECHNOLOGY

ALL ADVANTAGES FOR OUTSTANDING RESULTS AT A GLANCE



Powerful Torque:
Equipped with strong torque, our rotary shears offer a high-performance solution for processing a wide range of materials. Whether it's wood, plastic, metal, or other challenging substances – PTRS rotary shears deliver outstanding results.

Versatility in Applications:
The flexibility of our rotary shears makes them the ideal choice for a wide range of applications. From precise cutting to efficient disposal – PTRS rotary shears offer customized solutions tailored to your specific needs.

Robust Construction for Long-Lasting Performance:
We focus on robustness and durability. Our rotary shears are designed to withstand the demands of continuous operation. Minimal downtime ensures maximum productivity and profitability for your business.

Perfect Cutting Results:
Our rotary shears ensures reliable and consistent cutting quality, combined with long blade life.

Screen Quick-Change System:
Quick-change screen for precise control of particle size.

Cutter Shaft Quick-Change System
Easily adjustable and replaceable blades for optimal efficiency and high availability.

Economical in Operation:
Regenerable cutting tools for cost-effective operations.



PRECISION DOWN TO THE LAST DETAIL

OUR ROTARY SHEARS DELIVER ENGINEERED PERFECTION

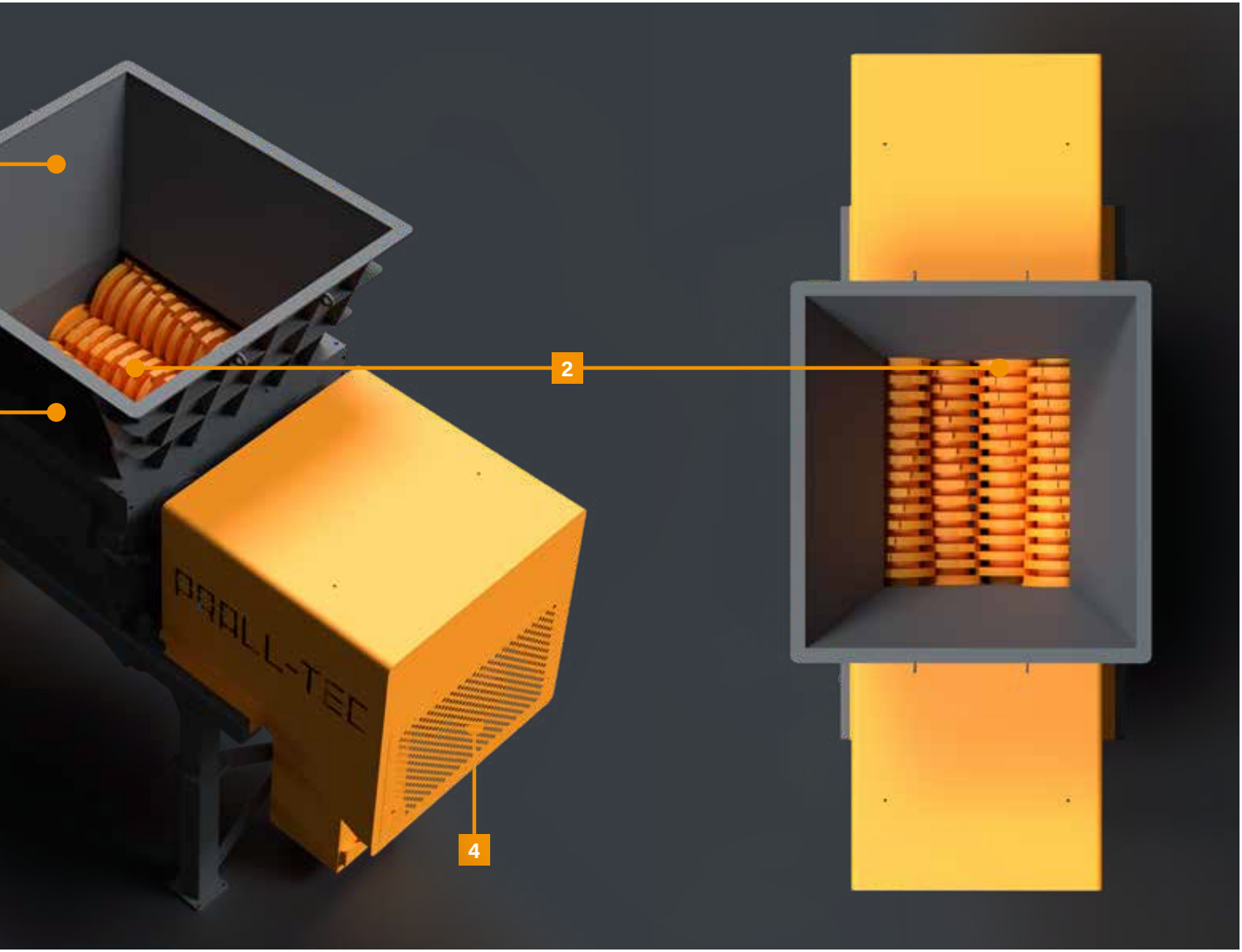
1 Feed Hopper (optional with Slide Gate):
In addition to the large central feed hopper, there is the option to customize with customer-specific hopper solutions.

2 Shear Shafts:
The high cutting performance is achieved through the special arrangement of the shear tools on the shafts. Maintenance is performed by replacing the worn shear shaft set, which is then reconditioned and made ready for reuse during the next exchange.

3 Machine Housing:
The extremely robust, one-piece steel welded construction of the sturdy machine housing easily withstands even the highest loads.

4 Drive:
Efficient variable frequency drive (VFD) for precise speed control throughout operation. A helical gear unit and electric motor drive each shaft individually. In case of overload, automatic reversal of rotation allows the system to clear itself and relieve stress.




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PRALL-TEC

ROTARY SHEAR (PTRS-2) TWO-SHAFT

TECHNICAL DATA



Performance Specifications

TYPE:	CUTTING CHAMBER:	SHAFT DIAMETER:	CUTTING WIDTH:	MOTOR POWER:
PTRS 75/100	750 x 1.000 mm	140 mm	35 mm	2 x 22 kW
PTRS 85/110	850 x 1.100 mm	170 mm	30/50 mm	2 x 37 kW
PTRS 95/120	950 x 1.200 mm	200 mm	58/80 mm	2 x 55 kW
PTRS 110/130	1.100 x 1.300 mm	240 mm	58/80 mm	2 x 75 kW
PTRS 125/160	1.250 x 1.600 mm	280 mm	89/120 mm	2 x 90 kW
PTRS 140/160	1.400 x 1.600 mm	320 mm	89/120 mm	2 x 132 kW



Dimensions & Weight

TYPE:	WIDTH:	LENGTH:	HEIGHT:	WEIGHT:
PTRS 75/100	1.430 mm	4.000 mm	1.050 mm	approx. 7.400 kg
PTRS 85/110	1.710 mm	5.000 mm	1.050 mm	approx. 10.000 kg
PTRS 95/120	2.150 mm	5.050 mm	1.220 mm	approx. 15.000 kg
PTRS 110/130	2.120 mm	5.100 mm	1.250 mm	approx. 18.000 kg
PTRS 125/160	2.470 mm	6.370 mm	1.550 mm	approx. 28.000 kg
PTRS 140/160	3.140 mm	7.400 mm	1.660 mm	approx. 36.500 kg

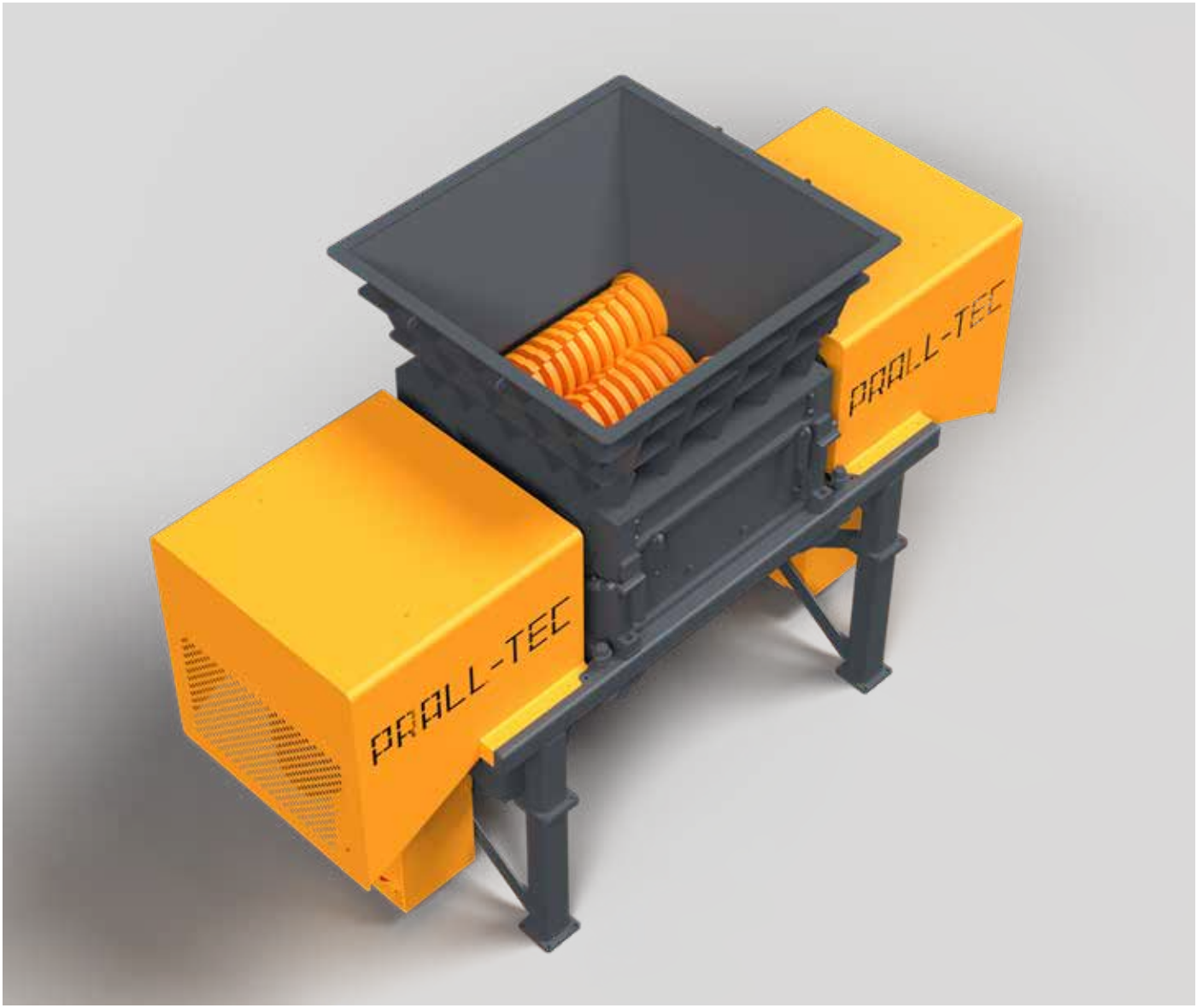
ROTARY SHEAR (PTRS-4) FOUR-SHAFT

TECHNICAL DATA



Performance Specifications

TYPE:	CUTTING CHAMBER:	SHAFT DIAMETER:	CUTTING WIDTH:	MOTOR POWER:
PTRS 48/140	480 x 1.400 mm	240 mm	20/40/60/80	37 kW, 55 kW



Dimensions & Weight

TYPE:	WIDTH:	LENGTH:	HEIGHT:	WEIGHT:
PTRS-4	2.290 mm	5.700 mm	1.200 mm	approx. 28 t

PTRS
ROTARY SHEAR



PTV
BALLING MILL



ROTARY SHEAR (PTRS) & BALLING MILL (PTV)

THE IDEAL MACHINE MATCH FOR TOP RESULTS



Input Material: E-Waste

PTRS



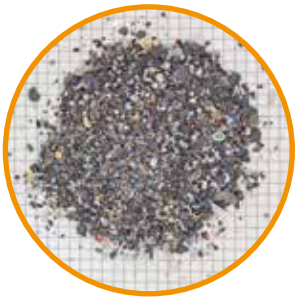
Material After Cutting with PTRS

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E-Waste Pre-Cut by PTRS

PTV



Material After PTV for Further Separation



Input Material:
Cables

PTRS

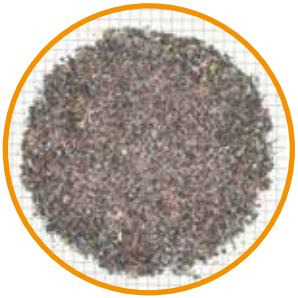


Cut Material
After PTRS



Cables Pre-Cut
by PTRS

PTV



Material After
PTV for Further
Separation

INNOVATIVE BATTERY RECYCLING FOR TOMORROW

EFFICIENT BATTERY RECYCLING LINES

1 Lift for Transport Boxes

The lift transports boxes containing used batteries into the battery tower to prepare them for the recycling process.

2 Function of the Dosing Hopper

Used batteries are carefully emptied from the transport boxes into the dosing hopper, which ensures a consistent feed into the subsequent stages of the recycling process.

3 3-Stage Water Spraying

In this phase, the batteries are sprayed with water in three stages to prevent spark formation and ensure a safe recycling process.

4 PTRS Rotary Shear 1

The PTRS rotary shear performs coarse cutting of the batteries to prepare them for the subsequent steps of the recycling process.

5 PTRS Rotary Shear 2

In this stage, the batteries are further cut to enhance material separation and maximize recycling efficiency.

6 Big Bag Filling

After cutting, the separated materials are filled into big bags to prepare them for transport and further processing.

7 Water Separation

In this step, the main amount of water drains from the big bags. The water is filtered and reused.


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RECYCLING TECHNOLOGY MADE IN GERMANY

ENGINEERED AND BUILT IN GERMANY. PERFORMING WORLDWIDE.

Construction and Development

From the rotor to the complete recycling plant, we design and develop all our machines and plants in house, prioritizing the wishes and ideas of our customers and incorporating them into the planning. This close cooperation has resulted in various machines for the preparation and processing of a wide range of materials.



Mechanical and plant engineering

Planning, design and construction from a single source. From material feed to screening, whether a production of 20 to 200 tons per hour, quarry, or recycling yard - we fulfill your wishes.



Assembly and service from the manufacturer

The most important thing for us is a well functioning and producing machine at all our customers. If there is sudden damage to your rotor or the plant, this repair has the highest priority for us. Spare parts are permanently in stock to ensure a high availability of your machines. A qualified assembly team takes care of the quick replacement or repair of the components on site.




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THE COMMON GOAL OF DEVELOPING NEW SOLUTIONS WITH OUR CUSTOMERS AND PARTNERS, WHICH WILL SET NEW RECYCLING STANDARDS IN THE FUTURE.

FURTHER INFORMATIONS

PRALL-TEC

www.prall-tec.de/en/products/rotary-shears/

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