



shredding technology

The reliable brand!



**INDIVIDUAL SHREDDING SOLUTIONS**



## EXPERIENCE AND KNOW-HOW MAKE INDIVIDUAL SOLUTIONS POSSIBLE

People are fascinated by jaguars. But why? What is their secret?

The jaguar is one of the most impressive and strongest big cats. Its most striking features are its tough, strong and powerful body, its dynamic movements and great adaptability.

The individual shredding solutions of **UNTHA shredding technology** are just as tough, strong and adaptable as jaguars are. With our decades of experience, technical know-how and highly qualified application engineers we can develop the best, customised solutions to meet our customers' individual demands and most exacting requirements to their total satisfaction.

Ground-breaking and trend-setting shredding solutions are ensured by our in-house Development Department with Research and Development Centre. Numerous patents and innovations document our leading role in shredding technology.

# RELIABILITY

Each **UNTHA shredder** incorporates visible and invisible strengths. Visible are the sturdy machine design, the powerful indexable inserts and the unique dynamics of design. Invisible and yet always recognisable are the power and performance of the machine resulting from the ingenuity, problem-solving skills and experience of UNTHA engineers and other staff. They provide our machines with the typical reliability appreciated by our customers worldwide.

# A MULTITUDE OF DEMANDS – A CHALLENGE FOR US

We provide solutions for individual applications by drawing on our many years of experience in our core applications. These are:

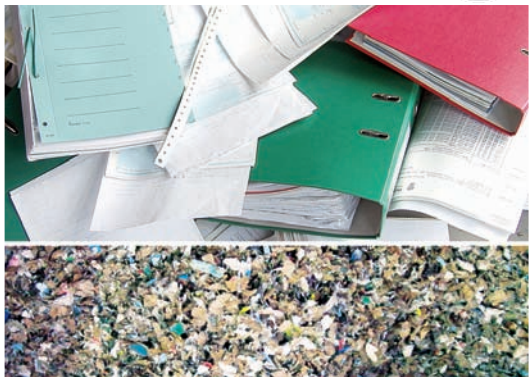
## PAPER AND CARDBOARD



No matter what needs to be shredded – entire bales of paper, cardboard waste or paper rolls – we offer the perfect cutting system. Be it single, two- or four-shaft shredders, they cover all applications.

- Hygienic paper
- Paper rolls
- Cellulose
- Waste paper
- Cardboard tubes
- Corrugated cardboard
- Cardboard
- Beverage cartons
- etc.

## DOCUMENTS AND DATA



The reliable and economic shredding and destruction of files, documents and data carriers is becoming increasingly important for many organisations due to statutory provisions on the one hand and for safety reasons on the other. We offer reliable solutions!

- Files and folders
- Seized goods
- Magtapes
- CDs, DVDs
- Bank notes
- Hard disks
- IT paper
- Security paper
- Stamps
- etc.

## PLASTICS



There is a wealth of varying demands that plastics shredders have to meet. The machines of the LRK, VR and RS series are tailored to shredding such materials:

- Lumps of plastics
- Plastic sheet
- Packaging
- Tubing
- Production waste
- Interior trim
- Foamed/expanded material
- PET bottles
- etc.

## WOOD



There are many possible applications for wood. Our machines are often used to shred pallets and waste wood before they go for thermal recycling. Our range of VR models ensures smooth operation.

- Wooden pallets
- Waste wood
- Demolition wood
- etc.

## ELECTRIC AND ELECTRONIC SCRAP<sup>1)</sup>



Electronic scrap contains valuable raw materials. To be able to recover these materials, they have to be reliably shredded, separated and removed. The patented UNTHA four-shaft cutting system with perforated screen is the perfect equipment for this task.

- |                        |                    |
|------------------------|--------------------|
| • Electronic devices   | • Refrigerators    |
| • PCBs                 | • Electric cookers |
| • Cables               | • Electronic scrap |
| • Household appliances | • etc.             |
| • Computers            |                    |

<sup>1)</sup> The EU WEEE Directive, aimed at reducing the increasing amount of electronic scrap from end-of-life electrical and electronic equipment, requires that electronic devices are recycled.

## METALS



Based on our many years of experience in the design of cutting system geometries, special cutting tool hardening procedures as well as the sturdy machine design, our shredders can be used for a variety of metal shredding applications:

- |                     |                      |
|---------------------|----------------------|
| • Packaging/barrels | • Metal casings      |
| • Metallic waste    | • Aluminium profiles |
| • Punching scrap    | • Al-Mg sprue        |
| • Steel tapes/wires | • etc.               |
| • Chips             |                      |

## TYRES AND RUBBER



Reducing the growing heaps of waste tyres is only possible through conditioning and/or recycling. UNTHA has developed specific cutters that make separation of rubber and steel wire possible.

- Tyres (from cars and trucks)
- Tyres from agricultural machinery
- Rubber, vulcanised
- Tubes
- etc.

## HAZARDOUS WASTE



Shredding is one of the first steps in the disposal of hazardous waste. To reduce contact with hazardous substances to a minimum, completely reliable shredders equipped with long service-life cutters are indispensable.

- |                     |                |
|---------------------|----------------|
| • Medical waste     | • Batteries    |
| • Radioactive waste | • Contaminated |
| • Chemical waste    | textiles       |
| • Waste from car    | • Oil filters  |
| repair shops        | • etc.         |

## ORGANIC SUBSTANCES



The range of applications covers the shredding of garden waste, leftover food, and goods with expired shelf life, including packaging, to produce compost and bio-gas, as well as the shredding of slaughterhouse waste to destroy it safely and reliably.

- |                        |                        |
|------------------------|------------------------|
| • Green waste          | • Waste from the       |
| • Organic waste        | catering trade         |
| • Food incl. packaging | • Slaughterhouse waste |
| • Goods with expired   | • Animal cadavers      |
| shelf-life             | • etc.                 |

### SINGLE-SHAFT SHREDDING SYSTEM

During the shredding process, the hydraulically operated and load-controlled feeder system pushes the material against the rotor, which is equipped with changeable indexable inserts and shreds the material against the cutting bars.

### TWO-SHAFT SHREDDING SYSTEM

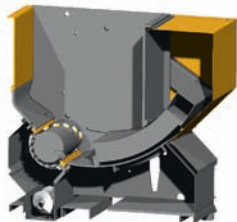


The cutting discs are arranged in such a way that one cutting disk on one shaft is positioned between two cutting discs on the opposite shaft. As a result, the material is shredded both lengthways and crossways.

### FOUR-SHAFT SHREDDING SYSTEM

After the material to be shredded has been drawn into the inner cutting system (main cutters), it is first coarse-shredded and then fine-shredded in a single operation. If the shredded parts do not immediately fall through the perforated screen, they are picked up by the teeth of the external cutting system (auxiliary indexable inserts), transported upward and re-fed into the shredding cycle.

## THE OPTIMUM SOLUTION FOR EACH APPLICATION

Depending on application, there are three different shredding systems available, divided into the following model ranges and types:

SHREDDING SYSTEM	MODEL RANGE	TYPE
 <p>Single-shaft shredding system</p>	LRK	LRK1000 LRK1400
	VR	VR60, VR80, VR100, VR120, VR140, VR160
 <p>Two-shaft shredding system</p>	S	S120
	RS	RS30, RS40
 <p>Four-shaft shredding system</p>	RS	RS45, RS50 RS60, RS100, RS150

For more detailed information on application, operation, advantages, benefits, performance and technical data please refer to the brochures for the individual machine types.

## MODEL RANGES AND APPLICATIONS



### **LRK SERIES**

Single-shaft shredding system

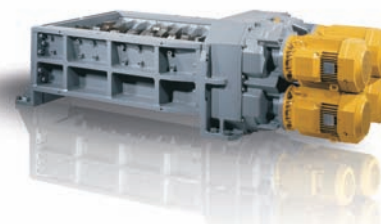
The reliable and cost-effective shredders in this model range are mainly used by the plastics processing industry for regranulation, in-house recycling and volume reduction.



### **VR SERIES**

Single-shaft shredding system

The VR model range is synonymous with reliable and trouble-free operation and includes powerful shredders that are mainly used for the recycling of paper, plastics, documents/data and wood (pallets and waste wood).



### **S SERIES**

Two-shaft shredding system

The very sturdy S series has been developed especially for heavy-duty applications, i.e. the shredding of materials such as electronic scrap, metal, tyres, hazardous waste or paper.



### **RS SERIES**

Four -shaft shredding system

The RS series has been tried and tested for decades and stands out with its powerful and rugged shredders that are highly suited to difficult operating conditions and multiple-shift continuous operation.



## A SELECTION OF IMPLEMENTED PROJECTS



Application: Documents  
Solution: RS100  
Options: Custom chute,  
custom hopper  
Location: Portugal



Application: Documents and Paper  
Solution: RS40  
Options: Custom chute,  
custom hopper  
Location: Austria



Application: Various plastic wastes  
in bales and loose  
Solution: S120  
Options: Frequency inverter,  
custom hopper, ram device  
Location: Switzerland



Application: Pallets  
Solution: VR60  
Options: Discharge belt,  
cutting bars,  
central lubrication system  
Location: Germany



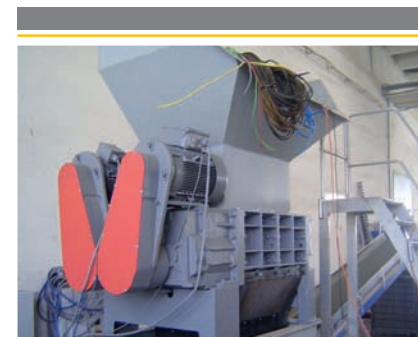
Application: Documents  
Solution: RS30  
Options: Custom hopper,  
stand, screw conveyor  
Location: Great Britain



Application: Beverage cartons  
Solution: RS40  
Options: Custom hopper,  
frequency inverter  
Location: Germany



Application: E-scrap  
Solution: RS50  
Location: Australia



Application: Copper cable  
Solution: RS50  
Options: Custom hopper  
Location: Germany



Application: Slaughterhouse waste  
Solution: RS40  
Options: Ram device, custom hopper, pneumatic hood  
Location: Poland



Application: Wood, Pallets  
Solution: LR1400  
Location: Great Britain



Application: Alu- and copper scrap  
Solution: RS100  
Options: Central lubrication system, water misting system, ram device  
Location: Romania



Application: Aluminium profiles  
Solution: S120  
Options: Central lubrication system, stand, custom hopper, water misting system  
Location: Romania



Application: Tyres from cars  
Solution: RS100  
Options: Chute  
Location: Germany



Application: Tyres from cars  
Solution: RS100  
Options: Stand, custom hopper, chute, conveying system  
Location: Germany



Application: Workshop waste  
Solution: RS60  
Options: Custom hopper, ram device  
Location: Slovenia



Application: Hazardous waste  
Solution: RS100  
Options: Central lubrication system, custom hopper, stand, ram device, chute  
Location: Great Britain

**40 years of expertise**  
**More than 8,000 shredders in daily operation!**



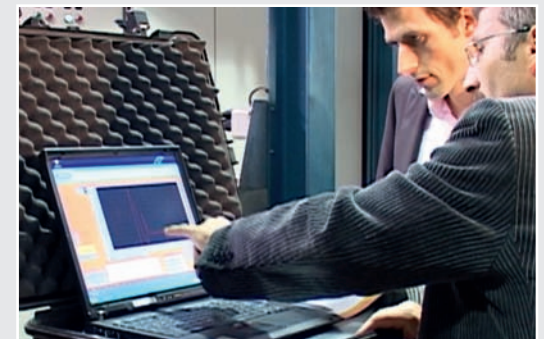
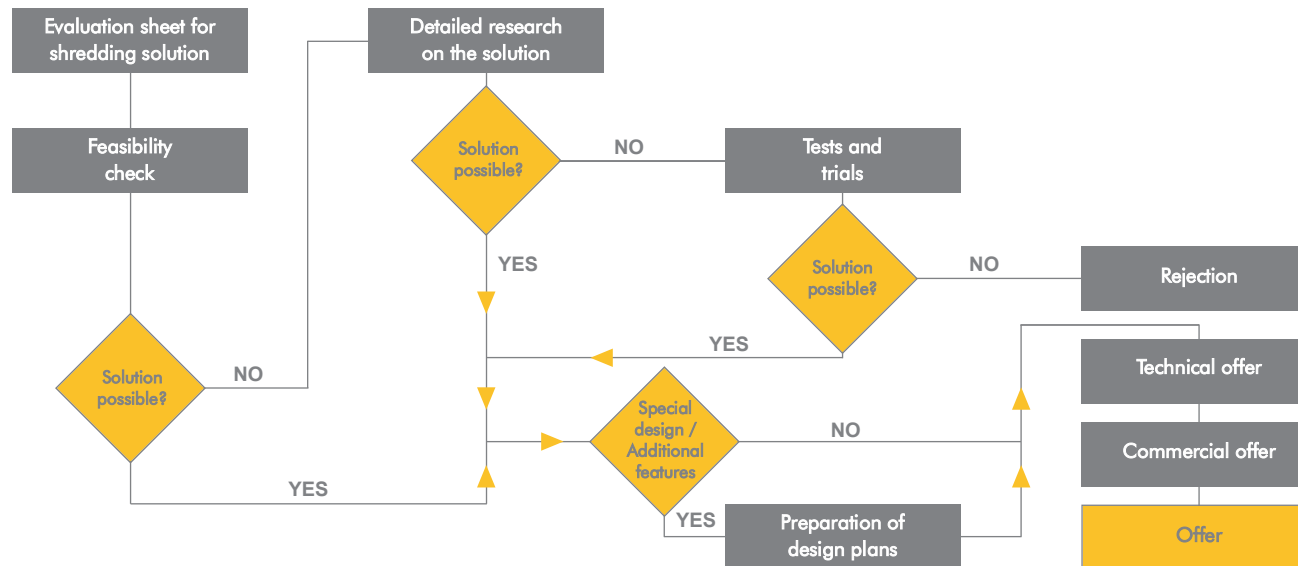
## UNTHA TECHNIKUM – OUR TECHNOLOGY CENTRE WHERE WE CREATE SOLUTIONS FOR PRACTICAL APPLICATIONS

In 2000, UNTHA opened a modern research and development centre where trials and tests with customers' specific materials are simulated under practical conditions.

The focus is always on the customer and on fulfilling each task in the best possible manner. The technology centre enables us to gain important experience and data for subsequent practical applications so that we can offer the ideal shredding solution for any given task.

The latest technological and scientific findings are very important for our development department, where they are used for the development of innovative systems and for the optimisation of shredders.

### THE PROCESS OF SOLUTION-FINDING



## UNTHA AFTER-SALES SERVICE – AS RELIABLE AS OUR PRODUCTS

Our customers' satisfaction is our number 1 priority. Our experienced After-Sales service experts make sure that machines and plant supplied by us are maintained and optimised to increase their service life and ensure efficient and profitable operation.

For more information please refer to our After-Sales Service brochure.



## HOW UNTHA AFTER-SALES SERVICE CAN BENEFIT YOU

### Cutting systems overhaul

- The low-cost alternative to buying new cutting systems
- Extension of service life and increase in productivity of used cutting systems
- Optimisation of worn cutting systems

### Spare parts

- Original UNTHA replacement parts for maximum availability of your machine and plant
- Comprehensive spare parts stock of more than 10,000 items
- Replacement parts are provided within 2 working days thanks to our advanced logistics concept<sup>1)</sup>
- All original UNTHA replacement parts are "made in Austria"

### Repair

- Short response time and expert support in emergencies
- Service hotline
- Highly qualified and experienced service engineers
- General overhauls on site and at the UNTHA Service Centre

<sup>1)</sup> applies to all articles in stock

### Preventive maintenance and maintenance agreements

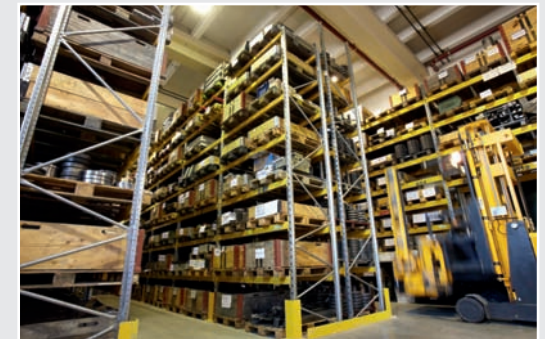
- UNTHA quality maintenance service for maximum yield thanks to high uptime of equipment
- Regular UNTHA quality maintenance ensures high performance of the machine
- Clear reduction in operating and maintenance costs
- Modular UNTHA quality Maintenance Agreements available

### Training

- Expert training courses for optimum operation and maintenance of machines
- Hands-on and multimedia courses for immediate, positive training results
- Individual training courses and on-site advice available

### Diagnosis of machine problems

- Prevention of serious damage
- Evaluation by means of state-of-the-art diagnostic equipment
- Remote diagnosis via GSM modem for swift troubleshooting



## OUR MISSION

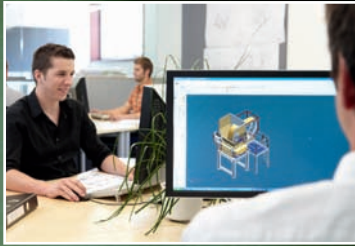
We have been a reliable and expert partner in the shredding industry for more than 30 years. Based on the latest technologies and with the help of our highly qualified staff, we develop and produce innovative and tailored shredding solutions for all applications.

Our every thought and action revolve around our customer and markets. We provide outstanding products and services of the highest quality and reliability and are therefore able to strengthen our customers' market position.

For us, reliability, credibility and a sound approach to business in both practice and theory are the central values that make our success in international markets possible. These values increase our competitiveness and help us to focus on our core competences and on the ongoing improvement of our business processes. The prerequisites for our success are innovative strength, problem-solving skills and our distinctive quality thinking.



## THE FACTS SPEAK IN OUR FAVOUR





shredding technology

The reliable brand!



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