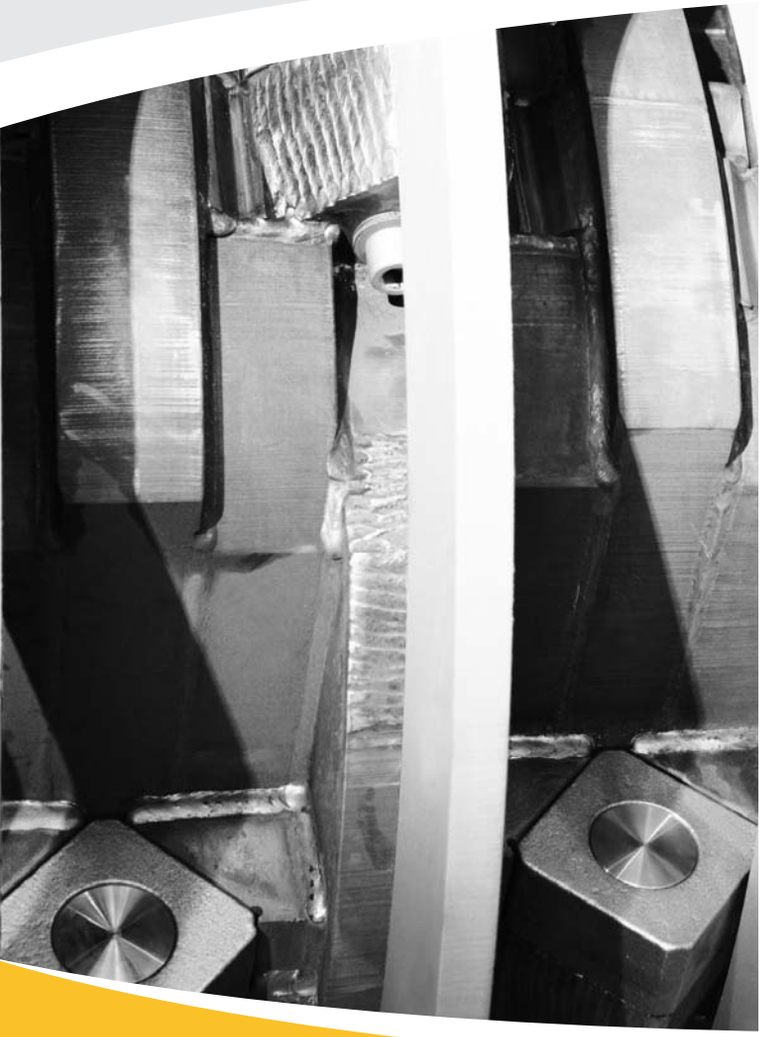
UNTHA

shredding technology

The reliable brand!



WASTE SHREDDING SOLUTIONS

RELIABLE TECHNOLOGY FOR COST-EFFECTIVE WASTE SHREDDING

Crocodiles are very efficient hunters, and their biting power is enormous thanks to their extremely powerful jaw muscles. With their regrowing teeth and their indestructible armoured backs, they remain agile into old age, even under very tough living conditions.

UNTHA waste shredders are just as reliable and long-lived as crocodiles. Be it the shredding of bulky waste or turning industrial and household waste into secondary fuel, the tried and tested pre- and post-shredding solutions of UNTHA provide valuable services.

These machines have been developed with cost-effective operation in mind. A logical consequence is the innovative quick-change system used for the replacement of indexable inserts. Our highly experienced team of application experts with their great technological know-how make sure that even highly complex projects are handled in an expert and reliable manner.

RELIABILITY

Each UNTHA shredder incorporates visible and invisible strengths. Visible are the sturdy machine design, the powerful cutting system and the unique dynamics of design. Invisible and yet always noticeable 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.

GAINING ENERGY FROM WASTE

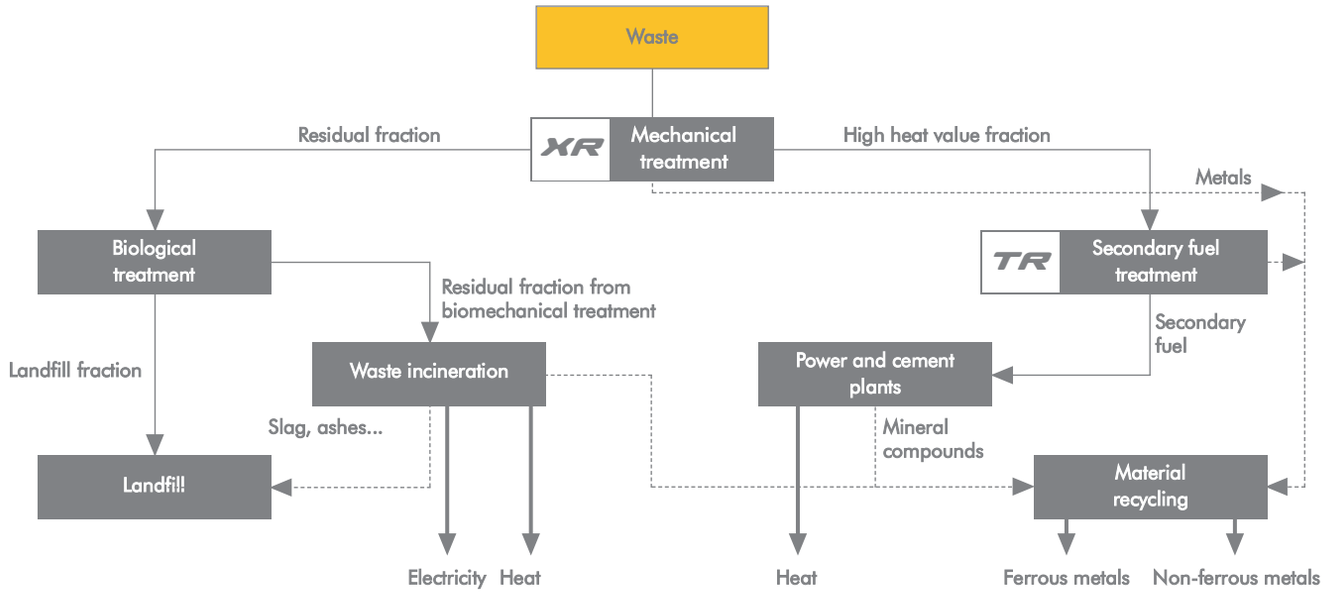
Our services in the field of "waste-to-energy processes" include the provision of reliable, efficient and cost-effective shredding technology and comprehensive After-Sales service.

1. Biomechanical treatment

Before household waste or similar commercial waste is put into landfill or incinerated, it is subjected to biomechanical treatment in order to reduce its volume and to stabilise the organic substances included in the waste. The first and most important step in the treatment process is pre-shredding. The proven XR models are very popular for these applications.

2. Secondary fuel treatment

In addition to the landfill fraction ready for dumping, a fraction with high temperature value for thermal recycling in power and/or cement mills is produced. Thus huge amounts of waste can be reduced and it is also possible to substitute fossil fuels that are harmful to the environment such as petrol, coal and natural gas. The highly economic post-shredders of the TR range are used for the treatment of secondary fuels.



FUNCTION AND DESIGN OF THE XR SERIES

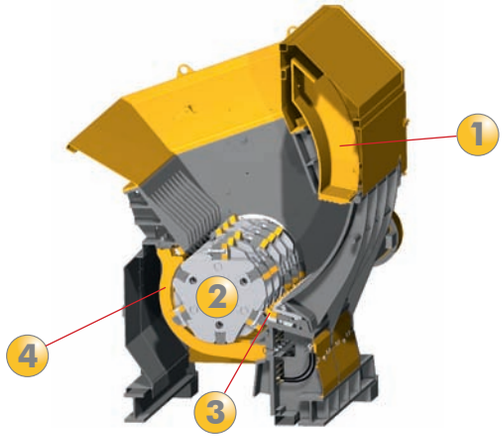
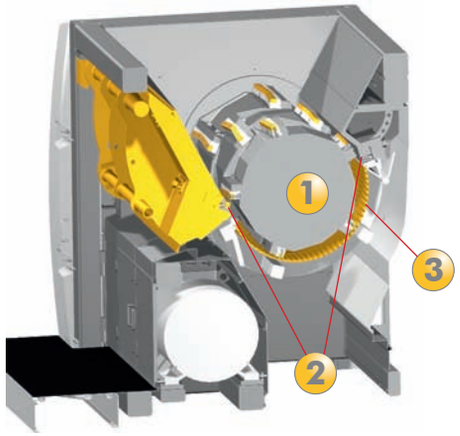
During shredding, the output-controlled hydraulic ram device (1) pushes the input material against the rotor equipped with indexable inserts. Once the material has been seized by the rotor (2), it is shredded against the stator blade (3). The grid rods (4) are adjustable so that the final size of the shredded material can be determined according to requirement.

FUNCTION AND DESIGN OF THE TR SERIES

Thanks to the huge diameter of the rotor and the specific geometry of the shredder casing, the rotor (1) is able to pull in the material independently and the material is pressed against the cutting bars (2) and shredded. The perforated screen (3) determines the size of the final fragments.

THE RIGHT CHOICE FOR PRODUCING COARSE, MEDIUM AND FINE FRACTIONS

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

SHREDDING SYSTEM	SERIES	TYPES
 Shredding system for producing coarse and medium fractions	XR	XR2000 XR2000S XR3000
 Shredding system for producing fine fractions	TR	TR2000 TR2500 TR3200

RISI

XR SERIES

The highly rugged and hard-wearing XR series has been specifically developed for the shredding of untreated waste and is mainly used for producing coarse and medium fraction.

The innovative XR series with patented cutting system stands out with features such as: pre-defined particle size, high resistance to foreign matter, process reliability and low operating costs. These quality features make the models of the XR series some of the most cost-effective shredders in their league.

POSSIBLE APPLICATIONS:

- Industrial and commercial waste
- Household waste
- Bulky waste
- Waste bales
- Demolition wood
- Mixed waste from building sites
- Hazardous waste
- Carpets and rugs
- etc.

QUALITY FEATURES

Particle size can be defined in advance

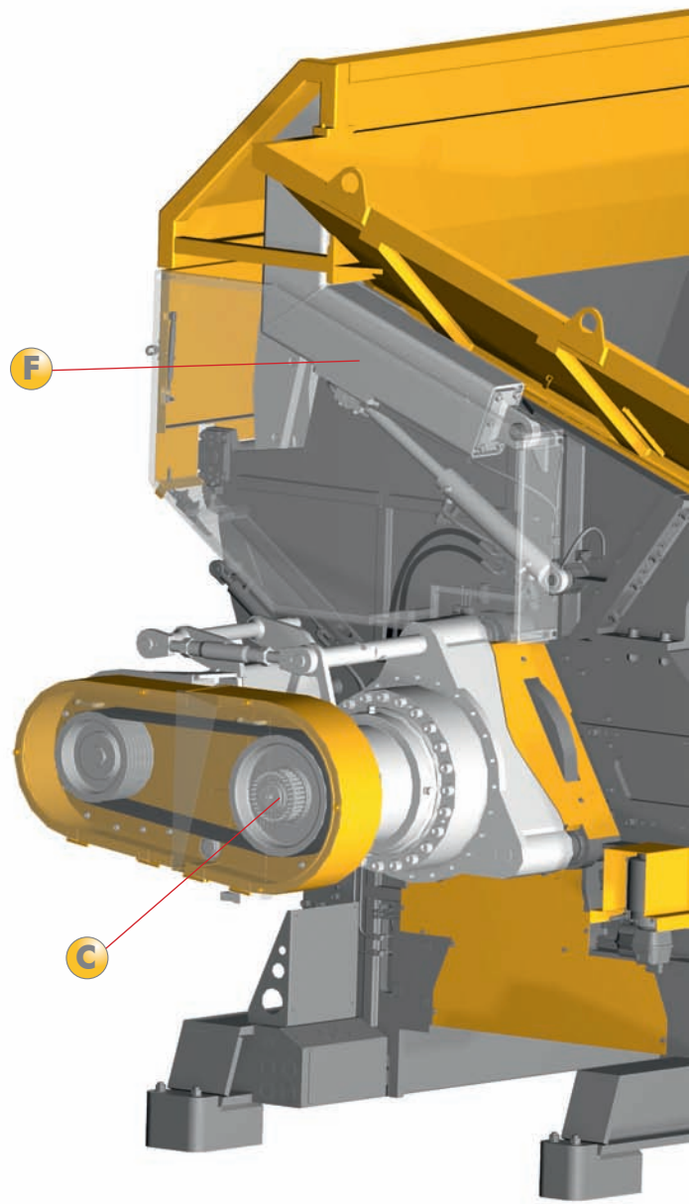
- by simply changing the cutting gap (A) and adjusting the number of screen bars (B)
- making continuous material discharge possible
- also possible with difficult materials (such as textiles, carpets and rugs).

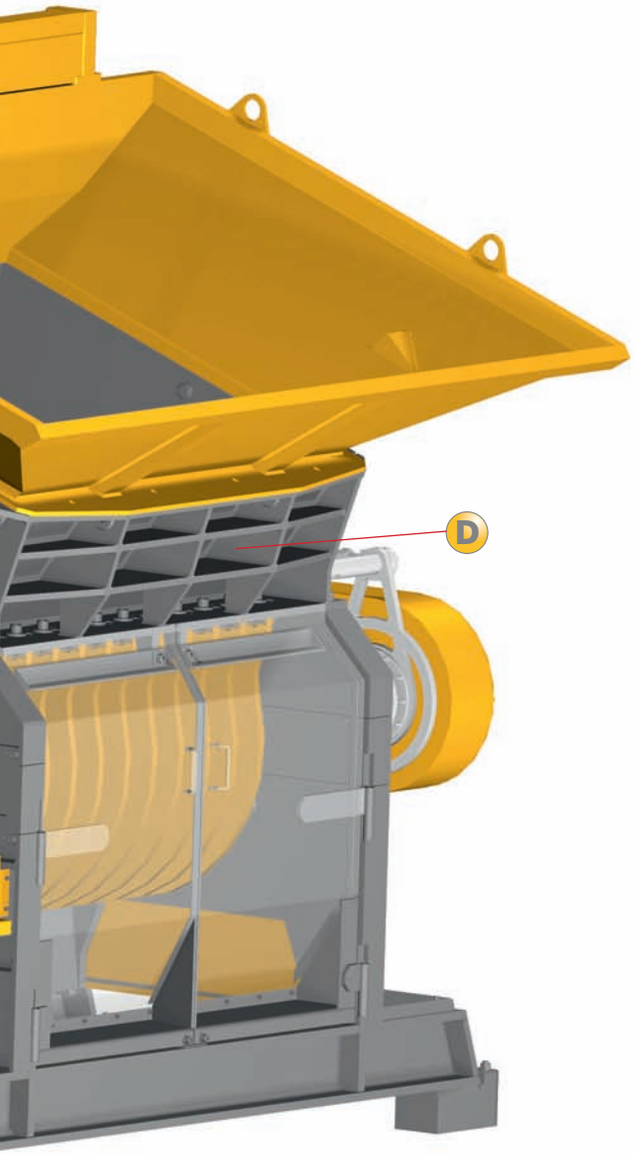
High resistance to foreign matter; process reliability

- The slow rotor speed (< 30 rpm) and efficient coupling system (C) prevents the indexable inserts from breaking
- Sturdy design (D)
- Solid grid bar design
- The integrated hydraulic system (E) for removing foreign matter discharges unshreddables quickly and efficiently.
- The hydraulic ram (F) prevents bridge building and ensures reliable treatment of bulky waste.

Simple operation

- SRC[1)] panel with integrated 5.6“ touch screen and high resolution colour display (simple menu navigation)





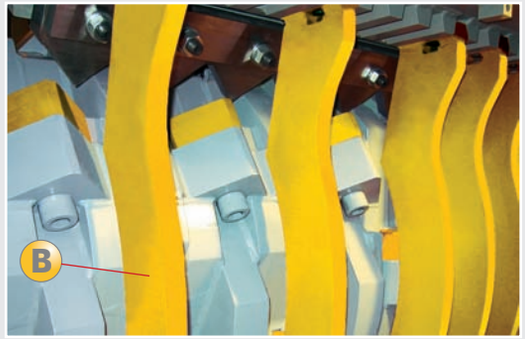
Low operating costs

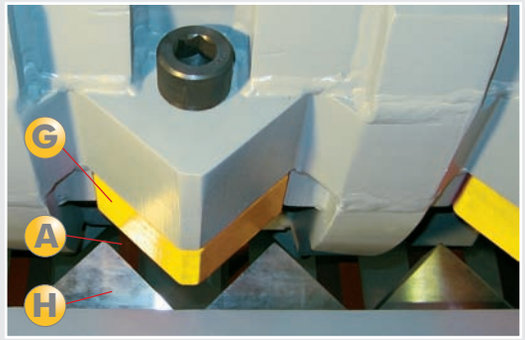
- Long service life thanks to 4-fold rotatability of the indexable inserts (G) and stator blades (H)
- Low maintenance costs thanks to short downtime for replacing the cutting tools, long maintenance intervals and automatic central lubrication system
- Low energy costs thanks to electro-mechanical drive and high efficiency of the cutting system (cutting rather than tearing)

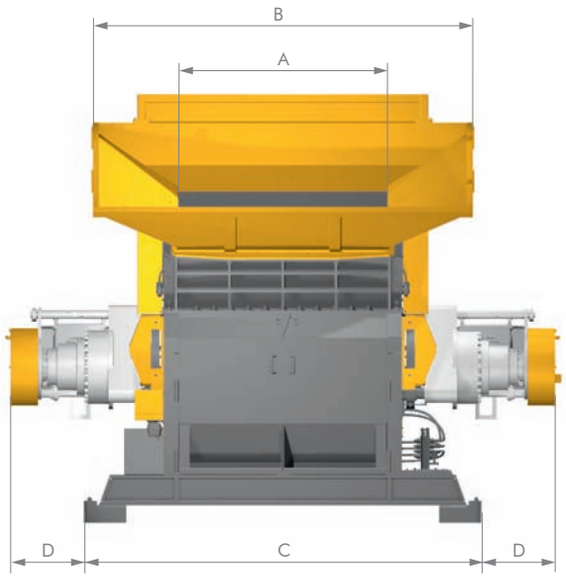
Options

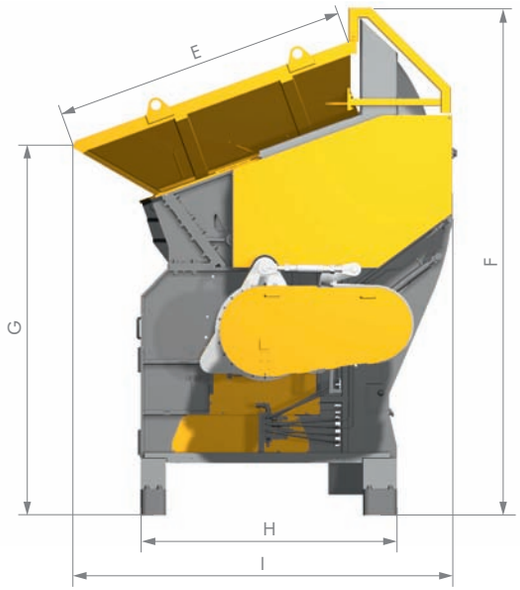
- Frequency inverter for infinite adjustment of speed to the input material to be shredded and for reduction of start-up peaks
- Integrated discharge belt for swift and safe discharge of material; thanks to the belt, the machine can be set up directly on the floor; no additional steel structures or frames required.
- SRC(E)[2] panel with 15“ touch screen for even more ease of operation
- **„UNTHA carefree package“**

1) Safety remote control
2) Safety remote control (expert)









XR SERIES

Single-shaft shredding system

TECHNICAL DATA		XR2000	XR2000S		XR3000
Driving power	kW	150	220	264	264
Hydraulic power	kW	7.5	7.5	7.5	7.5
Ø Rotor	mm	850	1,100	1,100	1,100
Rotor speed	rpm	40	30	34	30
No. of indexable inserts	unit	24	36	36 / 48	54
Dim. of indexable inserts	mm	130 x 130	130 x 130	130 x 130	130 x 130
Weight	t	ca. 22	ca. 27	ca. 27	ca. 38 - 40
Throughput*	kg/h	up to 25,000	up to 40,000	up to 50,000	up to 60,000

*) depending on: quality of material and diameter of perforated screen

	XR2000	XR2000S	XR3000
A	1988	1988	2972
B	3650	3650	4630
C	3780	3780	4764
D	450	595	810
E	2337	2337	2337
F	3920	4070	4070
G	2850	3000	3000
H	2370	2495	2495
I	3043	3043	3043

All dimensions in mm.

XR2000S

TR SERIES

The reliable and powerful TR series has been specifically developed for the post-shredding of the fraction of high calorific value and is mainly used in the preparation of secondary fuels.

With its high uptime and enormous throughput, the TR series is among the most profitable post-shredding equipment. Some highlights among the many quality features are the quick-change cutting system, the highly effective protection from foreign matter and the low operating costs.

POSSIBLE APPLICATIONS:

- Treated household waste
- Treated industrial and commercial waste
- Bales of pre-shredded plastics
- Pre-shredded plastic film
- Plastic waste from vehicle dismantling
- Pre-shredded waste from the plastics industry
- Packaging materials
- etc.

QUALITY FEATURES

High availability

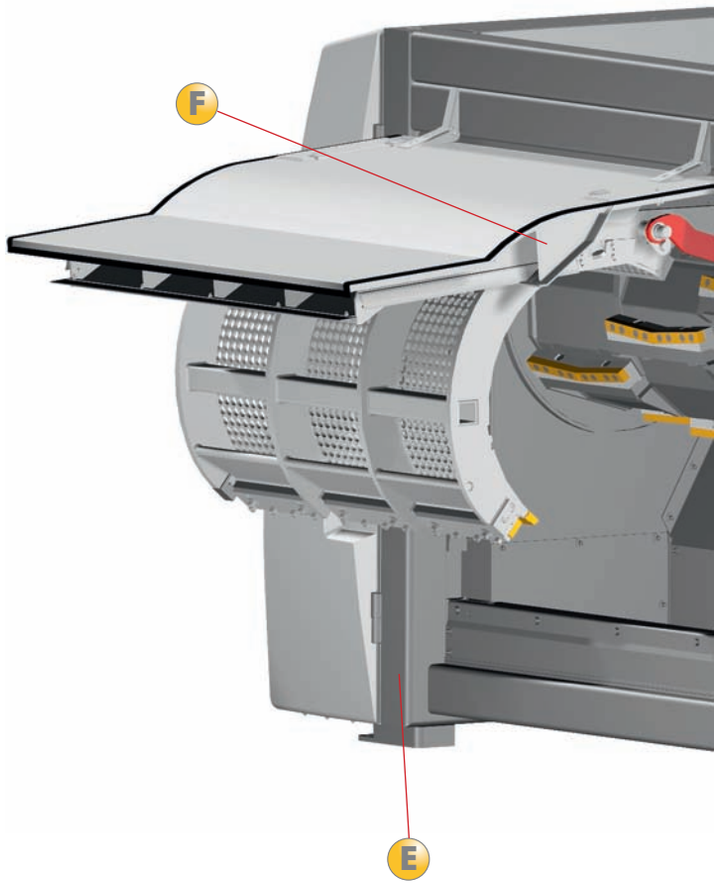
- Uptime increased by up to 10% thanks to quick-change cutting system (A) (5,000 t/ year in two-shift operation)
- Effective protection from foreign matter: the gate (B) opens automatically and the drive train is secured by means of a shear-pin coupling.
- Simple and therefore highly failsafe drive concept (C) with single-step timing belt drive without gear

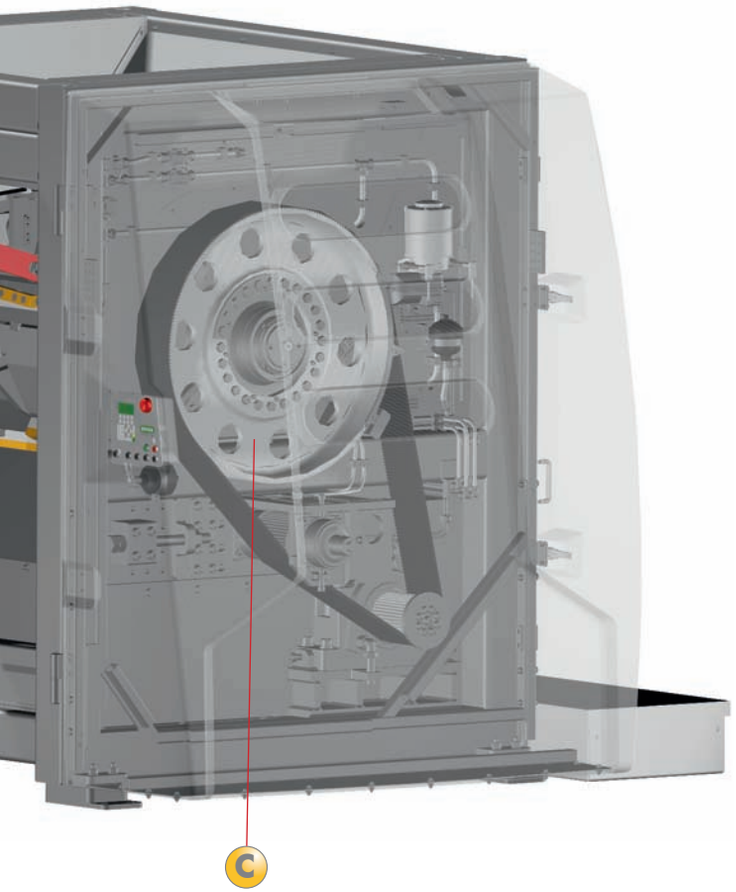
Low operating costs

- No ram required
- Energy-efficient drive system (timing belt drive without gear)
- Long service life thanks to 4-fold rotatability of the indexable inserts (D) and stator blades
- Low maintenance costs thanks to short downtime for replacing the cutters, long maintenance intervals and automatic central lubrication system

High throughput

- Extremely high uptime
- Very large rotor diameter (1,100mm) – hence larger screen surface
- Frequency inverter for infinite speed adjustment





1) Safety remote control
2) Safety remote control (expert)

Simple operation

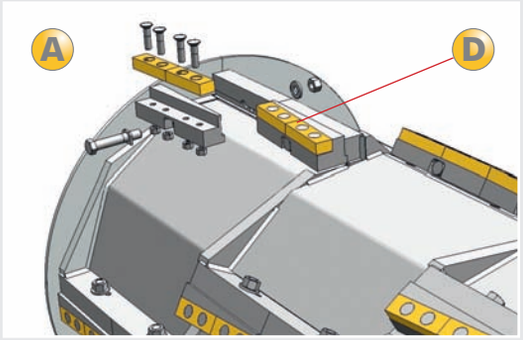
- SRC[1] panel with integrated 5.6“ touch screen and high resolution colour display (simple menu navigation)

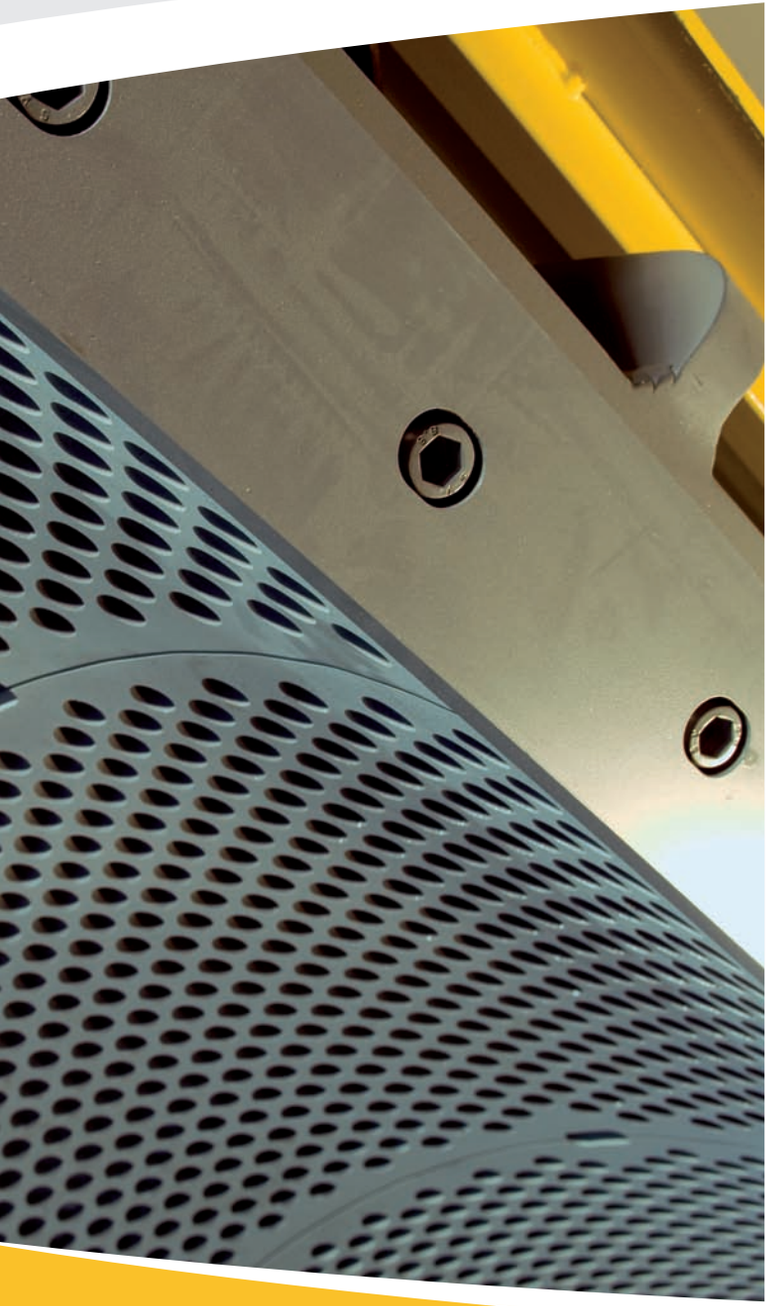
Robust, straight-forward design

- Steel frame structure (E) made from warp-resistant and solid special section tubes for heavy duty applications and low-vibration running
- Frame structure makes compact design possible – small footprint
- All machine components are easily accessible via maintenance gates; no tools needed to open them
- Integrated noise reduction system (F) to reduce noise emissions by 5-10 dBA

Options

- Ventilation system to protect the components from dust and contamination
- Discharge belt for swift and safe discharge of material; thanks to the belt, the machine can be set up directly on the floor; no additional steel structures or frames required
- Attachable hopper
- SRC(E)[2] panel with 15“ touch screen for even more ease of operation
- **„UNTHA carefree package“**





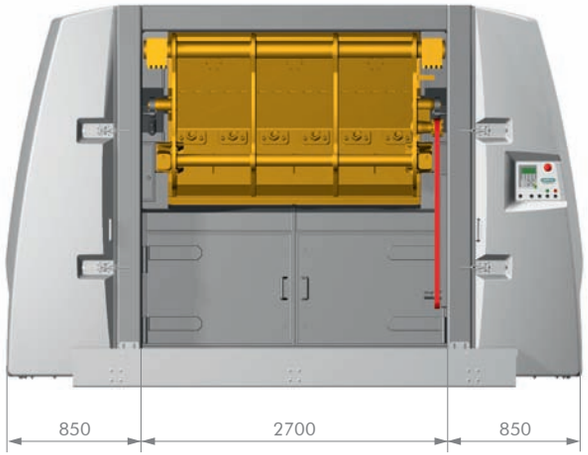
TR SERIES

Single-shaft shredding system

TECHNICAL DATA		TR2000	TR2500	TR3200
Driving power	kW	200	250	315
Hydraulic power	kW	3.5	3.5	3.5
Ø Rotor	mm	1,100	1,100	1,100
Rotor speed	rpm	140	140	175
Weight	kg	ca. 20,000	ca. 22,000	ca. 24,000
Throughput*	kg/h	up to 9,000	up to 12,000	up to 15,000

*) depending on: quality of material and diameter of perforated screen

All dimensions in mm.



UNTHA

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UNTHA
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Die zuverlässige Marke!
AUTOMATIK EIN
UNTHA

A SELECTION OF IMPLEMENTED PRE-SHREDDING PROJECTS

Application: Household and commercial waste
Solution: XR2000S
Location: Germany

Application: Commercial waste
Solution: XR3000
Location: Italy

Application: Household waste
Solution: XR2000S
Location: Germany

Application: Packaging, rejects, matured timber, screen overflow
Solution: XR3000
Location: Austria

Application: Paper rejects
Solution: XR2000S
Location: USA

Application: Bulky waste
Solution: XR2000S
Location: Germany

A SELECTION OF IMPLEMENTED POST-SHREDDING PROJECTS

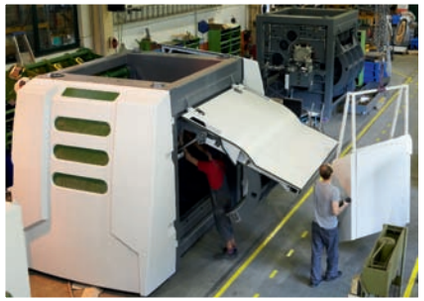
Application: Household waste
Solution: TR3200
Location: Ireland

Application: Industrial and commercial waste
Solution: TR3200
Location: Great Britain

Application: Industrial and commercial waste
Solution: TR2500
Location: Austria

Application: Household waste
Solution: TR2500
Location: Austria

Application: Industrial and commercial waste
Solution: TR3200
Location: Ireland



Application: Household and commercial waste
Solution: TR2000
Location: Great Britain

XR2000S

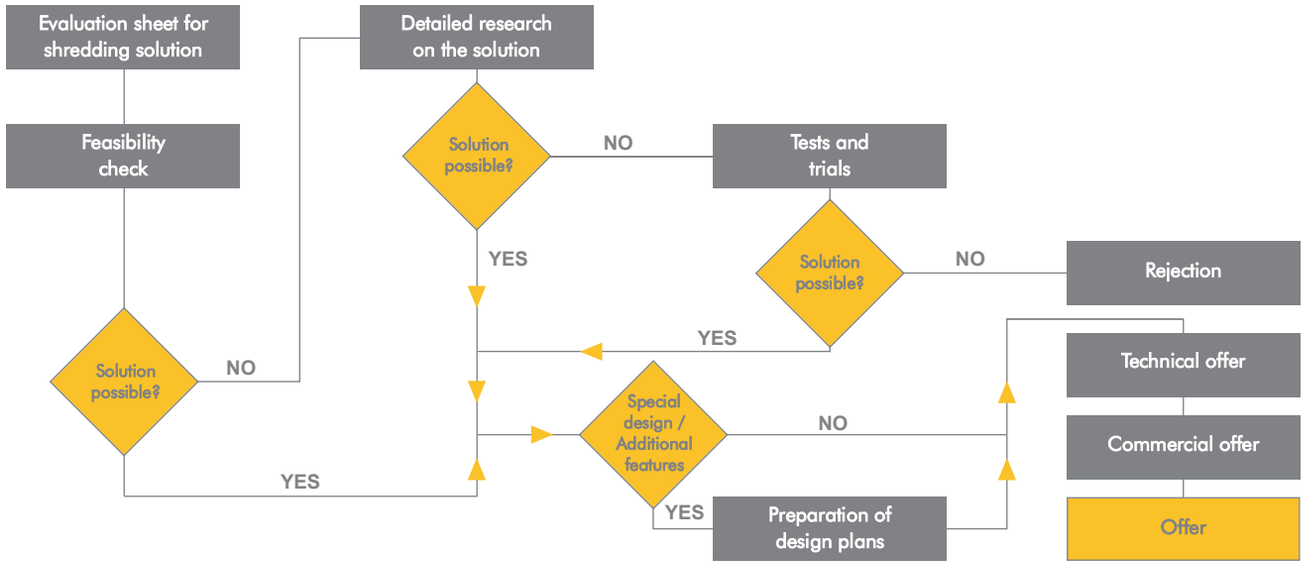
TESTS AND PRESENTATIONS ON SITE

For many years we have been offering our customers the opportunity to test our equipment on site to simulate the shredding of their materials under practical conditions.

The focus here is on the customers and their shredding tasks that need to be fulfilled in an optimum manner. The customer is given the chance to watch and judge the efficiency and performance of the offered shredding solution himself. To be able to ensure smooth presentations, well-trained UNTHA engineers will be available during the testing phase. All you need for a successful presentation is a sufficiently large presentation area, sufficient material for testing and means of transport to remove the output from the shredding site.

If presentations on site are not feasible, we would be happy to take interested customers on a tour to UNTHA reference customers.

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. Our highly qualified and experienced staff takes care of the implementation.

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

HOW UNTHA AFTER-SALES SERVICE CAN BENEFIT YOU

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[1] thanks to our advanced logistics concept
- 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

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 trouble-shooting

[1] applies to all articles in stock

UNTHA
Shredding
Technology

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

Inventor of the patented UNTHA four-shaft cutting system

Certified quality
UNTHA quality certificate

Development and manufacture of tailor-made shredding solutions
Made in Austria

Over 80% manufactured in-house
over 4,000m² of production space

40 years of experience and know-how
Established in 1970

Over 8,000 shredders in daily operation
(single-, two- and four-shaft-shredding systems)

The reliable brand

4 fields of expertise
shredding solutions for wood, waste, individual applications and after-sales service

Highly qualified and motivated staff

Comprehensive after-sales service
service hotline

Distribution to over 40 countries worldwide
Independent subsidiary in the USA

UNTHA Academy
Training centre for employees and distribution partners

In-house research and development centre

UNTHA

shredding technology

The reliable brand!

UNTHA shredding technology

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Authorised partner of UNTHA

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