UNTHA

REFERENCEBOOK

PROCESSING OF WASTE WOOD

The first choice when it comes to shredding residual wood

Dear reader,

with 50 years' experience in shredding technology and more than 13,000 reference facilities worldwide, UNTHA shredding technology headquartered in Kuchl near Salzburg is not just a reliable partner for woodworking and timber-processing businesses, but the undisputed first choice when it comes to shredding residual wood.

From small carpentry workshops to large-scale players in the timber-processing industry: This is a highly diverse field with many different processes, requirements and capacities. What all users have in common is that they need to process their residual wood in an efficient, economical and plant-specific manner. Thanks to its wide product range and complete solutions, UNTHA is able to offer the right shredding system for any requirement profile.

We are 100% confident in the quality of our products and thus offer our customer a 3-year carefree warranty for all our wood shredders! Many satisfied customers from the wood processing industry already put their trust in UNTHA's solution competence. In this reference magazine, we give you a short overview of our realised projects and overall solutions..

We wish you a pleasant and informative reading!
Your UNTHA team

3 YEARS

*) Or 2000 hours, depending on which value is reached first.

LR520

LR630

LR700

LR1000/LR1400

RS30/RS40

ENERGY FROM WASTE WOOD

Holzbau Rohrmoser relies on UNTHA shredding technology to heat its business premises as well as the adjacent residential building

The Rohrmoser carpentry and timber construction business based in Flachau/Salzburg appreciates the quality of the UNTHA LR700 shredder. The waste wood from the company's production as well as building sites is processed by the compact shredder into high-grade fuel for a wood-chip heating system. The business and the residential building that joins it cover their energy needs for the winter with the material produced in-house.

Wood is a precious resource and a fuel source produced in Austria, making it crisis-proof and renewable. This not only means that value creation stays in the region, but also constitutes a possibility for woodworking and timber-processing businesses to use their waste wood efficiently – as is the case for Holzbau Rohrmoser in Flachau. "By utilising and shredding the waste wood from our production and building sites as well as from disposable pallets, we are able to dispose of waste wood quickly and use 100% of it as an energy source", says proprietor and master carpenter Johann Rohrmoser. The business was founded in 1992, employs six people and does general carpentry work, builds wooden houses, car ports, roof structures, balconies and "anything else that comes along", as Johann Rohrmoser puts it. Rohrmoser first began to use an LR700 unit from UNTHA shredding technology for the shredding of waste wood around Christmas 2016. Johann Rohrmoser sees the benefits of the unit in the cutting system with a swivelling pusher and the low maintenance requirements. Waste wood from joinery constructions, splinters from circular saw operations and waste wood from the construction sites are all fed into the shredder and are mixed with wood shavings, resulting in a particularly productive heating material. The chips are extracted into the chip silo straight after the shredding process, where they are stored until the winter, when they are fed into the wood chip heating plant via a discharge system. "The wood chips see us through the winter", says Johann Rohrmoser, who uses the heating plant not just for his business, but also for his home that adjoins it.

The LR700 shredder is filled twice a day and runs for an hour each time. In the three and a half years since the unit was first put into operation, it has completed approximately 250 operating hours. It is the second UNTHA unit in operation at Rohrmoser, where a smaller, two-shaft shredder provided a valuable service over many years. Johann Rohrmoser is more than happy with the purchase he made in 2016. He sums up the main features of the unit: "It is robust, compact, and crucial to us in our daily workflows ."

Rohrmoser
zimmerei & holzbau

„BEST OF HOLZ“

Whoever proclaims this slogan does not make any compromises in the selection of the shredder either.

Weinberger is the market leader in the fields of Bilam, Trilam and laminated timber and blockhouse plank when it comes to quality and service. Numerous renowned European purchasers from the prefabricated house industry and quality-conscious wood construction companies and carpentries of all sizes have been putting their faith in Weinberger's products for many years.

Weinberger has been a satisfied UNTHA customer for a number of years. The Reichenfels and Abtenau plants are already equipped with one RS40 each. In the autumn of 2014, Weinberger put Austria's most modern glue-laminated wood works into operation in Abtenau. There, glue-laminated wood is, for example, cut to a specified length in a fully automatic process. For the shredding of the residues, the company has once again decided to make use of a UNTHA shredder.
A 4-shaft shredder of the RS30 series now shreds approx. 250 kg cut pieces per hour to a granulate size of 15 mm. As Weinberger works in 3-shift operation, the shredder also works 24 h a day. So the reliability of the UNTHA wood shredder was a deciding factor for the purchase.

The RS30 has been equipped with a special, low funnel and could thus be directly integrated into the mitre saw line. The installation in a secured, cordoned off area prevents anyone from reaching into the shredder. If the door to this area is opened, the shredder is automatically switched off.

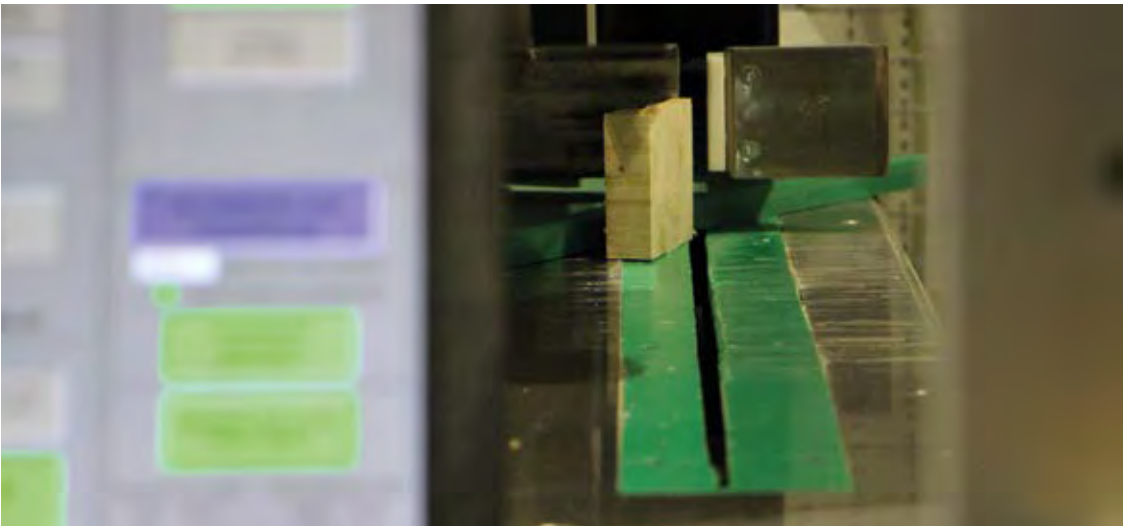
The machine base is designed with rollers. This allows for easy movement of the shredder in case of service at the mitre saw. The electric cabling between the chipper and the control cabinet was laid in an energy chain. Thus, the machine can be moved by about 1.5 m.

The homogeneous final granulate is removed via a suction device and afterwards stored in a silo. It will later be used for the pellet production.

„We work in three-shift operation, 24 hours a day, and thus need a reliable wood shred-der that is up to these challenges. With this RS30, we have made the right decision.“ Weinberger Johann jun. (Managing Director)


RS30


RS30



HOLZBAU GERSTENMAYER INVESTS IN UNTHA SHREDDING SYSTEM FOR RESIDUAL WOOD

LR1000 CAN COPE EVEN WITH LARGE PROFILES OF RESIDUAL WOOD

Holzbau Gerstenmayer is a timber construction company based in Karlstetten in Lower Austria. Business has grown steadily in recent years, as have the company's residual wood volumes. For this reason, the company has invested in an LR1000 shredder by UNTHA shredding technology.

Over the years, residual wood volumes have grown steadily. At the same time, legal requirements with regard to suction, filter and silo technology have become more stringent. Gerstenmayer thus decided to rethink its entire approach towards residual wood processing, making it fit for the future. Having used the robust LR700 from UNTHA for the reliable shredding of residual wood with minimal maintenance and energy requirements for almost 20 years, it seemed obvious to once again use the tried-and-tested technology provided by the premium manufacturer from Kuchl. Following a period of intense consultation, a complete system including conveyor technology, was developed jointly with the customer, based on the LR1000 with its 45° machine frame that would make it possible to process large timber profiles. Thanks to the oversized machine frame, larger volumes of residual wood volumes may be processed and shredded within a very short period and in a single sitting.

The customer had specified a throughput of around 800 kg/h. Thanks to the aggressive LR cutting system, the standard rated capacity of 22 kW with just 27 cutting blades was sufficient to fulfil these ambitious demands. When it comes to operation and maintenance friendliness, the LR1000 is also hard to beat: To utilise the maximum lifespan of the cutting blades, they need to be turned around just once. The valve technology is designed in such a way that guides are not required, eliminating both wear and maintenance in this area. A hopper structure increases the filling volume of the machine and makes it possible to also use large crates and shovels for feeding the machine, in addition to manual and forklift-based loading. Cabinet heating and low-temperature lubricants mean that the machine runs safely over decades, even at temperatures way below zero. Managing Director Peter Gerstenmayer is convinced that the investment will pay off: "The overall concept provided by UNTHA during the project planning phase and the high level of reliability and cost-effectiveness of the UNTHA machines we have been using for the last 20 years have once again made us opt in favour of UNTHA. And by the way, the LR700 was not taken out of service, but sold on to a partner business where it is still performing well!"

HOLZBAU GERSTENMAYER GmbH


LR1400

„WE MAKE MORE OUT OF WOOD“

This high aspiration was the motivation for Fritz Egger sen. to open the first chipboard factory in St. Johann in Tirol in 1961 and thus lay the foundation for the EGGER success story. Today, 17 factories in 7 countries produce 15 m^3 wood-based materials per minute.

„Wood is too precious to just throw away“
That was already the motto of Fritz Egger sen., founder of the EGGER company (died in 1982). Thus, all the recycling wood consisting of waste wood from goods that have been disposed of as well as goods that cannot be sold is prepared and used for the chipboard production.

For the post-shredding of the waste wood from the screen overflow, the company invested in a new shredder for the main plant in Tirol in 2015. An LR1400 with 2x22 kW drive power and special ram has been shredding between 1000 and 2000 kg/day since that time, depending on the fed material. The input material is a mixture of hard and soft wood, chipboards, pallets and MDF.

Due to the high throughput required, the machine has been equipped with two blade rows (76 blades). A 12 mm perforated screen ensures a homogeneous, small granulate. For the shredding of long board parts, the LR1400 was equipped with a tilting table. By means of a lifting truck, the chipboards are put onto the feed table and then hydraulically tilted into the shredder. The Screw conveyor and base frame have been adjusted to the on-site conveyor technology. The latter transports the final granulate into a bunker from which it is then re-supplied into the chipboard production process. In the meantime, the LR1400 in Wörgl has been installed and commissioned by UNTHA. All relevant tests have been completed. The throughput performance tests in particular complied with the specified values. EGGER accepted the machine in 2018, being completely satisfied. For UNTHA, it is a matter of course that the order does not end with the acceptance.

„We like the great service of the UNTHA advisers and customer support staff. They were helpful and forthcoming, not only in the preliminary stage and convinced us in the decision-making phase on the basis of extensive requirement discussions and test possibilities but the realisation and the service competence in the aftersale support are excellent, as well.“,

Martin Berger, factory manager production/engineering, Wörgl.

RELIABLE SHREDDING SOLUTION

FOR TROUBLE-FREE OPERATION

The family-run company Holzcenter Weiss has guaranteed top quality and top service when it comes to wood since 1965. Thanks to their versatile range, there is hardly any customer request that is left unsatisfied by Weiss GmbH when it comes to anything revolving around wood.

In the production facility in Flachau/Reitdorf, the employees handle the selection and refinement of the raw materials. Residual timber pieces from the sorting plant as well as packaging material resulting from this are shredded in-house and subsequently thermally recovered. As the company was no longer satisfied with the performance of the previous shredder and the latter was no longer able to handle the increasing throughput quantities, they decided in favour of a replacement investment.

The suitable solution was a UNTHA shredder. An LR1400 with 44 kW drive power and a filling opening of 1,400 mm x 1,050 mm now ensures reliable shredding of the material. Weiss works in two-shift operation. The shredder is in operation approx. four to five hours per day and during that time, processes a residual timber quantity of approx. five tonnes. The machine is fed by means of a conveyor belt and also by lifting trucks and wheel loaders. A light barrier in the upper funnel area provides for the automatic start of the machine as soon as a defined filling height has been reached. An industrial horn serves as start-up warning upon automatic start.

The shredded material is removed by means of an extraction system transporting the homogeneous end product into a silo. From there, the wood chips are thermally recovered.

At Weiss, the business premises and the drying chamber are supplied with heat by means of a 2.6 MW biomass heating system.

IN CONTINUOUS USE AT S.C. PLIMOB S.A.

LR1400 WOOD SHREDDER

Shredding hard wood is a hard task. This is why the large Romanian company S.C. Plimob S.A. decided in favour of a UNTHA shredder for the third time.

S.C. Plimob S.A. has specialised in the production of chairs made of solid wood and supplies major furniture stores. For the recycling of the wood waste, the company now put its trust in UNTHA's reliable shredding technology for the third time. They once again use an LR1400 shredder.

The LR1400 has been developed especially for the tough requirements of the furniture industry. The sophisticated shredder, which has been tried and tested under very demanding operating conditions, distinguishes itself through high reliability and at the same time high throughput rates. Multi-shift operation is possible without problems. In the case of Plimob, the shredder is in operation 16 hours per day. A fully automatic central lubrication system considerably reduces the maintenance efforts. Despite the very fine perforated screen diameter of 15 mm, the machine shreds about one tonne of wood waste per hour.

In addition to the tried and tested UNTHA cutting system with exchangeable blade holders and reusable blades, the LR1400 also scores thanks to its powerful double-sided drive (2x30 kW).

The homogeneous end product is perfectly suited for heat generation and the production of wood briquettes. Plimob sells them as heating material.


UNTHA

UNTHA WOOD SHREDDING TECHNOLOGY AT THE LARGEST CZECH PALLET MANUFACTURER

KLAUS TIMBER IS INVESTING IN THE POWERFUL LR1400

Klaus Timber employs around 280 people spread across a total of three locations. Its largest company premises, covering approximately 7.3 hectares, are located in Dvorec, where around 65,000 cubic meters of sawn pallet timber are processed every year. After expanding its production facilities for the manufacture of single-use pallets, boxes and lids, the company was looking for a powerful shredder to recycle its residual solid wood. It required a machine capable of being operated over two shifts and reducing residual wood to a size smaller than 30 mm. As the shredder would be constantly loaded with residual wood, a throughput of 2,000 kg/h was required.

The managers at Klaus Timber finally decided on the powerful LR1400 with a rated capacity of 2 x 22 kW. For this specific application, the shredder was equipped with a second row of cutting blades to achieve the required throughput of 2,000 kg/h. Materials are fed into the shredder on two conveyor belts. To ensure the shredder can also be loaded via the wheel loader, it was equipped with a corresponding, wide hopper. The company opted for the variant with the 45° machine frame to increase the filling volume of the shredder. Once shredded, the wood chips are transported via a trough chain conveyor to a bunker, where they are used for generating heat and operating a kiln.

Many years of successful collaboration with UNTHA Klaus Timber a.s. is a long-standing customer of UNTHA and already operates two shredders (LR630-15 KW with over 19,000 operating hours and an LR1000-30 KW) at various locations, which were implemented by the Czech sales partner AC Word. Thanks to the high reliability and longevity of the existing machines, the company decided to invest in the powerful LR1400 when expanding its production facilities. “We are extremely satisfied with our three existing shredders from UNTHA. They have exceeded all expectations in terms of reliability, performance and longevity and are still running as smoothly as the day they were purchased. The collaboration with UNTHA and our partner AC Word was a huge success too – from the planning right through to the acceptance of the machines,” explains Marcel Klaus, Managing Director of Klaus Timber a.s.

BRITISH MECHANICAL ENGINEERING FIRM USES

WASTE WOOD FOR HEAT GENERATION

XYZ Machine Tools is one of the largest British manufacturers of CNC-controlled ma-chines for metal processing. The company's headquarters including its production facilities are located in the South of England. All purchased parts for the production of the milling and turning centres are supplied on pallets or in wooden crates. The accumulated transport material took up a lot of storage area on the premises and impaired the operation. The residual timber was thus regularly disposed of on a landfill site, which also entailed high costs for the company.

To counteract the continuously increasing costs from disposal of the wood, the com-pany decided to use all wood waste for heat generation for heating the company's facilities. For this purpose, the company invested in a heating plant and an LR1400 shredder. The company received government funding for the entire project.

The residual timber is fed into the funnel of the machine with 30 kW drive power by means of a lift truck and shredded to a transportable granulate size of 30 mm. Afterwards, the wood chips are transported via the discharge screw conveyor and an inclined belt conveyor into the chip bunker. The additional funnel attachment increas-es the filling volume of the machine so that more material can be fed in at a time. A "cold package" ensures that the machine remains operational on each and every single working day, even at temperatures below zero.

The purchase decision of XYZ Machine Tools in favour of an LR1400 shredder was on the one hand taken due to the possibility of a live presentation and on the other hand due to the fact that included metal parts such as nails or screws can also be processed by the cutting system without any problems. The purchase costs for the entire system, boiler and LR1400 wood shredder will pay off for the company within less than two years.

seit 1926
Messe- und Ladenbau FRUHEN
Intelligent. Individuell. International.

FRUHEN MESSEBAU GAINS VALUABLE WOOD CHIPS
WITH UNTHA SHREDDERS

Fruhen Messebau GmbH & Co. KG from Viersen in Germany was founded in 1926 as a joinery. Since the beginning of the sixties, Fruhen has been active in domestic and international fair construction. A team of about 50 permanent specialists and another 40 freelancers works on trade fair and shop fitting projects up to extensive system roofing projects for a variety of organisers.

Within the course of exchanging the existing oil heating from the 60s, the company decided to change over to a wood chip heating system due to the increasing prices of heating oil. This on the one hand saves the costs for the disposal of the chip and MDF boards produced in fair construction and, on the other hand, the costs for about 50,000 litres of heating oil per year.

The suitable solution for shredding the produced chipboard residues was found to be a UNTHA shredder. An LR1400 with 30 kW drive power and a filling opening of 1400 mm x 1050 mm now ensures reliable shredding of the produced material.

The machine is fed by means of a lift truck which dumps the material into the steel funnel constructed on site. The shredded material is removed by means of an extraction system with cyclone separator into a 350 m^3 silo. The machine output is approx. 600 - 700 m^3 of wood chips per year. These chips are used to supply the entire production premises with heat.

„The energy-efficient UNTHA shredder is an important component on our way to a climate-neutral production of our trade fair stands“,
says Mr. Braun, authorised signatory of Fruhen Messebau GmbH & Co. KG.


SPEEDMASTER
WEIL ZEIT LEBEN IST
UNTHA

CUSTOMISED SHREDDING SOLUTION FOR AUSTRIAN MANUFACTURER OF FURNITURE COMPONENTS

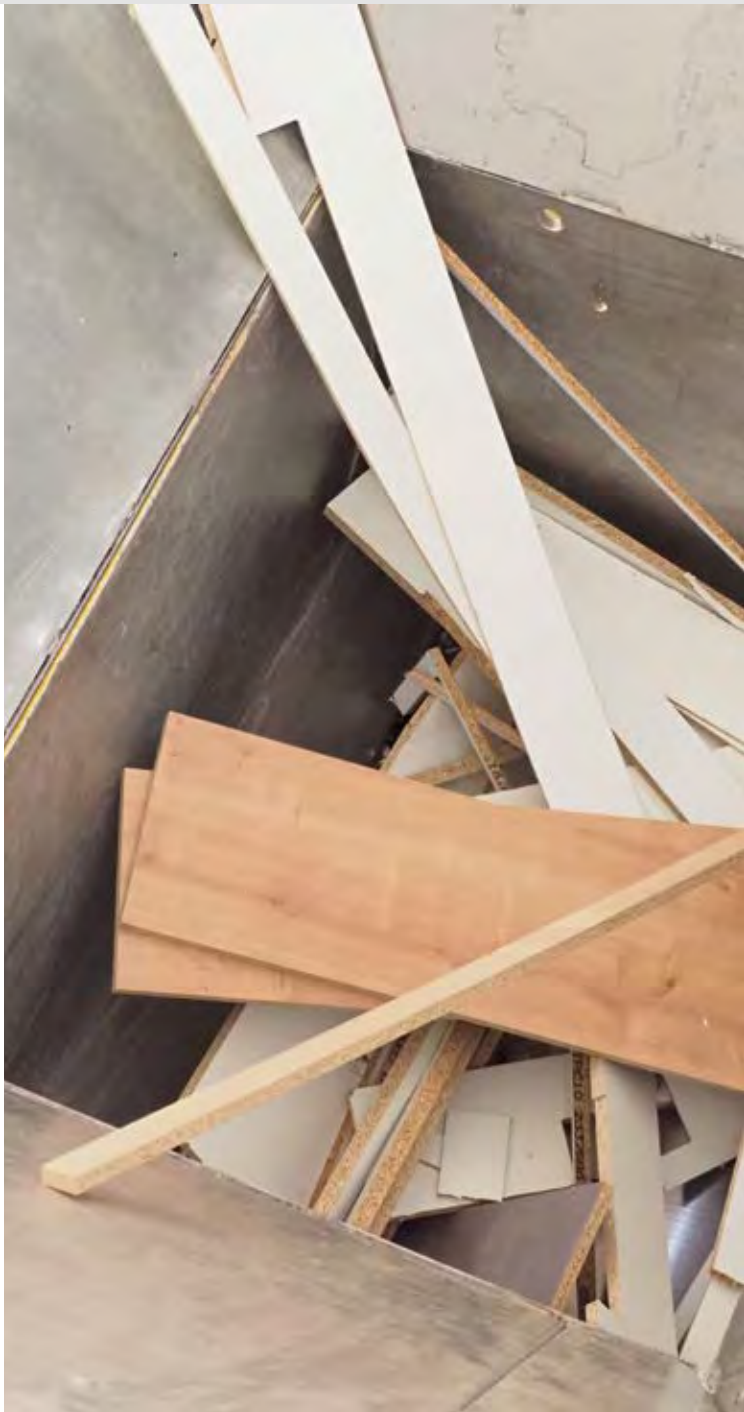
SPEEDMASTER OPTS FOR UNTHA WOOD SHREDDER LR1400

For expanding manufacturer SPEEDMASTER, based in Eberstalzell in Upper Austria, first-class technical solutions and an intelligent machine pool are fundamentals for providing customised solutions in record time. When it comes to shredding chipboard panels, the LR1400 wood shredder by globally active company UNTHA, headquartered in Kuchl/Salzburg, lives up to all these requirements.

Outstanding efficiency and constant availability, both important factors in ensuring seamless workflows, were the most important requirements for SPEEDMASTER when the company decided to invest in a new shredder for their plant in Eberstalzell in 2017. All the machinery used by the company must be ultra-efficient in order to live up to the demanding standards in place at SPEEDMASTER, and the expectations for shredding chipboard panels and residual wood are equally high. With the UNTHA LR1400, an innovative and reliable solution was found.

Exchanging the cutters of the UNTHA LR1400 is quick and straightforward. The cutter holders are also easy to replace in case of damage caused by foreign matter and may be exchanged swiftly by the customer. The innovative cutter geometry and fasteners of the LR1400 are a big plus for optimised shredding and allow the efficient processing of wet wood, to name just one advantage. The positive fit of the cutters prevents the threads from becoming deformed. Two hydraulic cylinders of the LR1400 ensure that the pusher is pulled in simultaneously on both sides, eliminating the risk of the pusher becoming jammed. This sort of hydraulic ram construction eliminates the need for pusher guides and therefore also for wear parts. The tried-and-tested cutting chamber of the LR1400 guarantees a homogeneous granulate and attractive throughput values. Furthermore, UNTHA offers an extended warranty of three years for the LR1400 shredding solution.

Every UNTHA solution is customised to fit individual requirements. This also applies to the solution that was chosen for SPEEDMASTER, where the loading process is somewhat unusual: The material is taken to a large hopper using an oversize forklift-mounted tipping trough. The machine is loaded on a fully automated basis and care must be taken to avoid bridging. The standard LR1400 comes with a mounted discharge screw conveyor that transports the material from the chopping unit to the interface with the suction system. This reduces the rated capacity required by the suction unit, making it more energy efficient. As an additional feature, a computer-controlled central lubrication system for the entire unit was installed, eliminating the need for manual lubrication after every 150 operating hours. The start and stop processes are also fully automated. Filling levels are measured by a light barrier: Once the defined minimum level is reached, the machine starts to operate. When the suction unit is empty, operation will cease. The LR1400 also comes with an integrated controller to avoid current peaks.



GREATER SELECTION OF REALISED PROJECTS

AREA OF USE
Wood waste from the window production

SOLUTION
LR1000

ACCESSORIES
Special funnel

LOCATION
Italy

LR1000

AREA OF USE
Carpentry waste

SOLUTION
LR700

ACCESSORIES
Screw conveyor

LOCATION
Germany

LR700

AREA OF USE
Joinery waste

SOLUTION
LR520

LOCATION
Denmark

LR520

AREA OF USE
Carpentry waste

SOLUTION
LR630

LOCATION
Germany

LR630

AREA OF USE
Joinery waste

SOLUTION
LR520

LOCATION
Austria

LR520

AREA OF USE
Joinery waste

SOLUTION
LR630

ACCESSORIES
Magnetic separator

LOCATION
Germany

LR630

AREA OF USE
Joinery waste

SOLUTION
LR700

LOCATION
Germany

LR700

AREA OF USE
Wood from pallet production

SOLUTION
LR1000

ACCESSORIES
Base frame, special funnel

LOCATION
Austria

LR1000

AREA OF USE
Carpentry waste

SOLUTION
LR700

LOCATION
Italy

LR700

AREA OF USE
Carpentry waste

SOLUTION
LR630

LOCATION
Germany

LR630

AREA OF USE
Joinery waste

SOLUTION
LR630

ACCESSORIES
Spiral screw conveyor

LOCATION
Austria

LR630

AREA OF USE
Sawmill waste

SOLUTION
RS30

ACCESSORIES
Screw conveyor

LOCATION
Austria

RS30

AREA OF USE
Wood waste from the window production

SOLUTION
LR1000

ACCESSORIES
Special funnel

LOCATION
Germany

LR1000

AREA OF USE
Carpentry waste

SOLUTION
LR1400

ACCESSORIES
Special funnel

LOCATION
Italien

LR1400

AREA OF USE
Wood waste

SOLUTION
LR1400

ACCESSORIES
Special funnel,
conveyor belt

LOCATION
Croatia

LR1400

AREA OF USE
Wood from
pallet production

SOLUTION
LR1400

ACCESSORIES
Special funnel,
screw conveyor

LOCATION
Germany

LR1400

AREA OF USE
Joinery waste

SOLUTION
RS30

ACCESSORIES
Extraction hood

LOCATION
Austria

RS30

AREA OF USE
Chipboards, pallets

SOLUTION
LR1400

ACCESSORIES
Tilting table

LOCATION
France

LR1400

AREA OF USE
Sawmill waste

SOLUTION
LR1400

ACCESSORIES
Special funnel,
screw conveyor

LOCATION
Austria

LR1400

UNTHA shredding technology GmbH
Kellau 141
5431 Kuchl | Österreich
Tel.: +43 6244 7016 0
Fax: +43 6244 7016 1
info@untha.com
www.untha.com

Authorised UNTHA sales partner

5 reasons to choose UNTHA

Customised, long-lasting shredding solutions

Premium quality products and services

All-encompassing expertise, from development to production, under one roof

Reliable customer service with the best technical know-how

More than 10,000 satisfied reference customers worldwide

We deliver what we promise

Since our founding in 1970, we've followed our promise of being "the reliable brand", which applies to every product and service that UNTHA delivers.

We work hard to consistently outperform our competitors, and provide customers with the confidence that – in choosing UNTHA – they have made the best decision for their business.