

**UNTHA**

shredding technology

# Inside

Special edition IFAT 2008

The magazine for our customers



- Introducing the new TR 2500 after-shredder
- The TR 2500 at the IFAT- Innovations in technology and design
- Economic refuse derived fuels: Energy from waste



Dear Sir or Madam,

don't worry; the Trojan horse on the front page in a modern aluminium waste look is not our new and innovative after-shredder. However, this motif was chosen to shroud the latest UNTHA machine on our expo stand at the 2008 IFAT in Munich. On the opening day, Monday the 5<sup>th</sup> May 2008 at 3pm, the aluminium horse will reveal the stately new product within. Whereas a wily Odysseus aimed to conquer the city, with the TR 2500 we intend to conquer the hearts and minds of city inhabitants as we help them and their regions to free themselves of waste (Naples would be currently an excellent case in point). Presentation of this new after-shredder and its fields of use are central to our stand concept at the 2008 show.

In this edition of UNTHA Inside special we introduce the TR 2500, its performance potential and all the beneficial features it provides. There's lots to find out about the numerous innovations integrated during the development phase of this machine. Of course, we'd be delighted to convince you of the excellent concept behind, and countless benefits of, this machine at first hand at the expo stand in Munich.

I would particularly like to mention that we will be sharing our IFAT stand with URT with whom we have been working together for decades. This year URT will be focusing on E-waste themed "We provide weee".

I hope we see you in Munich and in the meantime I wish you lots of success.

With our very best regards from Kuchl,

*Bernhard Walter*

Bernhard Walter  
Head of Sales & Marketing

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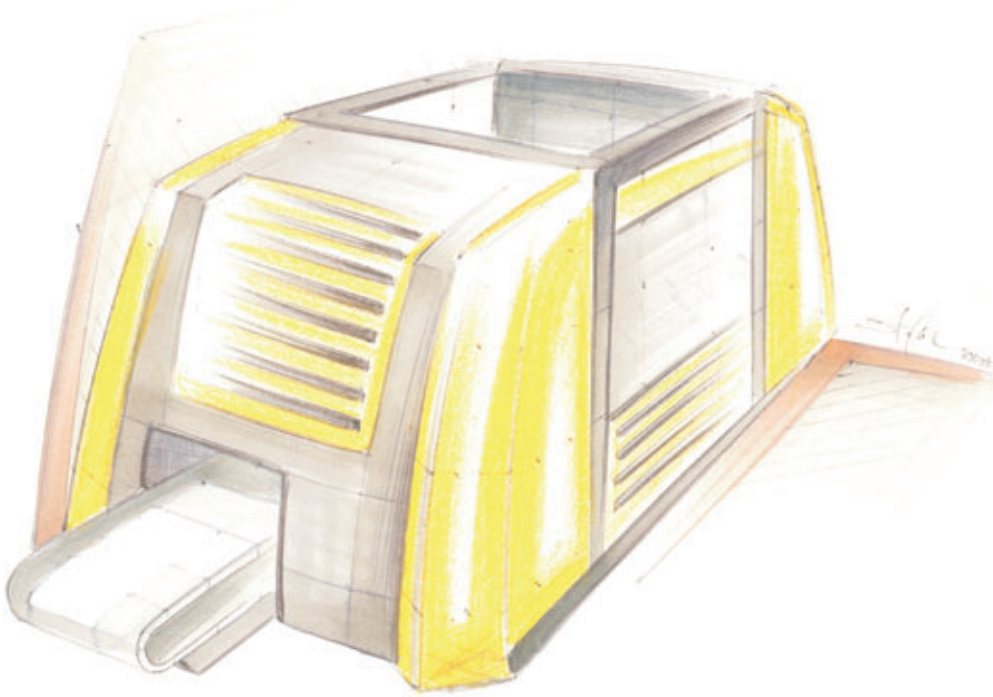
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# The New UNTHA TR 2500 Secondary-Shredder



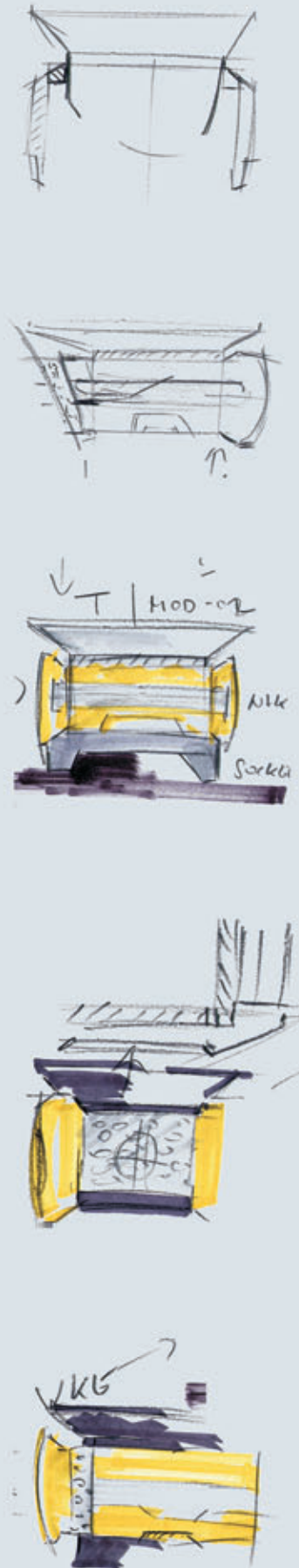
UNTHA has invested a great deal of time and money in the development and construction of the new TR 2500 secondary-shredder.

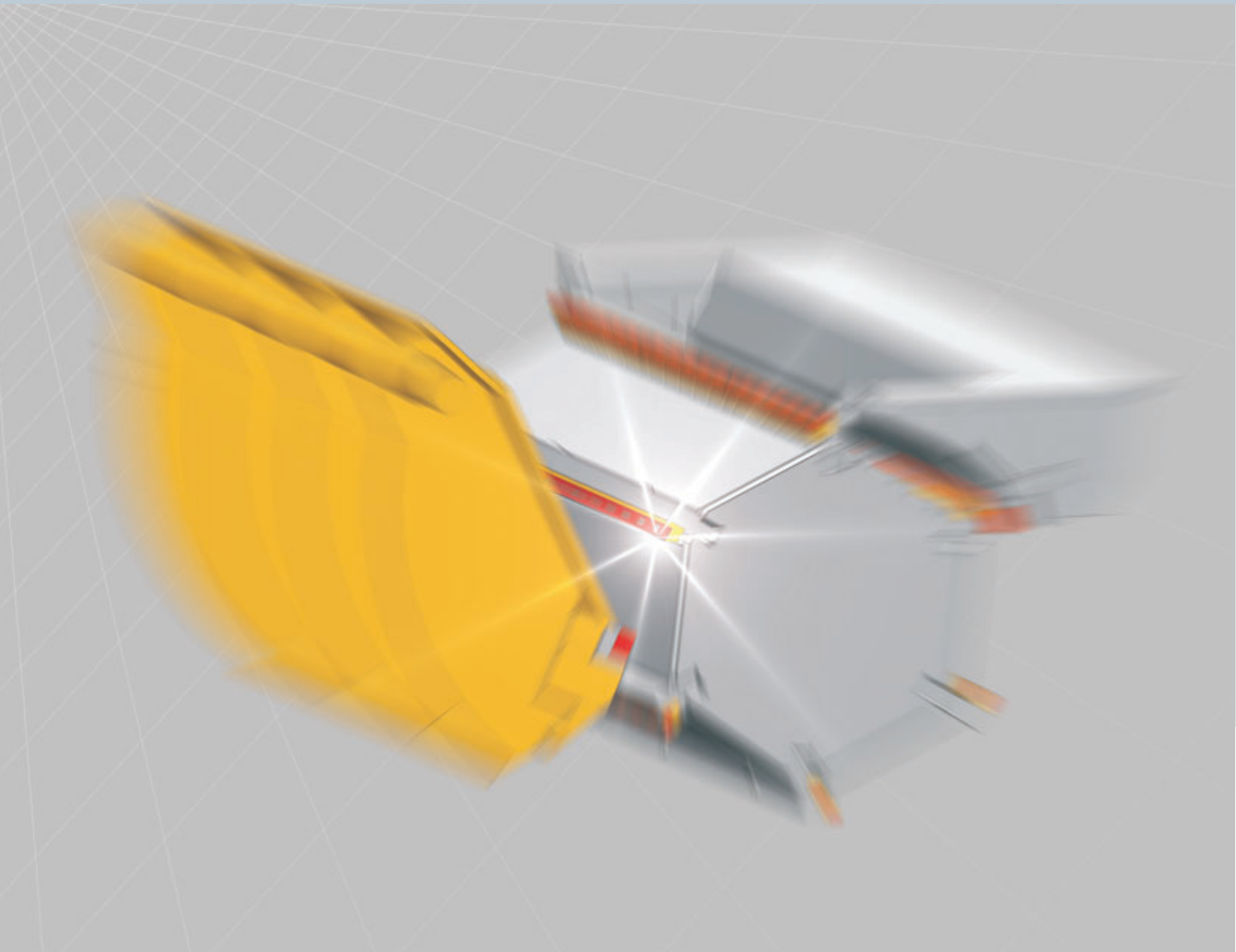
External experts were brought in to cooperate with our own specialists; as can be seen by the machine's practical yet eye-catching design. Moreover, numerous rounds of talks were held to discuss experiences and improvements with individuals working with the machine on a daily basis; people such operators, repair staff and maintenance technicians. This is one of the reasons why the TR 2500 boasts so many benefits and innovations such as patented solutions like the quick-change blade system, a perfect foreign

body damage aversion system and a modern, energy-saving drive system (see pages 4 & 5).

The TR 2500 was specially developed for refuse derived fuel applications. The increased rotor diameter of 1100 mm makes it easy to achieve throughput results of up to 15 tonnes/h. The above-mentioned innovations include numerous technical improvements making the TR 2500 extremely easy to service and maintain.

The machine's attractive design is further evidence that UNTHA has contributed something very new to the shredding industry, both in terms of aesthetics and technology.





## Patented Quick-Change Blade System

This newly developed and patented cutting system shows that UNTHA is breaking new ground in the field of shredding technology. Service technicians no longer need to spend hours of downtime changing cutters in awkward locations, under pressure of time, and in unpleasant conditions such as extreme heat, cold, and noise, or polluted and

pungent smelling air.

The TR 2500 quick-change blade system constitutes a highly innovative solution providing benefits for everyone concerned. Depending on the type of machine in question the rotor cutters are mounted to a holding system and screw-fixed at just 9 to 18 points.

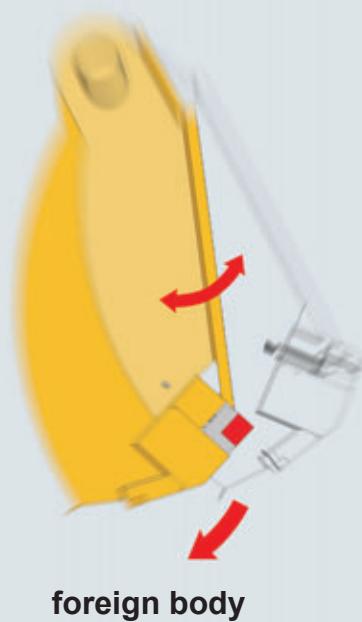
The removal of the entire cutting

system is now a question of 60 minutes. The cutters can then be replaced in normal workshop conditions.

## Perfect Foreign Body Damage Protection

The secondary-shredders currently available on the market all operate with fixed, inflexible stator bars. The introduction of unshreddable materials often causes immense damage to the cutter holders and the entire shredding tool set-up.

The UNTHA TR series features a pioneering hydraulically pretensioned stator bar. Furthermore, the TR secondary-shredder works using a rotor rev count of just 180 rpm. Optimal transformer drive conditions enable rev counts to be



selected freely between 0 - 180 rpm. The combination of low rotor revs and adjustable hydraulic pretensioned stator bar pressure provide a comprehensive system of protective measures to avoid damage caused by unshreddables. These materials are simply ejected via the self-opening hydraulic foreign body door.

## TR 2500 – Low energy consumption due to energy-saving drive system

### Lower Energy Costs



The issue of economic efficiency beyond the cost of investment also includes the running costs incurred by a shredder, a significant proportion of which can be accounted for by electricity consumption.

Standard electric engines used to date using friction-locked belt systems consume immense amounts of power due to the relatively low efficiency of such systems.

A power-efficient drive system was developed for the TR series able to achieve considerable savings in terms of consumption.

UNTHA's energy saving drive

system includes a high pin count, air-cooled asynchronous machine whose entire drive output is transmitted via long-life gear belts. If required the motor can be run via a frequency converter.

This drive technology can save up to around € 10,000,- based on current energy prices.

The cost-saving potential and extended working life of the TR 2500 are two highly convincing arguments for any potential customer.

## Refuse derived fuels - from waste to valuable fuels

Nowadays, there's almost no type of waste that can't be suitably processed and transformed into some form of fuel.

Technical processes have become very refined and legal requirements, in Europe at least, have become increasingly binding and sources fossil fuels rarer and more expensive; – so there are plenty of reasons to think about the issue of refuse derived fuels.

This also explains why the energy giant E.ON founded a subsidiary on the 31<sup>st</sup> of March this year by the name of E.ON Energy from Waste. The company's declared goal is to become Europe's number one in waste incineration by 2015.

UNTHA has successfully cooperated with a number of big-name

waste disposal and utilisation businesses for several years. The TR 2500 after-shredder offers this target group a technically refined and highly economic solution, perfectly tailored to refuse derived fuel applications.

Regardless of the heating method used; mono or co-combustion, UNTHA's secondary-shredder can be adapted to every kind of specification.

In this way waste becomes a valuable source of energy and contributes towards a world with less waste.



## One of the largest waste disposal operations in Austria and the neighbouring countries to the east and has decided to purchase an UNTHA shredder

.A.S.A. in Wiener Neustadt runs a plastics processing plant producing high calorific content refuse derived fuels for the cement industry and fluidised bed firing.

Until recently the materials delivered to the plant were shredded with a single shaft solution provided by an Austrian manufacturer. The reason for replacing the old, disused shredder was the big problems it had faced in dealing with the broad variety of foreign bodies and unshreddables in the materials being processed.

Johann Handler, Head of Operations in Wiener Neustadt, is an expert in the field of preparing and processing alternative fuels and has

now been with .A.S.A. for 16 years. Before deciding on a machine he looks very closely at the solutions on offer.

In this instance Mr Handler's research was no less intense as he made a thorough scan of the present shredder market. Ultimately, he decided on inviting three well-established Austrian shredder manufacturers to demonstrate their machines over the entire duration of wear part life in the cutting system. During this period the products of the various manufacturers were tested for operative benefits and disadvantages within the existing .A.S.A. system.

The material to be processed con-

sists of bales of industrial waste with lots of foreign bodies and unshreddables and, on the other hand, extremely tough industrial fibrillated tapes from manufacturing operations. The customer requires a single machine that can process both these materials without stoppages, damage and disturbances, and which can guarantee a throughput volume of 10t/h.

Furthermore, the machine has to be driven without a frequency converter as the owner has had negative experiences with the system currently in operation. In fact several frequency converters have already had to be replaced due to damage.

Subsequent to the shredder there is an optical chlorine sorting system which was an immense challenge for the output capacity of the shredder. Materials are expected to be of an even size at <80mm and to contain an absolute minimum of fine parts in order to achieve the best possible chlorine removal results.

The UNTHA XR2000S was the only shredder able to deal with such a complex variety of tasks and requirements. The 2x132kW shredder without a frequency converter and including the patented screen bar system was found to be best suited to adaption for use with the optical sorting system.

*Picture on the left: Christian Lanner at the delivery of the shredder to Johann Handler (.A.S.A.)*





## Side event programme for the TR 2500 at the UNTHA expo stand

On the opening day of the IFAT in Munich, on the 5<sup>th</sup> May 2008, the adjacent flyer will be distributed around the expo complex in English and German by six charming Amazonians, who will be positioned around the aluminium horse from 2.30 pm onwards,

which at this point in time will still be covering the TR 2500. At exactly 3pm the new UNTHA secondary-shredder will finally be unveiled to the public.



ENVIRONMENTAL SOLUTIONS

AIR  
FIRE  
WATER  
EARTH

IFAT 2008

WASTE EXPO

### Schedule of trade fairs 2008

**Waste Expo**  
Chicago / USA  
05.05. - 07.05.2008

**Enviro 08**  
Sydney / Australia  
05.05. - 07.05.2008

**IFAT**  
München / Germany  
05.05. - 09.05.2008

**Xylexpo**  
Mailand / Italy  
27.05. - 31.05.2008

**Elmia Waste & Recycling**  
Jönköping / Sweden  
27.05. - 29.05.2008

**Tem Tecma**  
Madrid / Spain  
10.06. - 13.06.2008

**CIWM 2008**  
Paignton / UK  
10.06. - 12.06.2008

**Expo AMPIMM 2008**  
Mexico City / Mexico  
11.06. - 14.06.2008



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