

³⁰Years - Volker Haas looks back

It seems like it was yesterday, in a small garage in Stockum-Püschchen ...

I was born in Stockum-Püschchen 1960. This is where I grew up and where the foundation for my commercial independence was laid. The first project plans and order placements were made 1989 right here in Stockum.

Today HAAS is represented worldwide! The number of employees has always grown up to over 80 today. Sascha Kloft supports me since 2015 as second managing director and will steer the future fortunes of HAAS. Of course, we have changed a few things at HAAS in the meantime for example more and more extensions of office buildings, new production halls and warehouses.

The product range was constantly extended, from exclusively stationary plant components for sawmills, to today's wide range of stationary and mobile components. A special thanks to all of our customers with whom we are in constant contact. Because of their suggestions and experience we are able to develop our machines further again and again.

Especially in the field of mobile technology a lot has changed in our company – for example there is our double shaft slow speed shredder "TYRON" or since 2018 the hammermill "ARTHOS".

In the past, our HAAS machines were used exclusively for shredding waste wood. Today the TYRON is a popular all-rounder, which is also used for processing waste and substitute fuels, PVC and plastics or roots and green waste.

Do you already know our two vikings TYRON and ARTHOS? They have become our trademarks in the meantime. For us these two are much more than pretty names and faces - for us, the strength, robustness and fighting spirit of the Vikings are reflected in our product quality!



Headquarter 1992



Headquarter 2018

Looking back, I can proudly say that we have done a great job. Stones that seemed to get in the way at first sight, have partly shown us a new way or guided us to new ideas. Some of the original HAAS plants are still in operation after almost 30 years and still doing their job reliably – isn't that great?

I'm glad to look back on 30 good business years together with you and I am curious to see how HAAS will develop in the next years!

Thank you very much

Yours Volker Haas

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NOREMAT - Sales partner from France continuing on the road to success

NOREMAT – a family-run company is the contact partner for solutions for roadside maintenance, landscape management as well as the recycling of green waste since 1981 in France.

NOREMAT relies on their own colours. So we design our TYRON in a special NOREMAT colour. In 2018 the first TYRON for NOREMAT has been delivered; today there are already three HAAS TYRON in operation for NOREMAT, including a TYRON model built by NOREMAT.

The sales and service team of NOREMAT was trained on the TYRON to be prepared for future sales and service tasks.

NOREMAT is pursuing the mission to actively support the goals of the customers by offering innovative machinery and the corresponding services. This can already be deduced from the company name:

„NO UVELLE RE NTABILITÉ DU MAT ERIEL“
(NEW PROFITABLE MACHINERY)

The TYRON model from NOREMAT has been presented for the first time at the trade fair POLLUTEC 2018.



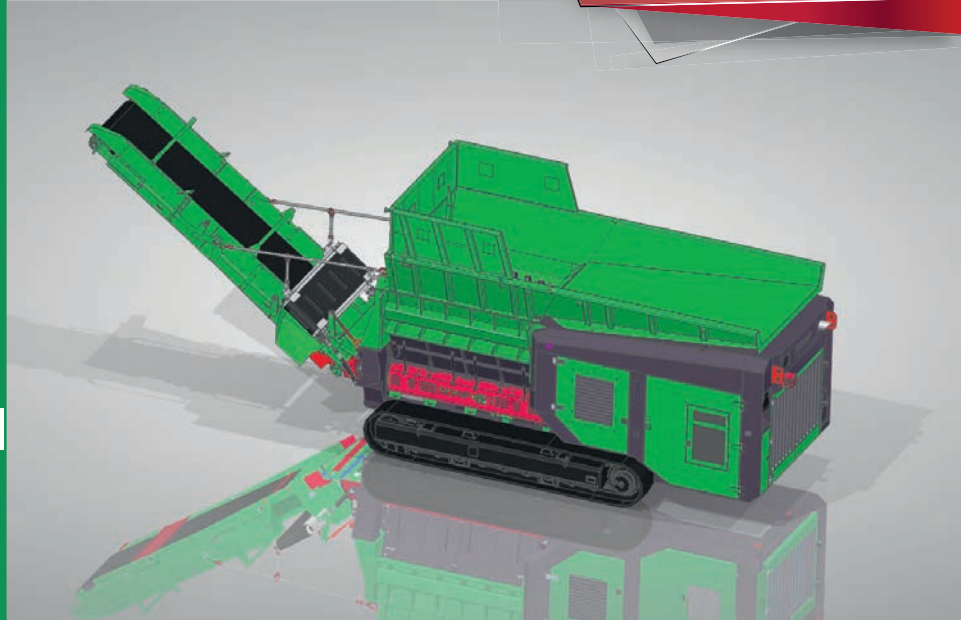
2.0 version - also available for our TYRON 2500!!!

HAAS INNOVATION
- THE FUTURE IS NOW

- optimized shredding box ✓
- aggressive tool setting ✓
- even more effective hydraulics ✓

The advantages of the 2.0 version are now also available for our largest TYRON, the TYRON 2500!

Call us right now and find out more **+49 2661 9865-0**



Upgrade: TYRON 2500-E 2.0 replaces the old “classic” model

The CHP plant BHKW Flohr offers, with FLOHR AG as its shareholder, sustainable concepts for the utilization of biomass. Long term experience as well as the newest technology in the treatment of waste wood and biomass and its utilization are creating customized energy solutions. Every year BHKW Flohr generates 102.000 tons of steam (sufficient for approx 4.500 single-family houses) and 47.000 megawatt hours of electricity (coverage for 11.750 single-family houses), from end of life timber produced in industry and households. Flohr also operates a CHP plant at Siegerland airport. The total recycling capacity of Flohr is approx. 200.000 tons of waste wood per year.



**Versorgen
durch
Entsorgen**

After 6 years of reliable operation, the stationary TYRON 2500-E is replaced by the new, revised version TYRON 2500-E 2.0. Six years of practical experience found their way into the design of the new machine. Nearly all customer requirements were implemented by HAAS and the shredder has been adapted accordingly. A customized infeed hopper, easier access for regular service and maintenance as well as many small ideas and suggestions from the operating staff can be found in the new HAAS TYRON 2500-E 2.0. The new „employee“ was received enthusiastically and is doing his job reliably since mid of August.



For wood waste all grades A1 - A4
Throughput capacity up to 80 t/h
For desired end product
approx. 0-300 mm



TYRON 2500-E 2.0 for BMK Lünen!

Biomassekraftwerk Lünen GmbH is a joint venture of STEAG New Energies and Remondis.

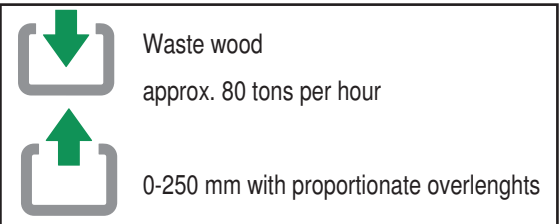
At the Lünen site, a biomass power plant produces 150 million kilowatt hours of electricity per year, that is fed into the public grid (supplying 39,000 single-family households). The power plant is processing 135,000 tons of waste wood per year.

In order for the waste wood to be burned in the power plant, it has to be processed first. This takes place in the waste wood processing plant.

In July 2019, the two previously used red pre-shredders were replaced by one stationary HAAS TYRON 2500-E 2.0.

In future, the TYRON is shredding the waste wood to an end product size of approx. 0 - 250 mm. The throughput is approx. 80 t/h. The TYRON feeds directly to the power plant. The supply of the power plant with fuel is guaranteed day and night.

A separate powerpack completes the shredder, it is dirt protected and freely accessible.

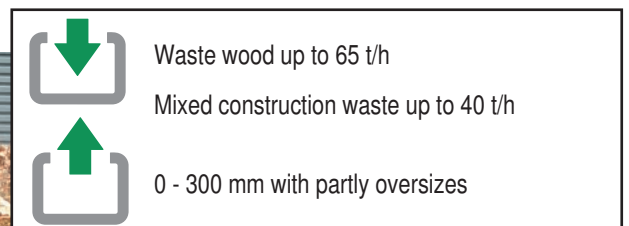


Putman Recycling B.V. - TYRON 2000 XL 2.0

We welcome our new customer Putmann Recycling B.V. from Westervoort in the Netherlands. The Putman Groep is specialized in the following tasks:

Production and sale of primary and secondary building materials, recycling and collection of construction and demolition waste, demolition work and infrastructure projects.

The TYRON 2000 XL 2.0 is shredding waste wood of all grades A1-A4 (up to 65 t/h) and mixed construction waste (up to 40 t/h).



40 Years Shred-Tech® – Congratulations from HAAS!

Shred-Tech® Corporation is a world leader in the design and manufacturing of shredding and recycling systems. Headquartered in Cambridge, ON, Canada, Shred-Tech has manufacturing and sales facilities located throughout the world. For its achievements the company has been awarded with one of Canada's most prestigious awards for Business Excellence.

The company's journey began in the late 70s with the production of stationary twin-shaft shredders. By the middle of the next decade, Shred-Tech had developed one of the world's first mobile shredding trucks to shred office paper and confidential documents on-site.

Over 40 years, Shred-Tech has installed more than 6,000 shredding and recycling systems worldwide and is known globally for their high quality products and commitment to engineering and innovation. With shredders in daily use in over 31 countries, Shred-Tech helps their customers reduce costs, generate revenue and protect the environment.

Since 2016 Shred-Tech has been the exclusive distributor of HAAS primary shredders and recycling systems in Canada and the USA. Together we have completed 17 projects. We look forward to growing this relationship and installing many more systems in the coming years!



HAAS machines in special varnish

On request we individualize all machines or plants for our customers with special painting in customer colours. All HAAS machines and plants are painted in RAL 6024 as standard. Customizations to the CI of customers is no problem for us!

Shred-Tech for example receives all machines in a combination of a bright blue, neon yellow and grey.



Waste wood plant already in operation since 2004



The individual solution

2003 - The sales contract for a new waste wood plant for the former Van Vliet Groep (today Renewi) was signed, the largest project for HAAS that time. Over a period of several weeks, numerous planning discussions were held and the plant concept was designed by Volker Haas.



Van Vliet Groep

? The challenge:

Processing of 70-80 tons of waste wood (unsorted waste and demolition wood) per hour. Separation of ferrous and non-ferrous metals. Exact screening of individual chip sizes according to customer specifications.

End product

Wood chips for biomass plants and high-quality chips for the chipboard industry.

The recycling company Van Vliet, part of Renewi, has been active in waste processing for the Central Netherlands region for more than 100 years. 135 vehicles are on the road for waste collection and the company also processes waste into semi-finished products and green waste into compost.

! The individual solution

A HAAS waste wood processing plant including primary and secondary shredder for up to 80 t waste wood per hour. The plant contains 5 huge round silos for intermediate storage of the recycling chips until loading by truck or ship loading system. The total size of the plant is approx. 2000 m².

The HAAS planning concept was convincing. The fact that the entire system was planned and designed in-house was decisive for Van Vliet in awarding the contract.



As time goes by.:

2003 - The originally installed horizontal hammermill, type HSZ 2000, was replaced after several thousands operating hours by a new vertical fed hammermill, type ARTHOS 2000!

The vertical hammermill ARTHOS is particularly characterized by the ballistic chute for impurities, which has significantly reduced the wear and maintenance costs. Another development of the hammermill is the easy screen change system, which now makes it possible to carry out the screen change in the machine within a very short time in order to be able to produce grain sizes according to customer specifications using other screen baskets.



And today?

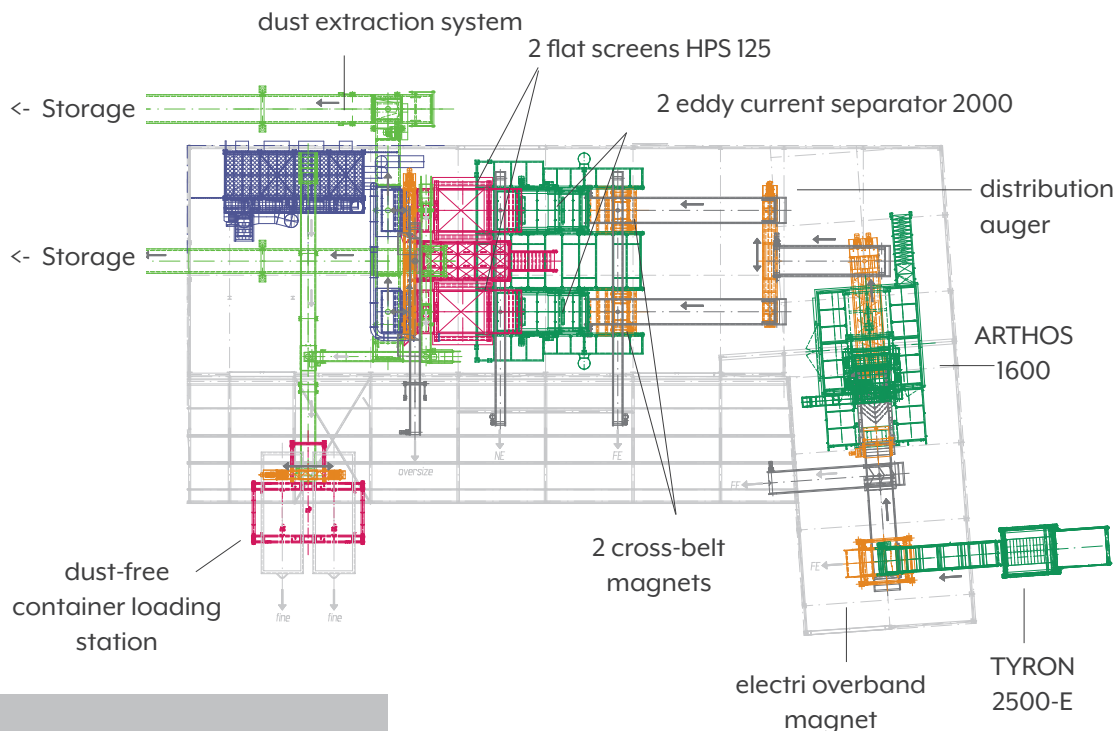
2019 – „The system is still running reliably. We are very satisfied that we have chosen HAAS. We are convinced of the good consultancy and the entire management and service team of HAAS, supporting us at any time, solving any problems and assisting us in any possible way. Maintenance intervals and regular service visits are planned well in advance and the spare and wear parts are manufactured in the time and stored at HAAS or at our warehouse. There are no downtimes for longer periods of time and the entire plant still has a very high availability till this day. We have maintained a good partnership with HAAS right from the start, which means that communication has never been a problem and mutual trust has built up. I would again implement a new plant project with Volker Haas and his team today“.

Renewi, Herr Johan Peter Post



Impurities

Plant layout



„In 2018, more than 170,000 tons per year were processed!“



1 TYRON 2500-E - Double Shaft Shredder

Shreds the mix of waste wood to an edge length of approx. < 300 mm.

2 Electro Magnet

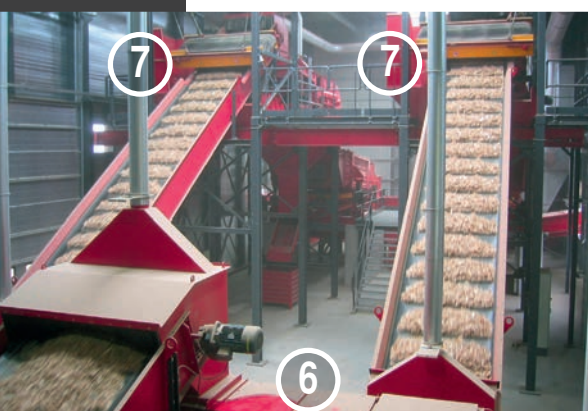
Placed above the outfeed belt of the shredder, it separates the released ferrous material.

3 ARTHOS Hammermill

The pre-shredded waste wood is post-shredded into wood chips < 80 mm.

4 The large dimensioned **Double Screw Conveyor (HDFS)** receives the chips underneath the hammermill and feeds the material to the following belt conveyor with integrated scale.

5 The **Belt Conveyor with integrated weighing system** enables the continuous checking of the throughput capacity.



6 Distribution Screw Conveyor

Splits the material flow onto the following ferrous and non-ferrous separators and the flat screens HPS 125.

7 2 Ferrous-/ non-ferrous separators

Separates the ferrous and non-ferrous parts.

8 2 Flat Screens (HPS)

Separates the material, cleaned from ferrous and non-ferrous parts into 3 fractions

9

1. Fine fraction < 5 mm - a **Chain Conveyor** transfers the fine fraction to the two dustfree, patented **Container-filling Stations**.

Fine dusts, extracted from the complete installation, as well as the screened fine fraction are stored here. The containers can be switched during the running operations without any downtime.

10

2. Middle fraction (accepted material) 5 - 80 mm – **Heavy Chain Conveyors** transport the good material into 5 large **Circular Silos** for the intermediate storage of the end product.

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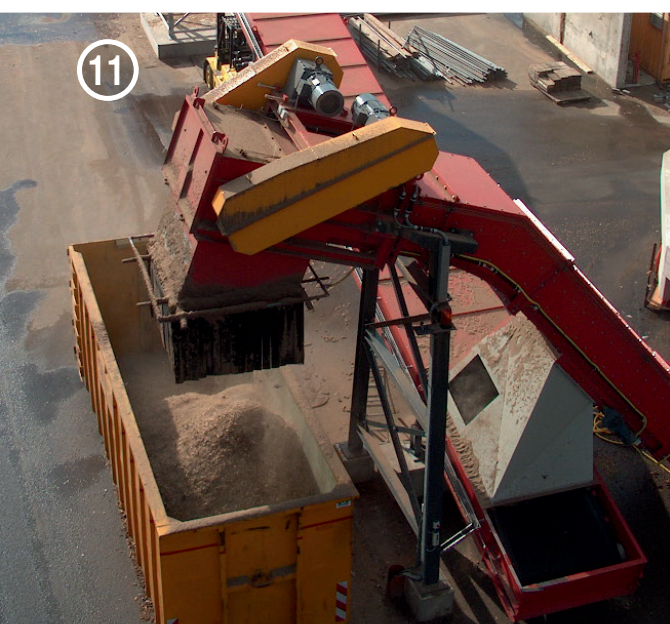
Discharge Screw Conveyors transport the material to the automatic **Lorry** - or **Ship loading station** (capacity up to 600 m³/h).

3. Oversizes > 80 mm are transported to a **bunker**, from which a wheel loader picks them up to return them to the recycling process.



Filter System / Dustextraction

The production line is kept nearly dustfree by a dust extraction unit with an exhaust capacity of nearly 40.000 m³/h.



**CRJ**

CELEBRATING
20
 YEARS
 1999 - 2019

A success story - 20 years of CRJ Services

CRJ is the leading provider and lessor of mobile recycling machinery in the UK and Ireland. The company's history began in 1999 with the processing of green waste. CRJ still processes this waste today. The cornerstone for today's main activity was laid when CRJ started hiring out its existing recycling machines. The beginning of a unique success story. Today the machine park consists of more than 85 mobile machines.

CRJ Services and HAAS have been working hand in hand since 2013! CRJ is HAAS' largest customer and currently operates 15 HAAS TYRON pre-shredders for machine rental.

In 2017 CRJ Services and Matpro Machinery - the HAAS representative in the UK and Ireland - started a strategic partnership. Under the umbrella of CRJ Holding, Matpro Machinery Ltd. continued the sales of the HAAS product range in the UK and Ireland, while CRJ continued to expand the rental business.

CRJ rental machinery

- Pre- and secondary shredders,
- Drum and disc screens,
- Air sifter
- All metal separator
- Conveying technology and sorting cabins



The Team

In April 2019 both companies merged into one company. Matpro Machinery Ltd. became „CRJ Sales“ - the sales arm of CRJ. As a result of the merger, CRJ has optimised its internal processes. The CRJ divisions are as follows: CRJ Sales, CRJ Hire, CRJ Parts and CRJ Service Support. Among other things, CRJ now has a team of 6 salesmen and 16 experienced engineers (4 of them mobile) for the maintenance of the rental fleet and customer machines. Regular HAAS trainings ensure the high qualification of the CRJ engineers so that a fast and smooth service and support is guaranteed.

Our business relationship

„I'm proud to work with CRJ Services! More than 50 satisfied customers have now been supplied with mobile and stationary machines from Dreisbach. The combination of machine rental and sales creates a unique foundation of trust for potential customers! CRJ is able to point out that it operates 15 machines itself. The service and support with 16 service technicians, 4 of them on the road is excellent. I hope to add a few chapters to this success story.

René Perne, Sales Manager der HAAS GmbH

CELEBRATING
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A customized HAAS TYRON for Hadfield

Hadfield Wood Recyclers, part of the Enva family, is one of the oldest and largest wood recyclers in the UK. Three sites (Manchester, Middlesbrough and Tilbury) process over 300,000 tonnes of waste wood annually. This wood is used to produce more than 20 sustainable products, including pet, horse and cattle bedding, raw materials for the chipboard industry and fuel for large and small biomass power plants in the UK and Scandinavia.

The challenge

At the Tilbury site Hadfield processes several thousand tonnes of waste wood every week. The untreated waste wood is processed in a multi-stage process and then stored ready for shipment. Since 2014 Hadfield has been using a HAAS TYRON 2000 primary shredder to roughly pre-shred the waste wood. After an impressive 12,000 operating hours, Hadfield decided to purchase a new machine.

With two HAAS TYRONs already in use in the Hadfield Group, Hadfield contacted CRJ Services and HAAS again. The new mobile shredder had to be capable of shredding at least 40 tonnes or more per hour of unprocessed waste wood. Hadfield specified a grain size of 0-300 mm. One of the most important points in Hadfield's requirements catalogue included that the machine had to be integrated seamlessly into the downstream preparation process. To be more precise, the discharge conveyor must feed an existing stationary magnetic separator in the best possible way.

"We opted for the HAAS TYRON 2000 XL 2.0 because it delivered the best output material and the highest throughput during the demonstrations."

Steve Greenwood - Remote Sites Manager

The individual solution

After a detailed requirements analysis, CRJ Services suggested the HAAS TYRON 2000 XL 2.0 (7/7-4) as the ideal replacement. As already mentioned, the pre-shredder had to be seamlessly integrated into the existing preparation process. CRJ took all customer requirements into account and developed the appropriate solution in cooperation with HAAS: A customer-specific, hydraulically height-adjustable and extended discharge belt was manufactured. With these adaptations the Tyron could be easily integrated into the existing processing line. The ascending angle of the conveyor belt and thus the discharge parabola to the downstream stationary overbelt magnet can be individually adjusted.

Hadfield initially had several machines from different manufacturers on demonstration during the selection process. After the demonstrations a HAAS TYRON was chosen again.

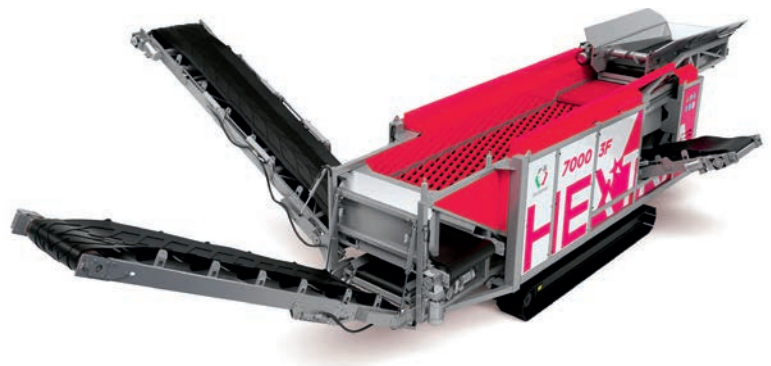


We are your ECOSTAR-sales partner for Germany

DYNAMIC DISC SCREEN with anti-wrapping system

Excellent screening solution for different materials:

C&D construction waste · bulky waste · MSW
RDF · paper/cardboard · waste wood · biomass · compost



The dynamic Disc Screen uses a series of hexagonal or octagonal disc shafts with a flat profile.

Thanks to this special construction, the material jumps on the screen and is exposed to an up and down movement. The screened material falls under the screening surface, passing through the spaces between the discs, while the material remaining on the screen is transferred to the end of the screening surface.

The result is a separated clean product, ready for subsequent recycling process.

ANTI-WRAPPING AND ANTI-BLOCKAGE-SYSTEM

The drive shaft is covered with free sleeves made of highly wear-resistant material (specially designed for each application). These are independent from the rotation of the shafts. This system avoids wrapping of long and fibrous material around the shafts as well as blockages. This leads to an easier separation and significantly reduced downtimes.

