

KOMPTECH MAGAZINE

INTERNATIONAL
2021



PRACTICE
A MILESTONE IN GHANA

SERVICE
WE'RE ALWAYS ON CALL

INNOVATION
INTELLIGENT WASTE TREATMENT



PRACTICE

A MILESTONE IN GHANA

CONTENT

6000 operating hours and still doing great – the Holz-& Stockrecycling AG plant in Switzerland. INNOVATION

34

Crambo, Topturn and Hurrikan make for efficiency at Severn Trent Green Power in the UK.

48

- 4

PRACTICE

WASTE TREATMENT ON A GRAND SCALE

AHA Hannover has relied for years on dependable machines and expert service from Komptech.
- 8

PRACTICE

HIGH-PERFORMANCE WASTE TREATMENT IN MADRID

The Terminator is an important part of one of the most advanced recycling facilities.
- 10

PRACTICE

A TERMINATOR FOR EVERY BIN

At Sieco Srl hazardous and non-hazardous waste are reliably separated.
- 12

PRACTICE

TURNING GARBAGE INTO EX-GARBAGE

Terminator and Crambo help Müllex-Umwelt-Säuberung-GmbH in Austria with a host of disposal chores.
- 16

PRACTICE

A MILESTONE IN GHANA

The country's first stationary waste processing plant has started operations in Kumasi.
- 22

PRACTICE

NEW THINKING IN INDONESIA

With this pilot project Indonesia is taking the first step to a recycling-oriented economy.
- 26

PRACTICE

INTELLIGENT WASTE TREATMENT OF THE FUTURE

Research into the integration of Industry 4.0 elements in waste treatment.
- 28

INNOVATION

ORGANIC WASTE RECLAMATION IS THE POSTER CHILD FOR THE CIRCULAR ECONOMY

A stationary Crambo and a Multistar clean up the organics at the Entsorgungswirtschaft Soest GmbH compost plant.

- 38

COMPACT WASTE WOOD PROCESSING À LA KOMPTECH

Two-stage compact system for the material and energy reclamation of waste wood.
- 40

PRACTICE

STARS AREN'T JUST IN THE SKY

A. W. Jenkinson Forest Products, the UK's leading specialist for forestry products, looks to Komptech.
- 42

PRACTICE

PASSIONATE ABOUT SOIL IMPROVEMENT

A "Certified Used" Crambo was the ideal solution for Feger Umweltservice.
- 44

PRACTICE

GIVING GREENERY BACK TO THE EARTH

Crambo and Axtor help Roosen Borgh in Belgium close the loop.
- 46

PRACTICE

SHARP TEETH VERSUS BULKY VEGETATION

A Crambo shows its mettle at Australian composter Bio Gro.
- 52

PRACTICE

CUTTING-EDGE COMPOSTING

Freestate Farms in Virginia makes top-notch compost, and a Crambo is an integral part of it.
- 56

PRACTICE

ON THE JOB IN SPAIN

At UTE TES they use a tough, powerful Topturn X5000 to turn their compost.
- 58

SERVICE

WE ARE ALWAYS ON CALL

Expansion of the Komptech site in Frohnleiten, Austria puts Customer Service, Rental Business and Research under the same roof.
- 62

NEWS

INSIGHT@KOMPTECH

What else we're up to.

FOREWORD



FOCUS ON SUSTAINABILITY

After a very challenging period due to corona, the economy has regained its optimism. But the results of the pandemic are everywhere to be seen. Chaotic transportation and production standstills around the world led to massive supply problems. Shortages such as in steel production drove material price increases. Komptech has had to cope with both of these sets of issues. Now, however, very important topics which had fallen from view during the height of the pandemic, like climate change, are back on the agenda. The major economic powers are showing a stronger shared commitment to getting away from fossil energy. The EU has moved the target for CO₂ reduction another big step higher, to 60 percent of the 1990 level by 2030. This is a mammoth challenge for European industry, but also a powerful impetus towards a changed growth strategy. Komptech is already working hard on becoming CO₂-neutral in the medium term.

Climate protection and sustainability go hand-in-hand. Recycling and reclamation play a major role in reducing greenhouse gases, but many countries in Africa and Asia are only now beginning to deal with their waste knowledgeably. With expertise transfer and collaborations like in Ghana (page 16) and pilot projects like the one in Indonesia (page 22), Komptech is contributing to greener business in other countries. We also benefit from this cross-continental cooperation, because we learn how to adapt our machines to all sorts of conditions. For Komptech as a supplier of technology for the processing of solid waste and woody biomass, sustainability is naturally a central part of our business model. We also take social responsibility as part of our sustainable business. In our first CSR Report (see page 63) we have now brought together our individual projects to provide a comprehensive view of our CSR (corporate social responsibility) measures. The report presents all of our

important CSR activities, and is aligned with the sustainable development goals of the UN. This makes us the clear leader in our industry. It remains a challenge to harmonize the demands of business with the needs of people and the environment. The sustainability idea provides the basis for doing this, because it includes responsibility to employees, customers and partners. And it connects us with you! Warm regards, Heinz Leitner CEO

PUBLISHER:
Komptech GmbH, Kühau 37, 8130 Frohnleiten, Austria
marketing@komptech.com, www.komptech.com
Editors: Andreas Kunter, Christoph Feyerer
Layout & graphics: Karin Guerrier
Photos: Komptech GmbH
Translation: Ralph Kirschner

Cover: Austria meets Ghana – Project Manager Robert Weidlich (right) and Product Manager Andreas Kunter with Service Technician Eric Martey (see page 16)

This magazine was printed on PEFC-certified paper which was produced in Styria, Austria.

WASTE HANDLING AT SCALE



Four shredders and two stationary screeners from Komptech are at work processing residual waste.

Where “trash” used to be just dumped someplace, today every waste stream is treated individually. No less than 750 to 800 tonnes of residual waste arrive at the AHA Hannover waste treatment centre every day. It’s one of Germany’s largest and ecologically most exemplary of its kind. For mechanical and biological processing, the company has relied on dependable Komptech machinery and service for over ten years.

The processing lines cannot be out of operation for more than two business days. A year ago, two worn out shredders in the residual waste treatment line were removed and replaced. The whole process had to be completed in under 96 hours including the weekend, per the bid tender of the Hannover Regional Waste Association (AHA). Komptech got the gig. “For each replacement we also had to switch out the control and control panel – normally for an install of this magnitude we would plan one or two weeks,” says Christian Hüwel, Stationary Machine Sales Director at Komptech. That in itself would be pretty ambitious, but the team made it happen in the specified 96 hours.

RELIABILITY REQUIRED

Fast reaction is a must if there is a machine breakdown in the Association’s mechanical-biological treatment system. Every day 750 to 800 tonnes of residual waste are unloaded at the site east of Hannover, and every day it all needs to be worked through before the next delivery comes. The plant only has room for two days’ worth of waste. Eberhard Lütge, who is in charge of residual waste treatment at AHA, explains: “If one of the four processing lines goes down we get busy. I call Komptech, sometimes with an energetic tone of voice.” Service technician Dennis Hahne totally understands. He’s taken care of the Association for seven years, and just

switched to Komptech Mobile Machine Sales. “That’s how it has to be with volumes like theirs. If need be, we move our other appointments around so we can get them up and running immediately.” AHA works closely with the Komptech Service team. With two double lines, just the necessary maintenance means a visit about every four weeks. “Right now I’m happy. The machines are running,” says Lütge.

Through the window of the meeting room under the roof of the multi-storey hall, Lütge shows visitors how the two mechanical processing lines run from the entry doors on both sides towards each other at a right angle. Each of the lines starts with a Terminator 3400 EF, followed by big drum screens. In total four shredders and two screeners from Komptech work here on residual waste. In the adjacent organic and green waste composting line there are two stationary star screens and one each mobile drum and star screen.

The screen drums in the hall were also replaced by Komptech, working through the roof with two truck-mounted cranes. “Like an open-heart operation,” says Hahne. As he says that, down in hall garbage trucks dump their loads right

on the concrete floor inside the open doors. It’s a confusion of plastic bags and everything else imaginable, including things that have no business being in residual waste, like devices with lithium batteries. Residual waste from some 566 thousand households and a good 41 thousand area companies is processed here. The scale is impressive.

For us in operations, the most important things are reliable machine function and good support in case of problems.

Eberhard Lütge

INCREMENTAL SPEED ADJUSTMENT

AHA Hannover has had Komptech machines on the job since 2008. They started with the first four Terminators, which were recently replaced. >>



Eberhard Lütge is in charge of residual waste treatment at AHA. Komptech is by his side: Left, Dennis Hahne (Service) and right, Christian Hüwel (Stationary Machine Sales)

Lütge tells how it was: “Before and during the first bid tender we measured the ideal feed for our drum screens and determined that above a throughput of 30 tonnes per hour, screening results get markedly worse, and with 60 mm screening we get more oversizes for incineration. Of all the shortlisted shredders, the Terminator gave the best throughput control. Later, during use, Komptech further improved the adjustability, so that now we can regulate the machine’s speed in increments of 1 percent.” Thus, the Terminators in the stationary lines, along with the loader drivers, help dose the waste for further processing. The speed is regulated by the system control. If contraries stop the machine, or materials block the line, it has to be run briefly at higher speed by manual control. This is done by the driver of the loader that feeds the Terminators. “For clean operation we need seven or eight people, who mostly operate the mobile machines. Maintenance and repair work is done by the night shift,” says Lütge. 22 people work the residual waste plant in two shifts.

MAKING THE BEST OF THE REST

Degreed chemist Lütge considers the AHA well prepared for residual waste processing for the coming six to eight



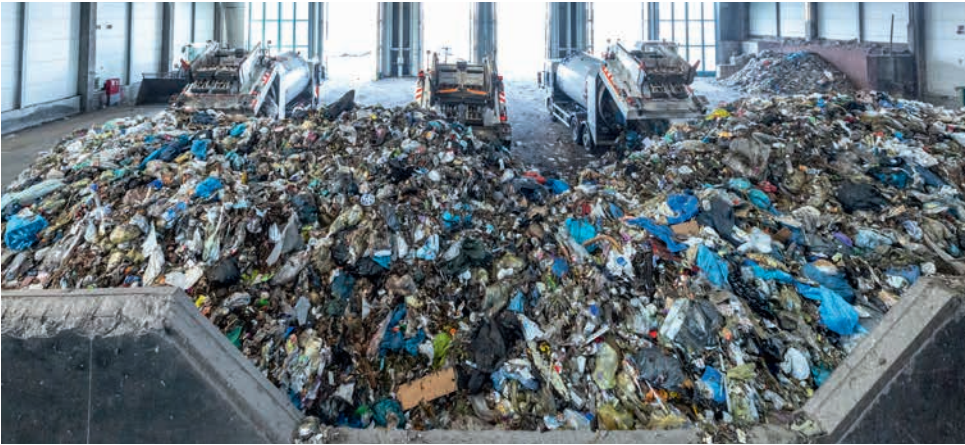
Dependable shredding and dosing – the tasks of the Terminators. Every day several hundred tonnes of residual waste pass through the shredders.

years. Beyond that they’ll have to see how the technical options develop. As he explains, “right now our goal with mechanical-biological processing is to minimize the amount that gets landfilled. Furthermore, the small amount that is landfilled should cause as few ecological issues as possible.” To accomplish this, after shredding in the Terminators the drum screens separate the material into

two fractions. The high-caloric coarse fraction goes to a press container and is used to generate heat in a waste incinerator. The fine fraction passes an overband magnet to recover the recyclable metals, and screened and wind sifted to remove hard inert objects that would interfere with subsequent anaerobic digestion. Fines preparation with two stationary drum screens, two wind sifters and various conveyors was revamped in 2010. After this step the fines from the screen drum (< 15 mm) and the light fraction from the wind sifter go on to biological residual waste treatment in the form of anaerobic digestion, to generate biogas. The solid residue from anaerobic digestion and the heavy material from the wind sifter go to post-rotting for further composting. The result is a soil-like substrate that meets landfill maturation criteria for residual materials. “The machinery is a very important part of what we do,” says Lütge. And what if the replacement of the Terminators had not succeeded in the time allotted? “Then Komptech would have had to pay the addition incineration feeds,” says Lütge with a grin, and adds “but we knew they handle it.”



Shop talk about cut geometry: Franz Pfeifer (AHA operating staff, left) and Dennis Hahne (Komptech)



Together they have met quite a few challenges – smiles are in order.



ZWECKVERBAND ABFALLWIRTSCHAFT REGION HANNOVER (AHA)
www.aha-region.de

The Zweckverband Abfallwirtschaft Region Hannover (AHA) was founded in 2003 as a municipal waste disposal company. Among its tasks are the regular disposal of residual waste, paper, light packaging and organics. To do this, AHA Hannover runs 21 recycling centres in its area, 54 green cuttings collection points, over 700 recycling bin islands for glass, paper and textiles, and landfills in Burgdorf, Hannover and Wunstorf. Some 1800 AHA employees collect and treat waste from approximately 1.1 million area residents in some 566,100 households, and from around 41,100 companies. The Association is also responsible for city cleaning and winter road clearing in the Hannover metropolitan area. At the modern waste treatment centre in Hannover-Lahe residual waste is processed, separated and treated mechanically and biologically.

PRACTICE

HIGH-PERFORMANCE WASTE TREATMENT IN MADRID

The most innovative processes and technologies are used here, to reduce landfilling to a minimum.

Jordi Vallès

The Terminator's motor is housed separately from the shredding unit in a dustproof, air-conditioned container.

One of the most advanced recycling plants in Spain has been built in record time in the north of Madrid. Its annual capacity is over 265 thousand tonnes of waste. The price/performance ratio of the Terminator convinced operator Ecomesia to include one in the machine park.

The "Loeches Environmental Recycling Complex" covers about 60 hectares, which equals the area of 86 football fields. This large complex comprising waste treatment, composting and landfill handles the waste from 31 municipalities in the east of Madrid. The scale is impressive. With five treatment lines, the plant's annual capacity is about 175,000 tonnes of residual waste, 45,000 tonnes of organic waste, 17,750 tonnes of green cuttings, 13,000 tonnes of light packaging, 12,000 tonnes of commercial waste and 2,500 tonnes of bulky waste. "The most innovative processes and technologies are used here, to reduce landfilling to a minimum," explains Jordi Vallès, Technical Director at Bianna Recycling and Project Manager for Loeches.

AUTOMATED PRODUCTION, NETWORKED MACHINES

For Komptech sales partner Bianna Recycling, the Loeches plant is a real milestone in the company's history. Despite the restrictions of the corona pandemic, and the size and capacity of this recycling complex, it was built and commissioned in just 40 weeks. Bianna Recycling was responsible for the processing lines for residual and packaging waste and commercial waste sorting. The complex has two household waste lines with a capacity of 35 t per hour. Jordi Vallès: "The prime objective in designing the Loeches plant was to

create the conditions for highly efficient treatment of the feedstock. This required not just technical but also process knowledge." The integration of Industry 4.0 elements in the plant is a forward-looking move. Wherever possible, treatment steps are automated, machines networked and data interchange enabled for better process control. Solid waste pre-sorting is even robot-assisted.

A TERMINATOR WITH COMPELLING REFERENCES

The Loeches recycling plant is operated by Ecoparque Mancomunidad del Este, or Ecomesia for short. The parent company FCC Environment Services brought Komptech to their attention. "FCC already had experience with Komptech machines in several other plants. Their throughput, consumption, reliability and safety had been consistently impressive," says Vallès. Thus, a stationary Terminator was included in the agreement with Bianna Recycling and now stands in the 120,000 square meter waste treatment hall. As a hydraulic version, it has the advantage that the power unit can be separate from the shredding unit, protecting it from dust and allowing very good cooling. The



ECOPARQUE MANCOMUNIDAD DEL ESTE (ECOMESA)

www.mancomunidadeste.com

stepless cutting gap adjustment allows precision sizing of the output for its intended purpose. "Shredding is the prerequisite for better separation. This step will be very important if we want to increase recycling rates going forward," says Vallès.



The precise adjustment of the degree of shredding is important for Jordi Vallès' downstream separation steps.

PRACTICE

A TERMINATOR FOR EVERY BIN



Ready for the next job! The Sieco Srl team has a modern machine park.

Whether disposal, recycling or storage – for Marco Bologna of Sieco in Italy, the important thing is reliable processing of the waste that comes to the plant. Since a Komptech Terminator 5000 SD has been doing the preshredding, he's had much less downtime and maintenance effort in his disposal operation.

"Before we found out about Komptech, we often had problems with difficult materials. Shredding-resistant items would get stuck in the drum, and the drive and transmission would quickly get overburdened," says Marco Bologna, Purchasing Manager at Sieco Srl. The Terminator put a stop to that. Its variable hydraulic drum drive focuses lots of power in a little space. "And reversing is always possible. Contraries hardly ever cause problems anymore," says Bologna with satisfaction.

SOLID AND LIQUID HAZMAT WASTE

The Sieco company in Viterbo in central Italy specializes in the environmentally sound disposal of solid and liquid hazardous materials for B2B customers. Among its services are volume reduction and the separation of solid industrial and municipal waste. At the very tidy

site you immediately notice the many tanks, plus the closely ranked containers in which cleanly sorted waste categories like tires, plastic film, aluminium cans and cardboard await further processing. Sieco has full order books. Right now, in Italy the demand for disposal services exceeds the supply.

"We use the Terminator every day to shred hazardous and non-hazardous industrial waste," says Bologna. Most of the hazardous waste consists of residues in lacquer, paint and oil containers. Around 40 tonnes of these go through the shredder per hour, which uses about 20 litres of fuel in the process. Sieco is very happy with the new acquisition. "The machine meets every requirement, and there is almost no down time. We also need less time for maintenance than before, because all functional areas are very easily accessible. That makes the Terminator more efficient and cost-effective for us," he says in summary.

In addition to the outstanding machine, CGT's responsiveness won us over.

Marco Bologna



SIECO SRL
www.sieco.eu

A THREE-YEAR TEST

Before Seico decided to buy a Terminator 5000 SD, they tested this single-shaft shredder for three years as a rental machine. At the Ecomondo 2015 trade fair the company made contact with Fabio Vollera of CGT, Komptech's sales partner in Italy. Vollera convinced Marco Bologna and Sieco management to test not just the machine through a rental, but also CGT's service. That service proved technically and economically dependable and professional. Bologna: "In addition to the outstanding machine, CGT's responsiveness won us over." "The combination of Terminator and Komptech's Connect! condition monitoring system lets us keep an eye on all machine parameters at all times, and we were also able to save on taxes, since Italy provides tax breaks for investments in Industry 4.0," says Marco Bologna.

Shredding used wood is one of the Terminator's easier jobs. Mostly it has to deal with hazardous and non-hazardous industrial waste.



PRACTICE

TURNING GARBAGE INTO EX-GARBAGE

CRAMBO TERMINATOR

12



The distinctive colour is everywhere to be seen at the company, and has done much to boost its regional profile.

Müllex-Umwelt-Säuberung-GmbH in southeast Austria handles commercial, business and residential waste from A to Z. For stationary and mobile shredding, the company uses two Crambos and two Terminators.

The purchase of the first machine 18 years ago was the start of a customer partnership between peers. If traffic isn't too heavy, the 70 km between Frohnleiten and St. Margarethen an der Raab are a matter of three quarters of an hour. So it was in early February as Alexander Höllweger, a new Komptech sales rep, drove to the Müllex site. As the "newbie" he was immediately confronted with an "oldie."

Founded in 1980, Müllex-Umwelt-Säuberung-GmbH has over 40 years of experience in the collection, treatment and processing of waste, and its relationship with Komptech has stood for 18 of those years. When Müllex bought its first Terminator in 2003, it wasn't just the "right machine" but also the "proximity to the manufacturer" that sealed the deal, since the company's philosophy has focused on regional value-creation from the outset. As Müllex CEO Manfred Fritz explains, "we work in the region for the region. So the regionality of the machine was an important factor, as was the proximity to Komptech with regard to service and spare parts availability," says Fritz.

PRETTY MUCH BESTIES

Komptech also benefits from the short distance between the two companies. "With Müllex we've done many tests in actual use, which have been a

Unfortunately, batteries frequently get thrown in with regular waste, and are an acute fire hazard. If the fire department has to come and put out a fire, it means huge damages to our machinery.

Manfred Fritz

Manfred Fritz (right) has used a Terminator since 2003. "The insights of such a long-time customer are extremely important for us," says Komptech Sales Rep Alexander Höllweger.

>>

13



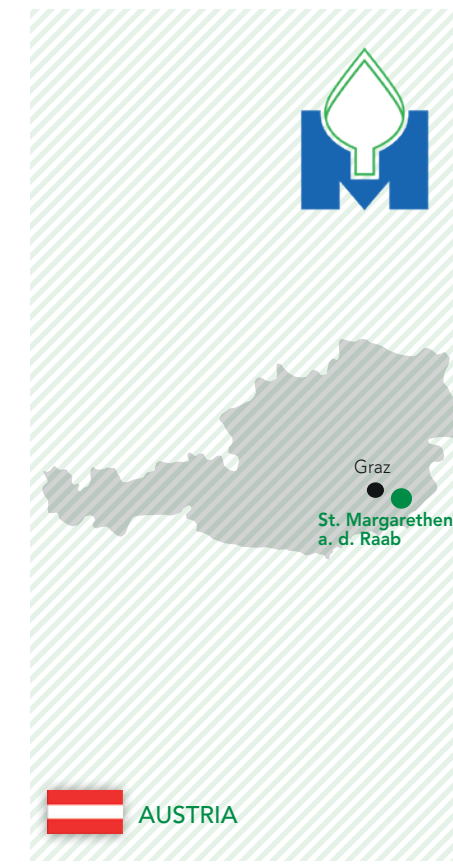
There's always something that needs doing – the new mobile Terminator has plenty to occupy it at Müllex.



tremendous help to us in the further development of our machines," says Höllweger. The collaboration is also about give and take for Manfred Fritz. He emphasizes that Komptech technicians are always on the scene right away if there's a problem, including "Friday evening or Saturday." Both agree that regular communication is important. Höllweger: "In maintenance it's important to listen to the people who work with the machines day in and day out. We need to know in good time where the problem zones are," he says. Right now a problem zone for Müllex is the steadily worsening quality of the waste it gets. Given the higher recycling quotas mandated starting in 2025, waste treatment will only be more challenging in future. "The amount of things thrown into the wrong bins keeps increasing," says Fritz.

TIME FOR THE TERMINATOR

For CEO Fritz, high machine availability is of the essence. And, he says with satisfaction, Komptech has always made it happen. Müllex uses two Crambos for shredding waste wood and two Terminators – one stationary and one mobile – for processing waste. As a tough preshredder, the stationary Terminator in the splitting line sizes mixed waste down to an even chip size to prepare it for further recycling steps. The mobile Terminator is used at the site as an all-purpose shredder. It preshreds high-caloric plastic bales, which go through a dosing hopper to the RDF processing line. It's also used to prep difficult materials like tarps, pipes and box-spring mattresses. "We've run easily more than a million tonnes of mixed waste through the two Terminators over the years," says Fritz.



MÜLLEX-UMWELT-SÄUBERUNG-GMBH
www.muellex.com

Müllex-Umwelt-Säuberungs-GmbH was founded in 1980 as a three-man operation. It started out as a service provider for waste collection, and then in the following ten years successively added problem materials collection, composting, residual waste processing and plastic packaging sorting. In 1999 Müllex GmbH built its Waste Processing Competence Centre in St. Margarethen an der Raab. It handles the collection, treatment and reclamation of hazardous and non-hazardous waste for municipalities, companies and private households. This includes processing trash and waste wood, recycling various materials, and providing bins and containers. Müllex employs 113 people.

PRACTICE

A MILESTONE IN GHANA



Dr Siaw Agyepong, CEO of Jospong Group, with Gottfried Reither, Director System Technology (left), and Key Account Manager Markus Maierhofer (right)



A bird's eye view of KCARP – Kumasi Compost and Recycling Plant. With two million inhabitants, Kumasi is Ghana's second largest city.

Since 2018, Komptech has been active on the African market with great success. In cooperation with the Jospong Group, 14 mobile processing lines and the first stationary plant are in operation in Ghana, with a second under construction. In addition to machines, there is a local demand for waste processing knowledge.

Each year Ghana generates about five million tonnes of municipal waste, an estimated 60 percent of which is organic. Of this, about a quarter can be composted, giving an annual return of some 750,000 tonnes of valuable soil improver. All told, around 80 percent of the waste of this West African country is reusable or recyclable. In recent years Ghana decentralized its waste disposal system, creating the conditions for better waste reclamation. Local government and the private sector are putting the necessary structures in place. This makes Ghana one of Africa's most advanced countries in respect of waste disposal. Zoomlion Ghana Ltd (Jospong Group) is a pacemaker, as Ghana's largest waste disposal and processing company.

ADAPTED TO LOCAL CONDITIONS

When Komptech and the Jospong Group together planned the first waste treatment facilities in Ghana in 2018, the decision was made to use a combination of mobile and semi-mobile machines. Gottfried Reither, Director System Technology at Komptech, explains: "Zoomlion urgently needed facilities to treat about 600 tonnes of municipal waste daily in Accra. A stationary plant requires infrastructure and above all a reliable supply of electricity, which was not available. But thanks to autonomous operation with diesel engines or generators we were able to set up the lines as needed, and they were ready for immediate operation."

>>

When orderly reclamation is just getting started, flexible machinery is better as a first step.” The specially developed Komptech processing plants select the biogenic component out of the waste and send it to composting, while separating the recyclables out of the rest, so that only a small remaining amount of waste is landfilled.

Technically, the Kumasi plant absolutely meets European standards.

Gottfried Reither

Before working with Komptech, Zoomlion had tasked an Asian machine manufacturer with the construction of a stationary facility. However, neither the performance nor the after sales service were up to expectations, so Jospong Group representatives travelled to Europe to look around for the right partner. They found it in Komptech. Reither: “We looked at pictures of the existing plant in Adjen Kotoku and could tell immediately that it wasn’t going to work.” As a systems technology professional, he saw four design flaws right from the photos. He grabbed a pen and sketched out how a preparation process could work well under the existing conditions. The Ghana delegation liked the pragmatic approach, and invited Komptech for a visit to the Ghanaian capital of Accra. A first order for five semi-mobile lines was followed by another for nine. Each of them can process 200 tonnes of mixed domestic waste per day.

STEP TWO: THE STATIONARY FACILITY

For Kumasi north of Accra, Zoomlion needed a substantially larger facility with a capacity of around 600 tonnes of mixed domestic waste per day. In this case, for economic reasons waste separation needed to be electric-powered. An existing hall was converted for the purpose. “When the infrastructure is there for it and the composition of the

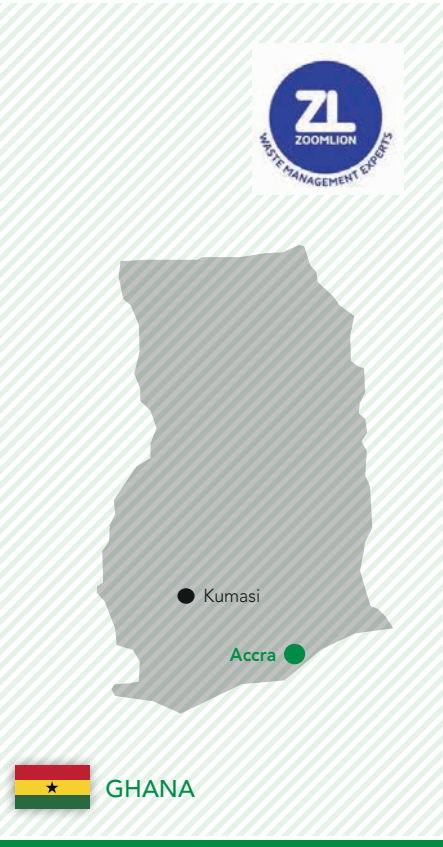


First comes mechanical preparation with separation of the recyclables, then comes biological treatment. The organics are first opened up and then composted in windrows. Subsequent fine processing provides high compost quality.



waste is known, a stationary solution is more economical. The higher efficiency of electric systems also plays into it,” explains Reither. Furthermore, some machines such as ballistic sifters and post-shredders are only available as stationary machines. However, they can achieve a more differentiated separation of the waste stream, so that more recyclables can be extracted. The new facility in Kumasi uses a Terminator 3400 shredder, followed by two-stage screening to 0-80 mm, 80-300 mm and >300 mm fractions. At four process stations Zoomlion employees assist with separation. Thus, the plant has created 400 new jobs. After manual removal of contraries and shredding, the input material is fractioned by Komptech drum screens. The fines (<80 mm) go through a 2SE star screen and then to composting in a tunnel system.

>>



ZOOMLION GHANA LIMITED
www.zoomlionghana.com

Zoomlion Ghana Limited is Ghana’s largest waste disposal and treatment company, and offers integrated waste management solutions from collection to transport, transfer and sorting, to recycling and disposal. The company was founded in 2006 by Dr. Joseph Siaw Agyepong and is a member of the Environmental Services Providers Association (ESPA) of Ghana and the International Solid Waste Management Association (ISWMA, USA). Zoomlion employs around 3000 people and manages over 85,000 workers through various public-private partnerships. A member of the Jospong Group, the company operates in five countries in Africa.

The resulting compost is subsequently prepped with Cribus 3800 drum screens and a wind sifter. The 80–300 mm fraction is separated into cubic and flat fractions by a Ballistor 6300. Recyclables like wood, PET, PE, PP and non-ferrous metals are manually picked from the cubic fraction. Ferrous metals are removed automatically. Recyclables are manually picked from the >300 mm fraction as well. Reither: “Technically, the Kumasi plant absolutely meets European standards.”

SERVICE AND TRAINING ON-SITE

In order to provide service for the Jospong Group, Komptech has set up a local presence in Ghana. Komptech Service Technician Eric Martey is stationed there and regularly inspects all plants. Manfred Harb, Director Customer Services Komptech, explains, “when we set up a new service structure, there are three possibilities. We find a local service partner with a spare parts warehouse. Or we provide service with a Komptech technician and use spare parts from our stock or the customer’s stock. Or, we contract maintenance by the customer with our assistance.”



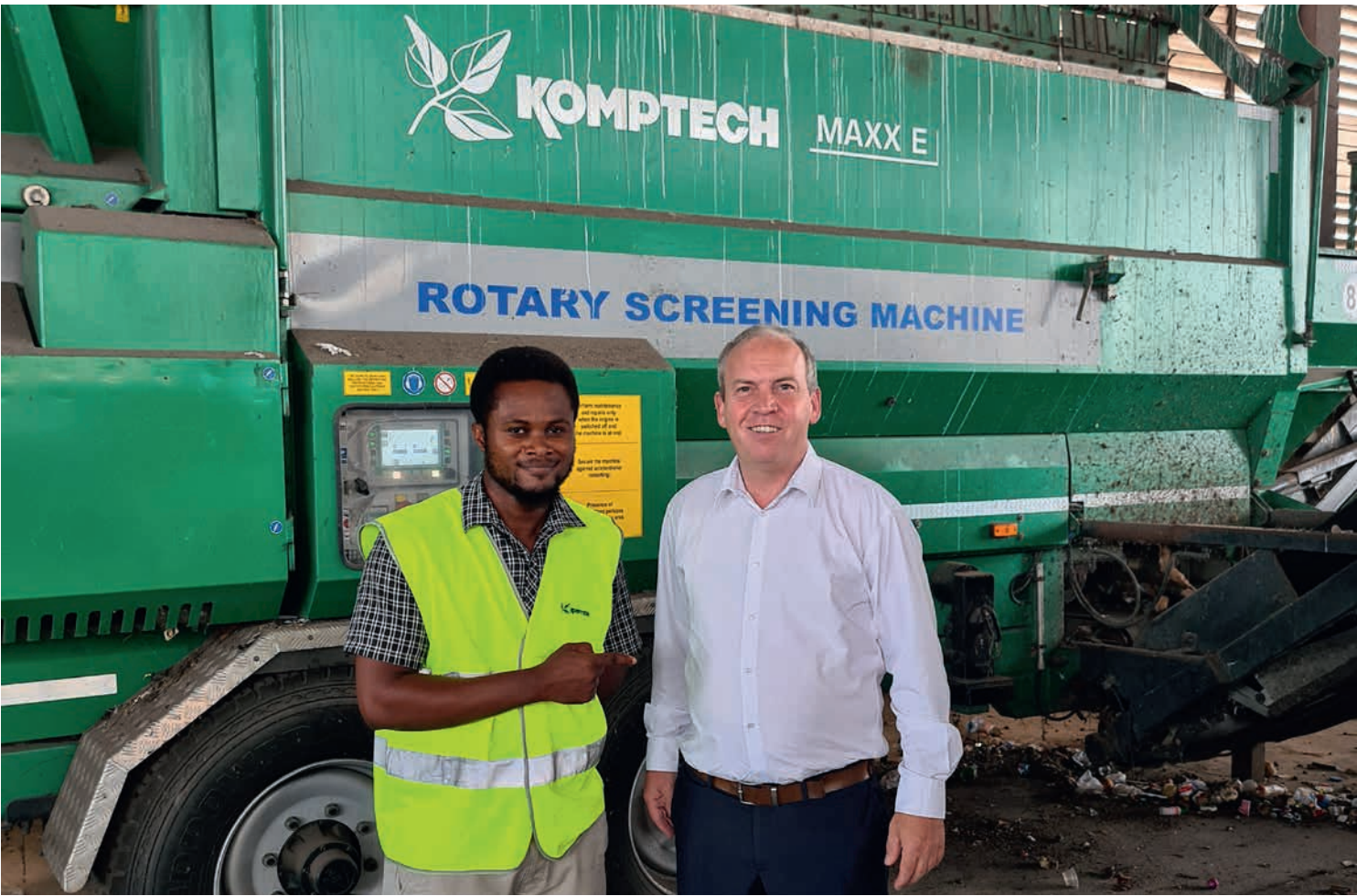
Up to 600 tonnes of household waste can be processed per day. The steadily growing amount of plastic is clearly evident.



Some of the recyclables separation is done manually. The creation of workplaces with working conditions to European standards was an important factor.



Final conditioning of the compost is done by drum screening and wind sifting.



Starting up a plant and keeping it running is a challenge. Gottfried Reither takes a look on-site, with Komptech Service Technician Eric Martey from local service partner Correct Engineering.



Training local personnel in the care and maintenance of the system is a high priority.

In all cases, sales and service partners as well as the customers are trained on the machines on site, through documentation and commissioning, to transfer the necessary knowledge and also pass along beneficial experience. In addition, maintenance agreements include a Komptech technician present as supervisor for inspections during the first 3000 operating hours. “As a rule, after this time most maintenance and repair events have come up at least once, and the customer has been able to gain sufficient experience. We also use digital systems like Connect, Assist and Track to make information available and help with service,” adds Harb.

PRACTICE

NEW THINKING IN INDONESIA

A short photo break: Komptech Service Technician Manuel Serton (lower left) trains future Topturn operators.



The landfills are full – the time to act is now.



Keep it simple! This is usually good advice for first-time operators of recycling-oriented waste management systems.

Three years ago the Indonesian government tasked Komptech with the development of a stationary facility design for processing solid waste for recycling, to be used at three locations. Now the machines are ready and the pilot projects can start.

Indonesia: This Southeast Asian nation made up of thousands of volcanic islands is known for its picturesque beaches, breathtaking underwater world and rainforests full of rare plants. Unfortunately, flora, fauna and people have to share the space with ever more waste, because waste processing is still in its infancy here. The main problem in this country, which for a long time had no recycling focus in its waste management, is plastic garbage. Landfills are overflowing, and Indonesia is the world's second worst polluter of the oceans with plastic waste, after China.

EMBEDDED IN THE ERIC PROJECT

But Indonesia wants to change its ways. Step by step, the Indonesian government intends to reduce its landfilling of secondary raw materials, and has created a new legal basis on which to do so. Convinced that solid waste is responsible for a large part of environmental pollution and CO₂ emissions, it launched the ERIC (Emission Reduction in Cities) project and put out international bid tenders together with financing partner KfW. Komptech applied, and got the nod for the first three pilot plants. "With us, all the components come from a single source. We were able to offer a concept that was seamless from A to Z. That won them over," says Komptech Sales Director Ewald Konrad. The three recycling processing plants are now in operation in Malang, Jambi and Sidoarjo by and for the Indonesian government.



A workplace that is secure and benefits the environment – separating recyclables in the sorting line.



With us, all the components come from a single source.

Ewald Konrad

Organics go to composting instead of landfilling. This produces valuable fertilizer and prevents uncontrolled methane emissions.



MSW TREATMENT PLANTS

SMALL, DECENTRAL FACILITIES ARE THE KEY

"All three were set up within three weeks in March/April, which worked out perfectly," reports Komptech Service Technician Manual Serton, who assisted with the commissioning on site. "All three are identical, each consisting of a sorting line and a composting line." In the sorting line, the feedstock, a mix of plastic film and bottles, drink cans, glass, metals, food cartons, bones and more is first shredded by a low-speed Terminator 1700 shredder. Sorting is done by stationary drum screen, side conveyor with magnet separator, and manual sorting of the overs. The composting line uses a Topturn compost turner and Primus drum screen.

At 35 tonnes per day the plants process relatively low amounts of mixed waste, since the capacity of such Komptech systems is more like 35 tonnes per hour. But, in addition to their pilot character, smaller plant sizes make sense here, since big central facilities are not always viable in a country consisting of many islands. "It takes time for a country to change its thinking. Indonesia has set out to do so, and has come a good distance," says Konrad. To his way of thinking, these first steps are valuable learning stages that will help prepare for future, perhaps larger, projects.



INNOVATION

INTELLIGENT WASTE TREATMENT OF THE FUTURE

One of the objectives of the European “Green Deal” is better use of waste. The European waste treatment industry is accordingly challenged to improve its processes and technologies. Komptech is a project partner in research on the integration of Industry 4.0 elements into waste treatment.

By 2035 at least 65 percent of residential waste in EU member states will need to be recycled or otherwise reused, per the EU circular economy package. Currently, reclamation of materials from mixed waste is feasible only to a limited degree. FE and non-FE metals are an exception, since they can be separated out with magnetic separators. However, much of the plastics, paper and wood cannot yet be recycled.

DIGITALLY NETWORKED RECYCLING AND RECLAMATION PROCESSES

Several research projects are underway in Austria towards deploying Industry 4.0 approaches in waste treatment in order to increase the proportion of waste that is recycled, involving scientific institutions and industrial partners like Komptech. The goal is to use sensors, digitalization, networking and artificial intelligence to increase the separation accuracy in treatment systems. Christoph Feyerer, Head of Product Management and Marketing at Komptech, explains

the basic concept: “It revolves around real-time communication between the waste quality and the processing system. This allows dynamic adjustment of processing steps to meet output objectives. The next development step would be to let the machines in a waste treatment line self-improve by machine learning. Then it really will be possible to get the maximum recyclables out of the waste stream.” But much research remains to be done before such innovations come into daily use by waste treatment companies. It starts with a comprehensive database. This is the goal of the project “Recycling

and Recovery of Waste for Future” – or “ReWaste F” – that started in April of 2021. Komptech is a technology partner for the practical test series and simulations, in which the control factors in mechanical processing and their effects are identified and gathered in a database. Process lines with shredders, screeners, separating and sorting machines are used for this purpose.

THE EU AS A PACESETTER IN WASTE RECLAMATION

“ReWaste F” was preceded by the “ReWaste 4.0” project. In it, the influence of shredder settings on material quality were examined. The tests took several months and were done with Komptech machines and around 1000 tonnes of mixed residential waste. The data gathered is sufficient, given a defined system configuration and feedstock, to predict what the screened output from mixed residential waste will be in terms of grain fractions and size distribution. “The knowledge gained from this research doesn’t just benefit our customers in Europe.



The technology solutions we develop to meet the requirements of the European waste industry will be available to customers around the world.

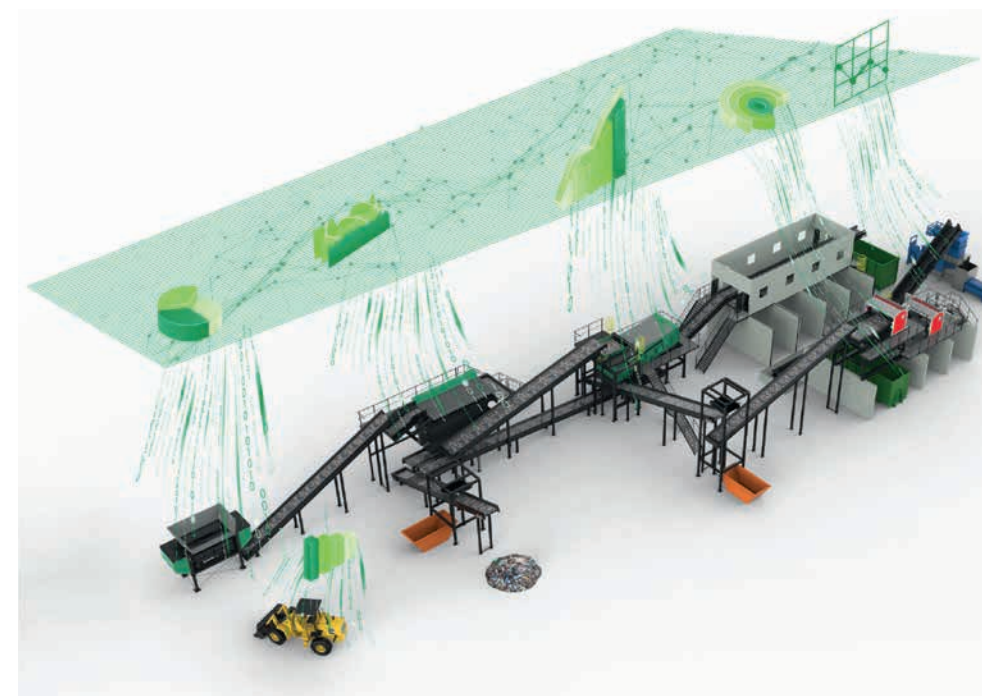
Christoph Feyerer

The technology solutions we develop to meet the requirements of the European waste industry will be available to customers around the world, to improve their waste treatment efficiency,” promises Feyerer.

shredding and separating. Within this scope there are many factors that can be adjusted to influence the quality of the output. These include the teeth used in shredding, and the fine-tuning in ballistic separation. Feyerer: “Komptech is already developing system designs that meet specific recycling requirements, taking into account the composition of the feedstock and addressing the quality needs of the recycling industry.”

SYSTEMS TECHNOLOGY AS THE FOUNDATION FOR RECYCLING QUOTAS

Mechanical trash splitting is a prerequisite for material reclamation from mixed waste. Therefore, Komptech focuses on the process steps of



PRACTICE

ORGANIC WASTE RECLAMATION A POSTER CHILD FOR THE CIRCULAR ECONOMY



It's a perfect fit! Martin Althoetmar (right), in charge of composting at ESG, and Plant Manager Meik Huster (centre) agree. Christian Hüwel, Komptech Stationary Machine Sales, naturally concurs.

Where formerly Anröchter Green sandstone was quarried, now stands the new compost plant of disposal company Entsorgungswirtschaft Soest GmbH (ESG). At this cutting-edge facility, a stationary Crambo 3400 and a Multistar 2-SE do more than just bring organic material to the right particle size. This machine combination also elegantly separates plastic film and bags from their organic contents.

“Actually, an improperly filled organics bin should anger every local resident, because the resultant added processing effort eventually finds its way into higher fees,” says Martin Althoetmar. For this degreed agricultural engineer, plastic bags in organic waste are a daily challenge. He’s worked for almost 30 years at ESG, where he’s responsible for the composting systems, including the composting plant in Anröchte, which was completed in 2020. This mechanical-biological line with fermenting unit and covered composting is one of the most modern of its kind, and can process 30 thousand tonnes of organic waste annually. A low-speed shredder from Komptech was acquired for the necessary preparation. “We chose a Crambo because its low speed gently opens the plastic bags. Unlike a high-speed machine, it doesn’t rip them to shreds that we then find in the screen or in the compost,” explains Althoetmar. They had demos run with machines from several manufacturers, but the Komptech was the most convincing and ended up winning the tender.



As a low-speed shredder, the Crambo gives very gentle opening of bagged organic waste.



The drum speed affects the screening results. Once the right speed is found, it is maintained.

WITH CRAMBO AND STAR SCREEN
Christian Hüwel, Komptech Sales Director for stationary machines, explains the outstanding performance of the Crambo. “With no other shredder can the shaft speed and thus the screening output be so finely adjusted. Once the right speed is found and maintained, you can get top results with comparatively low energy consumption.” Plastic bags that the Crambo opens up and generally only partially empties are conveyed to the stationary Multistar star screener, along with the rest of the organic waste. On the screen deck, the rotating stars knock the damp and sticky organic material out of the plastic. Martin Althoetmar explains: “The plastic film is ejected along with the oversize fraction. If necessary we run it through the Multistar again, to extract more organic material for composting. The clean undersize fraction goes directly to biological treatment.” Hüwel adds, “In our view the combination of low-speed shredder and star screen is currently the best solution for reducing the amount of plastic in organic waste.”



The compost facility makes an important contribution to climate protection. In addition to anaerobic digestion of organic waste to recover energy, the roof surfaces are used to make electricity using photovoltaics.



ENTSORGUNGSWIRTSCHAFT SOEST GMBH
www.esg-soest.de

Entsorgungswirtschaft Soest GmbH (ESG) combines the public interest with private business expertise in the waste disposal industry. It is co-owned by the Soest District as majority shareholder, and recycling and waste management companies Remondis and Veolia. ESG disposes of waste from 14 towns and municipalities, as well as area businesses and industries, either at its own plants or by transporting selected materials to other processors. Every year it processes over 150,000 tonnes of waste – including residual and organic, bulky and garden waste – as well as recyclables for reclamation and disposal. ESG employs 55 people and operates 13 waste facilities including recycling centres, composting plants and ground disposals.



Over the years, the technical requirements for waste treatment have become much more demanding, for example through new air pollution and organic waste regulations. Plants and machines need to adapt.

Martin Althoetmar



The electric motors with frequency converters make the star screen precisely adjustable.

EXPERTISE IN ORGANIC WASTE

The Multistar star screen was developed by Komptech in collaboration with partner company Anlagenbau Günther. It's especially suited to screening organic materials, since the integral "cleaning fingers" continuously free the stars from sticky matter during screening, and so prevent clogging. Thus, separation precision remains high even with very moist material. Hüwel doesn't pass up the opportunity to point out Komptech's special expertise in organic waste processing: "The company got its start in the composting industry. The first Komptech machine on the market was the Topturn compost turner. Only then came the shredders, screeners and wind sifters."

Today Komptech has the right technology for all parts of the composting process. Almost all of its machines are offered in mobile or stationary versions, with the basic designs being largely identical. The stationary models offer more options in terms of drive system, frame and periphery.

STATIONARY AND AUTONOMOUS

The ESG plant in Anröchte still has to get up to speed. In future, the plan is to generate 3.5 million kilowatt hours of electricity through anaerobic digestion. Together with the company's photovoltaic array, composting operations will not only cover the facility's own power needs, but also feed power into the public grid. The plant can product around 20,000 tonnes of high-quality compost per year. Currently the new stationary Crambo 3400 is in use two or three hours a day. To minimize downtime as far as possible, ESG has a maintenance contract with Komptech. Regular technical service is provided from Oelde, which is right around the corner.



FUTURE PLANS
3.5 MILLION KWH
ELECTRICITY

The plastic stays in the oversize fraction after screening. The clean undersize fraction goes on to biological treatment. The cleaning finger at each star keeps the screen gap unclogged even with wet material.

PRACTICE

POSITIVE EXPERIENCE IN WASTE WOOD PROCESSING

Four years ago Holz- und Stockrecycling AG in Switzerland took a new machine combination into test operation. It was hoped that a Crambo 5200 direct and Multistar One with integrated return would give quieter waste wood processing with less stoppages. Results were good, so the mobile test machines were switched out for a stationary system with a Crambo 6200 direct. It's running as good as new even after 6000 operating hours.

When CEO Andreas Suter decided in the spring of 2017 to try replacing a high-speed grinder with a star screen for post-processing, the idea was to improve the operating efficiency of his recycling company, which specializes in making RDF from waste wood. He was looking for lower wear costs and higher energy efficiency. A critical question was whether the changed output quality would affect the combustion process in the cogeneration plant that used his product. "After the change we saw a reduction in the amount of carbon monoxide and nitrogen oxide in the cogeneration plant exhaust. And instead of the noisy and dusty high-speed grinder with its energy consumption of hundreds of kilowatts, we had a nearly silent Multistar One that consumed not even 20 kilowatts," recalled Suter. In terms of product quality and operating costs, the Crambo and star screen combination was "just the right solution."

The boss checks the quality.
CEO Andreas Suter (right) and Machine
Operator Jose Da Silva



On the right the input material, on the left the finished fuel, in between the compact processing system

DREAMTEAM: CRAMBO 6200 DIRECT AND MULTISTAR

When it comes to reducing noise and dust, the Crambo and star screen work hand in hand. “The Crambo is remarkably quiet for the performance it delivers. It’s also one of the most efficient machines for shredding wood of all kinds,” says Frank Dätwyler of Komptech service partner GETAG. The Crambo 6200 direct in particular is not just extremely powerful, but also very resistant to contraries. And that’s what the CEO of Holz- und Stockrecycling AG wants. After a few adjustments in the starting phase the new machine combination works considerably better than the old one. Suter: “The Heavy Duty drums on the Crambo with the extra wear protection have proven very helpful.” If teeth get worn and need changing, it’s only a subset of them. “We never replace all of the teeth at once, but usually only 10 or 20, maximum 50 at a time. We’ve found this to be very effective,” says Suter. Machine care is a priority in his company. If there’s a slow period, they use it to the get the dust out of the machines and inspect them.

CUSTOMER SERVICE IS A PLUS

Three members of the operations team work exclusively in waste wood



A conveyor system takes the fuel directly to the storage hopper of the cogeneration plant.

processing. Plant throughput is about 25 tonnes an hour. For input pre-shredding sickle teeth are used with a standard 220 x 180 mm screen basket.

Komptech is always looking for ways to improve machines and processes. I like that.

Andreas Suter

The downstream star screen uses a 90 to 120 mm screen deck and works at about 70 percent rotational speed. A conveyor takes the useful fraction right to the cogeneration plant. The grain corresponds to about P100, so there are no problems in feed and combustion. Star screen overs go back to the shredder. There are magnet separators at two points. Komptech’s service partner GETAG accompanied the test phase and operation from the beginning. “Thus far we’ve been very happy with the customer service. They were always willing to listen when we had a problem,” says Suter, adding, “the green machines aren’t the cheapest, but they’re right for the job.

And Komptech is always looking for ways to improve machines and processes. I like that.”

THE CONDITIONS HAVE TO BE RIGHT

Investment decisions at Holz- und Stockrecycling AG are affected by market conditions. In 2017 the margins in the waste wood business shrank, making efficiency a focus. Today the pressure is from another direction. For many

power plants, be they biomass or solar, subsidies will soon run out. “Without subsidies the market sets rates, and those are too low for profitable operations,” says Suter. In his opinion the Swiss government needs to come up with a sensible follow-on subsidy scheme to keep waste wood-fired power plants viable. In 2008 he transferred his own company’s biomass power plant to an international energy company, due to changed market conditions. Since then his entire focus has been the supply of fuel for CO₂-neutral power and heat generation.



Dependable partnership: Frank Dätwyler (left) of Komptech’s Swiss sales and service partner GETAG AG knows the machines and the market.



HOLZ- + STOCKRECYCLING AG

FLEXIBLE RESPONSE TO MARKET FLUCTUATIONS

With a throughput of 30,000 tonnes per year, the plant uses 90 percent of the fuel produced at the site, with the rest going to other power plants in the area. The facility processes waste wood in categories from AI to AIII, i.e. ranging from untreated wood that only needs to be broken down mechanically, to coated and painted particle board. All of it is turned into a homogeneous fuel. Material reclamation is a lower priority in Switzerland. Currently there are only two particle board factories that can use waste wood. “Profits in the waste wood business fluctuate widely. In the summer months many biomass power plants shut down, and then fuel is more expensive to sell,” explains Suter. Excess fuel is then often exported to Germany and France, but Suter has his own solution. During the summer, when demand is low, he stores his RDF. In the winter he uses it in his own power plant and sells it to others. As Suter says, “in this business you need to be flexible. And flexibility pays in Switzerland too.”

The two-stage compact system can be used to prepare various classes of waste wood for material recycling or energy recovery. The first step is shredding by a Crambo. The shredding teeth and screen basket size are configured for the input material and desired output product. The objective is a homogeneous shred with the lowest possible amount of fine fraction. The second step is separation of the useful fraction and return of the overlengths to the shredder, and for this a Multistar SE star screen is used. Integrated bypass and reversing in the conveyor, and further processing steps like metal removal, increase the functionality of this setup.

INNOVATION

TWO-STAGE WASTE WOOD COMPACT SYSTEM À LA KOMPTECH

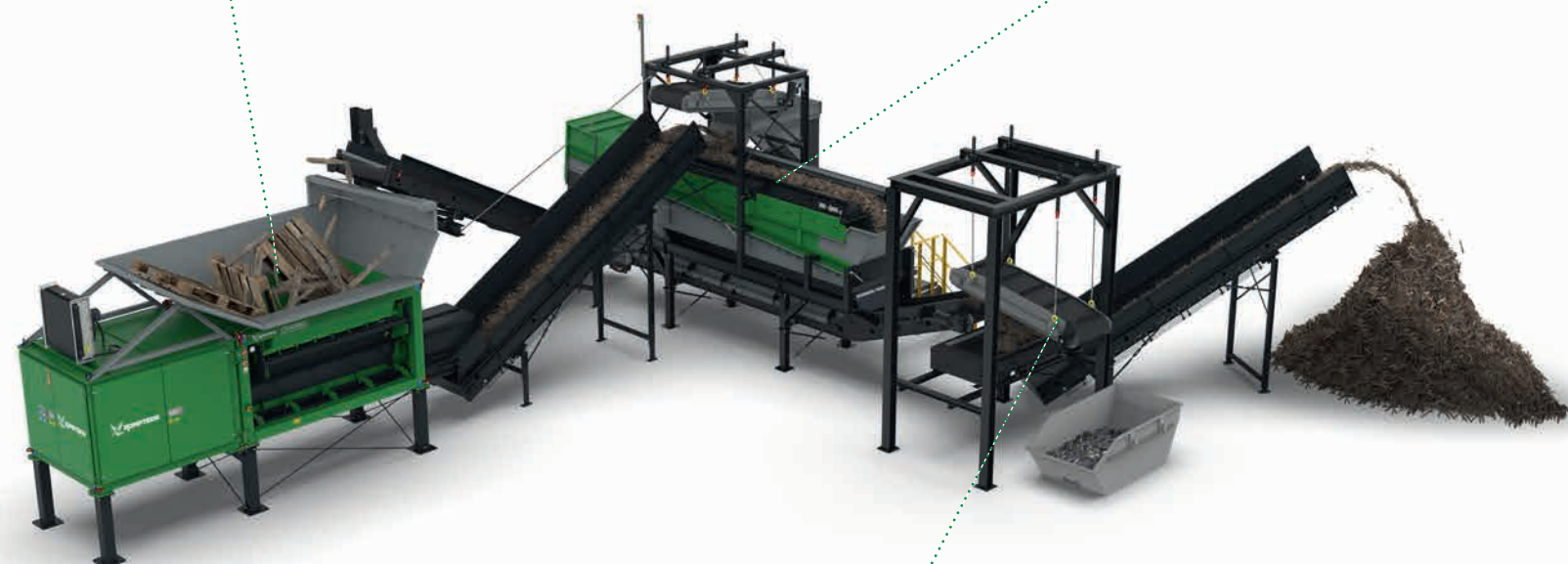
SHREDDING CRAMBO

Two drums with special teeth give very effective shredding. The stationary Crambo is offered with hydraulic or mechanical drum drive. A modular system for setup, material feed, discharge and controls offers numerous options for almost any requirement.



SCREENING MULTISTAR SE

Depending on requirements, a Multistar star screen is used to generate two or three fractions. The overlengths from screening are fed back into the shredder by a conveyor. The desired particle size can be obtained simply by adjusting the rotational speed of the star shafts.



FE/NE-SEPARATION

Metallic contraries are not desired in the output product. An overband magnet pulls ferrous metal items out of the shred stream. It is installed in the line of material flow for maximum effectiveness. Another option is the addition of an eddy flow separator to remove non-ferrous metals.

PRACTICE

STARS AREN'T JUST IN THE SKY



Large wheel loaders welcome! The hopper of the Multistar L3 holds seven cubic metres.

For precise screening of wet, fibrous materials, A. W. Jenkinson Forest Products, the UK's leading specialist for forestry products, looks to Komptech.

"We use every bit of a tree" is the motto of A. W. Jenkinson Forest Products. Together with its associated partners, the recycling company process over 3.5 million tonnes of log wood, chips, sawdust, bark and green waste. Thus, waste and residual wood from forestry, sawmills, woodworking and demolition finds its way to users. With its fleet of over 700 vehicles, the company transports raw materials from all over Great Britain to one of the recycling sites located throughout the country.

THE STAR SCREEN MAKES THE DIFFERENCE

In order to improve the screening of wet, sticky material, the company decided to purchase a Komptech Multistar L3 screener. Production and Operations Director Richard Errington explains: "The Multistar closes the last phase in biomass processing. It separates the material into three size fractions. At an annual workload of 44,000 tonnes, high availability and constant throughput, even with hard-to-screen biomass, are of enormous importance, adds Jenkinson.

It was the worldwide high reputation that prompted to invest in the new machine.

Richard Errington

It was not least the worldwide high reputation of Komptech's star screens that prompted the company to invest in the new machine. Errington says, "With the Multistar L3 we made a decisive improvement in the work process.

LEADING IN STAR SCREENING

Komptech star screens are among the highest-performance separators for organic waste, because they reliably maintain the set grain size regardless of

how damp the material is. One of the reasons is the patented cleaning system, which uses cleaning fingers to keep the screen gaps unobstructed during operation. The Multistar L3 has a number of innovative features that predecessor models did not. This includes a design that makes maintenance considerably simpler.

The screen decks are built as cassettes, and allow fast, flexible grain size changes. Thanks to the modular design, underbody, feed dosing container and wind sifter can be individually adapted to customer needs.

A SERVICE PARTNER NEARBY

It wasn't just Komptech's machine quality, but also the service quality provided by its distributor John Hanlon & Co. Ltd. that sealed the deal for the Multistar L3. Richard Errington completes, "Hanlon's sales rep Simon Burrow knows the Clifton Moor site very well, and recommended a machine version for us that was idea for our needs. Plus, if repairs are needed the nearest Hanlon depot is just 40 minutes away." They're convinced it's the ideal situation at Jenkinson, which for years has relied on Komptech compost turners, shredders, and drum and star screens.

A.W. Jenkinson
FOREST PRODUCTS



GREAT BRITAIN

A.W. JENKINSON FOREST PRODUCTS
www.awjenkinson.co.uk



With 40 percent more screening area, the extended coarse screen deck is ideal for screening biomass. For transportation the extension is folded down.



PRACTICE

PASSIONATE ABOUT SOIL IMPROVEMENT

Biomass processing the Komptech way. When necessary Feger rents a Multistar L3.

At Feger Umweltservice (environmental service) they already knew the Crambo well from years of work with a subcontractor. So when it came time to start doing their own green waste preshredding, company owner Michael Feger invested in a Crambo 5200 direct, Komptech Certified Used.

"In our region with its mostly sandy soils, one of the most important jobs in agriculture is the long-term improvement of soil through targeted composting. Compost is a useful organic fertilizer for maintaining humus content and soil structure," reports Feger. As young as 16 he got interested in the subject of compost. After apprenticing in a recycling plant and attending technical school with a concentration in environmental protection, in 2006 Michael Feger joined the family agricultural business

in Wegberg. Step by step that gave rise to the green disposal and compost company "Feger Umweltservice."

SECOND HAND, FIRST CHOICE

When Komptech Sales Manager Tim Sudahl stopped by in May 2020 to suggest to the young entrepreneur that he consider buying a used company-certified Crambo 5200, the timing was perfect. "The shredder was in great shape and the value for money was right.

We do our job with passion, and people feel like we take good care of them.

Michael Feger

That let us cover our range of services with a manageable investment risk. I had already seen what the Crambo can do technically at a subcontractor," explains Feger. Tim Sudahl adds, "we sold the Crambo as a 'Komptech Certified Used' machine. That means we inspect all the components and make repairs where necessary. The purchaser gets a warranty with it."

LOW SUSCEPTIBILITY TO FAILURE

Price isn't the only thing Feger looks at when investing in machines. He also needs them to be robust, breakdown-resistant and user-friendly. "We want to be able to do smaller repairs in our own workshop, and Komptech machines are designed to allow that. And then the

spart parts availability makes a difference," he says. With Komptech he feels like he's in good hands in this regard. "Great customer contact, reliable service, good parts stocks," is his assessment after a year with the new used machine. He specially emphasizes on the reliability of the machine. The throughput capacity of the Crambo 5200 - cumulated from all operating locations - is between 40 and 48 tonnes of green waste per hour. He uses a screen basket with 220 x 150 mm holes.

OPTIMISTIC ABOUT THE FUTURE

"Our volume keeps increasing, because people keep recommending us," says Feger with satisfaction. Customers include large municipal disposal companies as well as one-man cemetery gardeners. This green disposal company's seven-person team has an open ear for each one. "We do our job with passion, and people feel like we take good care of them," says 35-year-old Feger with pride. He sees an increasing need in his business for solutions that separate out plastic film, and is keeping an eye out for the right machine. He says "I'd like to see a Hurrikan wind sifter in operation."



GERMANY

FEGER UMWELTSERVICE

www.feger-umweltservice.de

As a service provider in the disposal and recycling industry, **Feger Umweltservice** processes green waste for municipal and private companies, as well as private households. Its core competence is the mechanical preparation of biomass for the further value-creation processing chain. This includes compost production in its own rotting area, and the production of soil, mulch and organic fuels. Service offerings include shredding and screening, as well as agricultural compost spreading and application.

From family agricultural business to compost producer – a logical development for Michael Feger (middle) and his team.

PRACTICE

GIVING GREENERY BACK TO THE EARTH



A green family operation: Gina Ackermans and Guy Kerkhof (right) with daughter Hanne and son-in-law Stijn Palmans (left)

Gina Ackermans would rather make substrate than fuel. To her, greenery belongs back in the earth, to close the natural cycle. Together with her husband Guy Kerkhofs she runs green cuttings processor Roosen Borgh in Riemst, Belgium. 20 years ago this family-owned company set out to specialize in the production of quality compost, bark mulch and chips. A Komptech Crambo and two Axtors take care of the shredding and chipping.

Roosen Borgh's 2-hectare site is surrounded by fields and is located right on the border between Flanders and Wallonia. In earlier centuries the sedimentary stone marl was mined near here. The abandoned mine shafts were later used to grow edible mushrooms. "The compost for the mushrooms was prepared at the same site where we now make our compost," reports Gina. That came to an end when the tunnels collapsed with multiple fatalities in 1958. Until 1998 Jean Ackermans, Gina's father, made compost for other mushroom growers, but his license expired and was not renewed. Building on his experience, Gina and her husband Guy Kerkhofs founded the Roosen Borgh company in 2003. While

searching for new business opportunities they met Bruno de Winter, an established name in the compost business in Benelux and a Komptech customer. After touring his operations, Guy and Gina knew the direction they wanted to take with their new company.

EXTREMELY LOW FINES CONTENT

"The market for compost is very good. In our area, demand is higher than supply," says their daughter Hanne Kerkhofs. She and her parents want to make as many products as possible from the green waste they receive. The remainder is processed into mulch or RDF. Most of what Roosen Borgh gets as feedstock is limbs and shrub cuttings, grass and

rootstocks from the region, totalling about 20,000 cubic metres annually. They shred the material, compost it in open windrows, and then screen it. Their compost operation is VLACO-certified, an independent quality seal in Flanders for compost products that can be used in organic farming.

They bought their first Crambo for shredding from Pons Equipment in 2014, and now have their third. In order to have a machine that could both shred and chip, in 2017 Gina and Guy added an Axtor 6010. "The results were great but we wanted modifications for a few functions," says Stijn Palmans, Hanne Kerkhofs' husband, who is in charge of the machine park. Together with Pons Equipment he passed the suggestions on to Komptech, where they were received

favourably. "We now work with the Axtor 4510, which is much better for our needs. We're also very happy with the service we get from Pons and Komptech," says Stijn. Roosen Borgh is particularly satisfied with the high throughput of the Axtor and the "very good quality of the chips." The low fines component in the output is the machine's greatest strength, according to Stijn. It can process up to 250 cubic metres of bark per hour, with up to ten percent less fines than with comparable machines. With green cuttings it can process up to 200 cubic metres per hour using a medium screen basket. Hanne Kerkhofs: "The output quality of the Axtor is perfect." The company has since purchased a second Axtor.



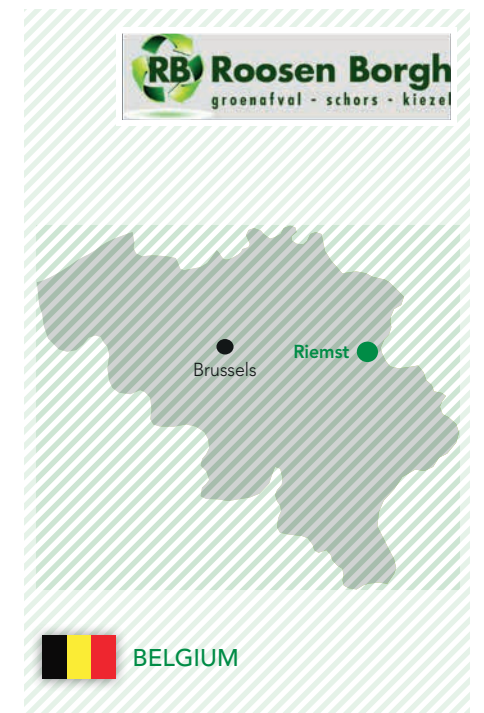
A robust duo for rootstocks, used wood and green cuttings with possible contraries: Crambo as pre-shredder and Axtor as post-shredder



The Axtor has a 4.5 meter cone height, making direct filling of trailers possible.



Generous feed area with low edge – the Axtor is compatible with almost any loader.

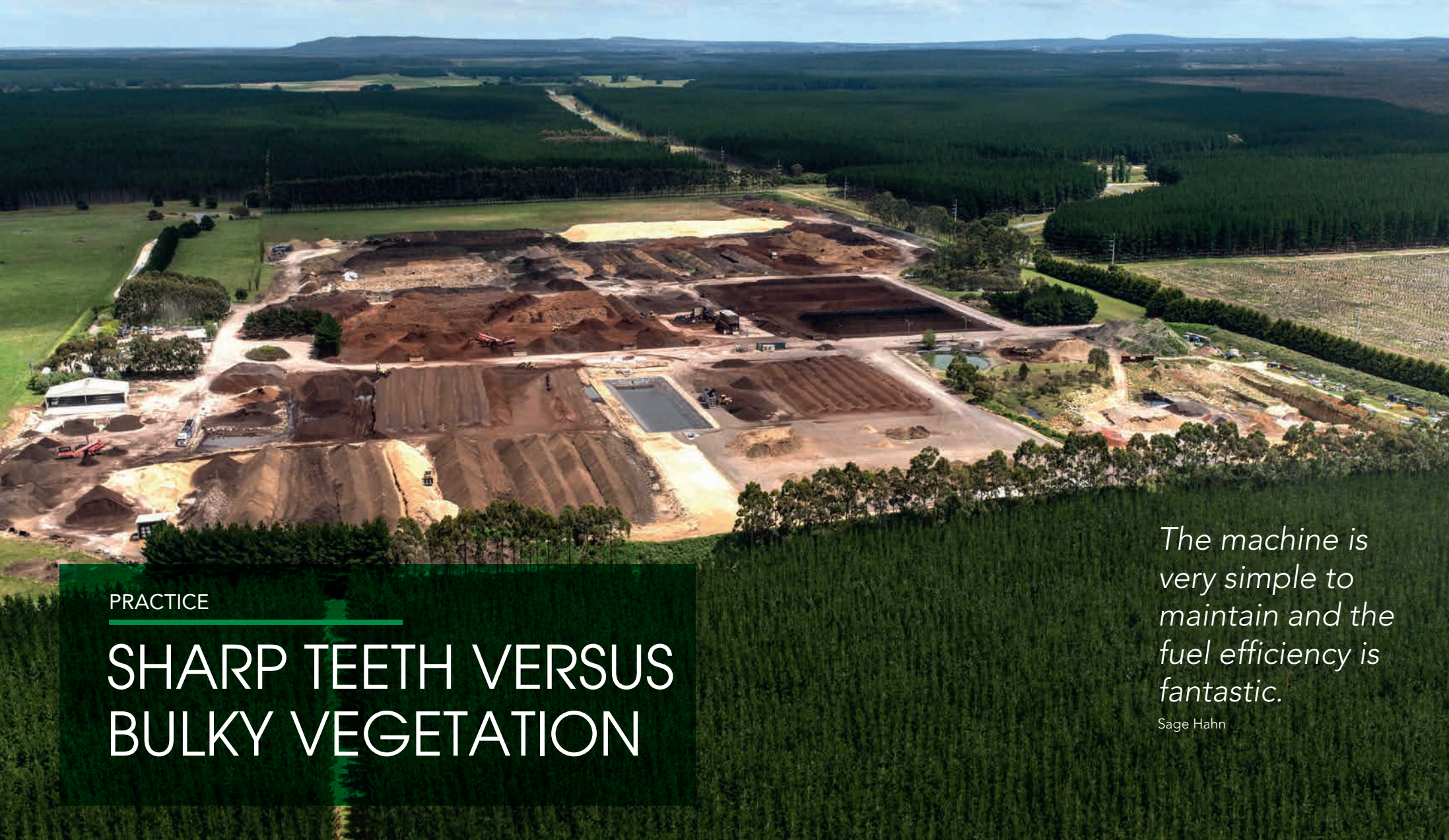


ROOSEN BORGH
www.roosenborgh.be

Roosen Borgh is a compost producer in Riemst, Belgium. The family company was founded in 2003 by Gina Ackermans and her husband Guy Kerkhofs, and makes compost certified for organic farming, as well as bark mulch and wood chips. They also sell garden pebbles and rolled turf. As a service provider, Roosen Borgh also does contract chipping. The company has twelve employees.



Bark processing is something the Axtor happens to be very good at, with high output and optimum chip sizes.



PRACTICE

SHARP TEETH VERSUS BULKY VEGETATION

The machine is very simple to maintain and the fuel efficiency is fantastic.

Sage Hahn

Self-sufficiency from gardening is more and more popular in Australia, not least spurred by the Covid 19 pandemic. It sometimes even happens that manufacturers and wholesalers on the red continent groan under the sharp rise in demand for gardening products. But not Van Schaik's Bio Gro. This compost and landscaping specialist produces nutritious substrates from green waste and waste wood, with the help of a Komptech Crambo.



There's nothing quite like it – a look at the shredding area of the Crambo.

"The Crambo is the best machine we know of for processing green waste. It's extremely robust, and shreds all the input handily and dependably, even if there are contraries in it. The machine is very simple to maintain and the fuel efficiency is fantastic," says Sage Hahn, Operations Manager of Bio Gro in Melbourne. At its facility at the edge of town, this family-owned company processes the green cuttings and waste wood of the Knox and Whitehorse local government areas, before sending the shredded material on for composting. This is part of the Metropolitan Waste and Resource Recovery Implementation Plan, with which the state of Victoria helps municipalities return organic material to the natural cycle.



Bio Gro Operations Manager Sage Hahn is excited about how efficient the Crambo is.

OVERTIME FOR THE CRAMBO

"Bio Gro works through about 50 thousand tonnes of green cuttings and waste wood each year. We process it into 35 to 40 thousand cubic metres of premium substrate for home gardeners, landscapers and nurseries," says Sage. To keep up with the constant material flow, the low-speed two-shaft shredder runs almost continuously. The Operations Manager had not expected this level of throughput before purchasing the machine from Komptech sales partner CEA. CEA Product Manager Simon Humphris explains why the Crambo is so well suited to this kind of task: "The counter-rotating drums and the special shape of the teeth produce a constant feed that even bulky planks can't stop."

INDIVIDUALLY DEFINED GRAIN

As the drums turn, they shred the material piece by piece. The drum teeth push the feedstock against the blade and the screen baskets underneath it with a cutting and splitting effect. Humphris: "The shred leaves the Crambo only when the grain matches the hole size of the screen basket. The degree of shredding can be adjusted flexibly." Adherence to a given grain is important for the processes at Bio Gro, since the shred is trucked directly from the Crambo to the composting facility.



VAN SCHAIK'S BIO GRO
www.biogro.com.au

Over 40 years ago company founder Hans van Schaik started making plant substrates out of the organic waste from pine plantations. Today, **Van Schaik's Bio Gro** makes and sells a wide range of plant soils and gardening products, and is an innovation motor for the waste industry and landscaping in South Australia.

SERVICE CLOSE TO THE CUSTOMER

Bio Gro is very happy, not just with the machine, but also with the professional advice and dependable service provided by CEA. Sage says, "CEA's technicians trained our machine operators on-site. That's very important, because only if they have a full understanding of how the Crambo works can they get full performance out of it." There aren't many companies that offer this level of training. "In addition, spares are always readily available from CEA, which keeps our downtime low," adds Sage.

Neil Pollington in the turner's cabin:
"The Topturn is our process accelerant."

PRACTICE

GREEN POWER

Each year, UK company Severn Trent Green Power (STGP) turns half a million tonnes of organic waste into green energy. That's enough to power 50,000 homes. For three years now, the machines have been green too.

As one of the largest combined food waste recyclers and composters in the UK, Severn Trent Green Power (STGP) provides food waste recycling services to waste collection businesses and over 50 local authorities. Today, they do this with machines from Komptech. "The fleet that we were operating before was aging and getting breakdown-prone," relates Operations Director Neil Pollington. Replacing it provided the company with an opportunity to move towards a more mechanical process. As an industry leader in machinery and systems for the mechanical and mechanical-biological treatment of solid biomass, Komptech's product range includes over 30 types of machines covering the process steps in waste handling, such as shredding, separation and biological treatment.



GETTING THE PLASTIC OUT

The relationship between the two companies began in 2018, when STGP initially bought a Hurrikan S mobile windsifter that removes light plastics, film and foils from screened overflow, with a separation efficiency of up to 95 percent. STGP uses the Hurrikan S at their South Mimms site, which has an annual throughput of up to 50,000 tons.

With the Hurrikan from Komptech the process is definitely safer, cleaner and more efficient.

Neil Pollington

"One of the things that really surprised me when we started to use the Hurrikan S, was that due to the integrated magnet roll and roller separation we saw quite a lot of stone and metal being captured, in addition to a high level of plastic," says Pollington, adding that formerly such oversizes had been sorted out by hand. That is now a thing of the past. "With the Hurrikan the process is definitely safer, cleaner and more efficient," he says.

MORE IS BETTER

This gave Pollington the confidence to invest further in Komptech. "I then purchased a second one for Ardley, which is our other in-vessel composting site, so basically replicated the same process. We could see the benefits clearly. Then from there we purchased two Crambo low-speed shredders." This was preceded by a demo of a Crambo 5200 direct at

>>



Windsifting by Hurrikan is an important part of the process.

STGP's Wallingford site. Pollington ran it against his existing high-speed shredder to compare the output, and decided to switch to the Crambo after finding fuel savings and increased throughput with higher-end product yields.

Previously, the high-speed shredder would be running all day to get through the amount of waste that the Crambo can do in maybe five, six hours.

Neil Pollington

There were other benefits as well. "Previously, the high-speed shredder would be running all day to get through the amount of waste that the Crambo can do in maybe five, six hours. And the Crambo just opens plastic bags instead of tearing them to bits like the high-speed shredder did. That means they can be captured again by picking."



Mobile or stationary, the Crambo delivers the right throughput and output quality.



BIGGER THINGS

STGP also invested in Komptech's Topturn X63 Track, a compost windrow turner with an intake width of up to six metres and a turning capacity of 4500 cubic metres per hour. "Again, Komptech GB organised a demonstration for us so we could see an X63 in operation on a composting site," says Pollington. The site managers were impressed with how it worked. "I think the key thing to me was making sure it could fit into our operation. Could it get over our windrows, which are slightly bigger?" The on-site test showed that it could. The Topturn X63 is now at work at STGP increasing the windrows' oxygen content and fine compost yield.

No fear of large windrows – the Topturn X63 can handle cross-sections up to eight square metres.

THE KEYS TO A PARTNERSHIP

Since starting to use Komptech machines, STGP has seen an increase in odour control and a reduction in odour complaints, something that the Environmental Agency also noted during site visits. Most importantly, the investment in Komptech has allowed STGP to move from a manual-based to a more mechanical operation, which has boosted efficiency. Komptech GB is a driving force behind all of this. Pollington recalls that as work with the initial Hurrikan S began, Komptech GB rolled out a training programme which STGP has since incorporated into their own training plans. As well as providing training to operators at STGP, Komptech GB has ensured that their staff are always available to respond to any enquiries quickly. For Pollington, this support has been key to the continuation of the partnership. Very much in the interest of green power!



SEVERN TRENT
GREEN POWER GROUP LTD
www.stgreenpower.co.uk

CUTTING-EDGE COMPOSTING



Freestate Farms uses a Crambo for shredding and homogenizing organic waste.

Nestled in the serene countryside just outside of Washington D.C. lies Prince William County, Virginia. The area is home to historical Civil War battlefields, miles of scenic farmland, and one of the only advanced aerobic composting facilities in the country: Freestate Farms, LCC.

Since 1994, the Balls Ford Road Compost Facility in Manassas, Virginia has been processing and composting organic waste from surrounding communities. Over the years, as demand for green waste recycling continued to grow, so did the need for additional space and a way to improve quality. Developing a new sustainable, growth-ready facility became a high priority for Prince William County. A Public-Private Partnership (PPP) contract was awarded to Freestate Farms to design, finance and construct a new composting facility that would process

the growing supply of organic waste and represent the state of the art in sustainability.

LARGE PROJECTS TAKE TIME

Behind Freestate Farms are two experienced recyclers whose skillsets complement each other very well – Denton Baldwin and Doug Ross. At the time, Baldwin owned and operated a successful Virginia-based business that supplied healthy, local crop products to

area farm-to-table restaurants. To meet the demand for high-quality soil for his farm, in 2012 he had founded composting company Freestate Farms. When he met Ross, who is now the company CEO, Ross already had significant knowledge and expertise in leveraging organic waste to produce clean energy. Soon after, Denton and Doug succeeded in winning a public solicitation for an opportunity to work with Prince William County to expand the area's existing compost facility. Work started in 2019 with the planning and construction of a 14-bunker aerated

static pile composting system with aerated curing pads. The new plant includes a waste processing line with a Komptech Crambo, manual sorting line and pre-compost material mixer.

We work hard to consistently create a finished compost product that exceeds consumer expectations.

Richard Riedel

Operation of the new composting system began in July 2020 and since then has been ramping up to the facility's estimated capacity throughput of around 80,000 tons per year. The next phase of the project includes additional advanced aerated composting that will double the site's capacity for recycling food and yard waste, and add renewable energy generation (both electricity and heat) that will offset the facility's own demand, and indoor organic produce growing (using on-site generated compost products and renewable energy) for sale to the local community. Phase Two construction

is slated to begin later in 2021 and expected to take 12-15 months. "We are proud to have completed Phase One of this new facility, and built it around three main principles," said Douglas Ross, Freestate Farms' CEO. "First, we wanted to create a high-quality compost by meeting the local community where it is today and where it is going over the next 5-10 years. Second, we wanted to promote a working environment of safety and efficiency. And finally, we wanted to minimize the region's and our own environmental footprint."

BETTER COMPOST WITH THE CRAMBO

Freestate Farms works hard to consistently create a finished compost product that exceeds consumer expectations. "We look to create a top-of-the-line compost that exceeds testing criteria. There is a science, but there's also an art to it," says Richard Riedel, Freestate Farms' Director of Marketing. "On a daily basis, we don't always know what type of food we might receive – it could be a bunch of kitchen scraps or a truckload of turkeys – but we need to process it quickly. Our new facility lets us identify and process these variable incoming food scraps into a balanced, healthy mix for the composting process."

>>





Doug Ross, CEO of Freestate Farms, inspects the odour filtering system of the new composting plant.



Several vehicles can dump their loads at once in the new receiving area.



Together with our partners, we've created new and tailored best practices for composting organic materials.

Doug Ross

Customers – individuals, county and community partners, and contracted haulers – from around the Washington DC metropolitan region drop off compostable waste materials. Freestate's tipping area is designed with enough space for multiple trucks to unload quickly and safely. The next step in the process is to reduce the feedstock materials to a uniform size. "At this stage, some composting facilities use high-speed grinders, with the hope of processing as much material as fast as possible," notes Doug Ross, Komptech's Washington-area Sales Partner. But organic waste, especially food waste, typically contains non-compostable materials like plastic and glass bottles. When these materials are sent through a high-speed grinder, they are reduced to sizes usually smaller than 5cm minus. Riedel: "Particles this small end up decreasing the airflow in the compost piles and result in a less than healthy finished compost product. So we chose a low-speed shredder. Depending on the configuration, the Komptech Crambo produces coarser particles to approximately 15 cm minus. These larger particles make contaminants easier to remove, and help provide porosity and promote better airflow throughout the compost pile."

The pre-shredded feedstock material is next sent through a three to four-person picking line equipped with a powerful cross-belt magnet to remove metals

The shredded and mixed feedstock is composted on ventilated rotting pads.

and an overhead vacuum system for film plastic. "We believe that the best compost can be made when you start with clean incoming material, versus trying to remove those contaminants at the end of the process," says Riedel.

THE MINIMUM ECOLOGICAL FOOTPRINT

Keeping a small environmental footprint while adhering to high safety standards was a top priority for Freestate Farms when they chose their equipment solutions. With lower energy consumption and maintenance costs than most grinders on the market, choosing the electric Crambo shredder from Komptech Americas was a no-brainer for the team. Riedel: "We selected the Komptech shredder because it allows us to create a high-quality compost effectively and safely from our incoming material."

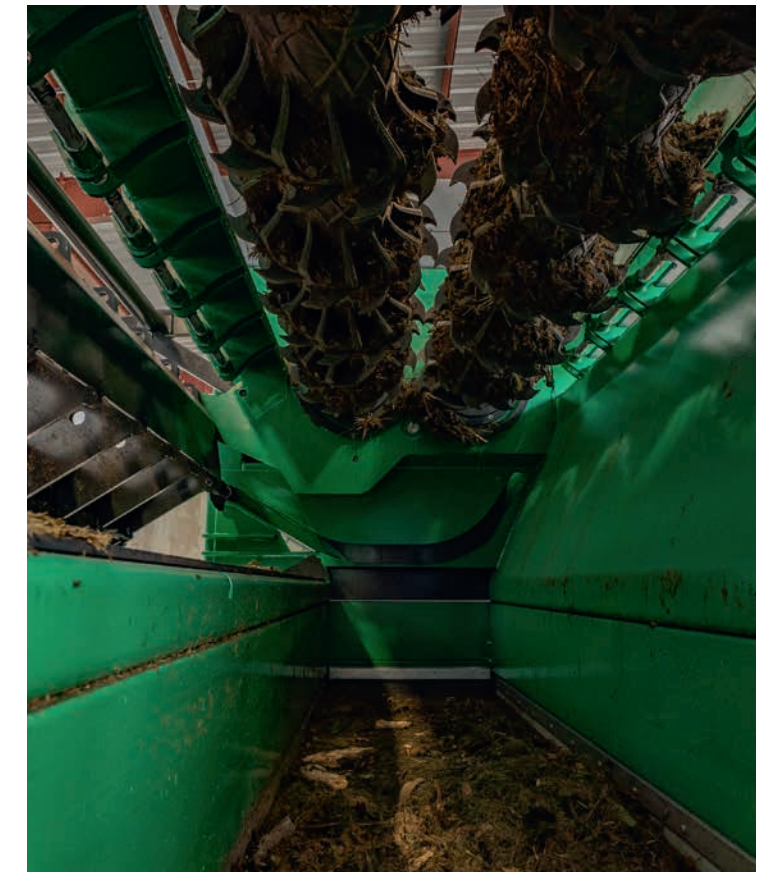
The mixer is the next step in Freestate's composting process. It blends the pre-

shredded feedstock materials uniformly before composting and adds recycled leachate if additional moisture is needed. Mixing helps circulate the carbon and nitrogen materials evenly, to promote faster decomposition. The material is moved to one of fourteen 230-square-metre bunkers for around 15 days, and then spends the next 30 days in long windrows with positive air distribution. Throughout the entire process, digital sensors in the composting material provide continuous temperature measurement and automatic system adjustment. Leachate is collected in a pond where it is available for moistening the compost if necessary.

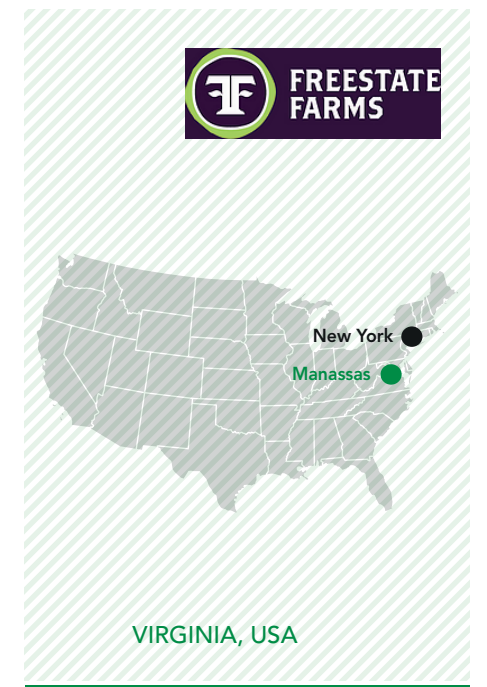
"Together with our partners, we've created new and tailored best practices for composting organic materials and, through our upcoming ability to generate renewable energy and grow local organic produce, we're expanding what people can and should expect from a composting facility," says CEO Doug Ross.



Shredding with the Crambo gives the material a coarse structure that makes it easy to subsequently remove contaminants.



Contaminants are removed in the sorting line prior to the composting process.



FREESTATE FARMS, LLC.
www.freestatefarmsva.com

PRACTICE

ON THE JOB IN SPAIN



UTE TES in Catalonia is working with a new turner. The Topturn X5000 can easily handle the conditions in closed halls.

A Topturn X5000 turns the windrows at the municipal waste treatment centre of El Segrià in Catalonia. Operator UTE TES chose the machine based on good references provided by Bianna Recycling and Komptech.

This disposal centre in the north of Spain has a capacity of 60 thousand tonnes of regional unsorted household waste and 15 thousand tonnes of organic waste. The facility is operated by a coalition of the companies Romero Polo and Valoriza Servicios Medioambientales (UTE TES) on behalf of the municipality of El Segrià. In conjunction with the construction of a new waste treatment system, the existing turner was replaced by a more robust and efficient Komptech machine.

PERFORMANCE AND RELIABILITY UNITED

Victor Romagosa, project director at UTE TES, explains: "We saw the Topturn in action at several reference companies. What made the difference for the

decision to buy was the low susceptibility of the Topturn to damage. This gives more process reliability and

What made the difference for the decision to buy was the low susceptibility of the Topturn to damage.

Victor Romagosa

productivity for composting our organic waste." The Topturn's very good cooling system was also quite important for UTE TES, since it allows dependable operation at high ambient temperatures.

The Topturn X5000 self-propelled turner is designed for standard five metre width windrows. Its extra-large turning drum and powerful hydraulics give high throughput and excellent mixing of the compost material. The frame and plough blades are very tough. Depending on conditions at the disposal facility, the machine is available with a wheeled or tracked chassis. UTE TES decided on the tough tracked chassis, whose open design makes cleaning very simple.

UNCOMPLICATED MAINTENANCE AND CLEANING

The panels on the left and right of the Topturn's cabin can be lowered with just the press of a button. This gives roomy platforms from which all maintenance work can be done in safety and comfort.

"This will make a definite reduction in downtime for repair and cleaning," says Victor Romagosa. The Komptech turner also won points at UTE TES for its ease of use compared to competitors. "The machine is intuitive to operate, and permits simple tool maintenance. That's an important factor for increasing the efficiency of the facility," notes Romagosa.

A GOOD PARTNERSHIP

Romagosa is also full of praise when he talks about the relationship with Komptech's Spanish partner Bianna. "The people at Bianna do an outstanding job. Sales rep Manel Llonch knows the business very well and has always given us excellent advice." With 30 years of experience in waste disposal and treatment, Bianna Recycling has extensive knowledge in composting, and offers custom-tailored services to its clientele.



UTE RECICLATGE SEGRÀ
www.reciclatgesegria.com



The generously-dimensioned 1200 mm diameter drum gives optimum mixing.

WE ARE ALWAYS ON CALL



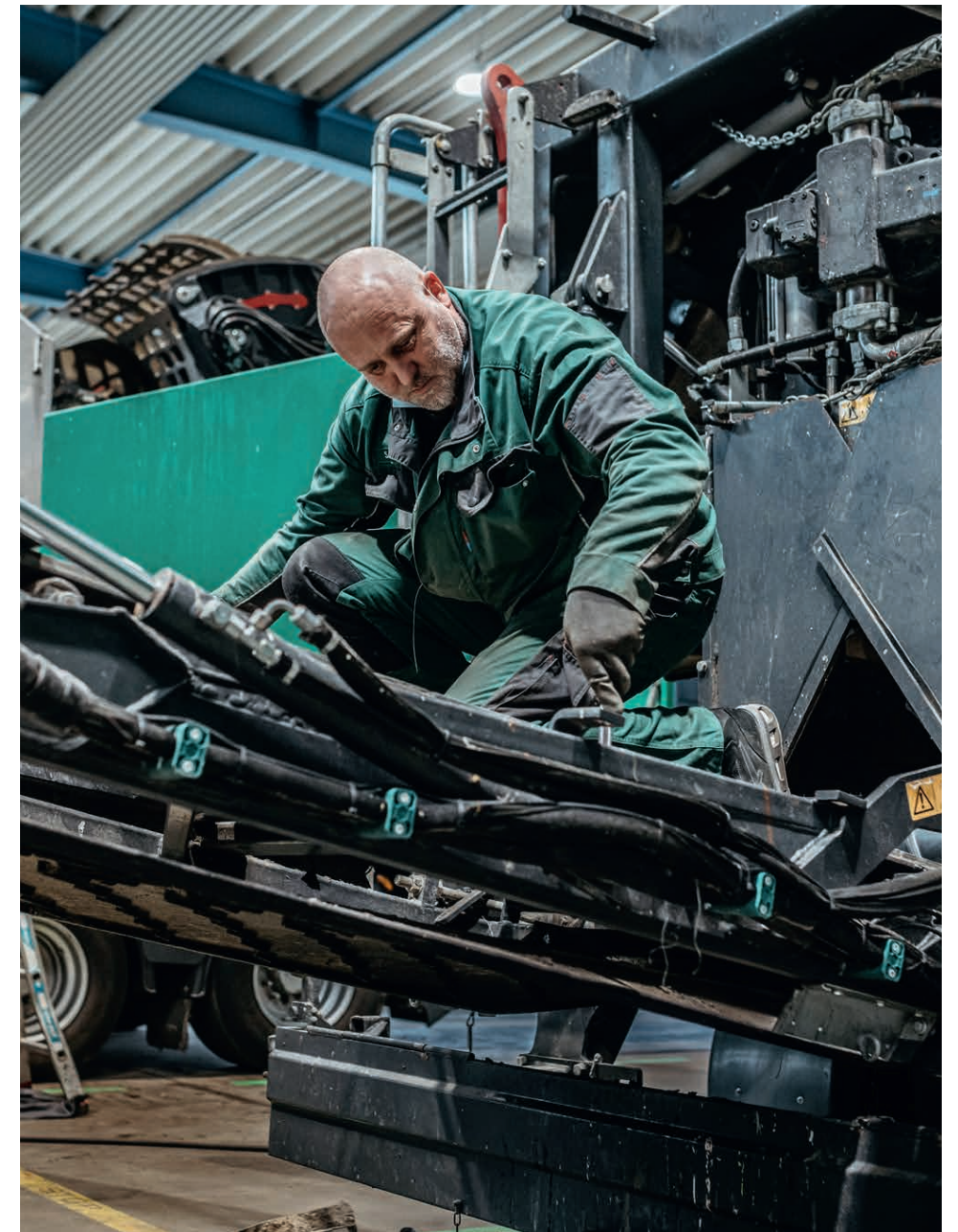
Sharing the varied tasks in Customer Service: Joachim Reitbauer (Head of Product Support, left) and Wolfgang Prietl (Director Service Centre)

When a customer in Austria has a problem with a Komptech machine, he puts in a call to Frohnleiten. This romantic little town in southeastern Austria is the home of Komptech Headquarters, and also the Service and Rental Centre for the entire country. But that's not all – since the expansion of the site in 2019 it now also houses all of the company's in-house Research and Development, and its worldwide Customer Service Centre, under one roof.

The opportunity to add capacity to the Frohnleiten location, which has been in use since 1997, was a stroke of good fortune for Komptech. Due to a bankruptcy, an adjacent one-hectare site with a 3000 square meter manufacturing hall and office building became available. We bought it, cleaned it up and modernized it. This enabled us to expand Customer Service and the Used and Rental Machine department, and also move our Research and Development Centre there.

SERVICE AND RENTAL CENTRE FOR ALL OF AUSTRIA

The Service Centre is led by Wolfgang Prietl, who prior to working there gained extensive experience in Field Service. His team is responsible for the maintenance and repair of customer machines, refurbishing used Komptech machines and maintaining the rental fleet. "We refurbish our used machines to strict standards so that they can bear the 'Komptech Certified Used' warranty. Every step is logged," explains Prietl. Maintenance and care of the rental machines likewise follows a defined "Check-in Protocol."



Development and maintenance of the machines demands specialist mechanical and electronics knowledge.

For example, if a machine comes back from rental use, the technicians in Prietl's team inspect the wear parts and check whether repairs are necessary. The machine's outward appearance is also brought up to par in the 200 square meter washing hall at the Frohnleiten site. Once everything is completed, the machine is checked in digitally in Komptech's RENT! app. That means it is once again available for rental. Prietl: "Our rental fleet comprises over 60 machines." And demand is rising. Komptech's rental offerings are used

more and more frequently by customers who know that they will need a certain machine only for a limited period of time. "It would be difficult for us to achieve this quality and speed without digital tools," says Prietl.

DIGITAL TOOLS FOR CUSTOMER SERVICE

Joachim Reitbauer confirms the importance of Komptech's apps for improved internal and external processes.

>>



As Head of Product Support, with his 19-person team he's responsible for supporting Komptech Service staff and partners the world over.

This includes the Field Service technicians as well as the Service Centre in Frohnleiten. Reitbauer: "With the Connect! app we – and the operator – see every detail of the machine without having to be on site. In real time. If there's a problem, the initial trouble-shooting can take place

If there's a problem, the initial trouble-shooting can take place online, and the technician can prepare for the service call in advance.

Joachim Reitbauer

online, and the technician can prepare for the service call in advance." He contributed his experience in Customer Service to the development of the Connect! app. For him and his team this digital tool is a

real boon for helping service engineers on the other side of the globe do their job well.

For some time now field technicians have also had another digital tool, the Assist! service information system. It runs on a smartphone and lets the user enter terms, just like in a search engine, anytime and anywhere. An algorithm returns the appropriate information for possible problem solutions, including explanations of error codes and repair instructions. Spare parts lists, operating instructions and circuit diagrams can also be accessed with it. "To create Assist! we



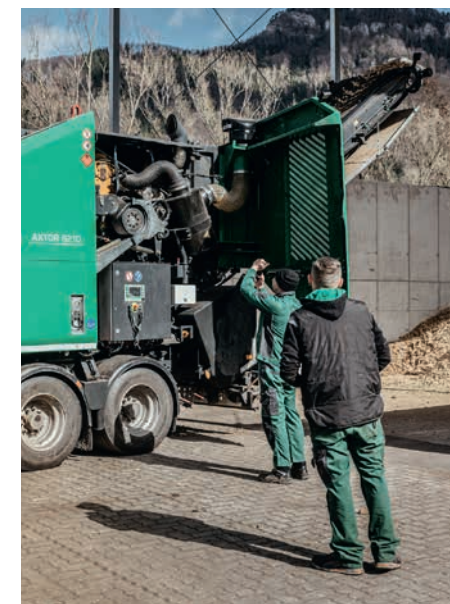
Australia in the morning, Europe at mid-day, America in the afternoon – Claudia Hofbauer travels the world on the phone.

digitalized many different sources and formats, like circuit diagrams and training materials, and entered them into an intelligent system. It was a lot of work, but it was worth it," says Reitbauer with pride.

KOMPTECH SERVICE INTERNATIONAL

Wherever a customer or service partner might be, if there's a problem they can call International Product Support in Frohnleiten and get help. "We want our customers to be able to focus on their business. We take care of problems with

Together in one place: Customer Service, Rental Business and Research. This naturally creates synergies.



Smaller functional testing can also be done right on site.

the machines," says Customer Assistant Claudia Hofbauer. Like her colleagues, she fields calls from around the world. By mouseclick she accesses data about the specific machine in Connect! and contacts a service technician where necessary. "In my job you need to be able to handle calls by people who are under a lot of pressure. Often they're having an issue with a machine that is urgently needed," she explains. In Product Support old hands work side



Four assembly bays are available in the workshop.

by side with young colleagues. And according to Hofbauer, they're always looking for new team members.

RESEARCH AND DEVELOPMENT

The expansion of the Frohnleiten facility let Komptech move its Research and Development Centre from St. Michael in Upper Styria back to headquarters. This helps the findings from projects

KOMPTECH GMBH



and testing flow into the organization faster, accelerating the development of products and solutions. And when prototypes are being developed it makes a lot of sense to let Service colleagues take a look at the machines. That way the development team gets instant feedback on things that might be too complicated or too involved for practical use. The Komptech Research Centre is tasked with creating the optimum conditions for "green" innovations.

DIGITALIZATION

NEXT STEP: CONNECT! 2.0 AND CONNECT!PRO

Our Condition Monitoring System CONNECT! 2.0 just launched. With a fresh appearance, enhanced usability and new functions, the app delivers useful information for further boosting the performance of Komptech machines. What's more, with CONNECT! PRO we're also launching a professional version with detailed machine data analysis functions.



INNOVATION

FINER SCREENING

New challenges in composting mean we need to up our game in screening technology. Conventional drum screening after rotting is not always enough to remove all contaminants, which are mostly plastic. So our Test Department is testing a new prototype. It's based on a flip-flow screen, and can screen at 10 millimetres and significantly smaller.



CSR

WE TAKE RESPONSIBILITY

"Sustainability and social responsibility are essential components of our company DNA," said Heinz Leitner, CEO Komptech GmbH. As specialists in environmental technology, and from conviction, we want to meet our responsibilities to the environment, people and society. Our first CSR report represents clear documentation of this attitude. It presents all of our important corporate responsibility activities in 2020. In the medium term Komptech also intends to become a CO₂-neutral company, and we're hard at work on a strategy for reaching this goal.



SALES



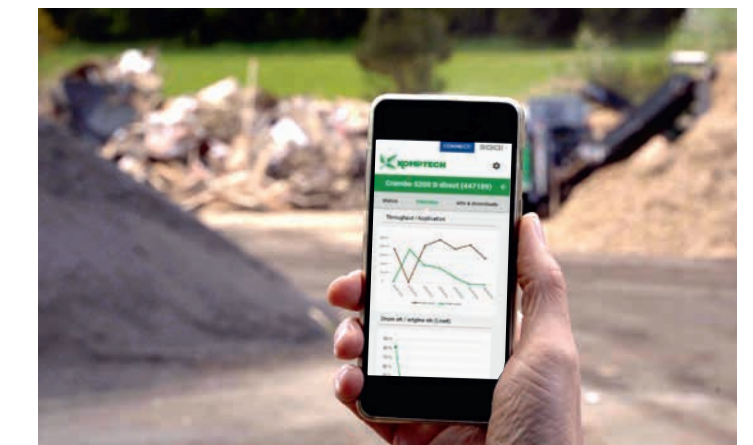
"E" FOR EXCELLENT: PARTNER DAYS AS E-DAYS.

From 22 to 24 June we played online host to our worldwide partner network, because pandemic or not, cancelling the Partner Days was just not an option for us. Without further ado we set up a film studio and held the 3-day event digitally as "e-Days," full of information about new Komptech products and innovations. To enable our partners in different time zones to attend easily, all program segments were presented twice, once in the morning and once in the afternoon. See you in 2023, hopefully in person, at the next Partner Days in Frohnleiten, Austria!

INNOVATION

OPTIONAL THROUGHPUT METERING

With the throughput metering now available for all shredders we're taking the next step towards the smart machine. The output is measured by a robust volumetric measuring system on the discharge conveyor. The data is shown on the machine's display as well as the Connect! app. In Connect! it can be correlated with other key indicators like consumption and operating hours, to provide exact information on costs and economy.



SERVICE

ASK ASSIST!

ASSIST! is an online service information system that supplies Komptech service technicians with all the information they need for problem-solving, independent of time and place. Error code explanations, troubleshooting guides, spare parts lists, circuit diagrams, operating instructions and much more are accessible online. A news function ensures that everyone having to do with a certain machine model is always updated. Because that's our goal – with a Komptech product, performance and service always need to meet customer expectations

SPECIALIZED IN FLEXIBILITY



TERMINATOR xtron

GREEN WASTE

For even more versatile use there is now the new Terminator xtron. It has a newly developed V-shredding unit that is particularly versatile, and is suitable for all kinds of waste as well as wood and green waste.



WASTE WOOD



MSW



BULKY WASTE



WATCH VIDEO

Further information at: www.komptech.com
Or send a non-binding enquiry to: info@komptech.com

www.komptech.com