

KOMPTECH MAGAZINE

EDITION
02/2017



ANNIVERSARY
25 YEARS OF KOMPTECH

PRACTICE
A COMPANY WITH A HEART

INNOVATION
THE AXTOR 6010



AUGMENTED REALITY EDITION

LookBeyond!

INNOVATION



WE'RE EXPANDING YOUR REALITY

KOMPTECH IS EXPANDING REALITY WITH AN INTERACTIVE MAGAZINE.

The new Augmented Reality app opens up new possibilities and makes it possible to present our products in a whole new way. Experience videos, animations and 3D models, and put Komptech's machines on your screen.

1

With "Komptech LookBeyond!" you can see the machines in use.



Komptech LookBeyond!

GET STARTED!

Look beyond the printed content and get additional information.

1. Download and install the Komptech LookBeyond! app.
2. Start the Augmented Reality function by clicking the camera symbol.
3. Scan marked and numbered projects with the LookBeyond! eye to see additional information.





ANNIVERSARY

25 YEARS OF KOMPTECH



2

WE KNOW WHAT IT TAKES.



EDK / ZDK
Single- and double-axle
tipping trailer



DDK
Tri-axle tipping trailer



TDK
Tandem-axle tipping trailer

MEGAFEX
Universal spreader



3



GRAVIS
Heavy-duty dump tipper



FORTIS
Push-off trailer



MINIFEX / SUPERFEX
Manure spreader



ULTRAFEX
Manure spreader



Flexibility, efficiency and reliability are very important in agriculture. Farmtech products fulfil these criteria and help farmers get the job done right. We know what it takes: user-friendliness, consistent high build quality and long product life.



DURUS
Dump tipper

CONTENTS



Bart Descamps and Geert De Beule run Verko, a recycling company with a heart.



Komptech's Stefan Windisch in Japan this time.



Andreas Warnsted and Jürgen Epstein of the Rhein-Lahn waste processing centre with their new Terminator.

- 2 **INNOVATION**
KOMPTECH LOOKBEYOND!
Komptech is expanding reality with an interactive magazine.
- 3 **ANNIVERSARY**
25 YEARS OF KOMPTECH
We look back at 25 years of company history.
- 6 **INTERVIEW**
BUONE STELLINE - GOOD STARS
Irene and Luca Armani with Andrea Mazzon on the advantages of the Multistar S3.
- 10 **PRACTICE**
POLISH LUCK
Marian Olesiejuk is happy with his green machines.
- 12 **PRACTICE**
ON THE RIGHT PATH
Oswald Hackl is convinced that the future is in recycling.
- 20 **PRACTICE**
SHREDDING SAVES SPACE
How to reduce landfill volume with the Terminator 6000S.

PUBLISHER:

Komptech GmbH, Kühau 37, 8130 Frohnleiten, Austria
T +43 3126 505 - 0, F +43 3126 505 - 505,
info@komptech.com, www.komptech.com
Editors: Andreas Kunter, Joachim Hirtenfellner
Layout & graphics: Alexandra Gaugl
Photos: Komptech GmbH
Translation: Ralph Kirschner

Cover: Irene Armani, Armani Logistica srl

- 22 **PRACTICE**
A CUSTOM MACHINE
The Niseko-Kankyo company in Japan gets a custom-tailored Topturn.
- 24 **INNOVATION**
AXTOR 6010
Five reasons you'll love the Axtor.
- 26 **PRACTICE**
STRONG AS OAK
The Axtor helps Polish wood processor ZWD enter a new line of business.
- 34 **LAW**
RECYCLING ON THE MARCH
Recycling in the European Union - current status and outlook.
- 36 **ASK THE ENGINEER**
GOING BALLISTOR
System tech professional Gottfried Reither on the benefits of the Ballistor.
- 38 **PRACTICE**
A NORWEGIAN BENCHMARK
Kjetil Vikingstad of Geminor in Norway has made the switch to low-speed shredding. And to the new Multistar One.
- 42 **ANNIVERSARY**
MEETUP IN FRANCE
French Komptech partner Hantsch celebrates its 50th year.



INTERVIEW



4

BUONE STELLINE – GOOD STARS

When you think of stars in Italy, you might think of many things – musicians, actors, perhaps stelle pasta. At Komptech we naturally think of star screens. We asked two Italian customers separately about their views on the advantages of the new Multistar S3.

INTERVIEWEES:

IRENE AND LUCA ARMANI
Directors of Armani Logistica srl, Pieve di Bono (Italy)

ANDREA MAZZON
Technical Director of Biociclo srl,
Castiglione delle Stiviere (Italy)



Irene and Luca Armani, Directors of Armani Logistica srl, Pieve di Bono (Italy)



Andrea Mazzon, Technical Director of Biociclo srl, Castiglione delle Stiviere (Italy)

What is the market like for you right now?

IRENE ARMANI: The market is stable but there is plenty of competition. To be successful in this market over the long term, you have to deliver the best quality.

ANDREA MAZZON: The demand for biological compost is rising as less liquid manure is spread on fields.

How do you see the biomass market developing?

IRENE: In the beginning we delivered all our biomass to industrial users, but the competition is fierce in that business. So we started making high-quality biomass and advertising it regionally. Since then we have sold mostly to private individuals and smaller plants. We're a PEFC-certified company, meaning that our biomass is regularly inspected.

Our customers expect consistently high quality from us, and we can ensure this quality only if we use the right machines.

ANDREA: The quality demands placed on compost will rise. Soon we will have to look around for technologies that will help us improve our product. Customers don't want sewage sludge in compost any longer. >>



Irene Armani stands by her material.

What do you particularly like about the Multistar S3?

LUCA ARMANI: It's very compact but still has very good throughput. We generate a lot of biomass in a relatively small area. So our machines need to be mobile, and we need to be able to position them to save space. To get high-quality biomass from sawmill waste we need to separate out the fines as well as the overlengths. So we could really only consider machines that can make three fractions in one pass. We also tried drum screens, but they were much larger for the same throughput and could only screen two fractions in one pass. Luckily, Loris Princivalle of CGT knew just what we needed.

ANDREA: Komptech's Italian partner CGT demonstrated the machine for us. We immediately liked how compact it was, along with its ability to make three fractions. We had previously used a drum screen and actually planned to get another. But after the demonstration we decided differently. The Multistar has higher throughput than a drum screen of the same size, and maintenance costs are lower.



*Three fractions with one compact machine!
We liked that.*

Andrea Mazzon

Andrea Mazzon (left) discusses the situation in front of the Multistar S3.

*With the S3,
we can even screen
damp biofilter
material - a big
advantage over
drum screens.*

Andrea Mazzon

What improvements would you make to the machine?

LUCA: A trailer version would further improve mobility, and longer conveyors would let us pile output material higher.

ANDREA: We'd like to be able to screen the fine fraction a bit finer. Komptech should develop a star that screens to below eight millimetres grain size. We're thinking about adding a discharge conveyor for the coarse fraction and hydraulic supports to lift the machine. That would make cleaning easier, since our machine is in a fixed position where it isn't moved, and is purely electrically powered.

What competitive advantages do you have since you started using the S3?

LUCA: Better quality means we can sell to more customers.

ANDREA: Formerly, when we wanted to screen compost at 10, 15 and 20 millimetres we had to switch out drums, which took time. On the S3 all we have to do is change the screen deck speed. With the S3 we can also screen our wet biofilter material, which was impossible with a drum screen.



High quality biomass as a starting material.



The high throughput and low maintenance effort of the S3 have Andrea Mazzon convinced.



Luca Armani (left) and Loris Princivalle of Komptech's Italian partner CGT.



Irene Armani is proud of the quality of the material.



ARMANI LOGISTICA SRL

Frazione Str. 30, 38085 Pieve di Bono, Italien

For 50 years the company's core business has been the transportation of waste wood. Since 1998 it has also sold biomass, which it produces from material it buys from sawmills and forest owners. Production: 80,000 to 120,000 m³ biomass annually (40% trunk wood, 60% sawmill waste) Processing: Chipping (Jenz), drying, screening (Multistar S3)

BIOCICLO SRL

Via Gerra, 46043 Castiglione delle Stiviere MN, Italien

The company makes compost for agricultural use. Input: 15,000 tonnes green cuttings and 30,000 tonnes organic waste annually Output: ca. 20,000 t/a compost www.biociclo.it



Top: Komptech Sales Manager Markus Maierhofer (left) with Plant Supervisor Marian Olesiejuk (middle) and Lukasz Birecki of Komptech Partner Agrex-Eco (right) at the plant.



Lots of Komptech green on the lot - a Joker drum screen, a Topturn X compost turner and a Crambo shredder.



PRACTICE

POLISH LUCK

Waste treatment association in Lubartow in eastern Poland uses a green machine park

All the users we've spoken to have been happy with Komptech.

Marian Olesiejuk

The waste treatment association in Lubartow, Poland is responsible for collection and treatment of waste from several area towns. In December 2016 the association's treatment plant began operations, using a machine park prominently featuring Komptech's dark green machines – a mobile Crambo for all-purpose shredding, a Terminator 2200 S, and a Ballistor for ballistic separation.

Some time before, association representatives had seen a demonstration of Komptech machines at a trade show in Katowice. Liking what they saw, they asked around to see what other users in Poland were saying about the brand. Contact with Komptech's Polish sales office Agrex-Eco, and visits to other plants, finally sealed the deal.



GLAD TO GO GREEN

Plant Director Marian Olesiejuk is quite satisfied with the decision to go with green. "We haven't ever used anything else, so we don't have any basis for direct comparison, but all the other uses we've spoken to have been happy with Komptech." Then he mentions a teething problem: "The only issue we've come up against was ash in the waste during the winter, which clogged the Ballistor. But we installed a screen that took care of that."

The rated capacity of the plant is 37,000 tonnes per year, and in the first half-year of operation it processed 10,000 tonnes. Olesiejuk's goal is to reach full capacity, and so as of July the plant is working two shifts.

At Lubartow they're so happy with the choice of Komptech that they are taking part in a contest for best structural investment on both sides of the EU's eastern border. We're crossing our fingers!



PRACTICE



5

ON THE RIGHT PATH



Almost 40 years ago Oswald Hackl started as a scrap metal collector. It was the first step towards a modern disposal operation, which is now led by Oswald Hackl Junior. He too has a goal that he is determined to reach.

Today, the Hackl Container company disposes of about 45,000 tonnes of waste and recyclables each year. Waste is presorted and put through a complex process to achieve the highest possible degree of reclamation. The company is located in Wulkaprodersdorf, at the eastern end of Austria near the Hungarian border. An ivy-covered bicycle and friendly employees are the first impression when you enter the site, but if you were to arrive from above, the photovoltaic panels covering most of the roof surface would probably be the first thing you noticed. "For me, responsibility for people and the environment isn't just a phrase in a mission statement," says Oswald Hackl. "I try to live by it every day, with our customers and with our employees." >>



Our goal is to ultimately throw away only as little as possible.

Oswald Hackl

DISPOSAL WITH RESPONSIBILITY

“Our goal is to ultimately throw away only the bare minimum, while reclaiming and reusing as much as possible. For the commercial waste we collect, that means extracting all of the secondary raw materials and making high-quality fuel out of the rest. This material and thermal reclamation saves natural resources,” says Oswald Hackl of his disposal approach.

An RDF processing line makes it possible. Its first component, the pre-shredder, was getting along in years. “The problem was that we were having to run more and more material back through the system. This was the inhomogeneous fraction, which no screen or separator can do much with, to put it simply. But we were sure there were still usable materials in it,” says Oswald Hackl.

HAPPY COINCIDENCE

They tried to address the problem by reshredding the material. “To do so, we rented a mobile Terminator from Komptech. Somehow we ended up running feedstock through the mobile shredder as well, and lo and behold, no more problem fraction! The reason was the better cut geometry and the resulting grain size distribution, which is much better suited to our screening and separating line,” notes Oswald Hackl.

ONE TERMINATOR WITH ADVICE, PLEASE

The idea of getting a Komptech shredder had been bruited about before. "But maybe back then there hadn't been as much motivation to sell us on the advantages of the Terminator," recalls Hackl. "But this time the sales team really made an effort and together we worked out which machine would be ideal for us." This included a careful consideration of the type of drive for the stationary machine - mechanical or hydraulic. "Our pre-shredder needs to be a real omnivore. We get all kinds of things in the waste that comes here. We've even had bulletproof vests come through. Reversing and starting under full load is standard. The machine has to be able to handle it without problems," adds Hackl. The throughput had to be adaptable based on the material, so the hydraulic drive version was chosen. Downstream of the shredder is an entire ecosystem of screen and separation machines that remove metallic recyclables and the high-caloric fraction from household and commercial waste. The high-caloric fraction is fine-shredded and sold as fuel to cement plants.

TREND TO RECYCLING

"It's really a pity to just burn everything, especially since this fraction contains plastic that could be recycled," says Hackl. He's convinced that recycling is the future. "But it will take a certain amount of pressure, since the industry's interest in recycled material, especially plastic, is not high. There needs to be a legal requirement to use recycled materials. But now with the low price of oil producers would rather use new material. It's supposed to be cheaper. But it's definitely not sustainable." Oswald Hackl's goal is to get a foothold in this area. He's been doing research since 2014, and working on a concept. "It's my project for the next five years," says Hackl, who can definitely see himself running a plant with a 100,000 tonne annual capacity. He's certainly well on the way.



Lots to recycle.



The Terminator outputs exactly the right particle size for further processing.



For Oswald Hackl, responsibility for people and the environment isn't just a phrase in a mission statement.



The photovoltaic system on the roof is one of the largest in the region.



HACKL CONTAINER ENTSORGUNGSFACHBETRIEB

7041 Wulkaprodersdorf
Hutweide
office@hackl-container.at
www.hackl-container.com

*Our pre-shredder
needs to be a real
omnivore.*

Oswald Hackl



PRACTICE

A COMPANY WITH A HEART

Belgian recycler Verko in Dendermonde has been in the waste disposal business for a very long time. Today, the company combines business, social, and sustainability in exemplary fashion.

The original Verko company was founded in 1979 to sell compost. In 2002 it merged with DDS, an MSW disposal company founded in 1970, to form the new Verko. Today the company serves 10 area municipalities and is one of Belgium's leading composters. In 2015 the company even received a visit by US ambassador Denise Bauer.



Bart Descamps, head of the Waste Management department and Geert De Beule, in charge of composting at Verko.



A HEART FOR PEOPLE...

Verko is a good employer. The company sees itself as having a social responsibility, which it meets in several ways. "For example, we employ people who might otherwise have trouble finding work. Although we now have 140 employees, fluctuation is very low" reports Bert Descamps, Waste Management Department Head at Verko.

"We have a staffer whose full-time responsibility it is to advise local residents on how to recycle, what to separate, and how to avoid waste in the first place. In addition, our employees volunteer to clean up illegal dump sites." Verko also accepts old furniture and similar items, repairs them, and sells them at very low prices to people in need, for example victims of natural catastrophes.

>>

We employ people who might otherwise have trouble finding work.

Bart Descamps



...AND A HEAD FOR BUSINESS

So this is definitely a company whose heart is in the right place. It's also a company that does good business, to the tune of about € 17 million in sales annually. Its two composting sites have a combined capacity of 40,000 tonnes, and the compost that Verko delivers is of the highest quality. It bears the VLACO quality label, and in 2015 Verko was just the second composter in Belgium to gain the European ECN-QAS quality seal. Not content with that, Verko is always on the lookout for ways to improve and innovate. For example, the company recently installed a CNG station to fuel its three new CNG-powered garbage trucks. "Our plan is to replace two vehicles with CNG ones each year. After twelve years we will have replaced the entire fleet. With each truck we save just under 10,000 litres of diesel fuel annually," says Descamp of the project. He is especially proud of the 15,000 solar cells with a capacity of 3.75 MWp that the company has set up on a former landfill, creating one of the largest photovoltaic sites in Belgium. And now, the company has also invested in a new Komptech Multistar 3-SE stationary star screen after a public bid tender process.

The high throughput and wind sifting meet our expectations to the full.

Geert De Beule

Michaël Degelin of Komptech Partner PON Equipment and Geert De Beule take a close look at the machine.

ONE MACHINE, MANY FRACTIONS

The Multistar 3-SE can turn out up to 4 fractions in one pass, separating materials like compost, bark and biomass very quietly and reliably. As a star screen, it can also be quickly adapted to different feedstocks and fractions. The one at Verko is installed with the control panel in a separate room for easier operation without exposure to dust. Thus far the company has been extremely satisfied with the machine's performance. "The high capacity and windsifting completely meet our expectations. The durability of spares and the good maintenance accessibility are further plus points," says Geert De Beule. Since Verko cleans and services its machines weekly, this accessibility is a major time-saver.

A GOOD PARTNER

Verko also sees the machine's all-in-one capability as a big advantage. "We only have to deal with one solution from one supplier, which really simplifies things. Komptech's sales partner PON has an excellent reputation, and we have had nothing but good service from them," continues De Beule. "Ben Verbeek and Michaël Degelin from PON and Komptech project engineer Patrick Wagner from Vienna contributed their extensive technical knowledge and experience to the project." Verko is a company with a social commitment and a long history of successful business, and never stops improving and expanding its services. As it does so, the Multistar 3-SE's broad capabilities and flexibility will be an important asset.



Verko has a biogas filling station for its gas-powered garbage trucks.



Every year the plant makes 40,000 tonnes of compost.



(Left to right) Bart Descamps (Verko), Michaël Degelin (PON), Geert De Beule (Verko) and Ben Verbeek (PON).



VERKO

Bevrijdingslaan 201
9200 Dendermonde
info@dds-verko.be
<http://www.dds-verko.be/verko/>

A solution from just one manufacturer simplifies things immensely.

Geert De Beule



PRACTICE

SHREDDING SAVES SPACE

Waste management is highly developed in Europe, but that is not the case everywhere. In many markets the problems customers need to address are of a more fundamental nature. For example, reducing waste volume to extend landfill life. Like a Terminator is doing in Gering, Nebraska.

The city of Gering is in Western Nebraska's Scotts Bluff County, centrally located between the Colorado Front Range, Yellowstone National Park and Mt. Rushmore. In 2016 the City of Gering Sanitation Department began looking for ways to improve the density of their solid waste, as the remaining landfill life expectancy was only seven years. They were pleasantly surprised when testing showed that shredding the waste increased density by 40%. This could extend landfill life by a projected five years. This in turn would result in millions of dollars in tipping fee revenues over those additional years, easily justifying the investment in a shredder.



Landfill Manager Darrel Vance (left) and Elias Escamilla in front of the Terminator.

Powerscreening, the Komptech dealer for Nebraska, helped Gering choose the right options for their machine. The knowledgeable sales team guided them to the high clearance chassis, which has substantial benefits in this application. Another plus point was that the Komptech Americas parts depot is located only three hours away.

SAVING SPACE TO ADD CAPACITY

In late 2016 the Komptech Terminator was delivered to Gering. Since then, the landfill operators have been nothing but pleased with the throughput and ease of maintenance of the machine. The Terminator has run without issue for the last six months, and has quickly become a valuable part of the city's waste management process. Prior to purchasing the shredder, Gering's landfill was projected to run out of space in 2024. Now, with the Terminator they are hoping to extend that to 2029.



Shredding saves space!

Darrell Vance

THE RIGHT SHREDDER FOR THE JOB

The next question was what kind of shredder to buy. After extensive research, the Gering team determined that the best machine for the job was a Komptech Terminator 6000S. This single shaft, low speed high-torque shredder is specifically designed for processing municipal solid waste and C&D. The automatic reversing shaft prevents wrapping of material, which is a big concern in this application. With its tracked chassis the machine can easily move around the landfill, even in muddy conditions. High ground clearance prevents stoppages and the tough shredding unit makes quick work of even difficult material.

The Terminator 6000S does its job dependably, even in wet weather and difficult terrain.





PRACTICE

A CUSTOM MACHINE



6

At Komptech, customer wishes are taken seriously. Up to and including building custom machines. Even if the customer is in Japan.

The Niseko-Kankyo company in Kucchan, Hokkaido, Japan has long been a Komptech customer, and uses a Terminator. So from time to time the president of Niseko-Kankyo Mr Kazuyuki Furuya receives visits from Komptech's Japanese partner Ryokusan, as well as directly from Komptech. At the last meeting it came out that Niseko-Kankyo was



looking for a new compost turner, since the existing Italian machine was showing its age. A brief presentation on the possibilities and advantages of the Komptech Topturn series was followed by a look at Niseko-Kankyo's composting plant. "We were very surprised," recalls Komptech Area Sales Manager Stefan Windisch. "The composting hall was so small that

none of our existing Topturn models would fit. So we had to look for another solution. Basically, either Niseko would have to upsize its composting hall, or we would have to downsize our smallest Topturn." Of course, the latter was the only real option.

A CHALLENGING PROJECT

Windisch promised to discuss the problem with the engineers in Frohnleiten soon after his return. But it quickly became apparent that building a smaller turner was no small matter, since the existing Topturn was already very compact. For one thing, it would take time to do the design work. For another, there needed to be a market analysis to determine whether there were enough potential customers to justify it.

So Ryokusan let Niseko-Kankyo know that it would take a while to deliver a solution. As it happened this wasn't a major problem, since Niseko-Kankyo needed more time on its end to do internal analyses and gain official approval. After due consideration, Komptech decided to build a smaller Topturn model, the X4500, that would be ideal for small to medium sized composting plants, and for customers used to operating older Topturn 3500 generation machines.

The Topturn fits in the hall now. We're very happy with its performance.

Kazuyuki Furuya



THE RIGHT CHOICE

In early 2017 Komptech was finally able to deliver the first Topturn X4500 to Niseko-Kankyo. Everyone at Niseko-Kankyo was excited about the new machine. "The roomy cabin with air conditioning and protective ventilation, and the automatic load-dependent drive, are features our old compost turner could not offer," says Furuya proudly. So proudly in fact, that the turner was first blessed by a Buddhist monk. Only then did technical instruction get underway, greatly assisted by Komptech technicians. After a few trial runs it was clear that Niseko-Kankyo had made the right choice. "The Topturn X4500 fits in the hall, and its performance is everything we could have wished for," notes Furuya with satisfaction.

AXTOR 6010

Five reasons you'll love the new Axtor.

The Axtor is one of the most flexible machines for biomass processing. In fast-running shredder mode with free-swinging blades, it produces material for composting. At low speed with fixed teeth, it turns out biomass fuel for heating plants. The high-performance Axtor 8012 now has a stablemate, the new Axtor 6010. Its most important features: A low-emissions diesel engine in a maintenancefriendly underfloor position, wide-area forward-facing feed with aggressive intake, and a clearance of 850 mm. The Axtor 6010 can be on a 3-axle trailer, semitrailer or self-propelled tracked chassis.



PLEASE FEED

Large 5.7 x 1.4 meter feed platform with tough chain conveyor and hinged hopper



BIGMOUTH

Active intake with large feed opening (1450 mm wide, 850 mm high)



YELLOW POWER

CAT® C15 590 hp engine in maintenance-friendly underfloor position





7

SHREDDING OR CHIPPING

In shredder mode, there is a free-swinging tool in each tool mount, optionally with disposable blades (right). In chipper mode, there is a fixed tool holder in each position that can take chipper or shredder blades (left). The Axtor shreds at higher rpm and chips at lower rpm. Speed change is done by a gearbox.



ALWAYS THE RIGHT PARTICLE SIZE

Simple screen basket change by swinging it to the rear



PRACTICE

STRONG AS AN OAK

Polish wood processor ZWD in Baronowo has been able to expand its business with the help of the Axtor.

Komptech Sales Manager Markus Maierhofer (left) and Kazimierz Abramczyk (middle) at the plant.

Komptech is a real partner - they didn't leave me alone with my problems.

Kazimierz Abramczyk

Kazimierz Abramczyk is founder, owner and CEO of the ZWD Abramczyk company in Baranowo, Poland. He's in the business of making oak wood prefabricates such as boards for floor and furniture production, and now he's also in the business of making fuel chips.

WOOD CHIPS AS A NEW PRODUCT

"We only use oak," says Abramczyk. "About 40% of the wood ends up as sawn products. The rest was formerly waste." He decided to turn this waste into marketable wood chips. For a chipper he chose the Axtor from Komptech, and he's delighted with it. The dry oak he feeds it is extremely hard to shred, but the Axtor chews through it quickly – 100 cubic meters in 40 minutes. In his considered opinion, the competition can't even come close.

PROBLEM, SOLUTION

There are many things he likes about the machine. As he puts it, "I've been working with wood processing machines for years, and I know what to look for. The design of the Axtor shredding unit is very good. The teeth are properly positioned on the rotor, and the contrary resistance system with the stationary teeth really works."

In the beginning he had problems processing small oak wood blocks, as the chain conveyor feeding system was not able to reliably feed them. Komptech developed and retrofit a new feeding system with still plate conveyor, and now Abramczyk's Axtor works fine with his material. He says, "Komptech is a real partner. They didn't leave me with the problem but helped me to solve it. Nowadays that kind of customer service is not common in business."

A WHOLE NEW LINE OF BUSINESS

The Axtor has allowed Abramczyk to get into a whole new line of business, supplying high quality wood chips to power plants. To start with he had to overcome some market resistance because his oak chips are more expensive than the typical wood chips on the market. "But they have a calorific value close to coal, and when customers realize that they don't want anything else," laughs Abramczyk

Kazimierz Abramczyk is building biomass fuel into a second leg of his company. With the huge amount of sawmill oak waste he has, he can promise his customers consistent quality and high volumes of wood chips in short delivery times. Now he has plans to build a second wood chip plant – and at the heart of it will be a new Axtor.



ZWD ABRAMCZYK
Oborczyńska 31b
06-320 Baranowo



Kazimierz Abramczyk (left) examines the material quality put out by the Axtor.



SYSTEM TECHNOLOGY

KEEPING A TRADITION ALIVE

For over a decade, a Terminator was kept busy shredding residual waste at the Rhein-Lahn Waste Treatment Centre in Singhofen, Germany. Recently it was replaced by a new Terminator, a fact that speaks volumes for the machine as well as for its manufacturer. >>



TERMINATOR 5000 S

green efficiency

KOMITEX

PERICL



Mechanical Treatment Supervisor Jürgen Epstein and Deputy Technical Director Andreas Warnstedt with their new stationary Terminator.

Germany's "Spa Route" takes the traveller through Wiesbaden, Schlangenbad, Bad Schwalbach and Bad Ems to the forested Taunus hills between the Rhine, Wetterau, Lahn and Main rivers.

Close to this route, near the town of Singhofen is the 50 hectare Rhein-Lahn Waste Treatment Centre residual and organic waste treatment facility. The organics are used mostly to make biomass, while the residual waste is sorted and partially recycled. Nonrecyclables are treated mechanically and biologically and then disposed of properly.

NOTHING HAPPENS WITHOUT PRESHREDDING

A big site, imposing halls, and a clearly laid-out administration building are the first things you see at Rhein-Lahn.

Then you notice all the activity.

Yet despite the many waste collection and container trucks driving in and out, everything seems to be orderly enough. "And that's as it should be" note Mechanical Treatment Supervisor Jürgen Epstein and Deputy Technical Director Andreas Warnstedt. "Just our mechanical-biological system treats over 60,000 tonnes of residual waste each year. That means a lot of truck traffic that we need to handle without traffic jams or wasted time."

*We process over
60,000 tonnes of
residual waste a year.*

Andreas Warnstedt

Jürgen Epstein explains the basic process of mechanical-biological treatment: "We remove the recyclables and contraries from the residual waste that arrives here. First we shred the waste, and then the screen drum separates it into a coarse and therefore high-caloric fraction and a fine fraction. A magnet separator pulls out the metals. The high-caloric fraction goes out as fuel while the rest is mixed together and moistened in a homogenizing drum. In the subsequent intensive rotting process, water and air oxygen are added in order to encourage decomposition of the organic components. The waste then goes to final rotting in windrows where it is suction-ventilated. This reduces the amount of waste that gets landfilled by over 50 percent." It's clear why preshredding is so important for smooth processing – shredding doesn't just make waste smaller, it also opens it up for the further steps. Good shredding makes the whole process work well.

THE TERMINATOR AS A "VW BEETLE"

Andreas Warnstedt looks back: "In 2000 the mechanical processing system went into operation. In 2005 we put in a Komptech hydraulic Terminator 5000 S that clocked over 15,000 operating hours by 2016 without major issues." Christian Hüwel, long the main Komptech contact for the plant, can confirm eleven years of smooth going. "All we needed was to replace wear parts – mostly on weekends to keep down time low – and occasionally retrofit factory-modified parts." Komptech always kept the Terminator at the latest "state of the art" as Christian Hüwel put it, which did the machine a lot of good. And yet, said Jürgen Epstein, "after over eleven years of hard use with sometimes rough materials, there is simply going to be wear and tear on a shredder. We looked at it in 2016 and came to the conclusion that we needed to replace it, although we had been very happy with it. That Terminator ran like a VW Beetle."

They wanted the new shredder to work like the old one, but more energy-efficiently and quietly. It also needed to be suitable for use in closed halls. In a bid tender, the right successor was found – a Terminator direct 5000 S. >>



Jürgen Epstein and Andreas Warnstedt like their new "worker".



Technical details like the easy shredding gap adjustment are also important.

The Terminator ran like a VW Beetle.

Jürgen Epstein



Not easy input, but not a problem for the Terminator.

Pleasant advice and assistance from the Komptech team.

Andreas Warnstedt
Jürgen Epstein

THE RIGHT TECHNOLOGY

The new Terminator direct has been in operation since mid-March. The old one was switched out against the new one in just a week, and Komptech even provided an interim machine so that operations could continue. Setting up the substitute machine, deinstalling the old one and installing the new Terminator in the same location went astonishingly smoothly, despite the structural modifications that were needed. Jürgen Epstein and Andreas Warnstedt both concur: "The new Terminator with its smaller control panel takes up much less space in the hall, and the electric drive naturally makes it much quieter than our old Terminator. We did the installation together with Komptech and it worked out great."

The stationary Terminator direct as an electric-drive machine delivers the desired energy efficiency as well as substantially less maintenance effort. Its control system is also a very good fit with the existing plant setup. The mechanical direct drive is very efficient, and the functionality and contrary-resistance are just as good as on the previous hydraulic system. The drum is driven by a gearbox with two shredding speeds and a reverse gear. As Jürgen Epstein notes, the shredding gap adjustment can be used to "compensate for the unavoidable wear on the teeth to get constant shredding quality." The new machine meets all expectations.

A CONVINCING PRINCIPLE

"A good relationship, very timely response to questions and parts orders by the Komptech team, and very good advice," is how Jürgen Epstein and Andreas Warnstedt describe their experience with Komptech. Christian Hüwel sees things the same way. In his opinion it's the Terminator itself that is responsible for this satisfaction.

"The precise material adjustment with two drum speeds, the chip shape of the output, about 20 to 30 percent lower specific consumption than the hydraulic machine, and last but not least 55 tonnes throughput per hour, those are things that really stand out."

And by the way, the old Terminator wasn't scrapped; on the contrary, after a refurbishment it is hard at work on new tasks in Austria. It's enjoying a new lease on life, while its successor upholds the tradition at its former site.



RHEIN-LAHN-KREIS ABFALLWIRTSCHAFT

Insel Silberau 1, 56130 Bad Ems

The Rhein-Lahn-Kreis Abfallwirtschaft company provides dependable disposal services of high technical quality to private households as well as businesses. At its waste treatment centre in Singhofen, it turns waste into recycled materials, biomass and high-caloric fuel to replace heating oil and natural gas. It works according to a detailed waste treatment plan which is regularly reviewed and updated.
www.rhein-lahn-kreis-abfallwirtschaft.de



RECYCLING ON THE MARCH

Recycling rates in the EU member states have risen steeply in the past decade, albeit with regional differences. The EU now plans to again tighten its standards.



Between 2004 and 2015 municipal waste in the EU dropped by three percent and per capita waste production fell by seven percent. Waste production was highest in Denmark, and lowest in Romania and Poland. In 2015, average waste production in the EU was 477 kilos per person. Unfortunately, there remain differences in how the individual countries capture this data, so further harmonization is needed.

RECYCLING UP, LANDFILLING DOWN

Municipal waste recycling rates, including composting and anaerobic digestion, continue to rise. The average rate in 2015 was 46 percent, as against about 31 percent in 2004. During the same period, the landfilling rate fell from 49 to about 26 percent. There are major regional differences, from 108 kilos per capita in Slovenia to 580 kilos per capita in Malta.

NEW STRATEGIES

The EU Parliament is pursuing new strategies and setting new goals to further improve matters. The minimum recycling rate by 2025 is now set at 60 percent, to rise to 70 percent by 2030. A revised landfill directive will cap landfilling of municipal waste at five percent in 2030, with a 5-year extension granted to member states which landfilled over two thirds of their waste in 2013.

MUNICIPAL WASTE IN THE EU - VOLUMES AND DISPOSAL ROUTES IN 2015

	Municipal waste volumes (in kg per capita)	Total waste treatment (in kg per capita)	Treatment of communal waste in %			
			Landfilling	Incineration	Recycling	Composting, anaerobic digestion
EU-28	477	463	26.3	27.3	29.5	16.9
Belgium	419	409	0.9	44.4	35.1	19.6
Bulgaria	419	412	67.4	2.8	19.4	10.5
Denmark	789	789	1.1	52.6	27.3	19.0
Germany	625	610	0.2	32.1	49.0	18.7
Estonia	359	313	8.5	59.1	28.5	4.1
Finland	500	500	11.5	47.9	28.1	12.5
France	502	502	25.8	34.7	22.3	17.3
Greece	not available					
Ireland	not available					
Italy	486	432	29.8	21.3	29.1	19.8
Croatia	393	384	81.6	0.0	16.7	1.7
Latvia	433	366	68.3	0.0	25.2	6.5
Lithuania	448	442	54.7	11.7	23.2	10.3
Luxembourg	625	625	17.7	34.0	28.4	19.7
Malta	624	599	93.1	0.4	6.6	0.0
Netherlands	523	523	1.4	46.9	24.6	27.1
Austria	560	542	2.6	39.6	25.5	32.1
Poland	286	286	44.3	13.2	26.4	16.1
Portugal	453	453	49.0	20.7	16.2	14.1
Romania	249	218	82.1	3.1	5.8	9.0
Sweden	447	447	0.8	51.2	32.4	15.6
Slovakia	329	310	72.8	11.3	8.1	7.7
Slovenia	449	421	24.2	18.2	49.5	8.2
Spain	434	434	55.1	11.6	16.8	16.5
Czech Republic	316	316	52.6	17.7	25.5	4.2
Ungarn	377	377	53.7	14.2	26.0	6.2
UK	485	472	23.2	32.2	28.0	16.7
Cyprus	638	590	80.6	0.0	14.4	5.0

Source: Eurostat

PLANNED NEW PROVISIONS AND IMPROVEMENTS

- Expanded producer responsibility and “disposal method-based payment” models
- Recyclable waste to no longer be incinerated
- Introduction of higher tipping fees for recyclable waste
- Introduction of mandatory separate collection, especially for organics
- Completion and updating of government recycling plans
- Harmonization of statistical data gathering guidelines
- Intensification of cooperation between regions and states



ASK THE ENGINEER

GOING BALLISTOR



9

System technology pro Gottfried Reither reports on the advantages of ballistic separators in modern waste splitting and recycling plants.

Modern waste treatment facilities are moving towards full automation. There are several reasons for this, including the inefficiency of hand-sorting, difficult and unhygienic working conditions in these plants, and of course not least the high labour costs and periodic absenteeism associated with employees.

The solution is the fully automated waste treatment and recycling system that can react to fluctuations in feedstock materials and quality, and deliver high sorting efficiency and availability.

In addition to the obligatory ferrous/non-ferrous separation or screening, conventional facilities of this type are fitted with a large number of optical sensor units. But this means high investment costs for the sensors and high operating costs for generating the huge amounts of compressed air these systems require.

An alternative is the ballistic separator. With low operating costs, it separates overlengths coming from an optional upstream drum or vibration screen.

The main focus is on the separation of 3D (cubic) and 2D (flat) items. It can also do a second fines separation through the paddle perforations, which can make an upstream screen superfluous if the input material is commercial or bulky waste. If a ballistic separator is not used, at least three machines are needed to replace it - a screen plus double optical separation of 2D and 3D material. A single ballistic separator means substantially lower investment and operating costs, plus cost savings for the conveyors that would otherwise be needed between multiple machines and the space needed to site them.

Another significant advantage is the ability to adjust the degree of 2D and 3D separation by changing the slope and release points on a ballistic separator. This gives higher efficiency for downstream optical sorting units in the form of reduced misses and the ability to use smaller optical sorters, since the material stream has already been coarsely sorted.

In refuse-derived fuel production, ballistic separators have the enormous advantage over wind sifters that they can also work in recycling and not just fuel production. This is very important where constantly fluctuating prices for different recycled material streams make flexibility a benefit.

In summary, the inclusion of a ballistic separator unit represents a technical and economic improvement for any sorting, recycling or refuse-derived fuel production line.



GOTTFRIED REITHER
SYSTEM TECHNOLOGY MANAGER



Some Ballistor installations in waste treatment facilities.
Upper photo: Bekescaba in Hungary
Lower photo: Jähte Oy in Finland



The new Multistar One makes treatment of waste wood even more efficient. An upstream Terminator handles the shredding work. The Multistar One then separates out a defined useful fraction while returning overlengths to the shredder. With its very compact crane lift frame and variable conveyors for flexible setup, plus electric drive, this star screen is also very economical.



PRACTICE



10

A NORWEGIAN BENCHMARK

Norwegian company "Geminor waste to energy" in the Haugesund region treats about 150,000 tonnes of waste every year. They used to use almost exclusively high-speed shredders. But not any more.



The company is part of the Geminor AS group and has worked since 2004 in trading with and treating all types of combustible waste. "In the past we almost exclusively used service providers with high speed shredders to process the annual 150,000 tonnes of material we get each year from Norway," says Kjetil Vikingstad, founder, owner, and director of the company. His life revolves around waste treatment, almost around the clock. What free time he has, he spends running, hiking and kayaking.

NEW SOLUTIONS

After seeing a presentation of a Komptech line consisting of a low-speed shredder and the new Multistar One, Vikingstad decided to invest in his own equipment for the first time. "We want to become independent of service providers and go in new, innovative directions. The high-speed shredders frequently gave us problems with the enormous amounts of dust they produce. There would also often be stoppages due to contraries in the wood. Despite pre-sorting, the waste wood we get has lots of metal in it." >>



Thomas Helle (Komptech Partner Gitmark, left) and Kjetil Vikingstad (owner and director of Geminor waste to energy, right) with the Multistar One and the Terminator.



The switch to the Terminator and Multistar One brought about a major reduction in dust.



Machine operator Petur Hafthorsson is very happy with the Komptech machines.

THE RIGHT DECISION

In June 2017 a line made up of a Terminator and a Multistar One went into operation in Karmøy. In addition to 20,000 tonnes of material that Geminor treats itself, the site gets another 10,000 tonnes of preshredded waste wood for further treatment. "Most of the shredded material goes by ship to customers in Sweden, Great Britain, the Netherlands, Germany and Poland," says Vikingstad of his sales markets. "We have found that throughput with high-speed shredders is higher than with the new line. But the new line gives higher quality material. And customers want higher quality with less fines and contraries." Vikingstad is optimistic: "The next twelve months will show that we absolutely made the right decision."

DUST DOWN

High amounts of fines present difficulties, and not just for incinerators. "The high dust content was a big problem in the hall, especially for loading ships," says Vikingstad. "When there was a lot of dust we had to clean out the wheel loader's radiator almost every hour." Petur Hafthorsson, who operates the machine on a daily basis, adds, "Loading a ship with 2000 tonnes of material previously always took 30 hours. But most recently we did it in just 23 hours, because we only had to clean the radiator twice a day. That saves time and also money, since frequently we rent the loading equipment."

We want to go in new, innovative directions.

Kjetil Vikingstad

The Komptech machines are solidly built and innovative.

Kjetil Vikingstad

HIGHLY SATISFIED

Geminor is very satisfied with its Komptech machines. "They are solidly built and innovative. The design shows that they paid a lot of attention to usability and ease of maintenance," notes Vikingstad. But he also has some suggestions for improvement. "A lot of overlengths still jump off the star screen and make the surrounding area messy." Komptech Sales Manager Christian Kulmer promises an immediate remedy with a new cover for the screen deck, which will be installed free of charge. Vikingstad is completely satisfied with the Terminator: "We can use it for everything, from mixed waste to waste wood. Its low dust level is a big advantage. Both machines also have low maintenance needs."

A GOOD PARTNERSHIP

He is equally positive about the relationship with Norwegian Komptech Gitmark. "The guys at Gitmark do an outstanding job. They immediately set us up with an interim machine. Sales rep Thomas Helle knows the business very well and he always gives us excellent advice." Vikingstad takes a look ahead: "We might need to replace more high-speed shredders with Komptech equipment."



"It goes in a new direction." Christian Kulmer (Komptech, left) and Kjetil Vikingstad discuss the switch from high to low-speed shredding.



ANNIVERSARY



11

MEETUP IN FRANCE

French Komptech sales partner Hantsch showed 200 attendees the latest innovations in processing machinery for composting and biomass production.



During 2 sunny days in May the Hantsch company, exclusive Komptech dealer in France, held the 4th "Composting and Wood Energy Days." With a wink to the company's 50 years of existence, the event was characterized by innovation. The site of TEVA ENVIRONNEMENT, a loyal Parisian customer, served as the setting for the event. 200 customers and prospects came from all over France to attend.

After some words by company president Christophe Hantsch, son of founder Didier Hantsch, the participants were invited to explore the demonstrations that had been set up.

EXPERT DEMOS

No less than 15 machines were presented on the site, organised in workshops to show expertise and efficiency in the different applications: Separation of the woody fraction of green waste, production of forest chips, screening for quality, cleaning of biomass, the production of different types of wood chips for the particle board industry, pre-shredding of input for methanation, etc. In addition to the machine

demonstrations, the expertise of Hantsch was also honoured - the Engineering Department with a presentation by Alain Guégan, an After Sales stand with partner ENERIA, the management of used machines, the RECYTAL company for the rental of machines without an operator, and forest management.

FOCUS ON INNOVATION

A stand focused on innovation presented the latest Komptech developments such as fleet management, as well as the joint Future Shredders project of Komptech and the FH Joanneum university, which received a warm welcome.

The event also stimulated the exchange of expertise and experience between the attendees, especially during the excellent evening meal, and wrapped with an interview with M. Frémin, CEO of Ecosys, regarding the transition of his company to wood energy.



CEO Christophe Hantsch is proud of 50 years of company history.



Komptech machines...



...were at the focus of the demonstrations.



The anniversary celebration was exceptionally well attended.

50 YEARS IN SERVICE OF THE ENVIRONMENT

Founded in 1967 by Didier and Gabrielle Hantsch, for half a century the Hantsch company in France has provided products and services for the maintenance and protection of the environment. Today the company's activities cluster in three areas. The first is municipal vehicles, forestry work including shredding, greenwaste chip production and forest maintenance. The second is environmental machines. The third is engineering services for the treatment of biomass and compost.

A MODEST START

Hantsch started in after-sales service and spare parts sales for Mercedes Unimog vehicles. In 1968 the company opened a repair centre near Strasbourg and hired its first employee, Didier Hantsch's brother René, as a mechanic.

The company got into forestry with its first sales of MB-TRAC wood hauling vehicles. By 1976 Hantsch was a Mercedes-Unimog partner and sales of used vehicles, spare parts and services were growing. The addition of municipal vehicles to the product line made a move to a larger facility necessary.

In 1980 Hantsch started providing forestry shredding, and by 1989 this had led the company to get into the composting business in France. In 1995 it took its first drum screen into service, a Farwick model.

BRANCHING OUT WITH KOMPTECH

In the late 90's Hantsch expanded its engineering department and began to get more involved in the composting business, implementing its first controlled ventilation systems. The company began distributing Komptech machines in France in 1997 with the Topturn 4000 compost turner, starting a partnership that lasts to this day.

WIDE-RANGING PARTNERSHIPS

In 2008 Didier and Gabrielle Hantsch passed the torch to their son Christophe, who has continued to grow the company. In 2014 came the first subsidiary in Poland, Biokompo, and by the end of 2015 the 10th household waste treatment system installation. 2015 also saw the start of



HANTSCH

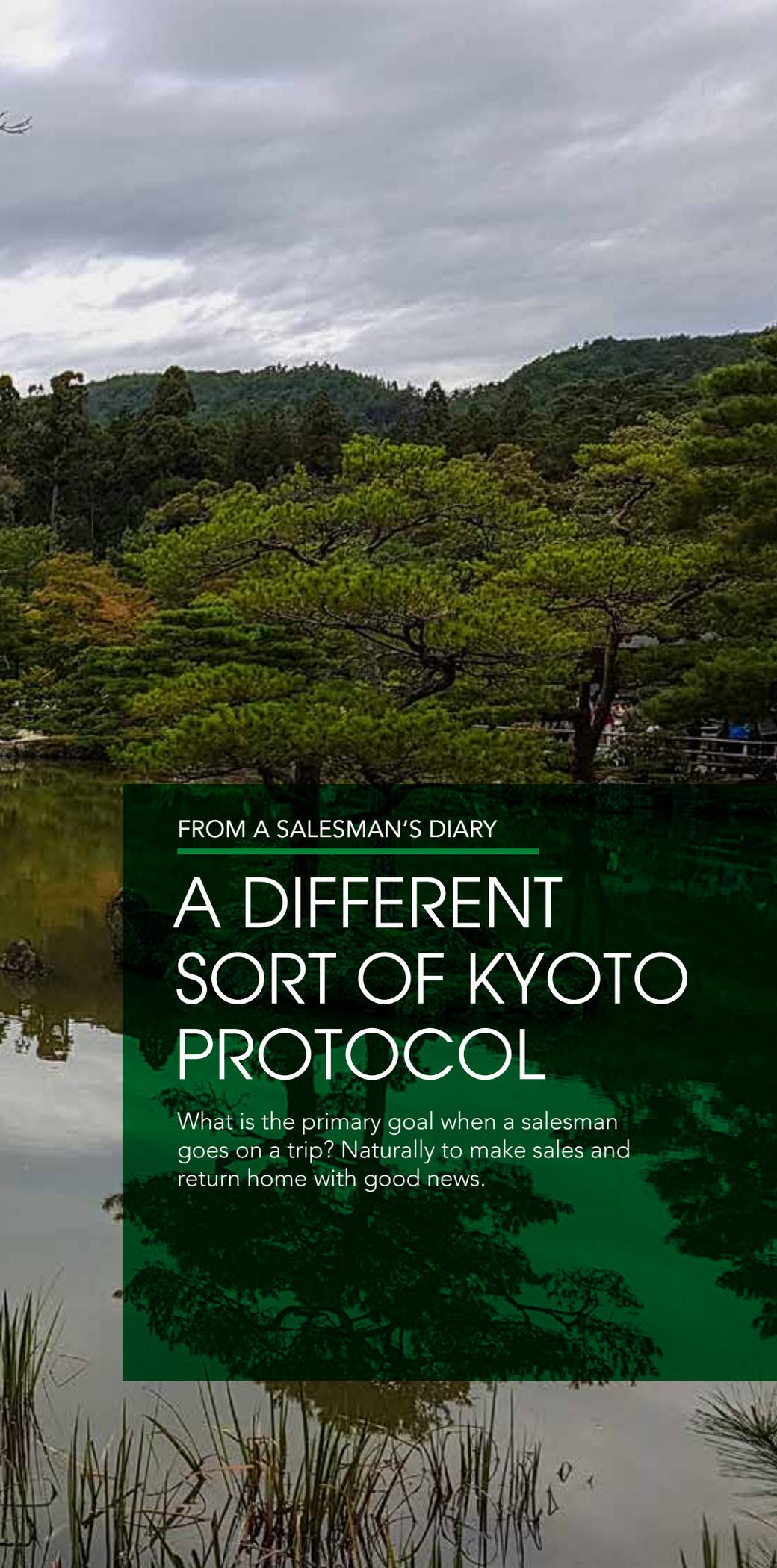
6 Rue de l'Europe,
67520 Marlenheim
www.hantsch.fr

partnerships with UK-based Atritor for the distribution of their Turbo-Separator depackager, Dutch forestry machines maker Ufkes Greentec, and Italian robot and self-propelled machinery maker Energreen. Most recently, 2017 saw the start of a partnership with Germany's Sauerburger company for agricultural machinery.

LONG EXPERIENCE

Like with every company, Hantsch's most important asset is the men and women who work there. Currently Hantsch has 40 employees, 10 of whom have more than 20 years of experience with the company, including service technicians who know the machines backwards and forwards. Hantsch can look back on 50 years of successful growth, and at Komptech we look back on 20 years of successful partnership with Hantsch. Together we look ahead to many more!





Kinkaku-ji Buddhist temple in to the northwest of the Japanese city of Kyoto.

FROM A SALESMAN'S DIARY

A DIFFERENT SORT OF KYOTO PROTOCOL

What is the primary goal when a salesman goes on a trip? Naturally to make sales and return home with good news.

That was the plan for our trip to Japan, along with a visit to a local forestry trade fair. For CTO Christian Oberwinkler it was also an occasion to get to know the Japanese culture and mentality better. As a special highlight, our local sales partner Ryokusan organized a seminar where we were invited to hold a presentation on Komptech and our products for biomass processing. We were also promised a tour of the city of Kyoto. It sounded like a good deal and a great trip to the land of the rising sun.

After a very tiring 24+ hour journey by air, rail and road, we arrived at the hotel. Japanese specialities, local beer, and traditional sake helped us recover to an extent from the massive jetlag.

The next two days were slated for a local forestry fair about one and a half hours away by car. After a somewhat chaotic start it turned into a very successful exhibit, with many talks with existing as well as potential new customers. >>





The Axtor 6010 was on the focus of the forest fair.

The Axtor 8012 with Caterpillar C18 800 hp engine was featured at the fair. It was a big attraction and elicited many enthusiastic comments, since it works much more quietly than competing machines while delivering perfect chip quality. We and the people from Ryokusan were quite happy with how the fair went. As a bonus, the biomass seminar with dozens of attendees was very successful.

After an interesting and impressive tour of Kyoto, our final agenda item was a visit to a customer. The Koei company uses the smaller Axtor 6010 to make about 600-800 cubic meters of chips a day, which power an adjacent salt factory (Ako Kasei). This saves great quantities of fossil fuels and thus helps the environment. With the owner of Koei we discussed their experience with the machine and had a critical, but very constructive, dialogue on potential improvements. He confirmed that the choice of the machine two years ago had proven absolutely correct.

Loaded with information, experiences and impressions, after five days we boarded the flight for home. This time unfortunately without a sale in our pocket, but with the certainty that we are on the right path.

P.S.: Two days after our return, we got the order from Japan that we were hoping for!



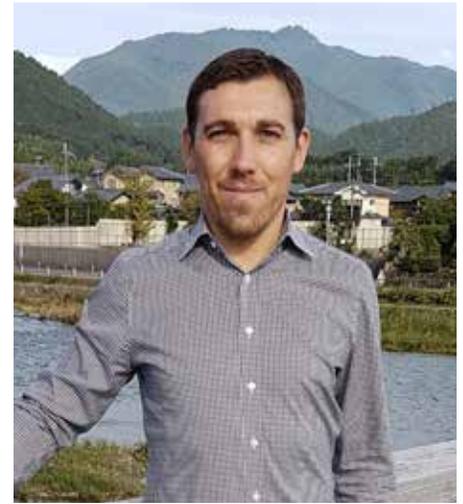
Komptech CTO Christian Oberwinkler fielded many questions after his presentation.



A traditional Japanese banquet.



The Axtor in action.



Stefan Windisch,
Head of Partner Sales, Komptech

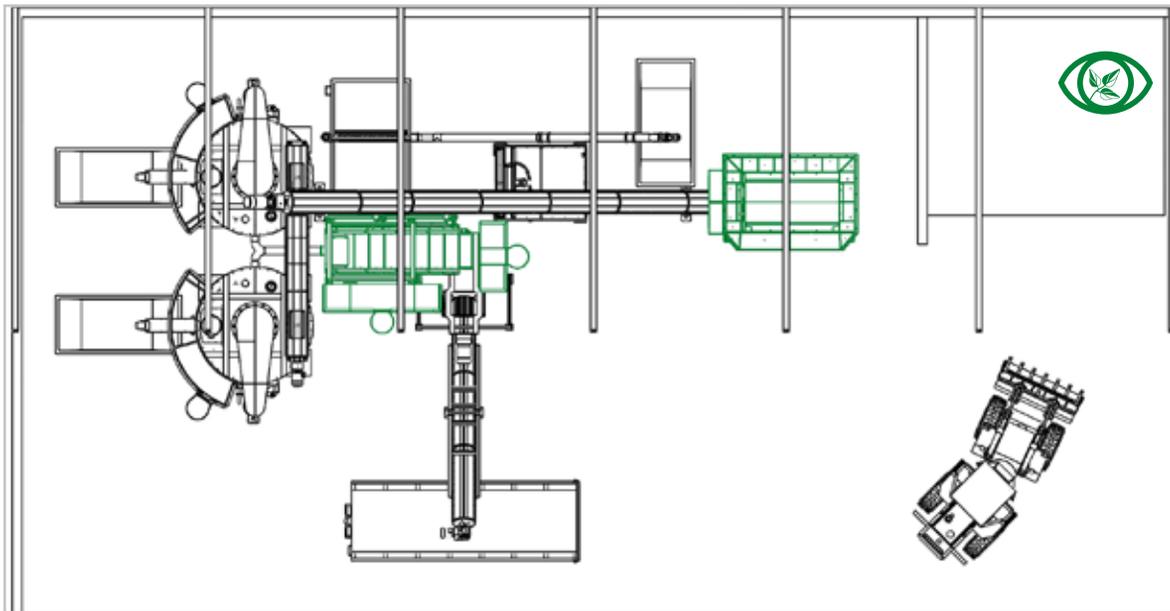


Capital: Tokyo
Population: 127 million
Head of state: Emperor Akihito
Land area: 382,871 km²

Japan is an island nation, consisting essentially of a chain of islands off the coast of Asia.

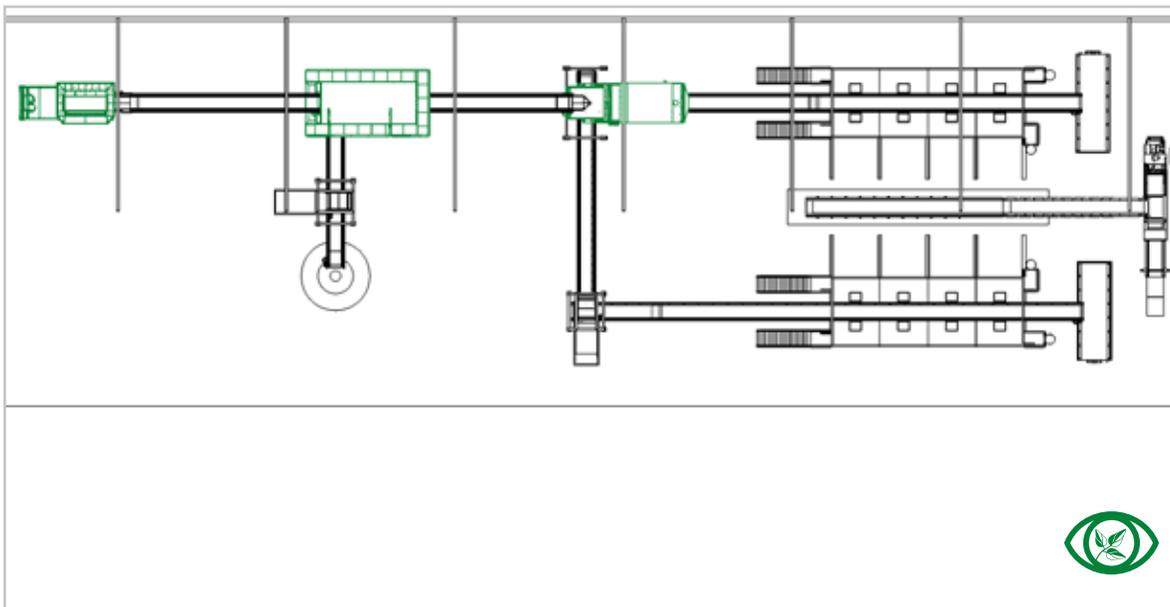
THE SYSTEM PROS.

FERMENTATION SOUP PREPARATION



12

SORTING SYSTEM



13