



A typical Vecoplan shredder installation at work in a post-consumer recycling centre (photo Vecoplan).

## Vecoplan to showcase efficient environmental and recycling technologies at Pollutec

Germany-headed Vecoplan AG, a leading manufacturer of machines and systems for the resources and recycling industry will be showcasing its leading-edge expertise in environmental and recycling technologies at Pollutec, the international trade show in Lyon, France.

In addition to the main focus, “circular economy”, this year’s Pollutec will highlight waste-to-energy management. Here Vecoplan says that it is a leading supplier of shredding technology and of conveying and storage systems with an extensive product line of solutions for processing a wide range of materials including wood, biomass, plastics, paper and other

recyclable materials.

Visitors to the Pollutec trade show in late November will have a chance to get a first-hand impression of the company’s in-depth expertise including powerful shredders for processing a wide variety of post-consumer and post-industrial plastics, fabrics, fibres, waste wood, household waste and industrial waste. The company also supplies high-performance shredding systems for single-stage and two-stage processing lines for refuse-derived fuels in the cement industry.

BI102/6170/DN

## MORBARK DEBUTS 23X CHIPARVESTOR AT DEMO DAYS

In the United States (US), Morbark LLC, a leading manufacturer of equipment for the forestry, biomass, recycling and tree care markets hosted its 12<sup>th</sup> Demo Days event, which included the introduction of the new 23X Chiparvestor whole tree disc chipper.

Held at the end of September in the vicinity of its manufacturing facilities in Winn, Michigan, Morbark’s 12<sup>th</sup> Demo Days attracted over 250 guests from 14 countries within the forestry, biomass, recycling, sawmill, and tree care industries. It was also the first Demo Days after the company acquired Rayco in November 2017 and participants were able to see a demonstration of Rayco forestry mulchers and aerial trimmer.

As in previous editions, the event included factory tours, networking opportunities, vendor booths, and a chance to see the equipment up close. It also saw the introduction of the new 23X Chiparvestor.

– In designing the 23X Chiparvestor whole tree disc chipper, Morbark followed the same

thought process and ideals as we did in creating the other X-series of next-generation Morbark equipment. We took our previous proven design technology and focused on minimizing downtime, increasing production and making improvements that will help contribute to customer success. said Michael Stanton, Director of Industrial Sales, Morbark.

Morbark has been producing mobile whole tree disc chippers since the 1970s, and like the previous Model 23 Chiparvestors, the 23X uses a 75" (190.5 cm) diameter x 5" (12.7 cm) thick chipper disc to chip large volumes of wood, while the built-in dirt separator with deflector keeps the end product clean.

According to the company, key improvements of the 23X over the previous models include:

- Increased ground clearance with four super single flotation tyres for mobilization on uneven logging jobs
- 8’6" (2.59 m) width for legal transport worldwide

- Simplified feed system that includes a two-wheel hydraulic feed system consisting of a 35" x 56" (88.9 cm x 142.2 cm) top feed wheel and 13" x 56" (33.2 cm x 142.2 cm) bottom feed wheel

- An independent disc drive tensioning system for ease of adjustment

- Large work platform for easier and safer disc inspections and maintenance

- Improved Chipper Hood design that allows for better access to the disc during inspections and maintenance

- Integrated skidder bar as standard to allow for easier staging and repositioning of chipping on the landing

– Morbark continues to listen closely to our customers, providing the features they want and need and delivering on our promise of making heavy-duty equipment that helps enable them to succeed, ended Stanton.

BI102/6174/AS



This year’s Morbark Demo Days culminated with demonstrations of equipment for the forestry, biomass, recycling, and tree care markets that ended with a 3400 XT and 6400 XT Wood Hog tracked horizontal grinders feeding into another 6400 XT Wood Hog for regrinding (photo Morbark).

# Size Reduction & Densification Directory 2018

Size reduction and densification - two of the most widely established and used forms of solid biomass pre-treatment. Reducing bulk volume and increasing bulk density means a more uniform product, better payloads and enables longer transport distances. Depending on the downstream application, size reduction is, as the term implies, reducing the overall size of a variable feedstock to produce a more uniform size-specific product, say converting roundwood or billets into micro-chips. Or it can be an issue of increasing the surface area for a better reaction, say in a biogas plant, or converting wood pellets to a powder for combustion. Densification on the other hand, for pellets or briquettes, is about increasing the bulk density of size reduced material by compressing particles together.

There are many manufacturers and suppliers of these types of equipment and the purpose of this directory is to provide an overview. To qualify companies have to be engaged in export and/or have subsidiaries in other regions, the country shown is where it is headquartered. Although comprehensive the listing is not exhaustive neither is it an endorsement.

COMPANY	COMMENTS	COUNTRY	WEB
Aimo Kortteen Konepaja Oy (Murska)	Manufactures modular pellet production plants for sawmills, furniture factories or cattle feed production.	Finland	www.murskabiopacker.fi
<b>Amandus Kahl GmbH &amp; Co.KG</b>	<b>Designs and builds machines, turnkey production factories for the conditioning and compacting of different products, and equipment for pellets production</b>	<b>Germany</b>	<b>www.amandus-kahl-group.de</b>
<b>Andritz Feed &amp; Biofuel</b>	<b>Complete process systems for industrial biomass pelleting. Total process solutions from raw material (i.e. wood logs, chips, sawdust, straw, agricultural byproducts) intake to ready pellets including de-barker, chipper, dryer, grinders and pellet mills.</b>	<b>Denmark</b>	<b>www.andritz.com</b>
Andritz MeWa GmbH	Manufacture a range of size reduction equipment and recycling machinery for different types of materials. Single machine or integrated in complete plant solutions	Germany	www.bio-qz.de
Anyang Gemco Energy Machinery Co. Ltd (AGICO GROUP)	Provides several types of equipment for biomass for energy preparation, complete plants for biodiesel as well for pellets, briquets or charcoal.	China	www.agitc.cn
Arjes GmbH	Solutions for wood processing equipment and recycling machines and shredders	Germany	www.arjes.de
Asket	Technology for straw, reed canary grass processing: Tomasser shredding, biomass briquetting	Poland	www.asket.pl
Astec Industries Co.	Designs, manufactures and markets a complete line of continuous and batch-process hot-mix asphalt facilities, and soil remediation equipment	USA	www.astecinc.com
B. Maier Zerkleinerungstechnik GmbH	Supplier of single machines and turnkey solutions for the size reduction of wood and biomass including drum chippers, crushers, knife ring flakers, hammermills, prallfiners, conveyors, cleaning units, separating and fractioning systems	Germany	www.maier-dieffenbacher.de
Bandit Industries, Inc	Manufactures chippers and recyclers for the transformation of biomass material into valuable feedstocks for fuel applications. Grind grasses, pallets, wood and more into any size product, even down to dust	USA	www.banditchippers.com
Beijing Aoke Ruifeng New Energy Co.,Ltd	Designs and manufactures pellet and briquette equipment, biomass boiler, house-used stove	China	www.bjakrf.com/en
Beijing Panda Pellet Machinery Co., Ltd.	Specialized in designing, manufacturing, installing and commissioning complete pellet line	China	www.pelletwood.com.cn
Bioenergy Machinery Sdn Bhd.	Manufactures wood pellet equipment. Provides machinery, training and marketing for local customers	Malaysia	www.greenbioenergy.net
Bliss Industries LLC	Manufactures a complete line of hammermills (5- 600 hp), counter flowcoolers (1-100 thp), pellet mills (80- 500 hp) and crumblers for residential and commercial pellet production	USA	www.bliss-industries.com
BMH Technology Oy	Turnkey supplier of complete fuel handling systems for biomass and Solid Recovered Fuel (SRF), including the entire fuel handling process from receiving to feeding into the boiler. Applicable for bark, wood chips, wood/bark/straw pellets, peat, coal, SRF etc	Finland	www.bmh.fi
Brikis Spol. s r.o.	Producer of briquetting presses for wood waste and complete drying lines.	Czech Republic	www.brikis.cz
Bruks Siwertell	Develops, manufactures and markets complete fuel handling systems for the wood-processing industry around the world.	Sweden	www.bruks-siwertell.com
Brunette Machinery Co.	Machinery and material handling systems for the biomass industry: whole log chippers, microchippers, grinders, log decks, rotary debarkers, conveyors, vibratory equipment.	Canada	www.brunettecm.com
BS Bollareto Implants	Manufactures machinery for biomass recovery. Assists companies that want to reprocess their products into powder, fibers and flocs.	Italy	www.bsollaretoimpianti.it
Bühler AG	Offers technology for wood pellet projects (equipment for drying, grinding, pelleting, cooling, bagging, loading, automation) and for biomass cofiring projects (vertical & horizontal hammermills)	Switzerland	www.buhlergroup.com
Büttner Energie- und Trocknungstechnik	Manufacturer of industrial drying systems, energy plants, pellet plants.	Germany	www.buettner-dryer.com
<b>C.F. Nielsen A/S</b>	<b>World-wide supplier of briquetting solutions with mechanical briquetting presses ranging from 200 to 5.000 kg/hour for pressing biomass and other types of waste materials</b>	<b>Denmark</b>	<b>www.cfnilsen.com</b>
Caravaggi S.r.l.	Manufactures bio-shredders, chippers and a full range of machines for special applications	Italy	www.caravaggi.com
Carmanah Design & Manufacturing Inc.	Provides technology and equipment to optimise fibre utilisation	Canada	www.carmanahdesign.com
Caterpillar	Product and work tool for different industries e.g forestry (harvesters, wood extraction machines, processing, loading and reforestation), mining and construction	Switzerland	www.cat.com
Cellwood Machinery AB	Pretreatment of household waste, manure, silage and slaughter waste. Reject separation of substrate such as plastic, glass, steel, sand and stones	Sweden	www.cellwood.se
CherkassyElevatorMash BRONTO	Manufacturer of extruders, briquettes and pellets machines, extrusion line, oil presses, conveyers, handling systems	Ukraine	www.brnto.ua
Chinese Academy of Agricultural Mechanization Sciences	Provides straw balers, cotton stalk harvesters, straw cutting-rubbing equipments, biomass gasification technology and equipments, and the resource utilisation technology of the farm and livestock wastes	China	www.caams.org.cn
Continental Biomass Industries, Inc. CBI	Manufactures a complete line of grinders, shredders, chippers, flail debarkers and attachments that produce pulp chips, fuel chips and ground wood fuel from trees, forestry debris, demolition debris and industrial waste	USA	www.cbi-inc.com
Cormall A/S	Provider of straw technology solutions and automatic feeding system	Denmark	www.cormall.dk
<b>Costruzioni Nazzareno</b>	<b>Specialized in the realization of complete wood pellets plants, as well as in the upgrading of existing ones. Designs and manufactures belt driers, feeding systems, conveyors, hammer mills, filters, coolers and other equipment for pellet system</b>	<b>Italy</b>	<b>www.nazzareno.it</b>
<b>CPM Europe B.V.</b>	<b>Pelleting technology specialist, providing machinery for crushing, grinding, densifying, cooling, drying, sifting, computerized process controls, ingredient scaling systems and extrusion equipment</b>	<b>Netherlands</b>	<b>www.cpm europe.nl</b>
Crowley Engineering	Turnkey projects: grain handling, feed milling, wood pelleting, bioenergy plants, drying plants. Also supplies pre-owned equipment and servicing	Ireland	www.crowley.ie

## ECOSTAR SHOWCASES HEXACT MODULAR SCREENS AT ECOMONDO



At ECOMONDO, Italy's leading exhibition on renewable energy and environmental technologies, Ecostar showcased two modular Hexact Dynamic Disc Screens (DDS), with a screening surface of 2 and 3 metres respectively. Being more efficient than traditional screening systems, DDS technology enables smaller screening surfaces to be used, which together with the modular construction of Hexact makes it possible to assemble machines of varying length from 2 metres and upward, according to the actual requirements and the free space available.

This translates into significant savings on the upfront investment costs needed to build the recycling plant. Instead, costs relating to space and auxiliary equipment, such as conveyor belts and support structures are reduced. According to Ecostar, cost savings relating to structures are as high as 800 percent and costs for conveyor belts up to 30 percent less compared to traditional screens.

The energy efficiency of the patented Dynamic Disc Screening technology also means that just one 7.5 kW electric motor is needed for eve-

ry 20 tonnes per hour capacity of material screened. This makes the Hexact disc screen very cost-effective in terms of power consumption, using up to 70 percent less power when compared to traditional screening systems.

Ecostar's Dynamic Disc Screening technology is a patented system that can precisely screen any type of material, minimising twisting and clogging, as well as reducing downtime and cleaning and maintenance costs.

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COMPANY	COMMENTS	COUNTRY	WEB
CSB bvba	Manufactures and turnkey service of grinders, shredders, industrial granulators, wood boilers, conveyor belts, defertilization systems, special machines, mobile shredders	Belgium	<a href="http://www.csb-wastesolutions.be">www.csb-wastesolutions.be</a>
Dartek Vibracion	Develops and manufactures vibrating feeder machines	Spain	<a href="http://www.dartek.es">www.dartek.es</a>
Dieffenbacher GmbH Maschinen- und Anlagenbau	Engineering and supply of complete pellet plants. Individual supply of the Maier chipping lines, Maier flaking & milling equipment, energy generation, Schenkman & Piel dryers for hot gas or steam, Dieffenbacher Panelboard, ClassiCleaners and ClassiScreens and pelletising equipment	Germany	<a href="http://www.dieffenbacher.com">www.dieffenbacher.com</a>
Doppstadt Calbe GmbH	Providing stationary and mobile machines lines used for recycling of different materials e.g. biowaste, C&D, waste wood and trunks	Germany	<a href="http://www.doppstadt.com">www.doppstadt.com</a>
Dorssers Inc	Manufacturers of pellet mill dies, roller shells and roll replacement parts for all makes and models of pellet mills.	Canada	<a href="http://www.dorssers.com">www.dorssers.com</a>
Double Crane Machinery Manufacture	Specialised in feed machinery, grass machinery, chemical equipment, organic fertiliser production equipment etc.	China	<a href="http://www.sdshuanghe.com">www.sdshuanghe.com</a>
Doza-Gran Ltd	Equipment for pellet as well as animal feeding production: ring-die pellet mills, wood chippers, rotary dryers, silos etc.	Russia	<a href="http://www.dozagran.com">www.dozagran.com</a>
EDGE Innovation at Work	Designs and manufactures stacker conveyors, tracked stackers, mobile stockpilers, trommels, shredders and tracked loaders	Northern Ireland	<a href="http://www.edgeinnovate.com">www.edgeinnovate.com</a>
Europe Forestry V.O.F	Manufactures a wide range of high capacity grinders and shredders, debarkers and disc chippers, including the unique Kwik Chip Unit	The Netherlands	<a href="http://www.europeforestry.com">www.europeforestry.com</a>
Ferotec	Manufacturers and suppliers of replacement pelletising parts for the animal feed milling and the wood pellet industries, manufactures also all types of pellet dies	France	<a href="http://www.ferotec.eu">www.ferotec.eu</a>
Five Continents Machinery Co. Ltd.	Manufacturer and supplier of feed machines and feed mill plants	China	<a href="http://www.fcm-cn.com">www.fcm-cn.com</a>
Franssons Recycling Machines	Manufactures of fast-running shredders and slow-running mills for recycling, fuel preparation and waste management	Sweden	<a href="http://www.franssons.se">www.franssons.se</a>
Fredrik Mogensen AB	Designs and manufactures screening equipment for industries worldwide	Sweden	<a href="http://www.mogensen.se">www.mogensen.se</a>
Friedli AG Engineering und Anlagenbau	Develops and improves facilities in the area of grinding, forming and finishing for pellet production. Provides individual components and produces complete systems	Switzerland	<a href="http://www.friedliag.ch">www.friedliag.ch</a>
General Dies s.r.l.	Produces pellet mill and other machines for pellet production as coolers, crumblers, sieves and spare parts	Italy	<a href="http://www.generaldies.com">www.generaldies.com</a>
Global Times Bioenergy Co.Ltd	Provides pelleting technology designed for small and big pellet manufactures	China	<a href="http://www.cntrades.com/b2b/global_times/">www.cntrades.com/b2b/global_times/</a>
Gongyi Xiaoyi Mingyang Machinery Plant	Manufactures machines for charcoal-making, sawdust carbonising and charcoal powder forming, as well as cold rolled ribbed equipment	China	<a href="http://www.eng.zgmingyang.com">www.eng.zgmingyang.com</a>
<b>Graf-Equipment GmbH</b>	<b>Manufactures German designed equipment for the pellet industry, offers robust and reliable machines and turnkey projects</b>	<b>Germany</b>	<b><a href="http://www.graf-equipment.com">www.graf-equipment.com</a></b>
GreenMech Ltd	Manufacturers of wood chippers, green waste shredders and stump grinders	United Kingdom	<a href="http://www.greenmech.co.uk">www.greenmech.co.uk</a>
Haas Recycling-Systems	Develops and manufactures vertical and horizontal drum chippers, screens and conveyors		<a href="http://www.haas-recycling.com">www.haas-recycling.com</a>
Hammel Recyclingtechnik GmbH	Offers a diverse range of shredding technology, from primary and secondary shredders to screening technology and complete processing plants	Germany	<a href="http://www.hammel.de">www.hammel.de</a>
Heizomat Gerätebau -Energiesysteme GmbH	Manufacturer of PTO wood chipper, crane-feed chipper, pallet chipper, wood chip conveyors, grippers, discharger systems and other products	Germany	<a href="http://www.heizomat.de">www.heizomat.de</a>

COMPANY	COMMENTS	COUNTRY	WEB
Hekotek AS	Offers turnkey pellet factories, debarking and chipping lines for low quality logs	Estonia	www.hekotek.com
Henan Kingman M&E Complete Plant	Manufactures and designs wood pellet equipment and pellet mills	China	www.woodpelletline.com
Henan Strongwin Machinery Equipment	Manufactures pellet machines, edible oil production line, briquetting machines, environment protection equipment	China	www.strongwin.cn
Hi-Tech Agro Projects Pvt. Ltd.	Developer, manufacturer and worldwide supplier of biomass briquetting/pelletising machinery incl. preprocessing equipment (dryers, hammer mills, separators, conveying and conditioning systems) and MSW to RDF plant and machinery	India	www.hitechagro.org
Holzmatic engineering Srl	Produces woodworking plants, stationary and mobile chippers, offers sawmill technology	Italy	www.holzmatic.com
HRV Equipamentos de Processo SA	Complete process systems for industrial biomass pelletising. Total process solutions from raw material intake to ready pellets including debarkers, chippers, dryers, grinders and pellet mills	Portugal	www.hrv.pt
<b>IFP Ingenieurbüro für Pelletiertechnologie</b>	<b>Manufactures spare and wear parts around pelleting. Dies, rolls, beaters and sieves, die and roll revision and more</b>	<b>Germany</b>	<b>www.pressformen.com</b>
IQR Systems AB	Solutions for energy recovery from waste materials	Sweden	www.iqr.se
J.P Carlton Company	Stump cutters and chippers for an international market	USA	www.stumpcutters.com
Jacobs Corporation	Manufacturer and designer of aftermarket high performance replacement parts for hammer mills and pellet mills	USA	www.jacobscorp.com
Javo International BV	Offers solution for storage and distribution of wood chips, substrate and other (waste) bulk material. Self-emptying on demand	Netherlands	www.javointernational.com
JCB	Product and work tool for different industries e.g forestry (harvesters, wood extraction machines, processing, loading and reforestation), mining and construction	United Kingdom	www.jcb.com
Jenz GmbH Maschinen- und Fahrzeugbau	Manufacture of mobile and stationary grinders, drum screens, touring and mixing machines, mobile chippers and regrinders	Germany	www.jenz.de
Jiangsu Liangyou Renewable Energy Mechanical Engineering Co., Ltd	Specialized in manufacturing of biomass pellet machinery and biomass fertilizer machinery as well as design, manufacturing, installation, sales and service of turnkey project solution	China	www.fdsp-reme.com
Jiangsu Yongli Machinery Co.,Ltd	Producers of equipment for complete pellet systems including hammermills, chippers, dryers, presses, conveyors	China	www.yongli-machine.com
Jiaozuo Hengmu Husbandry Machinery Co., Ltd.	Produces feed machines and packing units, compound fertilizer processing machines and complete biomass energy machines	China	www.jzhmjx.company.weiku.com
Jinan Jihong Machinery Co., Ltd.	Manufactures tower crane, construction elevator, large pellet mill machine	China	www.jihongjixie.com
Komptech GmbH	Technology supplier of machinery and systems for the mechanical and mechanical-biological treatment of solid waste and for the treatment of biomass as a renewable energy source	Austria	www.komptech.com
Konecranes AB	Provides solutions as well as services for lifting equipment and machine tools of all makes. Serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminal	Sweden	www.konecranes.com
<b>Lachenmeier Monsun A/S</b>	<b>Provides complete industrial plants for grain drying and storage, inland and port terminals, oil and feed mills, premix factories, malting plants and plants for handling of biomass fuels. MONSUN™ bucket elevators, conveyors, storage, intake, truck loading and dust aspiration systems.</b>	<b>Denmark</b>	<b>www.lachenmeier-monsun.com</b>
La Meccanica srl di Reffo	Feeding plants, pelleting line for wood pellets, mills, dehydration plants, sugar refineries, oil-mills, organic and mineral-organic fertilisers processing plants	Italy	www.lameccanica.it
Lambton Machinery (Zhengzhou) Ltd.	Provides conveyors and pellets presses for grain industry	China	www.ambtonchina.en.ecplaza.net
Landtechnik Urch GmbH/ Mus Max GmbH	Provides forestry technology; mobile wood-chipping machines, silo feeding technology, farm technology and conveyor belt technology.	Austria	www.mus-max.at
Lasco Heuthechnik GmbH	Technology for timber and hay handling incl. log-transport trailers (tumbri), timber loading cranes, log grabbers and a patented log splitter	Austria	www.lasco.at
Linddana A/S	Manufacturers of wood chippers for use in gardens, parks and forests	Denmark	www.tp.dk
Lindner-Recyclingtech GmbH	Develops and produces recycling solution for different industries. Offer wide range of shredders	Austria	www.l-rt.com
Liyang Rongda Feed Equipment Co., Ltd	Provides engineering design, product manufacturing, installation, customer training and other integrated services	China	www.lyrdgj.com
Liyang Tongfu Feed Machinery Co., Ltd.	Producer of biomass wood pellet machines, straw particle machines, feed machinery sets and accessories	China	www.liyangtongfu.com
Liyang Yuda Machinery Co., Ltd	Producer of grain feed machinery and grazing machinery	China	www.yd-js.com
Mabrik S.A	Manufactures pellet equipment such as presses, refrigerators, air conditioners, dies and rollers	Spain	www.mabrik.com
Maschinenbau Siegel	Producer of hydraulic briquette presses for dry wood shavings, chopped wood and grinding dust	Austria	www.siegel-mb.at
Mion&Mosole I.A.I. Spa	Development of suction and purification plants for industries	Italy	www.mionmosole.it
Morbark, Inc.	Builds equipment for process organic materials for forestry, recycling, sawmill, bio-energy, and tree care markets	USA	www.morbark.com
Muyang Holdings Co., Ltd	Provides research and development, project design, manufacturing, installation and services for process industries including biomass; pellet presses and lines, conveying equipment & automatic control systems	China	www.muyang.com
<b>Münch-Edelstahl GmbH</b>	<b>Manufacturers of complete pellet mill and grinder lines and spare parts for pellet mills</b>	<b>Germany</b>	<b>www.muench-gmbh.net</b>
Nawrocki Pelleting Technology Sp.	Producer of universal pelleting units for milled biomass	Poland	www.granulatory.com
O.M.A Impianti	Manufacture pellet presses, briquette presses, dryers, complete plants for pellets production, storage silos, separator cyclones and mills and refiners for wood.	Italy	www.oma-srl.com
Obilni Technika, s.r.o.	Supplier of technologies for drying, pelletizing or briquetting lines inclusive of installation and service. Supplies also installation and servicing of technologies for post-harvest lines and stores of cereals	Czech Republic	www.obiltech.cz
OP Erjo	Manufactures forestry machines, mobile and stationary chippers	Sweden	www.operjo.se
Pallmann Maschinenfabrik GmbH &	Manufacturers of machines and complete systems for the preparation and size reduction of almost any kind of material	Germany	www.pallmann.eu
Pawert - SPM AG	Sets up briquetting plants all over the world, from 150 up to 4600 kg/h capacity	Switzerland	www.pawert-spm.ch
Peterson Pacific Corp.	Manufacturer of whole tree pulpwood chippers and debarkers, horizontal grinders, blower trucks and trailers	USA	www.petersoncorp.com
Petkus Technologie GmbH	Suppliers of a comprehensive range of seed and grain handling and processing technologies as well as feed plants	Germany	www.petkus.de
Pezzolato Costruzioni Meccaniche S.p.A.	Manufacturer of machines for the preparation of firewood, refuse and recycling, saw-mill integrated systems	Italy	www.pezzolato.it
<b>Prodesa Medioambiente S.L.</b>	<b>Biomass solutions, EPC and turnkey wood pellets plants with or w/o cogeneration (ORC), biomass thermal dryers (low and high temperature)</b>	<b>Spain</b>	<b>www.prodesa.net</b>
Promill SAS	Designs and manufactures hammer mills and pellet mills, business sectors are: sugar, alfalfa, feed, oil, starch, wood energy, urban sludge, diester and bioethanol	France	www.promill.fr
Radviliskis Machine Factory, JSC	Manufactures pellet mills, hammer mills, conveyors, coolers, shredders, bunkers, rollers. Engineering and construction of complete pellet plants for straw, wood, peat, sunflower husks, bran and other materials	Lithuania	www.factory.lt
<b>Raumaster Oy</b>	<b>Supplies material handling systems for pulp and paper and energy industries</b>	<b>Finland</b>	<b>www.raumaster.fi</b>

# CBI and Ecotec demo new machinery at Factory Forum



CBI's expanded on-site demo arena included live demos of twelve machines from the CBI and Ecotec product lines, headlined by a pair of the all-new 6800CT Horizontal Grinders, which have been engineered to improve on the 6800BT's "revolutionary" design (photo CBI).

Forest, tree-care, and biomass industry professionals from around the world gathered in Newton, New Hampshire (NH) on the first week of October for the 2018 "CBI and Ecotec Factory Forum" hosted by US-headed Terex Environmental Equipment. CBI's expanded on-site demo arena included live demos of twelve machines from the CBI and Ecotec product lines, including the all-new 6800CT Horizontal Grinder and Phoenix 1600 Trommel Screen.

**A PAIR OF CBI 6800CT HORIZONTAL GRINDERS**, which have been engineered to improve on the 6800BT's revolutionary design, headlined the three-day event. A 15 percent larger screening area wraps more than 190 degrees around the rotor on the 6800CT, allowing production rates to surge beyond 200 tonnes per hour.

Supported by a larger shaft and bearings and an optional 1 200 hp CAT C32, the engine powers the forged drum rotor through the toughest materials. Built to process land clearing debris, pallets, clean industrial waste, stumps, logs, mulch, bark, shingles, and whole trees as fast as it can be loaded, the 6800CTs devoured entire trees and stacked the desired end-products in front of the crowd.

A pair of 5800BT Horizontal Grinders pro-

cessed high-volumes of material and demonstrated their powerful and portable designs. The newly available TSC 80T Stacking Conveyor was lined up in front of a 5800BT to show how end-users can optimize their current operations.

CBI also showcased the 6400 Horizontal Grinder's ability to process railroad ties contaminated with metal. Terex Ecotec's TDS 820 Slow Speed Shredder also processed railroad ties and pallets.

Terex Ecotec's product lineup featured the TRS 550 Recycling Screen, the TTS 620T Trommel Screen, and the all-new Phoenix 1600 Trommel Screen. The Phoenix 1600 has been "innovatively" designed to provide excellent fuel efficiency and low operating costs. The large screening area guarantees high-volumes

of precise production.

The highly versatile trommel can easily screen a variety of material including topsoil, compost, sand and gravel, wood chips, and C&D waste. Woven mesh or heavy-duty punch plate panels can be fitted to the drum ensuring all application requirements are met.

CBI's 30<sup>th</sup> Anniversary Dinner was kicked off in style with the first-ever "Golden Grizzly Awards" recognizing excellence in the industry. On the final day of the event, customers and service techs attended performance optimization courses to improve their understanding of the latest equipment upgrades.

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COMPANY	COMMENTS	COUNTRY	WEB
Rosal S.A.	Design, manufacture, mount and start up complete wood pelleting lines. Manufacturers of pellet mills, hammer mills, walking floors, belt conveyors, silos, bucket elevators and chain conveyors	Spain	www.rosal-feedmills.com
Rotawave Ltd	Developer and supplier of torrefaction plants based on microwave technology	United Kingdom	www.rotawave.com
Rudnick & Enners GmbH	Supplies feeding systems for biomass plants, turnkey pelletising plants, wood working machines, conveying systems	Germany	www.rudnick-enners.de
<b>RUF GmbH &amp; Co KG</b>	<b>Designs and manufactures a range of briquetting presses which can handle between 30 and 1,500kgs/hr of waste material</b>	<b>Germany</b>	<b>www.briquetting.com</b>
S-E-G Svenska AB	Supplies industrial weighing, belt scales, feeders and solid mass flow meters	Sweden	www.s-e-g.se
Saalasti Oy	Specialized in turning biomass into asset through innovative solutions, including particle size and moisture content control, as well as industrial solid biomass processing.	Finland	www.saalasti.fi
Sahut-Conreur	Designs and construction of briquetting and compaction-granulation units	France	www.sahutconreur.com
Salsco inc	Manufacturer of equipments like chippers, shaving mills, balers in sizes up to industrial scale, also equipment for agriculture, landscape care and municipality.	USA	www.salsco.com
<b>Salzhausener Maschinenbautechnik Salmatec GmbH</b>	<b>Manufacturer of pelletizers type Maxima. Designs and delivers wood pelleting units. Pelletizer spare parts like dies and rollers for all brands.</b>	<b>Germany</b>	<b>www.salmatec.com</b>
Seeger Engineering AG	Provide complete lifecycle power solutions and energy recovery from biomass	Germany	www.seeger.ag
Segem Macbo	Design and manufacturing machines for the wood industry and the wood energy	France	www.segem.com
Shanghai Shende Machinery Co., Ltd	Manufactures feed machinery and provides whole-plant turn-key project design and building for feed mills as well as the auxiliary equipment and spares.	China	www.andritz.com

COMPANY	COMMENTS	COUNTRY	WEB
Shanghai ZhengChang International Machinery & Engineering Co., LTD	Manufactures pellet mills, conveyers, extruders, hammer and roller mills, cleaning, screening and drying equipment	China	www.zhengchang.com
Shred-Tech	Designs and manufactures shredding and recycling systems	Canada	www.shred-tech.com
Smartec Srl	Develops and manufactures equipment for pellet production: complete range of systems for biomass, both for private and business customers to reuse processing waste	Italy	www.smartecsrl.net
SPC Sweden Power Chipper	Complete solutions for small scale pellets production	Sweden	www.pelletpress.com
Stolz S.A.	Manufactures and installs machinery for bulk solids including storage silos, mechanical and pneumatical handling and port silos	Spain	www.stolza.com
Tana Oy	Specialized in technology for solid waste management combine with control and monitoring systems	Finland	www.tana.fi
Tecon Konstruktionen GmbH	Supplier of standardized PELLET.TOWER pellet production modules (2.5 to 15 tons per hour) offers consulting engineering services for the entire life cycle of wood pellet plant projects	Austria	www.tecon.at
Terex Environmental Equipment	Designs and manufactures wood processing, biomass and recycling equipment. The offer for the large scale biomass producer and recycling industries includes whole tree chippers, horizontal grinders, trommels, slow speed and medium speed waste shredders, waste handlers, windrow turners and recycling screens with spaleck technology	USA	www.terex.com
TransRental UAB	Provides wood processing, forestry, utility and construction equipment, wood-cutting machines and logs debarking equipment both as sales and rental.	Lithuania	www.transrental.lt
TVM Termoventiltec S.p.A	Supplier of turnkey wood pellet plants, design, plant layout, engineering and supervision through to installation and commissioning	Italy	www.tvm-termoventiltec.com
Vaptech Ltd.	Manufactures equipment for the processing industries, offers complete automated pelleting and briquetting lines, grinding mills, briquetting and pelleting presses	Bulgaria	www.vaptech.bg
Warren & Baerg Manufacturing, Inc.	Manufactures stringing and grinding systems for agriculture and biomass applications, densifying/cubing systems and complete line of conveyors	USA	www.warrenbaerg.com
<b>Vecoplan AG</b>	<b>Develops, produces and markets machinery and plants for the resource and recycling industry to shred, grind, convey and process wood, biomasses, plastics, paper, residential and commercial waste, and more</b>	<b>Germany</b>	<b>www.vecoplan.com</b>
Weima Maschinenbau GmbH	Provides machines and briquetting presses for wood, the plastics and recycling industry and for the production of substitute fuels	Germany	www.weima.com
Ventura Máquinas Forestales S.L.	Provides a range of agricultural and forestry machines	Spain	www.venturamaq.com
Vermeer Manufacturing Company	Producer of equipment for agro and forest processing products	USA	www.vermeer.com
West Salem Machinery Co	Manufactures fiber preparation and processing machinery as well as complete customized installations worldwide: feeders, pre and post- screeners, grinders, shredders, hammermills	USA	www.westsalem.com
Vogelsang GmbH & Co. KG	Manufactures pumping, grinding and spreading technology for the municipal, industrial and agricultural markets around the world.	Germany	www.vogelsang-gmbh.com
Xuzhou Orient Industry Co. Ltd	Designs and builds pellet and briquette mills, pellets stoves, dryers, gasifiers, chipping and crushers	China	www.orient-biofuel.com
Ze.Pi Tecnologie srl	Manufacturer of pelleting presses, spare parts and equipment for complete wood and biomasses pelletizing lines	Italy	www.zepi.it
Zhangqiu Fada Pellet Machinery Co., Ltd	Manufactures pellet mills, hammermills, mixers and crushers, as well as feed, forest, organic fertilizer and energy machinery	China	www.fadajixie.com
Zhangqiu Yulong Machine Co., Ltd	Provides pellet mills, briquette presses, crushers, hammermill, mixers, coolers and pasture machinery, with global export	China	www.woodpelletmill.net
Zhengyang Machinery Equipment Co., Ltd.	Manufactures charcoal briquette machines, biomass energy machines, environment protection equipment, farm machines and some other mechanical equipment	China	www.zyfarmmachine.com
Zhengzhou Furui Mechanical Equipment	Produces machines for producing hookah charcoal, wood pallets, and various foods	China	www.cnchinafree.cn
Zhengzhou Rephale Machinery Co., Ltd.	Manufactures agricultural machinery, environmental protection machinery and feed machinery	China	http://rephale.en.china.cn
Zhengzhou Whirlston Trade Co., Ltd.	Research and development of agricultural machines, food and feed machine, and briquette machine	China	www.whirlstonmachinery.com

## Classy Dieffenbacher sizers making the cut

Germany-headed wood processing technology provider Dieffenbacher is a household name within the global wood-based panel industry. Not least on account of its size reduction and screening technologies to produce chips and flakes from logs and recycled wood, an application that has been something of a best-kept secret in the wood pellet industry.

Recently, French pellet producer Biosylva SAS (Biosyl), commissioned its second ClassiSizer from Dieffenbacher. The first has been in operation since 2013. Biosyl operates one of the country's largest pellet plants, a 120 000 tonnes-per-annum facility in Cosne-Cours-sur-Loire, about 200 km south of Paris. Ordered in 2017, the ClassiSizer provides Biosyl with a capacity of more than 10 tonnes per-hour (bone dry) of sized material.

Using a combination of roller screening and air separation to separate out contaminants, the ClassiSizer reduces input materials such as woodchips and sawdust, to the desired particle size in one step. The material is fed from above

into the impact chamber where it is resized with high kinetic energy by the fast rotating rotor and interaction of the particles. Screens, perforated according to the application, perform the final material size calibration. The end products, accept and reject is collected in two discharge boxes and fed out by screws.

The unit can handle heterogeneous raw materials, various chips dimensions and different wood species. Depending on the machine configuration, either dry, wet or both materials can be processed. A drum or a belt dryer in the downstream production process can dry the high-quality flakes produced by the ClassiSizer.

– We were very satisfied with the performance of the first machine and therefore ordered the second one in 2017. Our expectations were met, the new ClassiSizer works exactly like it should and together they make for twice the fun said Antoine De Cockborne, owner, Biosyl.

In total, Dieffenbacher has delivered four ClassiSizer units to France in the past five years making it the market-leading technology for



Dieffenbacher ClassiSizer.

the production of pellets from whole logs in France. Early this year, Dieffenbacher handed over its first ClassiSizer to a Canadian pellet producer – Pacific BioEnergy's 360 000 tonne-per-annum facility in Prince George, British Columbia (BC).

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