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September/October 2021 | Issue 70

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# Blue Machinery turns the Material Handler Market Electric!

**Blue Machinery Central recently supplied the UK's first Fuchs MHL 850F electric material handlers to Contract Plant Rental, as the two companies look towards the future of electric machines.**

Contract Plant Rental is part of the biggest contract hire groups in the UK and Ireland. They deliver bespoke, comprehensive contract plant rental solutions designed to meet the diverse needs of their clients, offering medium and long-term rental opportunities of plant and equipment with concentration on the 'heavy' end of the construction,

aggregate and waste handling market requirements. The two machines provided by Blue Machinery have gone straight out to work for their customer Lancashire Renewables, with the first handler feeding their waste plant in Thornton. Whilst second handler will be loading MSW waste at their site in Fleetwood.





State-of-the-art engine technology paired with intelligent hydraulics make the MHL 850 one of the fastest and most sensitive loading machines in waste and scrap handling. With an operating weight of up to 35.5 tons, 16-meter reach and a 3-meter undercarriage width, this data impressively demonstrates just what the MHL 850 can do. The powerful 132 kW electric motor and the high-performance hydraulics in the efficient two-circuit system make it possible for loads weighing several tons to be moved effortlessly, quickly, and precisely. In addition to its legendary robustness, it's modern technology and maximum reliability are among the strengths of the machine.

The MHL 850 is as quiet as a fox! Thanks to future-oriented drives with minimal heat and noise generation, Fuchs' electric machines are particularly suitable for use in halls or in the vicinity of inhabited areas. Fuchs offers one of the most extensive portfolios of electrically operated material handling machines. Thanks to decades of experience and strength in innovation, the Series F machines are among the safest and most reliable products in the industry.

#### Advantages of the MHL 850 include:

- No CO2 emissions
- Internal Stage V Deutz powerpack from transport
- Low-noise and high-torque electric motors
- Low heat development
- Future-proof drive technology
- Low maintenance and operating costs
- Comprehensive monitoring of network quality and machine grounding
- Generous working radius thanks to optional cable drums or power packs
- Spacious Fuchs comfort cab

Fuchs offer an electric version of their entire material handler range, starting at the 810 (baby of the fleet) all the way up to the 890

(80+ tonne machine). The extensive use of standard components from the Fuchs range of diesel engine models, ensures that spare parts are widely available for all the electric models. The electric cable lengths and cable reel designs on these machines are adapted to each customer's specific needs. The machines can be equipped with an internal or external powerpack, to move the machine around the yard for simple plug and play in several locations.



The UK government have confirmed that they are removing the tax relief on 'Red Diesel' from April 2022. These measures have come about to encourage the transition towards the use of more efficient vehicles and machinery. This means that we're going to face a significant rise in fuel purchasing costs and operating costs. Now is a great time to change out your traditional diesel-powered material handler, for a more cost effective, electric powered Terex Fuchs material handler!







Sales Director at Blue Machinery Central, Sean McGeary offers his thoughts on the future of electric machines in the industry: "I feel that 2022 will see a significant increase in the demand for electric machines across a wide spectrum of construction related industries as an alternative to traditional diesel hydraulic mobile machines. This is more so for machines where mobility is not the primary function e.g., Material Handlers, Crushing, Shredding & Screening trains. There is a convenience to have the machines with mobile capability, but they typically work on one site without regular movement. The demand will increase due to the change in diesel tax legislation as well as a general change in attitude across the construction associated sectors for decarbonisation and planning for the future".

Contract Plant Rental have been offering rental solutions on material handlers for a decade, however this is the first time that they have decided to invest in bringing electric material handlers to their fleet. Operations Manager at Contract Plant Rental, Richard Creighton, explains their decision to go electric: "As electric cars become a staple on our roads it's only natural that all diesel-powered plant will be heading in that direction, its advantages in terms of running costs and operator health benefits make it the obvious choice for a wide and varied number of applications."

"As custodians of the industry for a relatively short period of time, we owe it to the next generation to look for processes that not only look after our own health but also that of the planet. The waste industry continues to spear head the move from landfill to recycling, the move to electric machines powered by carbon neutral solar and wind power will be a natural progression from its diesel-powered predecessor. Saving money on fuel with the aim of Zero emissions."





# SunSkips, sets its sights on Sennebogen

**Fast growing business, SunSkips, was looking for a plant supply partner that could keep up the pace as their business continues to go from strength-to-strength post pandemic. A search that led them to invest in a new Sennebogen 817E material handler from the recycling machinery experts at Molson Green.**

When the team behind Stowmarket based firm, SunSkips, snapped up the Stowmarket Skip Hire business in 2020, it was to pursue a vision to shake up the waste handling sector. With operations that now cover Cambridgeshire, Suffolk and Norfolk, the skip hire and waste handling specialist has certainly been positive in its pursuit of business as it looks to become the go-to name in the area.

Where others see the waste industry as a sector that has struggled to keep up with the uptake of new technology, SunSkips has embraced social media and the internet as fundamental touch points for its business.



As part of its ambitious plans, the firm has expanded to take on a clutch of sites with Managing Director, Matt Stewart, working on the introduction of several more that are in the pipeline. He believes these sites will help cement SunSkips position as the area's premier skip and waste handling company. Part of those ambitious plans is the continued development of a plant fleet dedicated specifically to the waste handling sector.

Matt worked alongside Molson Green Sales Manager, Brian Bell, to help develop a strategy for improving the material handling equipment options at its Stowmarket yard.

Brian said, "The forward thinking and ambitious business model that SunSkips possesses, reflects that of Molson Green and Sennebogen. Matt and the team at SunSkips want it to be the leading firm in the sector and we see ourselves as kindred spirits. It has been a real pleasure to help them develop their fleet requirements."

The yard at Stowmarket handles over 50,000 tonnes of skip hire, construction, commercial and industrial waste each year, delivered to site through its fleet of skip lorries and ro-ro waste lorries. With such a high turnover of material the emphasis was on finding a compact waste handler that could work the concrete-slatted yard efficiently. The Sennebogen 817E mobile material handler was the perfect fit.

Brian further explains, "The team was using an excavator with a grab attachment. A specialist yard needs equipment specifically manufactured for the job. The Sennebogen 817E is the perfect option for the SunSkips yard. It is designed to lift and move large loads of waste materials rather than excavate. The reach is incomparable to an excavator and its rubber tyres mean there is less damage to the concrete floor."







With an operating weight of between 17.5tonnes and 18.5tonnes, SunSkips took the Sennebogen 817E that has an 8m reach rather than the maximum of 9m available. The 817E boasts a hydraulically elevating cab as standard and with its 2.4m maximum elevation, the machine offers perfect viewing into the site loading bins, improving operational efficiency and safety for operator and yard staff.

Operator comfort in the cab is second to none with the 817E offering superb sound insulation, its all-round glazing offering superb visibility and joystick control making the machine simple to operate.

It is powered by an extremely fuel-efficient water cooled FPT NEF 45 Tier IV turbo-charged direct injection engine that offers 92kW of power at 2,200rpm. The engine itself is located on the side of the machine, offering easy access for any maintenance issues.



SunSkips Managing Director, Matt Stewart, has been delighted with the performance of the 817E since it arrived at its Stowmarket base and has no regrets about taking on a Sennebogen handler.

Stewart said, "We saw lots of Sennebogen machines being sold into the market are familiar with the advantages they offer. We had heard nothing but great feedback from operators with experience in using them as we have developed the business, so capacity and material turnover has doubled. We

were looking for a reliable machine that would help increase our operational efficiency, the Sennebogen 817E does that."

SunSkips has taken the Sennebogen on a full-service contract which offers the certainty of fixed costs, coupled with the excellent post-sales support that Molson Green offers - and all with no nasty financial surprises.

Brian said, "Helping support rapidly expanding and ambitious companies, such as SunSkips, is part of the reason we are in business. At Molson Green we believe in working with customers and using our combined expertise to provide the ideal solutions. I am really pleased that we have been able to help the SunSkips team as they develop the business."





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# Welcome to issue 70

**Welcome to issue 70 which includes our annual focus on MRF's and associated equipment.**

As we are now 9 months into 2021 I would like to confirm the HUB-4 magazine (free subscription to industry operatives) will continue to bring you all the latest news which can also be read on-line here: <https://hub-4.com/magazines>

Equally important is our free weekly e-newsletter which is distributed to our readers and is presented on-line here: <https://hub-4.com/pages/newsletter>

We have also introduced a brand-new section on the website for 2021 – **New Product Features.**

This is on the home page of our website and is dedicated to new equipment launches and is also included in our weekly e-newsletter. It is a great platform for your launch and includes bookable time slots so you can maximise on your launch.

Our increasingly popular social media packages are also available across all our Twitter, Facebook & LinkedIn pages all of which can be linked with electronic web and e-newsletter advertising – why not enquire about our extremely competitive packages.

Finally, please note our **November/December edition** will focus on Mobile Processing & Materials Handling Equipment and I welcome any editorial contributions for this issue.

### Onwards into 2022:

If you're starting to look at marketing in 2022 our new media file with feature list can be found here, either PDF download or page flip version:  
<https://hub-4.com/pages/advertise-with-us>

**John Edwards**  
Editor

## November/December 21 MOBILE PROCESSING & MATERIALS HANDLING EQUIPMENT - material

handlers, mobile stackers, mobile conveyors, mobile radial stockpilers, mobile tracked conveyors. **QUARRYING** - Open topics for this issue. **RECYCLING** - Open topics for this issue. **BULK HANDLING** - Open topics for this issue



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# Rokbak revealed: the new name for Terex Trucks

**Articulated hauler specialist Terex Trucks rebrands as Rokbak and announces its vision for an exciting new future. The Scottish manufacturer unveiled the new brand at a digital launch event on September 1, attended by dealers, customers, media, and Volvo Group colleagues from around the world.**

Rokbak is the new name for Terex Trucks, with the new brand representing the continuation of its strong hauling heritage with a future-focused vision. Throughout the last four decades, the company has never wavered in its promise to customers to deliver powerful and reliable articulated haulers – and that legacy remains front and centre within the new brand. At the same time, the Rokbak name represents an exciting new future and reflects the significant advances the organization has made in recent years as well as its new strategic priorities.



Paul Douglas  
Managing Director, Rokbak

"Our company has an incredible history and a proud heritage," said Paul Douglas, Managing Director. "Seven years ago, we became a member of the Volvo Group, which allowed us to make major improvements in every part of our business. Millions of pounds have been invested in improving our products, modernising our facilities, expanding our network, and developing our people. It has been a process of continual evolution. That's why we feel it's right to recognize this evolution with a new brand name to launch an exciting new chapter in our history. And we'll keep investing to further improve our machines for our customers."



## Articulated haulers that don't buckle under pressure

The significant investments and improvements in the company's articulated haulers in recent times have ensured they remain among the most robust and reliable machines around. Now, with their foundation in the predecessor models from Terex Trucks, the 28-tonne payload RA30 and 38-tonne payload RA40 from Rokbak are the most productive and efficient articulated haulers the company has ever made.

As part of the new brand launch, the machines now come in Rokbak colours and livery. While maintaining the experienced design, craft and precision that are synonymous with the company's haulers, the RA30 and RA40 deliver better fuel economy, lower emissions, improved safety, and greater durability. With a tough design that's built to last, the haulers power through hard work with ease, boosting customers' productivity no matter how tough the conditions.



"We're very excited to reveal our new brand, and of course our haulers are the shop window," continued Paul Douglas. "Rokbak stands for power, performance and reliability. We already have a very healthy order book for the new brand, and we want to further expand our reputation, dealer network and market share. We're still the same skilled, experienced, and passionate team, committed to making rock-solid haulers every day. But we also have a clear vision for where we want to go and who we want to be."





## Rokbak has your back

As part of the Volvo Group, Rokbak has experienced steady evolution over the past seven years. While this has taken place across the board, it is particularly prominent in four key areas: product design, sustainability, safety, and people.

In product design, the company has introduced Stage V engines for better fuel efficiency and operation for customers. Other improvements include a new transmission on the 28-tonne (30.9-ton) machine, the introduction of the Haul Track telematics, and a stronger focus on operator wellbeing and safety. In terms of sustainability, the company's manufacturing plant has shifted to 100% renewable energy as well as operating within Science-Based Targets and ISO standards, plus targeting CO2 emission reductions.

The focus on safety has been emphasised in all areas, but particularly on its employees. Changes in processes at the factory have seen a stronger concentration on maintaining employee safety while simultaneously delivering high standards and low downtime. For the company's people at the heart of Rokbak, there is a continual focus on professional development, keeping the team at the forefront of skill and expertise. Similarly, Dealer Operating Standards and training ensures the expanded dealer network continues to deliver the highest levels of service.



Melker Jernberg  
President Volvo CE and Executive  
Vice President Volvo Group

"We are proud and excited to have the modernized Rokbak brand continue as a fundamental part of our organization," said Melker Jernberg, President Volvo CE and Executive Vice President Volvo Group. "We believe in a sustainable future, innovation and the power of our people and we see that all encapsulated in Rokbak. At the same time, the company has its own personality, heritage and loyal customer base and it will be exciting to see the brand evolve further as it sets out on this new stage of its journey."



# MWS Equipment launches Hydropure range

**Smarter washing solutions specialist, MWS Equipment is proud to announce the latest addition to its product portfolio. The Hydropure thickener range is designed to maximise water recovery whilst minimising the use of tailing dams.**

Water management solutions are increasingly in demand across the modern aggregates production world, with water being a valuable global resource. MWS Equipment have listened to their customers, particularly in regions where it can be difficult and, in some cases, impossible to find the water required to supply an aggregate processing plant. MWS have used their high-level expertise within this industry to design a range of thickener systems which complements the current range of wet processing equipment.



## Hydropure Thickener

The primary goal of the Hydropure thickener is to recycle as much water as possible at the point of use ready for feeding back to the wash plant. The MWS Equipment range of thickeners come in a variety of diameters of 6, 8, 10 and 12 metres. They are designed to handle various flow rates from 180 to 650 m<sup>3</sup>/hr of slurry and process up to 40 tph of solids.

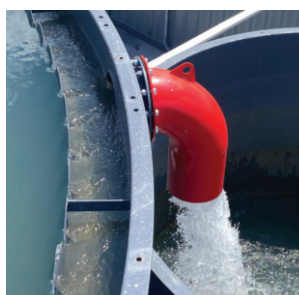
A well designed and installed thickener system can recycle up to 90% of the original feedwater supplied to the plant. This greatly reduces the amount of "fresh" water which is required. The use also vastly reduces the overall footprint of a plant as it reduces the need for large surface area settling ponds, and the costs associated with operating such ponds.

## Smarter Operation Unit

The cyclone overflow (waste slurry) from the wash plant is directed to the Hydropure thickener where an anti-turbulence feed chamber adds a small

amount of flocculant to the waste stream. This flocculant which is prepared in a dedicated make up station is used to combine the small particles together into larger sizes. These larger size particles then sink to the bottom of the Hydropure Thickener, allowing the clean water to flow over the weir into the clarified water tank, for direct reuse within the wash plant.

The particles which settle in the tank are collected in a lower cone section where they can be pumped from the thickener. The Hydropure is fitted with a centrifugal pump which is used to pump this waste sludge out of the thickener. This can either be to a settling pond or sludge holding tank for further processing by a filter press or similar.



The system is controlled from either a dedicated standalone PLC system or it can be combined into the controls of the MWS Equipment wash plant.

As a result, customers enjoy the flexibility to choose the best filtration technology for their production environment,

along with being able to integrate the Hydropure into existing equipment.

Ben Frettsome, Product Line Director, MWS Equipment, said "in line with our core values of commitment, innovation and sustainability we are diversifying our product range to supply our customers with a full product solution. MWS has been responsive and adaptive to change, with the outcome being our industry-leading design which offers versatility and cost efficiency. The water management range showcases the very best of MWS engineering and, with almost infinite permutations across the wet processing sectors, enables us to deliver our customers truly smarter water management solutions."

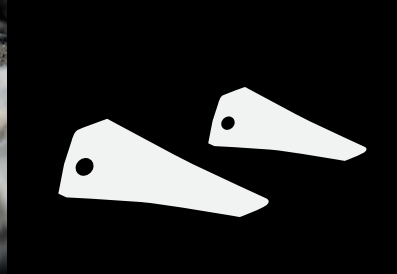
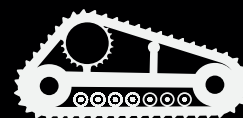
Norman Kane, Senior Technical Manager, MWS Equipment, added "This is an exciting development for the business with the new product range complementing our core offering. Over the years, MWS Equipment have gained a great reputation for quality products and efficient service, and these are the standards to which MWS Equipment will thrive to emulate. The business will continue to expand to suit the demand of the industry, regularly releasing new products and increasing its coverage to service our partners and customers through its regional teams."

MWS Smart water treatment and process filtration solutions are designed to:

- Increase productivity – using the latest water treatment and process filtration innovations
- Improve quality – using proven technology to deliver consistent results
- Drive sustainability – saving water, energy and consumables while reducing waste
- Reduce operating costs – with solutions focused on a low total cost of ownership
- Maximise efficiencies – through tailored technology that meets exact site requirements.

For further information visit: [www.mwswashing.com](http://www.mwswashing.com).





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# The new EDGE TRT620R - All the expected benefits of a 620 class trommel and more

**EDGE Innovate have Introduced their latest trommel offering with the launch of the EDGE TRT620R. The new 620 class trommel will take its place in EDGE's ever popular trommel line up.**

Designed for maximum productivity and superior screening efficiency, the new EDGE TRT620R tracked trommel has a heavy-duty construction design coupled with high manoeuvrability. This ensures that the TRT620R is the perfect screening solution for a wide range of applications including compost, mulch, soil, biomass or construction and demolition waste.

## Signature Features

The EDGE TRT620R has uniquely combined a remote operated, 180° radial fines conveyor with the ability to track, screen and stack material simultaneously. This functionality allows for enhanced production capacities, reduced material handling and the ability to create large radial or windrow stockpiles. The positioning of the radial fines conveyor whether at 0° or 180° allows the TRT620R to have the same small footprint of a side conveyor trommel format but with a much superior product separation and reduced material contamination.

Designed to accept several other trommel manufacturers drums, the EDGE TRT620R enables operators to take full advantage of their existing drum stock as well as loaned drums from other operators and drums from equipment hire outlets. A quick and simple drum exchange procedure is facilitated via an innovative sliding feeder design and double sided 180° swinging drum doors, allowing the screening drum to be exchanged in a matter of minutes.

With a screening area of over 30m<sup>2</sup> (35.8yds<sup>3</sup>), the EDGE TRT620R is fitted with a 2m X 5.5m (6.5' X 18') long spiral drum with variable drum speed and adjustable screening angle. EDGE are set to compliment the versatility of the TRT620R by offering a range of different drum types and screen apertures.

Offering the largest hopper capacity in its class, the EDGE TRT620R encompasses a 1400mm (55") wide, variable speed feed conveyor with forward / reverse functionality. A large hopper opening ensures optimum flow of material to the screen drum. EDGE's intelligent load management system constantly monitors drum pressure and regulates feeder speed resulting in superior uptime by eliminating material overload and ensures optimum screening production at any given time.



## Operational Features

An HMI control panel with an intuitive operating system enables automatic start up and shut down whilst allowing operators to customised operating parameters to ensure optimum throughput across all applications. A hydraulic raising chassis provides additional ground clearance and excellent service access to the power unit assembly. Adjustment of the drum screening angle from 0-5° is also achievable thanks to a variable angle feature. This function allows the operator to adjust the rate at which material travels through the drum screen.

A wireless remote with an operating distance of up to 100m (328') gives the operator control over feeder speed, tracking, tipping grid cycles and rotation of the radial fines conveyor.

The EDGE TRT620R utilises the latest engine technology, the EDGE TRT620R is powered via a Caterpillar C3.6 Tier 4 Final / STAGE V engine, resulting in extremely low engine and noise emissions. Further fuel savings are made possible thanks to a unique Eco-Power Saving Mode which reduces engine speed to idle when not processing material.

With superior stockpiling ability, efficient screening, intelligent load management and quick drum exchange; the EDGE TRT620R is your perfect screening partner.

For additional information regarding the newly available TRT620R track trommel or any other services provided, EDGE Innovate staff will be on hand at Let's Recycle Live on stand LD6 from the 15-16th September 2021.

Further information can be found at [edgeinnovate.com](http://edgeinnovate.com)





# Metso Outotec and Duo Group to provide aggregates solutions in the UK

**Metso Outotec has appointed the Duo Group as a distributor for Metso Outotec's aggregates solutions in the UK. The distribution agreement covers the current aggregate business serviced directly by Metso Outotec. This includes aggregate processing solutions including crushers and vibrating equipment, crusher wear parts and spare parts as well as commissioning, service contracts and technical support for aggregate quarries in England, Scotland, and Wales. The contract will come into effect in September 2021.**

"We are very pleased to announce the partnership with Duo," says Olli-Pekka Oksanen, Senior Vice President, Distribution Management Office in Metso Outotec. "The partnership expands our distribution model to include the larger aggregates quarrying customers in the UK. With Duo's local presence and world class know-how, we will improve our ability to offer more comprehensive solutions and aftermarket support with the agility and responsiveness appreciated by the quarrying customers."

"The partnership with Metso Outotec will set us apart from the competition," says Martin McWilliams, Managing Director of Duo Group. "We are excited to add Metso Outotec aggregates solutions to our offerings on both our own contract processing plants and to our customers. Thanks to this deal, Duo becomes the only company in the UK in the

extractive, construction, energy, and waste sector that can both provide end-to-end, design, and build but also supply the equipment from a world-leading supplier. We believe that this enables us to increase our sales, expand customer relations and more efficiently meet our customer demands in the aggregate industry."

Commenting on the cooperation, Adrian Wood, Vice President, Capital Business and Support, Distribution Management Office at Metso Outotec, adds: "Our target was to find a partner to better serve our traditional customers by holding both equipment and local inventories with an increased service capability. When the initial discussions with Duo began it was very clear they could offer even more than this through their turnkey business model." He concludes: "We are truly excited about the potential this partnership brings and are looking forward to bringing to our customers a world class and wide-ranging service offering. We believe this combined with the continuation of the partnership with the current distributor Garriock Bros, and the mining, pump, industrial customers remaining directly by Metso Outotec is the best way to reach the targeted level of service."

Duo Group Ltd. provides the aggregate, recycling, and material handling industries with comprehensive packages of complete processing solutions including equipment for civil engineering, manufacturing, and contract processing. They operate out of six locations with more than 200 employees.





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# BES merges with R&G Cooper to form Bulldog Plant & Equipment



**Two of the best-known names in the supply, installation and maintenance of concrete plants, asphalt plants and materials processing plants have announced a 50:50 merger to form a new venture offering a 'one stop shop' from concept to commissioning.**

Berkshire Engineering Supplies (BES) and R&G Cooper (RGC) have joined forces to create Bulldog Plant & Equipment, the only business of its kind in Britain, set to become the number one provider of large-scale production plants in construction materials, engineering and energy sectors.

With long-established reputations among the country's leading concrete, asphalt and aggregates producers, BES and RGC have worked hand-in-glove for many years to supply and install many of the UK's biggest and most advanced materials production facilities.

Coming together as Bulldog gives the team unrivalled expertise and capability to deliver complete 'turnkey' packages from the earliest stages through to ongoing operations. That includes planning, design, and specification; sourcing and supply; fabrication and mechanical engineering; control and instrumentation; groundworks and civils; build and installation; testing and commissioning; operation, continuous improvement and maintenance; refurbishment and relocation.

Bulldog also offers unparalleled access to the world's leading plant and equipment manufacturers thanks to an array of exclusive import licences and supply agreements.

Heading up the new Bulldog business is Managing Director Steve Millburn, a chartered engineer and well-known industry professional. Steve has a wealth of experience in the sector having worked in

operational roles at some of the country's best known materials producers including Brett, FM Conway, Lafarge, and Tarmac. He will report to Bulldog joint chairpersons and shareholders – Ian Griffiths who was Managing Director of BES and Gary Cooper who was Managing Director of RGC.

Steve Millburn said: "We're bringing together two successful companies with strong reputations to create a new business that's truly greater than the sum of its parts. With Bulldog we now have the capability to solve the most complex engineering challenges in the safest, most cost-effective way to achieve outstanding outcomes for our customers.

"The name Bulldog was chosen because of its association with the 'best of British', symbolising courage and determination but also dependability and patience, which is always a useful trait in our industry! Together our experienced and highly-skilled team will add value to any project and give us a platform for future growth in the UK and overseas."

Ian Griffiths said: "Our two businesses have worked together over many years and our teams complement one another well. This has helped us to deliver results through our collaborative, can-do approach. Looking to the future, and having listened to feedback from customers, we saw a natural opportunity to further develop our businesses through this merger. This allows us to build on our expertise and pool our resources to create a larger, more diverse business offering cradle-to-grave turnkey solutions – nobody else is able to do that in our industry."

Gary Cooper said: "A lot of blood, sweat and tears – literally – has gone into building our businesses and we appreciate the loyalty our customers have shown us over the years, helping us to become well-established and trusted partners. Through this merger we're keen to further develop those relationships with customers and bring a wider range of benefits to their business activities through our extended range of products, services and solutions – from off-the-shelf technologies to bespoke innovations – and deliver exceptional results time after time."

The transition from BES and RGC into the Bulldog business will take place over the weeks ahead. Representatives from the new company will be in touch with customers and suppliers to explain how the merger will work and to outline the increased scope and capability of the new company.

Bulldog Plant & Engineering Limited now directly employs more than 40 people and will have an annual turnover more than £10 million.



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## Re-Gen Waste Ltd chooses TOMRA Recycling's innovative sensor-based technology to transform sorting processes at its industry-leading MRF

**TOMRA Recycling's sensor-based sorting solutions have been chosen to upgrade the processing and quantity of recycled fractions at one of Europe's most advanced materials recycling facilities (MRFs) in Northern Ireland.**

Re-Gen Waste Ltd based in Newry, Co. Down, was established in 2004 as a family-owned and managed business. The company provides local authorities across the UK and Ireland with innovative dry mixed recycling (DMR) and residual waste services. Ongoing re-investment of profits into the business means that it is now a best-in-class MRF, driven by innovation and the adoption of the latest technology. The facility is in operation 24 hours a day, seven days a week and processes more than 180,000 tonnes of comingled waste annually. In addition to the management of mixed dry recycling, the company also processes 150,000 tonnes annually of mixed waste to fuel.



The plant is one of Europe's most advanced materials recycling facilities (MRFs)

AUTOSORT at TOMRA's Test Centre

Ten of the latest generation TOMRA AUTOSORT® units were recently installed as part of a multi-million-pound upgrade at the Newry site, representing an investment of more than £4m in sensor-based sorting technology. The upgraded equipment will focus on two key lines for Re-Gen. It will increase the quantity of fibre and paper materials and will boost the output of plastic fractions, enabling Re-Gen to move from its current mixed plastics output to more refined, higher purity single stream plastics fractions. Furthermore, with the new equipment in plant, Re-Gen will benefit from reduced operational costs.

TOMRA's new equipment focuses on enhancing the sorting process. Previously, the Re-Gen facility used a series of disc screens and other mechanical sorting equipment, complemented by manned quality control points. Now, improved efficiency and output is made possible thanks to the AUTOSORT®'s sophisticated infrared sorting technology.

The equipment combines near infrared (NIR) and visual spectrometers (VIS) to quickly and accurately recognise and



Ten of the latest generation TOMRA AUTOSORT units have been installed as part of a multi-million pound upgrade

separate different materials according to their material type and colour, extracting high-purity high-value end fractions that command higher market prices.

Re-Gen has also chosen to take advantage of TOMRA Insight, TOMRA's secure, nearly real-time and on-demand cloud-based data monitoring platform. The platform enables customers to turn their sorters into connected devices and help maximise plant throughput, boost sorting performance and optimise output quality. Re-Gen will get secure access from desktop and mobile devices to digital metrics on the status and performance of their sorters.

Joseph Doherty, Managing Director at Re-Gen Waste, comments: "Our mixed waste processing adopts best-in-class technologies to ensure European standards are not only met, but regularly exceeded. We have previous experience of TOMRA's equipment, having fitted an AUTOSORT® unit four years ago, with great results. We were familiar with the capabilities of the equipment, and we are confident that TOMRA will help us continue to outperform the market on materials recovery.

"We are particularly impressed with the addition of TOMRA Insight which will provide us with invaluable in-depth digital metrics and data about the status, performance and operation of our sorting equipment and the material waste composition it detects. If something can be measured, it can be optimised and this technology is helping us to do that. We can quickly understand what materials are coming in and how they are changing due to COVID-19 and the enactment of Government policies. We can feed back to local authorities to help them understand where contamination is coming from and, in turn, provide more targeted recycling information to householders."

Gavin Russell, Area Sales Manager UK at TOMRA Recycling, adds: "We worked in partnership with the Re-Gen team to assess their needs and install sorting technology that is fit for purpose in today's diverse recycling market. With higher-quality fractions commanding higher prices across sustainable international markets, it was vital that we established systems that could sort better, and faster, increasing throughput and value."



# Pronar MRW 1.300 slow-speed single-shaft shredder

**Discover the Pronar MRW 1.300 slow-speed shredder. This dynamic single-shaft system was designed to be as versatile as possible. It can handle a variety of materials including compost, green organic and wooden waste, biomass, paper, plastics, foil and scrap metal, to name but a few. The cutting teeth, combs, beams, screens, and counter-blades can all be configured and customised to suit individual customer specifications.**

The MRW 1.300 makes waste processing more productive by improving both working efficiency and quality of shredding. It is also ideal for customers looking to produce RDFs, fertilisers, and premium compost, as the high-quality fractions obtained from shredding can be used for further processing.

Safe operation of the shredding system is ensured by the pivoting beam unit with counter-blades, which automatically rejects elements that are too big or impossible for processing, thus protecting the shredder against damage. The standard mounted electrical reverse system enables the shaft to rotate in any direction without starting the combustion engine. This allows for any blockages to be removed safely and efficiently.

Direct transmission of power from the engine to the shaft reduces fuel consumption. To protect the engine, transmission, shaft components and shredding blades, the system uses a hydro-kinetic clutch that absorbs any impacts generated in the transmission unit.

To achieve great efficiency and work without unnecessary downtime for welding, shafts in the MRW 1.300 are manufactured in a unique way. The cutting of all crucial elements takes place using water jet technology, which does not involve high temperatures, thereby preventing the shafts and cutting tools from changing structure and physicochemical properties. This makes all the elements very durable and sharp, without the need for special hardening.

The MRW 1.300 is set on a wheeled chassis, enabling quick transport without using any specialised equipment or need for permits. Equipped with ABS and traction control systems, which considerably improve safety, the shredder can be transported at a maximum speed of 100 km/h.

The frame was designed to be robust but spacious inside. Its layout and design allow for performing daily and periodic inspections without any difficulties. Large doors on each side and a spacious interior provide great access to all crucial elements of the machine.

When it comes to equipment that is fitted as standard, the MRW 1.300 shredder is a turn-key solution that has everything needed to start work immediately after delivery. Standard equipment consists of: a central lubrication system eliminating the need for time-consuming greasing, ensuring greasing is never neglected; a remote control which operates all essential features from a safe distance to the machine;



reversible fans which prevent the clogging up of the hydraulic oil and engine coolers when the machine is working in harsh environments; work illumination lights, allowing work to carry on when it is getting darker (particularly useful during the winter months) and sound reduction techniques.

The MRW 1.300 is not only about power, productivity, and size but also about quality and support. This machine is backed up with exceptional support from both the manufacturer and the dealer. The partnership between Global Recycling Solutions Ltd and Pronar offers an outstanding service to customers. Engineers are always available to offer advice and to help optimize the machine to fit customer needs, as well as to carry out servicing and repairs, as necessary. Often this can be simply giving advice about settings, but the uniqueness of the partnership also means that if there is a need for the design and manufacture of individual machine modifications, Pronar will ensure the machine is perfect for the job. Global Recycling Solutions Ltd stock an extensive range of spare parts for the machine, all of which are readily available for same day dispatch. In the unlikely event that there is a part not in stock, Pronar will supply this from their shelves.

To find out more about any of the Pronar range contact our Sales office on 01476 568384, or visit our website [www.globalrecycling.eu](http://www.globalrecycling.eu)



# PRONAR MRW 1.300 SLOW-SPEED SHREDDER



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# CK International sees an increase in demand for semi-automatic balers



**CK International, market leading manufacturer of waste compaction equipment in the UK, has seen a recent increase in the demand for their semi-automatic balers. This past year has led to huge changes in the makeup of waste streams and the way that companies process waste. In these hard times, finding a baling solution that saves costs on labour, operation and consumables is vital for many companies, CK have found that the semi-automatic baler to be the ideal solution for their business.**

CK International's UK & EU Commercial Manager, Andrew Smith comments, "In the past year we have found that many customers are taking advantage of the increased commodity values and are upgrading their waste compaction equipment. This has been most notable within the e-commerce and retail sectors who have seen a high increase in their waste material. The semi-automatic machine has been the preferred choice."

Smith continues, "I think there are several reasons why these customers have approached CK International for a recycling solution. We have been able to understand their challenges and provide them with bespoke tailored solutions to ease their problem - whether that has been to decrease labour costs or improve on their commodity values. From conveyance to bin tipping or even reducing footprint, our internal design team were able to find a solution to suit their needs."

Some of the most recent projects where CK International have provided support include; waste management companies, e-commerce retailers, food manufacturers and the NHS. In a recent installation at a global food manufacturer the customer upgraded from a vertical baler to a CK450HFE semi-automated baler with bin tipping mechanism and safety cage. This customer noticed a reduction in labour whilst providing an increased commodity value for the baled material.

CK International manufactures one of the most extensive range of semi-automatic balers in the market. With 5 different models across the range, all materials are catered for. As semi-automatic balers process waste against a fixed surface, bale density in these machines often exceed that of channel balers. The machines are capable of processing up to 3 tonnes of material per hour with the product category split into 4 different series 400kg, 450kg, 600kg and 850kgs bales weights.

For more information on CK International's range of semi-automatic balers, you can visit [www.ckinternational.co.uk](http://www.ckinternational.co.uk) or call: +44(0) 28 8775 3966.



# Binn Group Ltd celebrates 20th year milestone as it takes delivery of the 100th HAAS TYRON sold into the UK and Ireland

**Scotland's leading independent provider of integrated recycling and resource management services, Binn Group Ltd, has taken delivery of the 100th HAAS TYRON sold into the UK and Ireland and the 10th TYRON sold into Scotland. This milestone for CRJ Services and the HAAS brand coincides with Binn Group celebrating its 20th year in since incorporation.**

"The 100th HAAS TYRON sold into the UK and Ireland is a very proud milestone for both CRJ Services and HAAS and reflects the quality of the machinery as well as our commitment to the brand. With 10 TYRONs now in Scotland, making up some of the 100 now in the UK and Ireland, we are extremely grateful to all those who have shown their trust in us and look forward to continuing to support our customers with quality machinery and exceptional service levels." - Ben McQuaid – Director at CRJ Services Ltd.

Binn Group was established in 2001 by father and son John and Allan MacGregor as part of a land diversification project on their Binn Farm estate. Rapid growth has seen Binn Group expand beyond their original landfill provision, to become Scotland's largest and most diverse independent waste management operation.

The array of services offered by Binn Group focuses on recycling, reuse, waste minimisation, landfill diversion and



improving the environment. Binn operates a materials recycling facility where a wide variety of recyclable materials are separated, graded, baled, and sent to re-processors. As a result, over 86% of all the materials entering the facility are transformed into usable commodities. The remaining 14% is then processed into SRF (Solid Recovered Fuel), which generates electricity and power (avoiding use of fossil fuels) from the materials that would have otherwise gone to landfill.







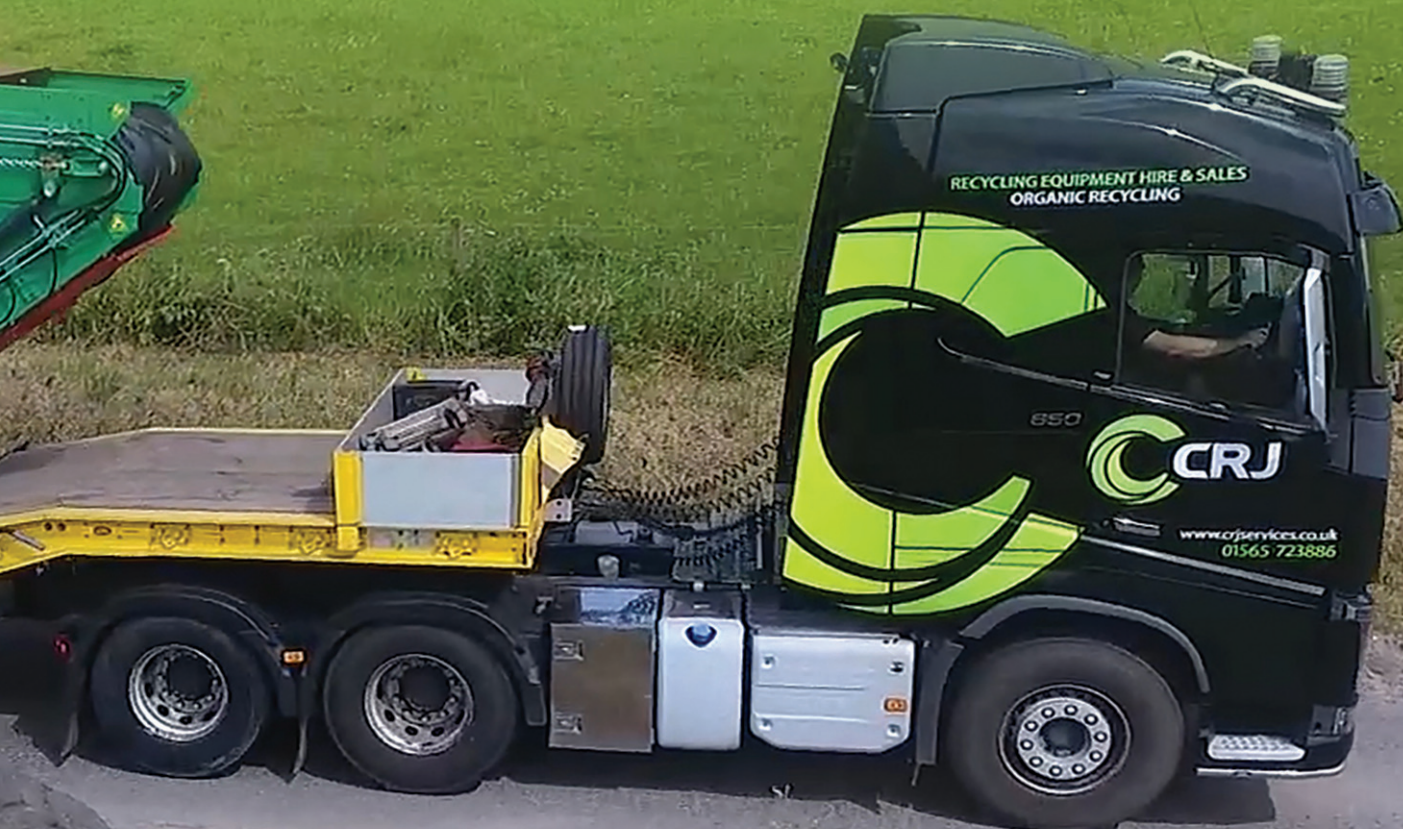
"It has been great working with CRJ. As a contractor and operator, themselves they understand the challenges we face with equipment downtime. In the rare occasion we have an issue, CRJ's team remotely diagnose the issue and arrive promptly onsite with the experience to get us back up and running with minimal downtime." - Stewart Smith – Operations Director at Binn Group Ltd.

Binn Group has been a loyal customer to both CRJ as a machinery solutions provider, and utilised HAAS as a brand of shredder for a number of years. Their first HAAS TYRON, purchased back in 2018, replaced their pre-existing single shaft shredder which was struggling to consistently produce the quality of shredded material required for their SRF product. They have been so impressed with the performance over the last 3 years, the decision was taken to replace their shredder with a brand-new TYRON.

"Binn Group has shown great faith in CRJ over the years, which is further reinforced with the purchase of their second HAAS TYRON. I've had the pleasure of seeing Binn Group continue to grow from strength to strength during the 4 years CRJ have been supplying them with machinery, and I look forward to continuing our strong relationship into the future." - Damian Casey – Area Sales Manager at CRJ Services Ltd.

The HAAS TYRON is the ideal shredder for Binn Group, due to its consistent performance across the range of waste materials processed on site. As Binn's strapline suggests, "your waste is changing", and the TYRON facilitates this change with its ability to alter the shredding sequence, though three inbuilt pre-set settings for MSW, wood and green waste. With a final setting that can be customised by the operator to suit their specific waste type.

"Binn Group has been dealing with CRJ for many years and have always been extremely happy with the service levels we receive. The reliability and performance of our first Haas Tyron convinced us to stick with the Haas brand once it came time to upgrade, coupled with the backup service CRJ provide." - Allan MacGregor - CEO at Binn Group Ltd.







## UNTHA disrupts pre-shredder market

**UNTHA UK has revealed a new two-shaft shredder - the ZR. And, following 24 months of rigorous industry research and development - including prototype trials on the continent - the dual shaft machine now promises the lowest lifecycle costing (LCC) for waste, wood, and metal shredding in its class.**

The high-performance ZR has been specifically engineered for multi-shift, continuous pre-shredding – even when handling difficult materials some would consider economically ‘unshreddable’.

The machine’s low speed, high torque drive means it can process severe duty applications with ease, for a high level of plant availability. And the modular, quick-change cutting table design presents versatility at the core.



The ZR2400H rough shredding wood



The machine’s low speed, high torque drive means it can process severe duty applications with ease

### Shredding flexibility

The ZR2400H has been engineered for the high throughput, rough shredding of bulky waste, C&I waste, waste wood, MSW, mattresses, carpets, railway sleepers, bales and rolled goods. Available as a static or mobile machine with crawler tracks, the goal for this model is volume reduction (90% <300mm), material breakdown for further treatment, and alternative fuel production. This cutting system is therefore perfect for cement plants, operators in the biomass and energy recovery industries, MRFs, sorting and waste disposal firms.

The ZR2400W is the perfect metal scrap shredder and excels also in the processing of WEEE and large domestic appliances. Again, the goal is to achieve a rough material breakdown (90% <300mm) for downstream sorting, making this the ideal machine for metal processors, recyclers, and aluminium and metal manufacturers.

The ZR’s independent, bi-directional shaft rotation means the aggressive cutters grab, shear and liberate material in forward and reverse, for a machine action that always shreds.

### Energy efficiencies

Whatever the customer’s preferred cutting mechanism, the ZR is supplied with the UNTHA Eco Power Drive with water-cooled synchronous motors – an energy-efficient concept which has become globally renowned for its ability to reduce energy consumption by up to 75%.

“With the ZR, we’re talking a reliable powerhouse that pays for itself!” commented sales director Peter Streinik. “Like all our shredders, the innovation is engineered for long service intervals, easy maintenance, safe operations and high uptime. But what will really make it stand out in its class, is the ability to tackle difficult materials, at low cost.

“We believe this will open up a whole new world of shredding possibilities.”



The energy efficient Eco Power Drive reduces operators' energy consumption by up to 75%

### Data intuitiveness

Strong in performing, smart in saving, the ZR will be supplied with UNTHA GENIUS – the condition monitoring system which provides operators with access to their shredder’s performance data, in real-time, from any device.

Using several intuitive sensors, in-built within the shredder, it is possible to analyse up to 100 process values including speed, torque, engine temperature and conveyor power. The goal of this intuitive cloud-based technology is to provide easy access to the metrics that matter, to enable customers to optimise machine availability while minimising downtime and running costs.

### A satisfied customer

Commenting on his 12-month trial of the ZR prototype during the machine’s R&D phase, Hubert A. Schwarz, head of processing and process development at Schaufler said: “The most important advantages of the ZR are versatility – the unit can shred both large, coarse NF metals and composites; fast, easy and efficient cleaning and maintenance; and low energy consumption – compared to other manufacturers, we’re saving €70,000 in energy costs a year as a result of using the ZR!”

### Seeing is believing

Trials of the ZR are currently being offered throughout Europe, with customers invited to try the new two-shaft machine using their own materials.



Two cutting concepts are available with the new ZR



To celebrate the UK debut of this new technology, UNTHA is also holding a shredder showcase in Lancashire on 13, 14 and 19 October. Hailed as being the company's biggest event ever, it promises to give the country's most pioneering waste and recycling professionals an unrivalled opportunity to see what UNTHA's machines can really do.

"Seeing is believing," commented UNTHA UK's managing director Marcus Brew. "So, we're inviting guests to enjoy live demonstrations of the UNTHA XR3000RC and XR3000C with high torque drive, as well as them being the first people in the country to see the all new two-shaft UNTHA ZR2400 in action! Launched specifically to tackle severe duty materials, this is not one to be missed!

"Our shredder will process a range of applications, including metals, large domestic appliances, wood, bulky waste, and more! Plus, there'll be the chance to put your questions live to our on-site shredding experts on the day – however technical the query."

"And that's not all," continued Marcus. "We'll also have our globally-renowned RS four-shaft shredding technology on site, as well as the new PS1300 pallet shredder, the high throughput LRK plastic shredder, and the most compact machine in our range – the S25. We will work with customers to build real-time business cases for the technology on show, and our aftersales team will also be on hand to talk about the optimisation of these shredders, long into the future."

Places for the showcase are limited, so pre-registration is essential. For further information, please visit [untha.co.uk/events](http://untha.co.uk/events).

## At-a-glance information:

### Input materials - achieve a high-performance rough shred of:

- Metals
- WEEE
- Bulky waste
- Construction & Demolition (C&D) waste
- Commercial & Industrial (C&I) waste
- Waste wood
- Municipal Solid Waste (MSW)
- Mattresses
- Carpets
- Baled and rolled goods

### Outputs - guaranteeing a homogenous output material (90% <300mm), the ZR is ideal for:

- Bulk volume reduction
- Recycling
- Metal separation
- Alternative fuel production
- Biomass

The ZR two-shaft pre shredder from UNTHA UK





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We are raising the bar of recycling and transforming the value of waste for our customers and planet.

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# Kiverco to provide a third waste system to Haulaway Plant



**Kiverco has been chosen to design a new static solution for Haulaway Plant for their new facility in Polegate, East Sussex. The new waste processing system will be used to process and separate different types of plastic and is the third plant that the Company has purchased from Kiverco. The new machine will be capable of processing up to 25tph and will enable the separation of various plastic types and grades to a high level of purity.**

Established in 1991, Haulaway Ltd is a family-run recycling and waste management company based in East Sussex. The company operates two licensed sites, including a waste transfer station and a recycling distribution facility.

Steve Walton, Manager at Haulaway Ltd. stated: "We chose to work with Kiverco again because they are market leaders and visionaries in the waste industry. Their designs and build quality are excellent, and the support and level of customer service is exemplary. Our previous Kiverco plants have worked very well for us, providing reliable and consistent throughput, high levels of output purity, and helping us greatly reduce the amount of waste sent to landfill. "

Over the past 25 years, Kiverco has grown in capability and reputation for designing, engineering, and building waste processing plants for the waste industry. Their team and presence have grown, and they are recognised as market leaders within the waste industry. They now have over 300 Kiverco waste plants throughout the world, operating in places such as Saudi Arabia, UAE, Australia, most of Europe, and the UK. Most of the UK plants process C&D waste, however, Kiverco waste systems are also used to process lighter and less challenging waste streams such as Commercial & Industrial (C&I) waste, Municipal Solid Waste (MSW), Dry Mixed Recyclable (DMR), and compost.

JP Devlin, Sales Manager at Kiverco stated: "We have worked with Haulaway for many years, and we are once again very grateful for their recent business. They are a fantastic company and were a real pleasure to work with on this latest project. Steve and the Haulaway team are committed to diverting 100% of their incoming waste from landfill, creating a healthy and cleaner environment for everyone.

For further details on this latest innovation from Kiverco visit their website [www.kiverco.com](http://www.kiverco.com)



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# Dry recyclables and light packaging: the sorting

**The varying and constantly changing composition of waste materials poses a challenge for designers of sorting plants, which need to deliver consistently high purity rates while managing an increasing degree of complexity. STADLER, a leading supplier of sorting plants for the recycling industry, has the broad wealth of experience and know-how to develop high-performance facilities with the best plant concept for each type of material that will meet the specific requirements of every individual customer.**

The recycling and waste disposal sector is in constant evolution, with an increasing degree of complexity and growing volumes. New regulations, policies and targets have been introduced across the world to address the global waste issue. Different countries have adopted varying approaches to collecting and separating dry mixed recyclables and light packaging as they strive to reduce the quantity of materials going to landfill. The composition and density of this waste is also constantly changing, with an increasing proportion of films and plastic trays. At the same time, the recycling industry is demanding high purity levels of the sorted fractions so that their recycled end-products can compete with virgin materials on the market. These factors are driving a demand for sorting plants capable of processing multiple materials flexibly while delivering consistently high purity rates.



Developing sorting plants for dry mixed recyclables and light packaging that meet these requirements calls for a flexible, tailored approach combined with in-depth knowledge of how the varying composition of waste material affects the sorting process. This is where STADLER excels, having been involved in the design of the first plants of this type from the outset and developed numerous such facilities across the world.



## Design considerations: waste material composition

The composition of waste materials arriving at sorting plants can vary depending on different factors, starting from the way waste is collected and separated, which can vary from country to country or even at regional level. Dry mixed recyclables can include paper and cardboard, plastic packaging, ferrous and non-ferrous metals and films – in some cases also beverage cartons or glass. Glass and paper can be collected separately. Drop-off systems tend to lead to cleaner waste than collection. The way local authorities charge for Municipal Solid

Waste collection can have an effect on how much people sort their waste for recycling. Different demographics in rural and urban areas will result in strong variations in the composition, and there will even be seasonal fluctuations.

"When developing a sorting plant for dry mixed recyclables and light packaging, waste composition is a key consideration," says Jürgen Berger, Director for International Sales at STADLER. "For example, the mixed film and paper content in the Dry Mixed Recycling material collection in the UK requires more complex processing. If glass is included, it needs to be removed in the early stages to protect the process."

## Managing increasing complexity

The introduction of new European recycling targets is driving changes in the way waste is collected. In Belgium, the decision was taken to extend the types of plastics collected in the blue bag for packaging waste to include all plastic packaging. As a result, the sorting plant in Willebroek operated by sustainable waste management solutions provider Indaver would have to process much bigger volumes and manage the greater complexity involved in sorting more materials.



The company decided to invest in a new facility three times bigger than the previous one. They chose STADLER for the design of a plant with the necessary capacity and capable of managing the complexity: "Going into the project with STADLER made us all feel very confident that in the end we would get a high-quality installation

with cutting-edge technologies. We knew from the beginning that the project would be in good hands and that STADLER would do whatever was necessary to start up in time," says Eline Meyvis, Project Engineer of the sorting plant at Indaver.

STADLER's extensive experience came into play, as it developed and built a new plant capable of sorting the high volume of packaging waste into 14 fractions at a throughput of over 20 tph using a bag ripper, drum screens, magnets, windsifters, eddy current separators, ballistic separators and optical sorters. "The flexibility of the whole project team, including the people on site was incredible. Also the will to solve problems and to make the installation function was extraordinary. STADLER delivered a high-quality installation which Indaver can rely on."

STADLER also managed the complexities of delivering a project during a global pandemic with success: "It was not an easy year with the Corona-pandemic, but STADLER made it happen nonetheless. All the milestones for production and



delivery of parts and machines were reached. Construction was finished as planned and commissioning was started on time. Many subcontractors were involved, under the strict coordination of STADLER. With Corona, extra administration was necessary and tests to be done. Although this was not an easy task, any possible delays and problems were countered by great teamwork and a lot of flexibility on both sides."



## A flexible approach tailored to the customer

STADLER has developed its extensive experience through a highly flexible approach to each project, every time developing a solution tailored to the individual requirements of the customer.

Silvio Urias Pereira, Managing Director of Brazilian waste management company Flacipel Comércio de Aparas e Sucatas Ltda, part of the Multilixo Group, found this to be the case when STADLER designed a new sorting plant for dry recyclable material: "STADLER works very closely with the customer. They accompanied us during the entire adjustment and training phase for production and maintenance. Their technical staff have a comprehensive knowledge of both the plant and the materials, which makes for an excellent partnership."

The plant processes a very heterogeneous material input, which goes through a pre-sorting that uses a STADLER ballistic separator PPK2000 at the end of the line. It continues with a bag opener, two STADLER ballistic separators STT5000, 2 magnets, 9 optical sorters, an eddy-current separator and a suction system.

"This project has been in the planning stages for almost eight years and thanks to working together with STADLER it became possible," says Silvio Urias Pereira. "It was a 4 hands job, joining FLACIPEL's knowledge of the material and of the demand for quality of the final product with the good performance and technology of STADLER's equipment. With this plant, it is possible to meet the high demands of our market, meeting the expectations of our customers with a differentiated and quality product."

## Flexibility built into the design and delivery process



"The key challenges to address when designing and building a plant for dry mixed recyclables and light packaging are the changes in material composition, in the packaging and in purity requirements, because they can affect the quality and recovery of the products" explains Jürgen Berger. "These changes can happen between the design phase and final plant commissioning, and this possibility needs to be factored in. At STADLER we have the experience to address these issues by integrating flexibility and spare capacity in our design."

This approach was particularly important when STADLER designed a future-proofed, flexible sorting plant for the Schroll Group in France, for whom the company had previously designed and built 5 plants. On the customer's request, the facility was designed to allow for future expansion and the sorting of further fractions, as well as the possibility of installing robots. STADLER addressed this demand by including two independent sorting lines – one for the treatment of multi-material and one for hollow material – a set-up that gives more flexibility.

Vincent Schroll, co-owner of the Schroll Group, appreciates STADLER's ability to innovate, developing new products that meet the changing needs: "the technical evolution of the equipment meets the growing requirements of our sorting centers." Pascal Schroll co-owner, adds: "We appreciate Stadler's ability to meet commitments, advise us and respond to changes during equipment setup."

## Meeting the growing demand for recycling

The push to address the global waste issue by working towards a circular economy is driving a growth in the recycling sector. As a result, STADLER has seen an increase in the demand for new sorting plants as well as upgrades and expansions of existing facilities.

This was the case of Viridor, one of the UK's leading recycling, resource and waste management companies, which undertook a £15.4m upgrade of its Masons Materials Recycling Facility (MRF) in 2020. As one of two developers of this plant, STADLER transformed its operation, increasing its capacity from 65,000tpa to 75,000tpa and significantly improving output quality, achieving 98.5% purity on newspapers and pamphlets and 95% for polymers such as PET, HDPE and mixed plastics.

Viridor Recycling Director, Colin Richardson, said: "This was by far the largest investment in a UK MRF in recent years. Viridor is focused on developing opportunities to put quality recycling materials back into the economy where they belong. The Masons investment plan has been specifically designed not only to achieve greater capacity but to match the quality of its output with market requirements. The plant now has the same infeed material as before, but the upgrade has resulted in us being able to cope with an additional 10,000 tonnes of material per annum. We are pleased with the performance of the plant and its equipment since the upgrade was completed."



### Lancashire-based waste management firm Able Recycling has invested in three new Hiab MULTILIFTs as part of its ongoing modernisation programme

**The Futura FTR skiploader chassis are on 18t Volvo trucks and feature Skiptop2 sheeters and Flex Radio control.**

Able Recycling is one of Lancashire's best-known skip hire and recycling companies, offering a variety of different skip sizes and types to meet all waste requirements, from simple DIY jobs and general household tidy-ups right through to multi-million-pound refurbishment contracts and new build residential developments.

The skiploaders join a 9-strong fleet which have operated across Lancashire for more than 30 years helping businesses to deliver their sustainability strategies. It is part of the APK group of businesses which operate predominately across the North of England and Wales offering a range of integrated services including Civil Engineering, Groundworks, Demolition, Remediation, Plant Hire, Transport and Recycling and Aggregates.

Oliver Kirkbride, Owner and Director at APK said: "Following the purchase of the Futura Skip Loaders in our GTR business in 2020 we have been impressed with the build quality and functionality of the HIAB product and as part of our ongoing fleet expansion and fleet renewal program chose HIAB as our partner for these additional Vehicles at Able."

Dek Butler, MULTILIFT specialist for Hiab UK said: "Recycling and waste management is a sector which demands high-



performance equipment. Our MULTILIFT skiploaders are built to perform so waste management is a key sector for us. Hiab have supplied similar solutions to other APK group companies, and they have been delighted with the quality and performance, leading them to strive for similar consistency across the group.

"I'm confident Able Recycling's three new skiploaders will help it manage its growing customer base in the region. The inclusion of Skiptop2 sheeters and Flex Radio control will improve safety and productivity for the business. We're proud to be a valued supplier for a globally-recognised company."

### TWIN RAM FULLY AUTOMATIC BALERS



CK International's fully automatic Twin Ram balers are ideal for use in waste transfer stations or as part of a larger recycling MRF system where high volumes of waste materials such as RDF, SRF, PET, plastic, cardboard and paper are processed.

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# Sorting technology turns aluminium green



**Karl Hoffmann, Global Sales Director from the Metal Recycling Division at STEINERT about recycling aluminium, technological breakthroughs, the distinctive features of the market and his expectations for the future.**

**Mr. Hoffmann, how can so much energy be saved by recycling aluminium?**

Karl Hoffmann: Basically, you have to compare primary and secondary aluminium. In the case of primary aluminium, firstly bauxite has to be mined and then a complex process is undertaken to produce aluminium oxide from this. The molten salt electrolysis process then produces aluminium with a purity of up to 99.7 %. This is a very energy-intensive process, which causes a lot of environmental pollution. Recycling is brought into the equation when producing secondary aluminium.

By using scrap aluminium in smelting works, much less energy is used. What's more, the aluminium can be used again and again – in theory, it can be recycled infinitely. And the figures involved are significant: around 75% of the aluminium ever produced is still in circulation. This is firstly because products

made from aluminium have a long life and secondly because metal can be recycled with great ease.

**So how much less energy is needed to recycle aluminium compared with producing it from scratch?**

Hoffmann: You can assume a saving of up to 95 %. Of course, this is great news for climate protection. Recycling aluminium has the potential to produce 92 % fewer CO<sub>2</sub> emissions than new aluminium. In 2019, 20 million tonnes of aluminium was recycled globally, which is an equivalent saving of 300 million tonnes of greenhouse gases.

Processing one tonne of aluminium scrap also saves 8 tonnes of bauxite from having to be mined. All things considered, it's a saving of 14,000 kWh.





## So why are we producing any new aluminium at all?

Hoffmann: These days to be able to produce certain quality alloys, we still need primary aluminium, the manufacturing process for which is highly energy intensive. Maintaining high quality levels for recycled aluminium requires intelligent cycles using highly efficient recycling technologies, such as sensor-based sorting technology. This can then compensate for the downgrading of material qualities experienced in the recycling cycle, which also enables secondary aluminium to be efficiently used in the production of what are known as aluminium wrought alloys.

## What is the importance of aluminium alloys?

Hoffmann: There are hundreds of different alloys and, depending on the requirements of the application in question, they provide various mechanical properties, such as strength or hardness. Developments in this field are highly dynamic. In the automotive sector, for example, it has long been standard to produce body parts from aluminium. And now, supporting parts, like suspensions are being manufactured out of recently developed aluminium alloys or even aluminium compounds. Of course, the engine itself is already mainly made from cast aluminium. Several automotive manufacturers have already honed in on aluminium as a material. Aluminium's lower weight helps them comply with ever tighter CO2 emission requirements; the density of aluminium is 2.7 times less than that of steel.

Aluminium will also be a key material for electric vehicles. The more steel is replaced with aluminium, the greater the range of an electric vehicle. Its potential for the future is huge too.

Alongside these large potential savings in CO2 emissions driven by lightweight design in the automotive sector, this potential will also be boosted by the efficient and specific use of recycled aluminium to reduce greenhouse gases.

Using recycled aluminium consumes around 95% less energy than primary aluminium. But precise sorting technology is essential for ensuring high-quality recycled goods.



## STEINERT XSS T EVO 5.0 sorts heavy metals from light metals like aluminium

## How do you ensure as high a grade of aluminium as possible from recycling?

Hoffmann: It goes without saying that this depends a great deal on the input material. The quality needed of course also depends on its intended use. Course impurities, like plastics or

wood, can be removed with relatively simple technology, involving eddy current separators.

Sensors can sort to a much finer degree. X-ray transmission technology is basically the same as that used in the medical profession where the absorption of x-ray radiation makes different material densities visible. When sorting metal, this means that pieces of metal on a conveyor belt can be radiated and classified into materials and purity levels to a high degree of accuracy.

The huge advances made in detection, software and the processing of signals deliver a combination of very accurate sorting and high speed. Compressed air is then used to separate good parts out from not so good ones.



## What happens then with the sorted material?

Hoffmann: Smelting plants buy the metal to process it further. But there is also an option of further sorting the aluminium into alloys. The more precisely this is done, the more specifically the material can be used. We then inch ever closer to the goal of a closed cycle, in other words, a circular economy.

## What technological advances have been made recently at STEINERT?

Hoffmann: Not long ago, we updated our system with x-ray transmission technology. We call the system XSS, which stands for x-ray and sensor sorting, the latest innovation bears the add-on EVO. This embodies developments made over the last five years. For example, we are now able to detect various material characteristics much more precisely than was previously the case. This is mainly thanks to enhanced signal processing. Nowadays, the systems are able to better separate out certain alloys. What's more, we are also now able to separate free magnesium, a metal that is frequently found in aluminium scrap and if not detected causes considerable extra work in aluminium smelting works. This is challenging because, like aluminium, magnesium is a light metal and its absorption coefficients for x-ray radiation are therefore very similar.

## Have you made any other breakthroughs?

Hoffmann: Yes, we have made the components in our systems even more resistant. The x-ray source, a key and costly component, for example, now comes with a four-year warranty, which is unique in the sector.

What is happening on the markets right now?



Hoffmann: Light metals allow weight and therefore CO2 to be saved in the mobility sector. The statutory requirements in this area are getting more and more stringent all the time so there is growing pressure on OEMs to implement lightweight solutions. At the same time, there is more and more interest from society in sustainable economies. Aluminium recyclers are therefore increasingly stating the share of recycled aluminium used. It can be assumed that demand for aluminium over the next few decades will increase by another 50 percent. An above-average amount of this will have to come from recycled material. Around 5 million tons of aluminium scrap is currently recycled a year in Europe. The figure globally is 20 million tons. Experts estimate that this figure will double over the next 10 years.

What trends do you see emerging for aluminium recycling?

Hoffmann: Most of the material we sort today comes from vehicles or other products that were manufactured ten or more years ago. The number of alloys used has increased since then. So in the future, it will be important to be able to distinguish between alloys more accurately than we can today.

**Are there also any technological solutions, which would simplify the recycling of all these alloys?**

Hoffmann: Yes, and we have already developed them: Laser-Induced Breakdown Spectroscopy or LIBS for short. This

involves firing at aluminium with a high-energy laser. When the laser hits the metal, it turns into a metal vapour known as plasma. As it cools, it implodes and emits a measurable energy radiation, which is specific to that atom structure. This allows the various aluminium alloys to be determined with great accuracy.

If this technology is introduced across the board, we will be able to separate the alloys from one another so precisely that a circular economy is possible. The smelt works know what they need for their alloys. If a company can determine exactly what kind of material they have, then they can also establish what needs to be added to achieve the specified material properties.

**STEINERT uses the term “Greener Aluminium”, what does this mean?**

“Greener Aluminium” highlights the opportunities, which this metal and its unique possibilities offer us in recycling. This does require intelligent recycling cycles and sorting technology, but it is already allowing us to produce closed material cycles for this important material.

Here at Steinert we are delighted that we are able to play a key role here through the work of our development teams and our specialist advisers in the field. The future that intelligently reusing this metal offers us is driving us to achieve even more and develop even smarter solutions.





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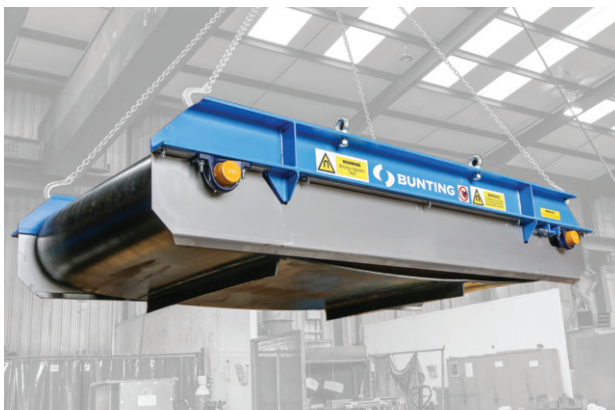
# Bunting Magnetic Separators for CRS Overseas Recycling Project

**Bunting-Redditch has completed the manufacture and supply of three (3) magnetic separators and one (1) eddy current separator to recover metals in an overseas recycling plant designed and installed by CRS NI Ltd.**

Bunting is one of the world's leading designers and manufacturers of magnetic separators for the recycling and waste industries. The Bunting European manufacturing facilities are in Redditch, just outside Birmingham, and Berkhamsted, both in the United Kingdom.

CRS NI (Complete Recycling Systems) is a leading player in the UK waste processing market, designing and manufacturing bespoke Material Recycling Facilities (MRF) to suit any size operation, from in-line trommel plants to full co-mingled waste plants as well as original plant extensions and "add-ons".

After an extensive review of recycling equipment suppliers at the end of 2020, CRS selected Bunting-Redditch to supply the metal separators. The configuration of the waste processing plant led to the selection of three (3) ElectroMax Overband Magnets and one (1) Eddy Current Separator with vibratory feeder.



## EMAX150 ElectroMax Overband Magnet

The Model EMAX150 ElectroMax Overband Magnets recover steel cans and other ferrous metals from the conveyed waste. One is suspended inline with a conveyor, over a non-magnetic head pulley, with the remaining two positioned across the conveyors. All the ElectroMax models feature compact, air-cooled, high-powered electromagnets with heavy-duty self-cleaning rubber belts. In operation, the waste passes under the electromagnet on a conveyor where any ferrous metal attracts up and out of the burden. The self-cleaning belt transfers captured ferrous metal out of the magnetic field, discarding into a collection area. Each EMAX150 weighs 2.8 tonnes and is 2750mm long, 460mm high and 1590mm wide.

In this project, two of the conveyors are 1200mm wide for the cross-belt installation, with the third being 1500mm for the in-line position. There are three size fractions: <50mm, 50-150mm and 150-400mm with the burden depth on all three conveyors averaging around 300mm.

The 1500mm wide Eddy Current Separator, with integrated vibratory feeder, is located later in the process and recovers non-ferrous metals such as aluminium cans. The HIC Model

(high-intensity concentric) features a 300mm diameter magnetic rotor. The vibratory feeder regulates an even and controlled feed of waste material onto the faster running Eddy Current Separator conveyor belt, which then transports the waste into the alternating magnetic field of the rotor.



## 1.5m wide Eddy Current Separator

An Eddy Current Separator is a dual pulley conveyor system, where the non-metallic rotor cover houses an independently rotating high-speed magnetic rotor. Separation occurs when a non-ferrous metal particle (e.g., aluminium, copper or zinc) is conveyed into the magnetic zone. The non-ferrous metal particle is exposed to rapidly changing magnetic polarity. This induces 'eddy currents' into the particle generating an electrical current (Fleming's left-hand rule) that subsequently creates its own magnetic field. The two magnetic fields oppose each other (i.e., North vs North pole repulsion), causing the repulsion of the non-ferrous metal particle and change in trajectory. The measured positioning of a splitter enables the separation of non-ferrous metals from non-metallic material due to the altered and unaltered material trajectories.

The 1500mm wide Eddy Current Separator and vibratory feeder combined system weighs 3.9 tonnes and is 5.8 metres long, 2.6 metres wide and 2.3 metres high. 15 tonnes per hour of mixed waste with a maximum particle size of 50mm feeds through the separator. The waste contains approximately 1% non-ferrous metals, which are dominantly aluminium beverage cans.

The combination of the ElectroMax Overband Magnets and Eddy Current Separator ensures the maximum recovery of metal from the waste stream.

"This is another manufacturing export success story for the United Kingdom," said Adrian Coleman, the General Manager of Bunting-Redditch. "CRS is one of the leading designers and suppliers of recycling plants and we [Bunting-Redditch] were thrilled to be selected as the suppliers of the metal separators. Effectively managing waste is a global challenge and we are proud to see UK designed and built plant being used in overseas recycling projects."

[www.bunting-redditch.com](http://www.bunting-redditch.com)



# Safe and sustainable: mitigating the environmental impact of fire safety systems in waste management applications

**Spokesperson: Alden Spencer, Global Product Manager for ANSUL® Vehicle Systems at Johnson Controls**

As the global population continues to expand, demand for waste storage and processing is also on the rise. Recently released data predicts that solid waste generation worldwide will increase by a staggering 70% over the next 30 years to reach 3.4 billion metric tons. Such exponential growth is likely to heighten pressure on already busy waste management and recycling facilities and in turn, raise the risks posed by fire incidents.

With large shredders and other waste handling equipment operating close to combustible dust, flammable fluids and unstable waste materials, fast-acting vehicle fire safety systems are essential for protecting personnel and property. But as awareness grows of the impact fire suppression agents containing per- and polyfluoroalkyl substances (PFAS) can have on the planet, companies must consider evolving environmental regulations as well as performance when selecting a fire suppression system.

## **Focus on fire hazards**

Like all heavy industries, waste management brings with it a host of unique safety challenges. Shredders and mobile plant vehicles pose a risk of ignition in themselves though superheated engine parts, high-performance turbo chargers and flammable hydraulic fluid or vehicle fuel. Add to this the threats presented by Class A material build-up (wood, paper or textiles), and it becomes apparent why waste management sites require effective, fully regulation compliant suppression systems to keep them safe. The incentive to install these vital safety measures is clear. But as facility operators look to source the best solution, the environmental credentials of some fire suppression agents – plus the stricter guidelines governing their use – must now factor into their decision-making process.

## **Changing PFAS perspectives**

A common ingredient of wet chemical, foam or dual agent fire suppression systems, per- and polyfluoroalkyl substances (PFAS) are valued for their thermal stability and flame blanketing properties. Recently however, governments and regulatory bodies around the world have begun to introduce tighter restrictions on the use of these chemicals. Because they are largely non-biodegradable and have a low Predicted No Effect Concentration (PNEC) score, even trace amounts of these chemicals in soil, ground or surface water can lead to serious environmental damage. With this in mind, waste management contractors must seek fire suppression solutions that can assure the safety of their teams, costly specialised equipment and the planet.

## **Solutions for a safer, greener future**

Typically, when a vehicle suppression system is deployed at the waste site it is not possible to stop the suppression agent from spilling out into the surrounding environment. In the light of growing environmental concerns surrounding PFAS, this lack of containment is now a key consideration site operators should factor into their choice of suppression agent, along with ensuring the area can be cooled quickly to below flash point (450°C) to reduce the risk of re-ignition.

In response to these evolving requirements, next generation of fluorine-free suppression agents like the ANSUL® LVS Non-Fluorinated Liquid Suppression Agent are emerging onto the market. This innovative suppression agent offers fast flame extinguishment and rapid surface cooling for reduced equipment downtime and improved suppression performance – all without PFAS. Simple and easy to fit into existing suppression systems, solutions like these give waste management professionals a reliable option for protecting their operations and profits, sustainably.





## Changes to Small Metal Recycling and End-of-Life Vehicle Sites



**Currently, small-scale metal recycling operators can operate under a T9 exemption to recover scrap metal and a U16 exemption to use depolluted end-of-life vehicles for parts. The Environment Agency is proposing to make substantial changes to these two exemptions and will be introducing two new standard rules permits:**

- Store and treat up to 5,000 tons of ferrous and non-ferrous metals each year
- Operate a vehicle storage, depollution, and dismantling facility for up to 10 end-of-life vehicles per week



If you cannot operate under these standard rules permits, you may be required to apply for a bespoke environmental permit. The Environment Agency has also joined force with eBay to ensure that all sellers who list used vehicle parts are required to display environmental credentials including an environmental permit to legally break End-of-Life vehicles.

With these changes in mind, we understand that many sites will need to plan ahead. A significant difference between working under an exemption and an environmental permit is the requirement to have a Technical Competent Manager (TCM) onsite for 20% of the operational hours.

Serac UK (part of Mentor Training Solutions) can offer training and support for a range of qualifications under the WAMITAB scheme to provide an Operator Competency Certificate to those who are required to work under the standard rules or bespoke environmental permit. The qualification required is dependent upon the type of waste accepted and processes undertaken on site. There are two pathways to gaining this status:

### On-Site Assessment

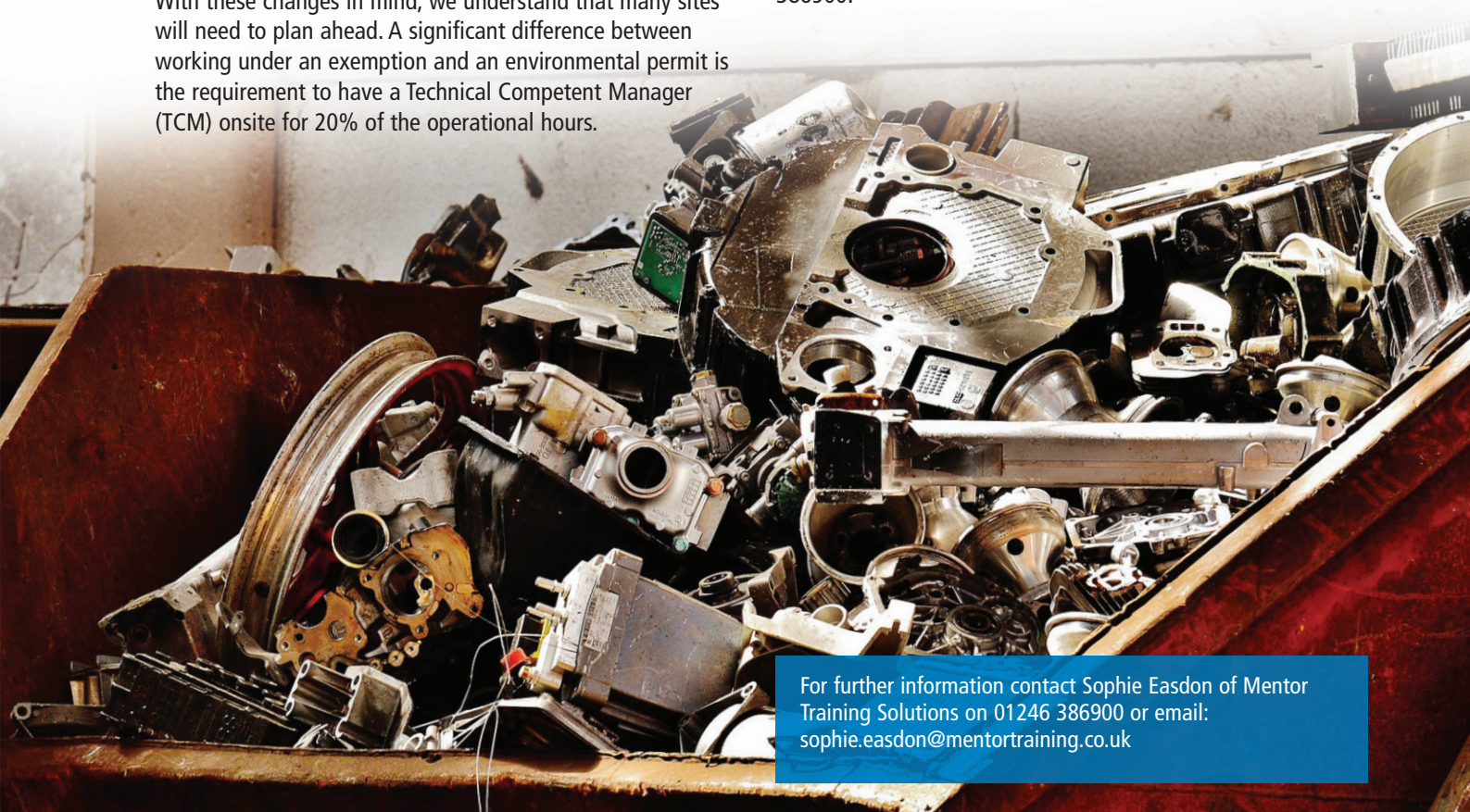
An on-site assessment route is ideal for those already working in a facility who may be looking to expand their knowledge and become a TCM onsite. In order to complete this method of learning, there needs to be access to a working site with the required resources to enable the assessment phase to be completed within the working environment.

### WAMITAB VRQ

This classroom-based route is better suited for those new to the industry or those who don't have the site or resources to carry out the on-site assessment route. The course can be tailored to those wishing to specialise in the optional units for Metal Recycling or End-of-Life vehicles.

As we see these changes coming into place, our team will be on hand to provide guidance on the required qualification route for your team to ensure your site is running efficiently and in line with the new guidelines.

For more information, please do not hesitate to contact us and arrange a call with one of our expert assessors – 01246 386900.



For further information contact Sophie Easdon of Mentor Training Solutions on 01246 386900 or email: [sophie.easdon@mentortraining.co.uk](mailto:sophie.easdon@mentortraining.co.uk)



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# BHS-Sonthofen adds complete process solutions for recycling technology to its test

**Machinery and plant engineering expert BHS-Sonthofen has expanded its test center at the Sonthofen site and has undergone modernization work in the areas of recycling and environmental technology. BHS conducts tests with shredding, sorting, and conveyor technology for the recycling industry and environmental technology in a space that spans nearly 1,000 square meters. This allows BHS to offer its customers the option of testing all process steps.**

When it comes to recycling and the environment, no two input materials are ever the same. That is why it is imperative that recycling companies conduct extensive tests with the respective input material before deciding on a specific plant layout. At its company headquarters in Sonthofen, Germany, BHS offers customers and interested parties in the area of recycling the opportunity to conduct comprehensive tests using their own input materials. Magnets, screening, and various separating tables provide the right technology for sorting shredded products.

"As a leading process consultant and mechanical process technology provider, it is our responsibility to develop all-in-one solutions together with our customers that are perfectly adapted to their needs," explains Steffen Hinderer, Director Process Development at BHS-Sonthofen. "Our test center, which opened in summer 2019, has already raised the bar in the areas of mixing, shredding, recycling, and filtering. Thanks to the expansion of the recycling and environment test division, our customers are able to test all their processes in this area even more comprehensively in our facilities."

## **Turnkey systems for improved overall process efficiency**

In addition to optimizing the conveyor technology, investments for the expanded area of recycling also include sorting machines that perfectly complement the process expertise of BHS-Sonthofen. Dryers and mixers can also be installed upon request. "Our customers can now test their entire recycling processes, all the way from the input material to finished products on-site at our facilities. Our "one-stop shop" approach allows you to test your complete systems in a time and cost-efficient manner," explains Steffen Hinderer.

In the expanded test center, customers will also be able to gain an impression of suitable plant control systems for the area of recycling and environment. This involves control systems for complete plants from BHS Control Systems, which are specifically tailored to the requirements of the customer. The user benefits from the base software's open interface architecture: the Win CC Open Architecture. The scalable system allows the wide range of components to be integrated smoothly and therefore the plant control systems can be expanded as required and without large investments.



## **Put to the test: recycling of lithium-ion batteries**

BHS can now also test the shredding of electrolyte-loaded and deep-discharged lithium-ion batteries at its Sonthofen location. "The recycling of lithium-ion batteries comes with great challenges in terms of safety," says Hinderer. "That's why many providers do not possess the necessary infrastructure." At BHS Sonthofen's, the shredding of battery packs, modules and cells with an individual weight of up to 220 kg can be tested in a closed nitrogen atmosphere inside the machines.



# Qualitech to launch new portable tank cleaning service for utilities sector

## Environmental services firm invests in D:MAX mobile screening and classification unit

**North-west industrial cleaning and waste management specialist Qualitech has announced the launch of a new tank cleaning service for the utilities sector following an investment in the latest screening and classification technology from wet processing industry experts CDE.**



One of the UK's leading contractors specialising in waste management, recycling and industrial cleaning services, Qualitech will unveil its new D:MAX at RWM next month.

CDE's D:MAX is a mobile, trailer-mounted screening and classification system which efficiently removes grit, rag and other troublesome solids from the water and wastewater treatment process.

Its mobility enables flexible processing of waste across a range of industries as it can be transported between sites to process material closer to the source, therefore eliminating the need to haul waste at high cost to a central processing facility.

The investment comes as the company marks 10 years in business and expands its range of services to support future growth, as Bob Currie, UK Business Development & Sales Manager at Qualitech, explains.

"Over the past decade, our attention to detail and service delivery has made us an industry leader in our field. In that short space of time, we have built a strong reputation for excellence, underpinned by a constant strive for improvement, and demonstrated by a consistent strategy of reinvestment in the business to commission new technology, acquire new equipment and further develop our facilities.



"As our customer base grows so too does our range of services. We have identified a clear gap in the market in our region for a tank cleaning contract service of this kind, and it's an area where we see great potential for future growth."

"Although this is our first project with the team at CDE, we have long been familiar with their technology and credentials in this space. From the moment we observed the D:MAX solution in operation and witnessed first-hand the results it



was delivering we knew it had the potential to play a key role in our business."

Qualitech's new D:MAX will be used to process a variety of waste materials from digesters at wastewater treatment sites at a rate of 120m<sup>3</sup>/hr at 6% dry solids (DS) content.

With the D:MAX, Qualitech can eliminate plastics, rag, grit and other solids passing through pumps, tanks and centrifuges which can reduce capacity and adversely impact efficiency due to their wear on downstream processes. By removing these highly abrasive materials the D:MAX minimises avoidable and costly downtime for maintenance, while recovering capacity within the process where solids build-ups have occurred resulting in increased operational efficiency.

CDE Business Development Manager Fergal Campbell says the introduction of the D:MAX to Qualitech's fleet will be a welcomed addition to the region.

"Qualitech has developed an impressive network in its 10-year history, providing coverage throughout the north and south of England. With the addition of the D:MAX to its fleet, the business will be equipped to further expand its contracting services to a range of industries. The solution will play an important role in advancing the circular economy in the region by recovering dewatered grit, with opportunities for applications in construction, and allowing retained sludges to be recovered for energy generation

that will produce high quality cake free from solids contamination for agricultural uses"

A key advantage of the D:MAX is that it has the potential to divert high tonnages from waste for landfill and can recover significant volumes of recycled grit and aggregates suitable for a variety of applications.

This material represents an unknown proportion of the volume of sludge that could potentially be removed and transported offsite at significant cost. By utilising the D:MAX only the solids contamination is removed, resulting in considerable reductions in disposal costs, reducing carbon footprint and minimising environmental impact.

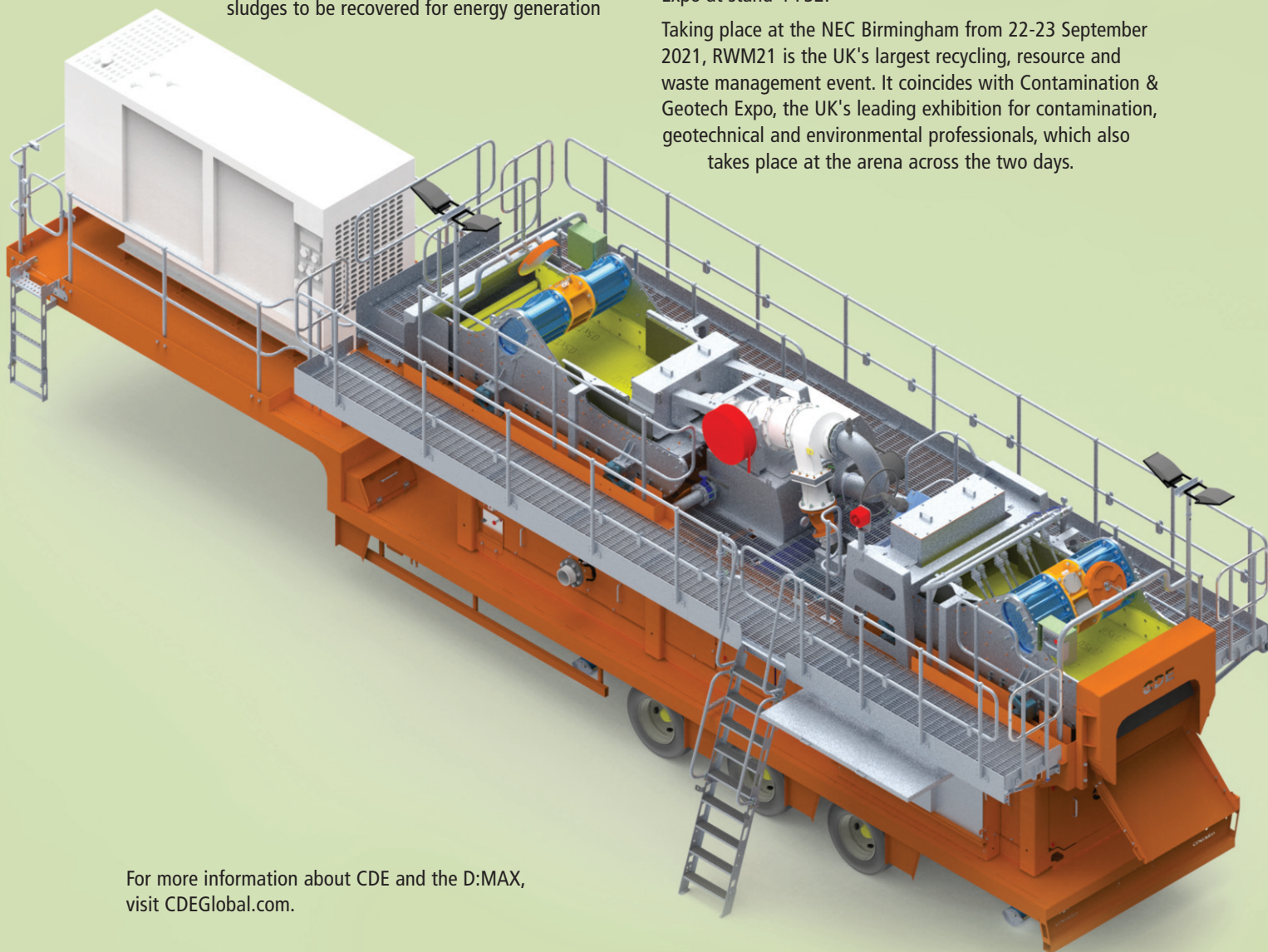
In addition to recovering materials for future use, screened organics can be used in electricity and energy generation while screened sludge can be used for composting and agriculture.

Qualitech provides bespoke waste management solutions to a wide range of clients in the public and private sectors, including sludge dewatering, tanker services, chemical cleaning, environmental waste management and roll-on roll-off skip hire.

It will officially unveil its new D:MAX at RWM21 where the solution will be on display at stand 5-U220. CDE will be participating in the neighbouring Contamination & Geotech Expo at stand 4-F32.

Taking place at the NEC Birmingham from 22-23 September 2021, RWM21 is the UK's largest recycling, resource and waste management event. It coincides with Contamination & Geotech Expo, the UK's leading exhibition for contamination, geotechnical and environmental professionals, which also takes place at the arena across the two days.

For more information about CDE and the D:MAX, visit [CDEGlobal.com](http://CDEGlobal.com).





## McLanahan offers Ultra range for your challenges in the construction demolition and recycling industry

McLanahan has been in business for over 185 years and has been at the forefront of providing processing solutions for a variety of industries, including mineral processing, aggregate processing, agricultural and many others. In recent years, McLanahan has developed a full range of modular wet processing equipment to help with the challenges faced in construction demolition and recycling waste. This includes our Ultra Range – UltraWASH, UltraSCRUB and UltraSAND along with our range of Hydrosizers and Flat Bottom Classifiers. McLanahan is also one of only a few companies that designs and supplies a full range of water treatment and silt processing equipment.

### UltraSAND Modular Sand Plants

With the greater separation efficiency of Hydrocyclones/Separators™, UltraSAND Modular Sand Plants are proven to provide a higher product yield compared to stand-alone processing equipment. Producers can achieve a much lower moisture content from the Dewatering Screen, depending on the characteristics of the sand.

### UltraSCRUB Modular Scrubbing Plants

Capable of removing water-soluble materials from the toughest of clays, McLanahan UltraSCRUB Modular Scrubbing Systems provide a flexible washing option for aggregate feeds. Arriving on-site in containerized modules, producers will benefit from the shorter lead times, quick setup and ease of transportation offered by the UltraSCRUB.

### UltraFINES Modular Fines Recovery Plants

UltraFINES Modular Fines Recovery Plants are a combination of a Sump, Pump, Hydrocyclones and a Dewatering Screen in a module that is specifically designed to recover fine solids from a wash plant effluent stream. The plant recovers material that is

conveyable and stackable. This plant is suitable for multiple industries, including sand, iron ore, coal recovery, ash, industrial sands, frac sand and more. UltraFINES modular plants recover fine solids to produce a stand-alone product and reduce the amount of solids reporting to the settling pond or downstream equipment.

### UltraDRY Modular Dewatering Screens

The UltraDRY Modular Dewatering Screen is quick to set up and can be easily added onto any new or existing equipment. The slow travel speeds of material through the Dewatering Screen allow for longer sand retention, which allow for longer sand retention to yield a consistently drip-free product that is stackable and conveyable.

McLanahan's Dewatering Screens use the highest G-force on the market, which enables them to handle the largest loads. An optional pump add-on can provide ideal water placement for a cleaner product while limiting water usage.

### EcoPRESS Modular Filter Press Plants

EcoPRESS Modular Filter Press Plants provide the ability to optimize tailings management with the recovery of clean, reusable process water. The EcoPRESS can address many typical issues associated with fine material processing, including full slurry ponds/tailings dams, high material handling equipment repair costs, limited expansion capabilities, environmental permit restrictions, high waste material handling costs and limited water availability.

### EcoCYCLE Modular Elevated Thickener Plants

EcoCYCLE Modular Elevated Thickener Plants provide a compact and modular solution for water recycling and sludge handling. EcoCYCLE plants come complete with motor, Pump, floc dosing station, control panel and control cabin.

The biggest challenges that the construction demolition and recycling industry face today can vary from country to country depending on a variety of factors, including local legislation and incentives. In short, many businesses are typically driven by economic incentives; therefore, recycling needs to be more cost effective than sending the material to a landfill.

Other issues associated with the construction demolition and recycling industry are a set of acceptable quality standards for recycled material and its potential uses, e.g., load-bearing concrete. This could be assisted in the upstream sorting process by ensuring a more homogeneous material, such as separating materials like brick and concrete where possible before being processed. An element of this would include design. Many buildings and structures being demolished today were designed and built decades ago when a recycling plan would have not been in the criteria. The subject of older buildings and structures leads on to another factor to be considered, which is contamination and classification of hazardous substances. Asbestos was commonly used in construction throughout most of the 20th century, and dealing with it still causes challenges to this day.

While a lot of the material processed within the construction demolition and recycling industry can now be repurposed, one of the main challenges that remains is what to do with the silt that is removed at the end of the process. This is often a true waste material, but many companies continue to search for other uses for this material.







Given the long and rich history McLanahan has within our chosen industries, we possess world-class expertise when it comes to process engineering and have been providing specialized solutions for decades, e.g., frac sand solutions, specialty leisure sands and more. The fact that McLanahan has expert knowledge of the entire process from material processing through to water management also provides the industry with confidence that McLanahan can provide a complete solution. It is a little-known fact that McLanahan invented the Log Washer and obtained a U.S. patent in 1894. Fast forward to the present day and Log Washers are widely used within the construction and demolition recycling industry.

In order to best serve our customers in the construction demolition and recycling industry, McLanahan gathers as much information to help design the ideal solution. McLanahan takes a holistic approach to the entire process and asks the customer to imagine the worst-case scenario when it comes to

processing material so that they will get a solution that is fit for purpose and can cope with any scenario. In addition, every project is treated in isolation to ensure it gets the attention it deserves. McLanahan also has a world-class testing facility to ensure each solution is correct for your challenge.

While there are a number of modular plant solutions available in the market, McLanahan is one of the only companies offering both custom and modular washing solutions. This, combined with years of processing design knowledge, provides unmatched industry expertise in providing the correct solution for your application.

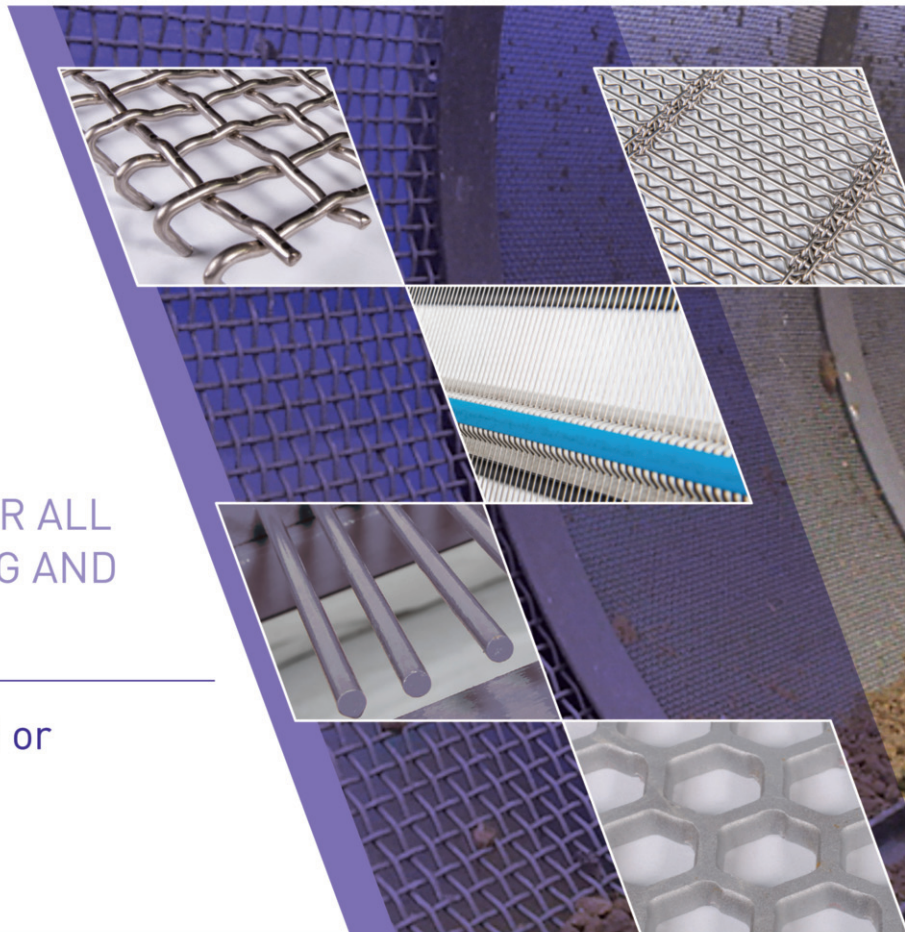
McLanahan Corporation was founded in 1835 in Hollidaysburg, Pa., USA. Today, the company is in its fifth and sixth generations of family ownership with offices that provide local service and support in Asia, Australia and Asia Pacific, Europe, Latin America and North America.

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# Online conveyor training content for Learning Management Systems



**New online content has been introduced by the world's most experienced conveyor training provider, specifically designed to integrate with Learning Management**

**Systems (LMSs) so users can assign, monitor and certify progress of all participants. The new offering from Martin Engineering includes eight self-paced modules that address methods to identify, understand and correct common bulk conveying issues to improve safety on powerful and potentially dangerous systems, while complying with regulations, maximizing production efficiency and achieving the lowest operating costs.**

"Online conveyor training is delivering critical knowledge to companies around the world, and that's never been more important than in these pandemic-restricted times," explained Training Manager Jerad Heitzler. "But even as the popularity of these programs continues to rise, larger firms face challenges integrating the content into their Learning Management Systems so they can ensure thorough and convenient training for all employees -- at all levels -- across multiple sites. These modules create a verifiable record of employee training, so customers can track and confirm the participation of individuals company-wide." Organized into 90-120 minute segments, the virtual classes cover topics such as best practices for safety, fugitive material control and belt tracking.

With the training modules easily accessible and conveniently located in company-wide LMSs, the new Martin content gives customers complete control over scheduling and tracking. "This is the type of training that everyone should have, and

companies no longer need to rely on an outside vendor to schedule individual or group sessions," Heitzler continued. "It delivers an in-depth and consistent understanding of conveyors and their hazards, ensuring that personnel at all levels can work safely and efficiently around these powerful systems."

Martin Engineering has been providing expert training for much of its 75+ year history, helping customers better control bulk material flows while reducing the risks to personnel. Designed to maximize employee engagement, the modules deliver topic-specific, non-commercial content that can be put to immediate use, and the new format allows even the most remote locations to take advantage.

The eight modules cover essential subjects that include an introduction to the concept of Total Material Control, with content on transfer points, belting and splices, as well as belt cleaning, alignment and dust management. "This system is created using a SCORM 1.2-compliant format, so it will integrate seamlessly with most existing LMSs," Heitzler added.

SCORM is a widely used set of technical standards that provides the communication method and data models that allow eLearning content and LMSs to work together. All eight modules are currently available in English, Spanish and Portuguese, and can be provided in a variety of formats to meet the requirements of specific customers and their LMSs.

"Seven of the eight modules have a test at the end, requiring a minimum score of 70% to move on to the next module," he said. "SCORM allows the content to interact with the LMS and leverage any features that a customer's system has, which could include tracking the progress of each learner, providing reports or issuing certificates of completion."

"With this new effort in place, Martin has taken another step forward in global conveyor training," Heitzler concluded. "We've emerged as an LMS content provider to deliver greater flexibility and control over employee learning, helping customers attain the highest levels of efficiency and safety."

The training content is available in a variety of packages, with options to suit a wide range of industries and company sizes. Interested parties can obtain details by contacting their regional Martin Engineering locations, which can be identified at [https://www.martin-eng.com/content/find\\_rep](https://www.martin-eng.com/content/find_rep).





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See all McCloskey crushers, visit [agg-pro.com/mcrushers](http://agg-pro.com/mcrushers)



## Screeners

With the largest screening areas in their class, the S-Series and R-Series screeners are designed to give customers high output and durability in the most demanding conditions, whilst also delivering high production levels across different industries.

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## Washing Systems

We are also authorised suppliers of MWS Equipment. MWS supply a range of modular, mobile and static washing systems around the globe. Their products have gained a reputation for quality, reliability and agility that is second to none.

See all MWS washing systems, visit  
[agg-pro.com/mwswash](http://agg-pro.com/mwswash)





## Trommels

As pioneers in trommel screener design and innovation, McCloskey trommels are proven in screening, material throughput, quality components and customer focused features.

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## Stackers

McCloskey stacking conveyors provide stockpiling solutions that maximise the efficiency of mobile screening and crushing plants. Tracked or wheeled, McCloskey conveyors deliver high stockpile capacity and less downtime across every application.

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# Using dewatering systems to improve site efficiency

**Open pit and underground mining that's carried out below groundwater level requires dewatering. And as mines are being dug deeper to access diminishing mineral supplies, mine dewatering is becoming more important than ever before.**

Dewatering is critical to a mine's operations and more resources are being allocated to its optimisation. Traditionally, there's been a tendency among some mine and quarry operations to view dewatering as something to be avoided at all costs – until it can't be. Therefore, cost minimisation has been the primary focus when it comes to implementing a dewatering or fluid management solution. However, with dewatering becoming increasingly necessary, operators are approaching these challenges in more sophisticated and methodical ways.

The trends informing dewatering practices mirror many of those that are observable across all mining processes: a focus on sustainability and the efficient use of energy and other resources; customised, holistic solutions based on each site's unique geological and climatic conditions; and the emergence of new technologies, with a particular focus on real-time monitoring.



Multiflo® mega barges on site in Brazil

Dewatering solutions that are carefully designed and implemented have the potential to reduce energy usage, CO2 emissions and significantly lower OPEX over the life of the mine. The overall efficiency is affected by individual elements, but also by how these elements interact and operate with one another.

The renewed focus on pumping efficiency requires a significant shift in how many operators have previously approached dewatering and fluid management on site. Because most dewatering programs have been designed with the singular focus of lowering groundwater levels as quickly as possible, they often have excess pumping capacity and oversized pipes and pumps operating at only a fraction of their capacity – a process that's inherently inefficient. This needs to change to accommodate the increased focus on efficient use of energy and water, which is critical to maintaining a social licence to operate.

Improving pump efficiency begins with effective monitoring. There have been enormous improvements in electronic control and communication systems in the last few decades. Real time reporting and control of pumping systems can now be an economic reality for almost any mine site. The more visibility you have over your fluid management on site – flow rates, operating pressures, groundwater level, water quality, system relocations, alternate drive solutions, equipment selections to reduce maintenance and repair cycles, etc. – the better placed you will be to install the most appropriate equipment. The

industry is moving towards customised solutions and there's a growing awareness that no two sites are the same, which means a one-size-fits-all approach to dewatering is neither cost effective nor sustainable.



Multiflo® MF pump unit on site in Indonesia

Weir Minerals has a global team of dewatering experts who partner with mine operators to assess their specific requirements and provide integrated solutions. With a long and proud history of innovative engineering, Weir Minerals has a team of process and design engineers armed with the latest technology, specific process knowledge and site experience to optimise your dewatering management processes. We take advantage of our global capabilities and engineering skills to provide our customers with the best solution as quickly as possible.



Weir Minerals specialist builds new Multiflo® pump unit in Australia

We also understand that as conditions and requirements change, which means so too do your dewatering needs. Therefore, the partnerships we form with our customers extend long after the pumps have been installed. With an extensive global network and the ability to service on-site or at one of our 130 dedicated service centres, we are always there when you need us - no matter how remote your operation is.

We are also investing in research and development through our central research and development hub, as well as through a network of academic research partners in some of the world's leading universities. This enables us to develop and exploit emerging technologies to create new products for our end markets and provide competitive advantages to our customers through leading and emerging technologies.



# Economical in mining operations: third Liebherr L 586 XPower® wheel loader for the Rinsche gravel plant

- **Purchasing criteria: low fuel consumption and high power output**
- **Wheel loaders fitted with tyre protection chains for quarry operations**
- **Load-and-carry operations with distances of up to 200 metres**

In the Soest Börde in the heart of North Rhine-Westphalia, the Rinsche stone quarry extracts "German bluestone" and "Anröchter greenstone" also known as "Anröchter dolomite". The Rinsche family business also mines large quantities of gravel. Three L 586 XPower® wheel loaders supplied by Liebherr play a significant part in this. The wheel loaders operate with impressively low consumption levels and high performance in load-and-carry operations they move up to 12 tonnes of limestone marl per loading cycle.



Machine handover: Wilhelm Rinsche (right) receives his latest L 586 XPower® from Wilfried Holz (left).

A third Liebherr L 586 XPower® wheel loader was recently added to the machine park of the Rinsche gravel plant in Anröchte. The key factor in the recent acquisition were the positive experiences of the two previous L 586 XPower® wheel loaders purchased by Managing Director Wilhelm Rinsche in 2019. "With its power split driveline, our L 586 use only around 20 litres of diesel per operating hour. This is approximately 12 litres less than a comparable wheel loader from another manufacturer which we previously had in the quarry. The Liebherr wheel loaders enable us to achieve huge cost savings and greatly reduced CO2 emissions.

### **Liebherr L 586 XPower® wheel loaders perform impressively in load-and-carry operations**

The low fuel consumption is particularly worth noting because the wheel loaders, weighing more than 33 tonnes, are fitted with a range of special equipment for mining operations. The tyre protection chains are particularly distinctive and weigh up to 800 kilograms each depending on the version. Their main purpose is to improve traction in combination with the automatic self-locking differential. "The limestone soil in our quarries gets muddy and slippery particularly when it has been raining and this means we need the tyre protection chains," explains Wilhelm Rinsche.



Wilhelm Rinsche (left), together with two machine operators, presents the company's three Liebherr L 586 XPower® wheel loaders.





A Liebherr L 586 XPower® wheel loader loading a crusher at the Rinsche gravel plant.



Load-and-carry operation using Liebherr L 586 XPower® wheel loaders in Rinsche gravel plant.

The main task of the wheel loader is to transport blasted material from the quarry face to the crusher. In this load-and-carry operation, the machines cover distances of up to 200 m. The wheel loaders also help with reloading. "Besides the low fuel consumption, we appreciate the consistently high power our Liebherr wheel loaders provide. Whether it's picking up material at the quarry face, travelling or reloading, the wheel loaders always deliver the full power output," adds Wilhelm Rinsche.

### **Many years of cooperation between Liebherr and the Rinsche stone quarry**

"The L 586 XPower® is Liebherr's largest wheel loader model and – like all XPower® wheel loaders – comes with the robust and efficient power-split travel drive as standard. We are delighted, since the first demonstration in the quarry in 2018, to now be delivering the third L 586 XPower® to Wilhelm

Rinsche and his team," explains Wilfried Holz during the machine hand-over procedure. Wilfried Holz is a sales manager at Liebherr-Baumaschinen Vertriebs- und Service GmbH in Dortmund and looks after Schotterwerk Rinsche GmbH.

Like Liebherr, the Rinsche gravel plant is a long-established family business. The company has 35 employees and owns three quarries in the area between Münster and Sauerland from which it removes approximately 500,000 tons of material annually. The core product is "Anröchter green sandstone", a particular sandstone with blue and green colouring that is popular around the world as a high-quality and natural building material.





## Doosan adds new DX245NHD-7 Heavy-Duty Crawler Excavator

**The DX245NHD-7 is a true 25 t machine built for the toughest jobs...**

Doosan has launched the new DX245NHD-7 25 tonne heavy duty crawler excavator, a completely new model in the Doosan range, designed for the most abrasive of applications. Whilst it is a real 25 tonne excavator, the DX245NHD-7 incorporates 30 tonne class undercarriage components - the chains, rollers, sprocket, and the chassis itself are oversized to increase the working lifetime of the machine, even on the toughest jobs.



Stephane Dieu, Excavator Product Specialist at Doosan, said: "The DX245NHD-7 adds a new highly sturdy option in the medium-sized range of crawler excavators from Doosan. Regarding the name of the machine, the 'N' stands for 'Narrow Track' and the 'HD' stands for 'Heavy Duty' illustrating its suitability for the most challenging applications. Complementing this, the 'narrow' design of the DX245NHD-7 offers the further advantage of a transportation width of only 2.54 m."

### Increased Comfort and Controllability

Complementing the robust build, the state-of-the-art cab on the DX245NHD-7 excels in terms of spaciousness and ergonomics, taking operator comfort and ease of operation to new levels. As well as a new high quality seat, the enhanced cab offers more features as standard than other machines on the market, ensuring super controllability and high precision in all applications.

### Key new features in and around the cab include:

- Doosan Smart Touch (new 8-inch touch screen)
- DAB audio (Handsfree and Bluetooth)
- Doosan Smart Key (Keyless start system, Remote door unlock)
- Leatherette Heating Seat (Heating and Cooling as an option)
- Parallel wiper system and new design pedals
- Improved air flow for defrosting and air conditioning
- 9 x LED work lights as standard
- 4 more LED lamps as an option • AVM - Around View Monitor with 360° cameras (option)
- Ultrasonic sonic detection of obstacles (option)

### New Stage V Engine

To meet Stage V engine emission regulations, the new DX245NHD-7 excavator is powered by the latest generation Doosan DL06V diesel engine, providing 131 kW (176 HP) at 1800 RPM. The DL06V engine offers a new solution to exceed Stage V regulations without exhaust gas recirculation (EGR), that boosts the quantity of air available during combustion, increasing the temperature of the process and greatly reducing the amount of particulates produced.

This is combined with super-efficient DOC/DPF+SCR after-treatment technology to ensure minimal emissions. Thanks to the new technology, maintenance of the diesel particulate filter (DPF) has been greatly reduced, with no maintenance required until the machine has operated for 8000 hours.

### SPC3 Smart Power Controls

The enhanced fuel efficiency of the DL06V engine in combination with a new hydraulic main valve and the new generation SPC3 Smart Power Controls, provides increased fuel efficiency. There are four power modes (P+, P, S or E) available on the DX245NHD-7 which can be set in both one-way and two-way working modes.

In addition to higher performance and cost savings, the DX245NHD-7 excavator offers more new features as standard than other machines on the market, many of which are common to the other new Doosan medium-sized excavators to be launched in the near future and which build on the very successful design of the previous generation machines.

The new features provide major enhancements in machine controllability, versatility, operator comfort, uptime and return on investment, with a strong focus on increased productivity and robustness.

### New Heavier Counterweight for Work with Tiltrotators

In the DX245NHD-7, the new features include a heavy 5.0 tonne standard counterweight particularly suited for working with heavier attachments such as tiltrotators. The heavier counterweight also contributes to the higher lifting and digging capacities of the DX245NHD-7. The DX245NHD-7 also incorporates as standard a new lifting eye that forms part of the casting for the push link for the bucket attachment at the end of the arm. The new lifting eye has a maximum capacity of 5 tonne and has a special bush insert to prevent deformation of the lifting hole.

Complementing the increased stability provided by the new counterweight, the DX245NHD-7 introduces a new smart hydraulic system that offers an improvement of around 30% in attachment work, compared to previous excavator models. The new system applies a smart hydraulic logic for optimal distribution of the hydraulic flow rate when both the arm and attachment are working simultaneously, with a new priority valve and an additional hydraulic line maintaining continuous hydraulic flow to the attachment, even when the arm is being used.

### New Tiltrotator Mode

There is a new Tiltrotator Mode on the control panel in the DX245NHD-7, which can be selected to ensure an optimized hydraulic flow and helps to maximize the accuracy of





tiltrotator work by eliminating back pressure. This new tiltrotator mode is a special two-way flow mode, but it is managed by the EPOS like a one way flow mode, with direct return to the tank in each direction, to avoid back pressure and increase flow and controllability.

## New Fine Swing Function

Another standard new feature is the Fine Swing function which minimizes the shaking that a lifted object undergoes at the start or stop of a swing movement with the excavator, to increase the safety of nearby workers and to prevent damage caused by the object falling from the excavator.

When Fine Swing activates, the overrun disappears, allowing the DX245NHD-7 to smoothly reach maximum swing speed, whilst removing the shock from the turn reversal at the moment of stopping, resulting in a smooth stop.

## DoosanCONNECT Telematics System

The new DX245NHD-7 model is factory-installed as standard with Doosan's state-of-the-art DoosanCONNECT wireless fleet monitoring system. The DoosanCONNECT system offers a web-based fleet management solution which is very useful for monitoring the performance and security of machines and promoting preventative maintenance. It is available as a standard feature on all new Doosan excavators (from 14 tonne), all new Doosan wheel loaders and Doosan ADTs.

For more on Doosan construction equipment, please visit the website: [www.eu.doosanequipment.com](http://www.eu.doosanequipment.com)

## Brief specifications for the Doosan DX245NHD-7 excavator

• Buckets:	1.3 m3
• Operating weight:	25.1 tonne
• Digging depth (std front):	6595 mm
• Digging reach (std front):	9715 mm
• Digging height (std front):	6825 mm
• Overall width (with 600 mm shoes)	2540 mm
• Height (std front):	3006 mm
• Overall length in travel position (std front):	9522 mm
• Rear swing radius:	2815 mm
• Drawbar pull:	248 kN
• Digging force over bucket (ISO):	16.5 tonne
• Digging force over arm (ISO):	11.5 tonne
• Lifting capacity at 6 m reach:	8.78 tonne
• Travel speed:	low range – 3 km/h high range – 5.3 km/h
• Engine (SAE J1995 net):	6-cylinder Doosan DL06V Stage V, 131 kW (176 HP) at 1800 RPM



## DRUM CUTTER

The only cutter heads on the market to have the **Direct Drive Twin Motor System**, a double motor system that allows the unit to distribute and increase the force between the two drums differently.



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# Bulk savings for Bullimores

**Downsizing doesn't have to mean scaling back, as one Northamptonshire aggregate producer has proven. The investment in a compact EvoQuip Colt 800 from UK distributor Molson Finlay, has seen them keep production high and improve their operational efficiency.**



Bulk aggregate firm, Bullimores Sand and Gravel, know a thing or two about aggregate production. The business can trace its origins back more than a century, beginning as hauliers and coal merchants in 1907, and it has been trading continuously ever since. Over that time the family-owned business has used the experience and wealth of knowledge it has built up to expand and develop across several sectors. It moved into the quarrying industry in the 1960's, plant hire in the 1980's and skip hire in the 1990's. Now it employs 80 full-time members of staff across its businesses and has a combined mixed fleet of crushers, screeners, dozers, excavators as well as several tipper lorries.

With a heavy workload across the firm, the team at Bullimores was looking for a versatile screener that could supplement its existing equipment. It would be working primarily at the top of one of the Bullimore quarries, processing arisings and fill from its skip hire business into top quality recycled topsoil. It also needed the flexibility to be easily transported down to the quarry floor where it would process agricultural lime.

Brian Bell, Molson Finley Sales Manager, spent time working with Director, James Bullimore, listening to what he was looking for and what he needed the equipment to do. By using the knowledge and expertise he has built up over the years, Brian was able to work up the best option for the Bullimore team.

Brian said, "I have the utmost respect for everything that Bullimores do. They have been in business and been successful over such a long time that they obviously know what they are looking for. But in this particular application, I thought a slightly smaller machine, with greater flexibility and manoeuvrability than one they already have in operation, would be the better option for them."

Brian advised that a Terex EvoQuip Colt 800 mobile screening machine would be perfect for the Bullimores operation. It is versatile and is capable of working across a variety of materials including topsoil, construction and demolition waste recycling, aggregates, sand, and gravel while its compact size ensures it is easily transported with quick set-up times.





# Quarrying

Brian went on to say, "This is a smaller, less expensive machine but it packs a punch. At Molson we strive to ensure that we supply the best piece of kit for our customers' requirements. We want to work with our customers to use their experience alongside our own expertise, weigh everything up and make sure they have their ideal machine. This EvoQuip Colt 800 is perfect for the Bullimores team. It will do everything they want of it, offers superb build quality and reliability, all backed by the excellent levels of service they can expect from the Molson Group."



The tracked EvoQuip Colt 800 boasts a 1050mm wide feeder hopper with variable speed operation and a 2.9cu m standard capacity which extends to an optional 4.7cu m. It features a 2.77m x 1.22m double deck screen and a range of screen media. It has an operating weight of 16.7tonnes, a transport length of 9.2m and is capable of an average material throughput of 280tph. It features a compact and aggressive forward facing inclined screen and can work through a variety of materials including aggregates, sand and gravel, top-soil, construction, and demolition waste recycling in applications where space is at a premium.

Quarry Manger, James Bulimore, is delighted with the Colt 800. He said, "Its compact size means it is easy for us to transfer down to the bottom of the quarry whenever operational demands require. It hits all the production targets that we need of it, and I have been impressed with the quality of service from Molson. Having used Terex equipment in the past I was reassured of its quality and strength. It's such a solid machine."



With many manufacturers and dealers experiencing supply problems exacerbated by the pandemic and Brexit period, Molson took the opportunity to snap up as many production slots for machines as possible. As a result, it has excellent availability on all machines, despite its order books being at a record volume.

Brian said, "Customers such as Bullimores need to have confidence in the availability of pieces of plant and our ability to supply. Getting machines to them when they need them is key. Thanks to the steps taken to secure post-pandemic supply we have good availability on all the machines we offer. Customers can be assured that if they need a particular machine quickly, we can deliver."





# Don't compromise on vibrating screen health

## How Partnering with a Technical OEM for Equipment Monitoring Can Help Your Bottom Line

By Wilm Schulz, Haver & Boecker Niagara service manager

**Vibrating screens work at the heart of an operation; every ton of material must be screened at least once before it is loaded into a truck for sale. And just like the human heart, they need to be kept strong and healthy to do their job well.**

Maintenance crews have a lot to take care of. From vibrating screens and crushers to conveyors and load trucks, the list is a long one. It's tough to be an expert on every piece of equipment.

By partnering with a technical vibrating screen OEM that also specializes in equipment monitoring, operations can rely on a team that not only manufactured the equipment, but offers comprehensive diagnostic tools, product-specific knowledge and years of engineering experience. The result can be peace of mind, minimized downtime through faster problem solving, and lower repair costs down the line.



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### Hard-Earned Experience

There's a wide range of OEMs to choose from. While many have engineered reputable screening equipment, it's important to consider the services they offer to take care of that equipment for the long run. One that has dedicated research and development focused on diagnostic tools, for example, will be that much further ahead in keeping that heart of the operation healthy.

### Vibration Analysis & Monitoring

Vibration analysis is one such tool dedicated to measuring the health of vibrating screens. These systems measure and transmit real-time vibration data such as acceleration, orbit, deviations and more. The data is transmitted while the machine is in operation via sensors that are placed at dedicated locations on the screen body. The information is recorded to software in a phone, tablet or computer, or to a

cloud service where it can be viewed from multiple devices. In addition to analyzing current machine performance, some systems also store historical data in order to predict the machine's future performance and schedule maintenance accordingly. All of this data is used to fine-tune equipment for optimal performance and maximum output, as well as locate issues that could lead to larger repair costs or machine failure and unplanned downtime if not addressed.



While many vibration analysis and condition monitoring tools are available, only a small number are manufactured by a vibrating screen OEM, like Haver & Boecker Niagara's Pulse Vibration Analysis. An OEM offers the benefit of having engineered the equipment, fully understanding its operational parameters, and providing in-depth analysis and recommendations.

An OEM should perform a vibration analysis on any new vibrating screen before it even leaves the factory. This provides a baseline for how the machine should run. At each service visit, vibration analysis should be used to better understand the machine's condition before any repairs are made. Once technicians make necessary repairs, another vibration analysis should be completed to ensure the problem has been solved and to document that the machine is running at optimal condition once again.

The vibration analysis sensors themselves are something to consider. All vibration analysis systems require some sort of sensor — often magnetic — to be placed on the vibrating screen. Some are wired and require the user to stand within range while holding the connected device. Others are wireless, providing the safety benefits of allowing the user to stand farther away. A vibration analysis setup may include one sensor that must be moved to multiple parts of a machine for a full reading. Others save time by including multiple sensors, allowing for a comprehensive look at the entire machine at the same time.

Vibration analysis systems work similarly to a stethoscope — they analyze the machine at the moment in time at which it is being measured. Conversely, condition monitoring — sometimes called continuous monitoring — systems work more like a heart monitor, or perhaps an EKG. These systems include permanently affixed sensors for 24/7 monitoring. Some condition monitoring systems include automated alerts if problems are detected, allowing for a quick shutdown before the problem becomes potentially catastrophic. The



Condition monitoring systems, like those offered by Haver & Boecker Niagara, include permanently affixed sensors for 24/7 monitoring and data collection for trends analysis. Some systems include automated alerts if problems are detected, allowing for a quick shutdown



accumulating data can be used to improve efficiency by illustrating trends, making predictions as to how long before an issue may arise, and more. Some around-the-clock monitoring systems allow OEM certified technicians to monitor results remotely, analyze the data and send expert recommendations to ensure equipment longevity.

While many vibration analysis and condition monitoring tools are available, only a small number are manufactured by a vibrating screen OEM. An OEM offers the benefit of having engineered the equipment, fully understanding its operational parameters, and providing in-depth analysis and recommendations.

In one recent example of an operation benefiting from these tools and services, a British Columbia producer worked with an OEM to conduct a vibration analysis on a vibrating screen that appeared to be healthy. The resulting data indicated a problem, however, and caused the operation to discover a broken spring which had led to damage to the vibrating screen's foundation. Catching the problem early saved the producer money in downtime and repair costs.

Many producers conduct biannual vibration analysis tests on their vibrating screens. Another western Canadian producer has saved significant time and money through the service by detecting problems early on that he and his team weren't able to immediately otherwise identify, including a twisted frame on one of the vibrating screens. In this case, they knew something was wrong, but it took a vibration analysis to determine exactly what.



Plant simulation tools — like Haver & Boecker Niagara's NIAflow, pictured here — offer a high-level view of an entire operation's efficiency. This helps optimize processes and look at opportunities for improvement in both existing sites and new mines or quarries for all mineral processing operations. The software also helps operations spot and fix bottlenecks.

## Plant Simulation Software

Plant simulation tools offer a high-level view of an entire operation's efficiency. This helps optimize processes and look at opportunities for improvement in both existing sites and new mines or quarries for all mineral processing operations. The software also helps operations spot and fix bottlenecks.

Plant simulation programs take into account the equipment used throughout the plant, from material washers and conveyers to crushers and vibrating screens. The operation's existing setup, or a proposed setup, is entered into the program to understand and predict overall performance and

plant flow. The systems use scientific calculations to monitor input, output and waste piles, as well as calculating mass and volumetric flow rates based on machine placement and machine-specific operating parameters. The tool is also useful for insights into product specification or production rate changes — such as dry and wet crushing, screening and sorting — as the software can be used for pre-calculations.

A quick search will turn up a handful of brands of plant simulation software, but few are created by processing equipment OEMs. While solid functionality and user interface are clearly important, extensive experience and understanding of the equipment and processes the software is meant to optimize may be more so. Partnering with an OEM can allow for the most accurate simulations and enhanced features based on engineering expertise and application knowledge gained from actual site visits and understanding an operation's challenges firsthand. An OEM can interpret the data to provide recommendations for improvements within the operation



Partnering with an OEM can include the benefits of site visits by certified technicians who not only know how to use the vibration analysis, condition monitoring, and plant simulation tools, but are able to conduct thorough vibrating screen and screen media inspections to complement the analysis.

regarding production and profits. In addition, OEMs may offer virtual or on-site training of their software, teaching both how to use the software correctly and how to implement it in a way that benefits plant flow and design.

## Comprehensive Service Approach

Any service tool is most effective when paired with a comprehensive, hands-on service approach. Partnering with an OEM can include the benefits of site visits by certified technicians who not only know how to use the vibration analysis, condition monitoring, and plant simulation tools, but are able to conduct thorough vibrating screen and screen media inspections to complement the analysis. Some OEM technicians follow the inspections with diagnostic reports to point out areas that could be improved.

OEM warranty programs can be another benefit of partnering with a manufacturer on a service program. Some are offered for up to three years and include biannual site visits, inspections, vibration analysis, screen media evaluations and overall recommendations.

## A Member of your Team

Choosing to partner with a technical OEM for equipment monitoring through diagnostic tools — in addition to regular service — results in a comprehensive service program designed to optimize plant flow, boost production and increase profits, keeping the heart of an operation in optimum health.





### Who helps nature look “perfect” for Instagram?



**During summertime, enchanting locations flood social media, but a lot of work goes into preparing these places behind the scenes.**

This year, now, more than ever, the warm weather has brought out the desire to be outdoors, breathe in the fresh air, and enjoy nature and the scenery and colors that come with it. Social media immortalizes every experience. After months of being cooped up inside and seeing the same four walls, there's now a flood of selfies where people are surrounded by plant life and beautiful views.

From inner-city parks to mountain slopes or even a handful of white pebbles decorating a flowering bush becomes an opportunity for a photoshoot. On the other hand, the locations also grow from it: these areas have seen tourism explode thanks to the images and posts that have gone viral.

It takes a lot of work to make a park, country dirt road, or a simple flowerbed look welcoming and aesthetically pleasing. The formula is simple: the more beautiful something is, or the more “natural” it seems, the more challenging the behind-the-scenes work is.

For example, using soil for inner-city park maintenance requires careful preparation. Among the different types of machinery, it's better to choose ones that will reduce the environmental impact, such as MB Crusher's units. In cases like city parks, a simple and easy solution to maintain the area is to use an MB screening bucket. When attached to the excavator, the unit collects, selects, and creates material ready to be put back into the ground, perfect for large parks and botanical gardens that need constant maintenance. <https://vimeo.com/535755554>

With MB Crusher's MB-HDS shaft screener, soil and other materials are quickly separated without specialized

personnel. With a single unit, you can do the entire processing cycle: manage wet and dry soil, aerate the dirt all the while respecting the location's ecosystem. And the processed material can be reused in more than one way, for example, when constructing or maintaining a road, trail, or ski slope. <https://vimeo.com/571655833>

And what about the white stones that brighten gardens and make the area pleasing enough to take a picture? Usually, you purchase the materials and lay them down. However, there's a natural way to “create” them using what emerges from the excavations and the ground itself. Recently, on a construction site in Japan, the company in charge used MB's screening bucket to wash the crushed material to get perfectly white stones. After the unit sorted the rocks, some were used on the construction site, while others were sold to landscaping companies for other urban gardening jobs. <https://vimeo.com/571637967>


Imagine this: while on your vacation in the mountains, you decide to walk along a forest path, looking for the perfect shot. It's hard to see how much hard work went into keeping the trail clean and in excellent condition. MB Crusher's sorting grapple is an effective tool to clear branches and trunks. Like other machinery from the Italian company, it quickly reaches inaccessible areas. The unit hooks up to the excavator and can move trunks, branches, and different types of material, regardless of shape, delicately and precisely. Using MB units avoids “overwhelming” the area with various vehicles or equipment. <https://vimeo.com/577202634>

With MB Crusher's attachments, areas such as gardens and mountain roads can be kept in perfect shape and beautiful without altering their ecosystem. The results? Millions... of likes.



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