

**Special Feature**  
**NEW WASTE  
HANDLING  
EQUIPMENT**

Pages: 56-61

**Site Report**

**AUTOMATED  
CONCRETE REMOVAL  
SAVES THE DAY IN  
SALT LAKE CITY**

Pages: 63-64

# ENVIRONMENTAL AND CIRCULAR FOCUS AT ECOMONDO

**Business**

**STEELWRIST  
ADDS SQ90  
TO ITS RANGE  
OF FULLY  
AUTOMATIC  
QUICK COUPLERS**

Page: 14

**Special Feature**

**HYDRO-  
DEMOLITION 2021**

Pages: 30-37

**News**

**NEW ESD 162  
DESIGNED FOR  
DRY DRILLING OF  
THE HARDEST  
MATERIALS**

Page: 38

**Reports**

**KEMROC  
GETTING BIGGER  
ON ALL LEVELS**

Page: 67

**Reports**

**RUBBLE MASTER  
CUSTOMERS PRAISE  
EQUIPMENT  
RELIABILITY**

Page: 84

**Site Report**

**TYROLIT DRILLING  
SYSTEM USED  
SUCCESSFULLY  
ON UNDERWATER  
PROJECT**

Page: 88



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# CONTENTS

PD*i* • issue no. 5 October - November 2021 • Volume 21

## REGULARS

### Editorials

6 IACDS Yearbook 2021 ready for delivery

8 "Bring your broom cos it's a mess"

10 Welcome to the digitalisation era

### Associations

6 2021 IACDS Yearbook now available

12 Andreas Pocha marks successful era as managing director of German Demolition Association

### Business

6 AS Baltem new McCloskey dealer

Husqvarna Group invests in Gamma Technologies

8 Hilti now amongst world's best places to work

10 Komatsu new offerings leverage electrification

Volvo CE joins Open-S Alliance

Hitachi appoints new finance partner in the UK

14 Industry looks forward to bauma 2022

Komatsu Europe announces sale of 'FrontRunner' autonomous haulage system

Steelwrist adds SQ90 to its range of fully automatic quick couplers

### Jobsite Report

16 Erkat supports RockFeel project

Tackling high altitude road development in India

40-42 Eco-friendly renovation

42 Case short reach excavator delivers sustainable recycling solution

63-64 'Automated Concrete Removal' (ACR)

86 Cutting technology for tunnelling

Tyrolit drilling system used successfully on underwater project

Arjes shredder helps reduce flooding debris

### News

28 Mecalac adds to rail offering

Volvo launches world's first vehicle using fossil free steel

38 New ESD 162 designed for dry drilling of the hardest materials

68 Volvo prototype LX03 the intelligent future of construction

MB says rebar 'no longer a problem'

70 German Demolition Association to meet in March 2022

IACDS networking event at bauma 2022

IACDS Diamond Award 2022



72 Avant Tecno Oy announces changes to operational management

75 Asynchronous technology and flywheel energy storage from Lindner

Idrobase Group announces new 'Elefante 90' fog maker

77 bauma Innovation Award 2022

New managing director of Komatsu Europe

Tilly Manutention announced as authorised EvoQuip distributor

82 Ausa DR601AHG reversible dumper wins Smopyc Gold Award

83 Agder Gruppen appointed as Powerscreen distributor for Norway

Christophe Sanchez replaces Martin Schickel at Liebherr

### Reports

67 Kemroc getting bigger on all levels

78-79 Messersi turns earthmoving into fine art

80-81 Heger's innovative diamond tools help with sustainability

84 Rubble master customers praise equipment reliability

### Shows

49-54 Environmental and circular focus at Ecomondo 2021

## Special Features

18-26 Concrete floor prep, grinding and polishing

30-37 Hydrodemolition

44-46 The sawing team is working

56-61 Waste handling equipment





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## IACDS Yearbook 2021 ready for delivery

As we approach the end of the year, the IACDS is proud to present our annual Yearbook. This year the focus is on innovation with every member association having presented innovative projects.

Our working paper on the subject of slurry management will also appear shortly which marks cooperation under the leadership of the US American Association, CSDA. The topic of slurry management comes more and more into focus as it is part of the holistic way of dealing with the waste product, the drilling and separation of water.

The structural survey that was carried out in September has recently been evaluated and made available on our website. For the second time, contractors and manufacturers around the world were surveyed and the data obtained presented a look at the different markets and their characteristics worldwide.

We made very successful use of the contactless time with webinars during this second year of the coronavirus pandemic. We held a total of six webinars from the ÖNorm over GPR technologies, PQ-6 connection and one involving safety guidelines concerning the handling of diamond tools. We look forward to continuing this series next year.

Now at the end of the year, I would like to thank you for your trust and support and look forward to welcoming you again in person next year.

I wish you and your families a Merry Christmas and stay healthy!



**Michael Findeis,**  
President of IACDS



## 2021 IACDS Yearbook now available

The IACDS Yearbook 2021, the third edition of the publication, which provides an overview of the international drilling and sawing industry, is now available. On this occasion, the publication focuses on innovation, a topic of great interest to professionals in the sector. Thus in its pages can be found the vision of the national associations that are members of IACDS as well as other associations and entities. Likewise, important subjects such as the different initiatives carried out by IACDS are highlighted along with articles focused

on specific topics, such as training, written by professionals in the sector.

The IACDS Yearbook 2021 is now available for online consultation, accessible from any device with 'hard copies' being available on request. However, the 2021 Yearbook is already traveling around the world and in order to maximise access, numerous copies have been distributed globally where they are already being received by concrete drilling and sawing professionals.

[www.iacds.org](http://www.iacds.org)

## AS Baltem new McCloskey dealer

McCloskey International has welcomed AS Baltem to its global network of distributors serving Estonia, Latvia and Lithuania.

Established in 1994 and owned by Sumitomo Corporation (Tecnosumit North-East), AS Baltem is the exclusive distributor of Komatsu construction and utility equipment in the region. A leading construction equipment distributor in Estonia, Latvia and Lithuania, AS Baltem employs over 100 people, being dedicated to providing a full suite of services and solutions to the market. Quality aftersales support and focus on new technologies is a priority and differentiator for the company which operates from six branches with workshops and parts warehouses across the Baltic and nearly forty fully equipped service vans.

Now offering McCloskey's mobile crushers, screeners and stackers, rounds out a robust product portfolio, continuing the company's commitment to be its customers' partner in improving their business operations. "McCloskey's offer fits perfectly our product portfolio and we're confident it will help us to complete our offer for the quarry and recycling business," said Tomasz Jakubik, vice president, sales and marketing, Tecnosumit North-East.



Toni Laaksonen, senior vice president, McCloskey International, stated, "Having AS Baltem on board further strengthens our distribution network globally. This market has huge potential, particularly in infrastructure development following the coronavirus pandemic. Expected economic expansion, along with projects like Rail Baltica, will stimulate the demand for machinery in these markets. These unprecedented times present some unique situations that we anticipate will contribute to the growth of our partnership and success in the marketplace."

AS Baltem is strongly positioned to support sales of McCloskey equipment in the region. Jakubik concluded: "With economic stimulus and recovery, we anticipate strong growth across sectors. Bringing McCloskey products to the market at this key time benefits our companies and our customers."



## Husqvarna Group invests in Gamma Technologies

Husqvarna Group's venture capital arm has recently invested €1M to take an equity stake in Gamma Technologies. Gamma is the fifth investment for Husqvarna Group's venture capital fund where the aim is to collaborate and help grow start-ups in areas of digital disruption that impact the Group's industries.

"Gamma is innovating in an area of high interest to us as we believe Augmented Reality (AR) is an important technology when delivering new technology based services to our customers going forward. We look forward to a close collaboration with the Gamma team and to capture learnings to accelerate the evolution of our Construction business," says Mark Johnson, vice president of Corporate Venture Capital, Husqvarna Group.

"The investment from Husqvarna Group will accelerate the revolution of the construc-

tion industry and spread awareness about the benefits of using AR technologies on the jobsite. Husqvarna Group, with our current shareholders Formitas, are strategic investors and partners which will help us define the future of construction. We are excited to start working with Husqvarna Group on the implementation of innovative technology in the construction industry," says Caner Dolas, CEO & co-founder, Gamma Technologies.

Husqvarna Group Ventures is looking for start-ups to invest in and partner with, where Husqvarna Group's industry knowledge and distribution network will deliver value and help scale these companies to maturity. Gamma represents an example of how Husqvarna Group likes to get involved at the early stages to help co-develop customer solutions.



A row of Lavinia floor grinding machines is parked in a large industrial facility. The machines are white and grey, with various models labeled like 'LAVINA 20NE', '25E', '25LE', '30E', and '30LE'. They are arranged in a line, and their reflection is visible on the highly polished floor. The background shows the interior of a large factory with high ceilings and industrial lighting.

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## “BRING YOUR BROOM COS IT’S A MESS”

Things are now loosening up in the market and in June, PDi Magazine exhibited at World of Concrete in Las Vegas, but only with our US personnel attending the show. In October however, some of our European staff attended the Italian show Ecomondo in Rimini. This marks a kind of a new era in travelling after being more or less locked up since March 2020.

The question does arise though if whether we can believe that things are coming back to normal? No not yet. Not completely anyway. We still see outbreaks of the pandemic all over the world and increasing numbers of people being infected. Some countries are reintroducing Covid restrictions. However, the death rate has decreased thanks to the vaccination programme resulting in reduced numbers of people becoming ill with the virus. Still, soon there will become a need for a third dose of the vaccine so that things can become closer to normal during 2022. If we do see a shift to the worse, I think 2022 will be rather limp as well. But despite the situation, it is looking rather better in the markets PDi Magazine covers. It could anyway have been far worst.

Some weeks ago, the United Nation Climate Change Conference was held in Glasgow, Scotland. A lot of promises were made and at this point it seems like most countries are on the right track to work in the same direction to prevent climate change. However, we will not reach the 1.5° goal that is for sure. Following the Paris meeting nothing actually happened, with our pollution, and the felling of our forests actually increasing. So, the conditions for improvement look slim unfortunately.

But we as an industry actually can do a lot on our own and take responsibility for our actions. The fact is we only have one world and we are now borrowing time from our childrens’ future. We have now come to the point where each of us has to take this into consideration and ask, ‘How I can help?’ And that concerns all aspects of both our private and professional lives. When it comes to our professional lives, when we act as contractors or suppliers we can receive a lot of help from branch associations of industry bodies to help find effective measures and strategies that will help us decrease pollution in different ways. It is not just about making the ‘buck’ anymore. We have worked that way for so many years without considering the effects of our actions and it is time to take responsibility and start cleaning up after us. This reminds me of the movie, ‘The Campaign’ with Will Farrell and Zack Galifianakis, where Galifianakis’s character, Marty Huggins, says, “Bring your brooms cos it’s a mess”.

I am not blaming anyone however for the state we have reached, but I think it is really about time, and I mean “really”, that we start thinking about how we can all help to save our planet.

This issue of PDi Magazine is as usual loaded with interesting stories and new developments from the industries we are all involved in. We are also publishing our annual special feature on new equipment for floor prep, concrete floor grinding and polishing. We are also running special features on hydrodemolition, floor and road saws and waste handling equipment. You will also find a review of the recent Ecomondo show in Rimini.

I would also like to wish you a good and fruitful continuation of the year and hope that you stay healthy.

Jan Hermansson  
Editor-in-Chief  
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## Hilti now amongst world’s best places to work

**For the fifth time in the past ten years, Hilti has been named one of the World’s ‘Best Workplaces’. The accolade was awarded by Great Place to Work, the worldwide industry body that quantifies employee experience.**

To say that 2020 has been challenging to both employers and employees is an understatement. For employees, the rapid succession of events led to unprecedented changes in both their working and private lives, with unknowns still on the horizon. For employers, one particular question still needs an answer befitting the culture and the type of work conducted, namely: ‘What will going to work look like in a couple of years?’ This is pertinent as recent experience shows that people cope differently with the new arrangements caused by the pandemic.

In response to these disruptions, Hilti continued focusing on its core strengths of a caring and performance oriented culture. As a result, the company received global recognition from Great Place to Work, an authority on workplace culture, which has been gaining insights from over 100M employees in 90 countries worldwide. This year, Hilti ranks 11, with the global accolade reflecting Hilti’s ranking on 12 national ‘Best Workplaces’ lists during 2020 and early 2021 (Austria, Canada, Chile, Denmark, Finland, Germany, Japan, Mexico, the Netherlands, Portugal, Sweden and the US). This is seven countries above the threshold set for being ranked as one of World’s Best Workplaces.

“This is the fifth time that Hilti has been awarded the global accolade as a World’s Best Workplace. It definitely shows the effect of the continuous efforts of our teams,” points out Matthias Gillner, a member of Hilti’s executive board. “Today, organisations distil their unique culture into a set of values to differentiate themselves on the market, in the eyes of business partners, employees as well as of prospective employees. For us, this is not just a claim; it is part of our DNA. The acid test for a company culture is when things get difficult, which is exactly what has happened since early 2020. This global crisis has proven that, at Hilti, we truly care for our people and all other stakeholders.”

### The value of community during the pandemics

In 2020, team members were showing what ‘team’ means to them when employees and

management at Hilti headquarters converted a fraction of their salary to support their colleagues in need around the world. The company topped these funds to match the contributions of employees. “Coming together as a team for direct and compassionate support of colleagues in need around the world shows the wonderful community spirit we have at Hilti. As long as funds remain available, Hilti will continue to provide quick and easily accessible help for Covid-19 related emergencies, where employees and their families need it most,” said Sabine Krauss, head of global human resources.

Beyond providing support in various forms, colleagues across the world took it upon themselves to prioritise the health and safety of the team and customers. Virtual interactions with customers and visits to the Hilti stores by appointment became the norm in several Hilti entities, which enabled the employees to keep up with customer needs while working in safe environments. In the process, Hilti started offering virtual mental health and resilience boosting workshops to help its employees better cope with ‘the new normal’.

### When stepping outside work pays off

When it comes to offering help, Hilti goes beyond its own community. ‘Engaged Beyond Business’ (EBB) is one such example. This global programme, developed by the Hilti Group and the Hilti Foundation, provides every Hilti employee the opportunity to volunteer towards socially or environmentally impactful activities during their work time with one day of paid leave per year. Working together for a greater good, especially in these trying times, has further boosted the team spirit. “The Hilti culture has been acclaimed regionally and globally for the past ten years but we have never considered this ‘business as usual’, it has always been regarded as a huge achievement for all of us, as a team. This year’s award is beyond memorable to the Hilti community. 2020/2021 has been anything but conventional, which is why upholding, together, this great workplace is even more outstanding,” concluded Sabine Krauss.



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## Words from the EDA President

# Welcome to the digitalisation era

If we talk about digitalisation, the moment has come to stop talking about it in terms of the future. That moment had already arrived, in a way, some time ago. But it became more evident with the emergence of the Covid-19 pandemic, which undoubtedly transformed our lives in many ways.

Abruptly, we had to get used to living with a screen between us in order to do our shopping on the internet, to talk to our relatives while seeing their faces through mobile devices, to celebrate birthdays and special moments from a distance and, of course, to work telematically. The words 'teleworking', 'video conferencing' and 'remote' have never resonated so much in our minds.

Analogue became almost obligatorily, digital, and the change, although too abrupt for many, has not been so difficult. Although we have been talking about digitalisation in the future tense for some time, it has been part of our present for years.

Aware of the importance of this topic, this year we have decided to dedicate our traditional yearbook to it. Thus, the vast majority of the contents of the EDA Yearbook 2021 revolve around digitisation in the field of demolition at the European level.

On its 120 pages, national associations from all over the continent give their views on the topic and analyse the situation in their respective countries, as do associations, organisations and specialised media.

Likewise, and with the aim of reaching a larger number of professionals, this

yearbook, which is already available for online consultation and the purchase of printed copies, reviews the main initiatives carried out by EDA, namely publications, training activities, working groups, events and so forth.

To consult the yearbook or learn more about it, just visit: [www.europeandemolition.org/yearbook](http://www.europeandemolition.org/yearbook)

### About EDA

The EDA was founded in 1978 and is the leading platform for national demolition associations, demolition contractors and suppliers. The EDA has a strong focus on developments in Europe, which are of interest to the demolition industry.

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**Francisco Cobo, President of EDA,**  
European Demolition Association



## Komatsu new offerings leverage electrification

Working together to rapidly innovate in support of carbon reduction targets, Komatsu and several of its customers have formed the Komatsu Greenhouse Gas (GHG) Alliance. The founding members of the alliance are Rio Tinto, BHP, Codelco and Boliden. Through the alliance framework, Komatsu's GHG partners will work directly with Komatsu to actively collaborate on product planning, development, testing and deployment of the next generation of zero emission mining equipment and infrastructure. The alliance's initial target is to advance Komatsu's power agnostic truck

concept for a haulage vehicle that can run on a variety of power sources including diesel electric, electric, trolley (wired), battery power and even hydrogen fuel cells.



## Volvo CE joins Open-S Alliance

The Open-S Alliance works towards the global interchangeability of hydraulic work tools for excavators has now seen Volvo CE join as its first excavator OEM.

The Open-S Alliance is a manufacturer-independent organisation working to safeguard global interchangeability of hydraulic powered work tools and attachments for excavators. Membership is available as either full, associate or supporting depending on if Open-S products are developed, produced in house or sourced. Since early 2021 Volvo CE has delivered quick couplers and adaptors directly from the factory and is now joining the Open-S Alliance as a supporting member in a bid to make customers' day to day work even more productive. "We are very happy that Volvo Construction Equipment also formally joins the alliance as a technology leading OEM. We also see that the interest is growing from other excavator brands. I am firmly convinced that open and standardised interfaces will give end customers major advantages. It makes it easier to use many different work tool brands without being locked into a proprietary solu-

tion owned by one manufacturer," says Stefan Stockhaus, chairman of the Open-S Alliance.

### About Open-S

The purpose of Open-S is to provide global interchangeability between quick couplers, tiltrotators and work tools from different manufacturers. The standardisation work has been ongoing for the last two years with the purpose to increase safety and efficiency for excavator owners, operators and ground personnel thanks to the interchangeability of hydraulic powered work tools. The Alliance also aims to create a competitive and open industry standard that is not controlled by a single producer, create a standard that is user friendly and follows the highest safety standards, create a uniform manufacturing standard for dimensions and tolerances as well as make it cost efficient to retrofit adaptor brackets to used and new buckets and work tools. The Open-S Alliance is a non-profit organisation with the sole purpose of developing and promoting the Open-S standard. More information is available at: [www.opens.org](http://www.opens.org).



**Brendan Walsh, Walbrook Asset Finance CEO; David Roberts, HCMUK CEO; Mark Turnham, HCMUK national sales & marketing director; Chris Smith, Walbrook Asset Finance head of sales and Andrew Shield from HCMUK CFO**

## Hitachi appoints new finance partner in the UK

Hitachi Construction Machinery UK (HCMUK) has appointed Walbrook Asset Finance as its preferred finance provider for HCMUK customers. Walbrook Asset Finance specialises in providing finance, hire purchase and operating lease financing to the construction, demolition, transportation, logistics, mining,

manufacturing and other sectors, proving a perfect fit to HCMUK's customers. The partnership is the latest development in HCMUK's strategy to become a class leading solutions partner and will be branded as Zaxis Finance, which shares its name with Hitachi's 1t to 90t excavator line up.



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For 20 years Andreas Pocha has successfully managed the German Demolition Association.

## *Andreas Pocha marks successful era as managing director of German Demolition Association*

Andreas Pocha has recently celebrated his 20th anniversary as managing director of Deutscher Abbruchverband -DA (German Demolition Association). "At the end of the day, of course, it's the decisions of the members which determine the course, too. But thanks to Mr. Pocha's prudent management, we have been able to reach many important milestones in the development of our association in the last two decades," says DA chairman Johann Ettengruber. This period has been deemed a 'successful era', which is reflected in the development of the association's membership. Since Pocha began on 1 October, 2001, the number of members has more than doubled from 290 to the current 810.

### **Quality assurance and improvement**

Instead of just quantity of members, the focus has been on the 'quality', with members meeting strict admission criteria. Quality assurance and improvement in demolition has always been one of the main concerns of the DA, which has been significantly promoted during Pocha's leadership. In recent years, the DA's participation in the standardisation committees of DIN (DIN 18299, 18007, 18459) and the VDI committees (VDI 6210) has helped to standardise and improve technical standards in demolition.

Since 2005, the DA has also acknowledged qualified experts in the field of demolition as 'Fachberater Abbruch' (specialist

demolition advisor), who act as competent contact persons for tendering, planning and appraisal of demolition work. In 2004 the first edition of the 'Fachbuch Abbrucharbeiten', published by the DA, was published, being a comprehensive reference work on professional planning and execution of all work in the field of demolition and dismantling.

### **Fachtagung Abbruch (demolition conference) now an industry highlight**

Under Pocha's aegis, the DA network further developed in a targeted manner. In addition to re-joining the European Demolition Association (EDA) in 2010, the Berlin office opened in October 2018 in cooperation with the German Federation of the Demolition Industry (ZDB) to boost political communication. Being located in Berlin, the DA ensures that the demolition industry is able to network and exchange ideas alongside its connected exhibition. There, exhibitors and business people are able to meet.

The event, which was launched in 1995 by Dr. Dietrich Korth, was taken over by the DA in 2011 and, under Pocha's direction, has developed into an annual highlight for the entire industry. In 2011 there were 411 participants and 47 exhibitors, whilst in 2020 it attracted well over 1,100 industry insiders and nearly 130 exhibiting companies from Germany and abroad. The Fachtagung Ab-

bruch is now organised by DA Service GmbH, which was founded in 2017 and has been able to raise both the profile of the event and the extensive range of seminars to a new level. Since 2018, Viola Ridderbusch has been responsible for the management of the GmbH with great success.

### **Apprenticeship launched**

Another important element in Pocha's work was, and still is, the recruitment of skilled workers for demolition. A significant milestone in this regard was the development of the job description of the construction mechanic for demolition and concrete separation technology. The three year apprenticeship, which has been state approved since 2004, is the first to be tailored purely to the needs of demolition and dismantling. In addition, Pocha has acted as an advisor for various professions in inter-company training for many years.

### **Focus on the environment and sustainability**

Also important has been the consistent ecological orientation that the demolition industry has pursued for more than 30 years through the modern practice of selective dismantling for the extraction of secondary raw materials. The DA was the driving force behind the founding of Qualitätssicherung Sekundärbaustoffe GmbH (QUBA) in 2019. In

conjunction with bvse and ZDB, the association was able to gain two equal shareholders. In 2015, the remediation of pollutants required for the extraction of secondary raw materials prior to demolition was included as a division and established its own professional committee on the subject.

### **To the future**

A lot has happened in the last two decades of the association's history. The list of achievements can also include the gradual opening of the association to further business sectors and professional groups such as recycling and disposal companies, or manufacturers and engineers as supporting members, or the recent revision of the association's magazine Abbruch Aktuell, to name but a few examples. Parallel to the expansion into associated areas, the actual office has also changed. Initially based in offices in Düsseldorf, the team, which has now grown to ten employees and two trainees, has been working under Pochas' management since 2010 in its own premises in Cologne, which were expanded by one floor in 2020. According to Johann Ettengruber, the success story is far from over: "There are still many goals and tasks that we will be happy to implement with the imaginative, energetic and experienced management of Andreas Pocha."

***deutscher-abbruchverband.de***



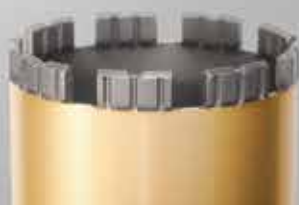
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SCAN ME

## EVENTS

### WORLD OF CONCRETE 2022

Jan 18-20, 2022  
Las Vegas Convention Center  
Las Vegas, USA  
[www.worldofconcrete.com](http://www.worldofconcrete.com)

### NDA ANNUAL CONVENTION 2022

Demolition San Diego  
Feb 26 -Mar 1, 2022  
San Diego, USA  
[www.demolitionassociation.com](http://www.demolitionassociation.com)

### FACHTAGUNG ABBRUCH 2022

March, 11, 2022  
Berlin, Germany  
[www.deutscher-abbruchverband.de](http://www.deutscher-abbruchverband.de)

### EUROPEAN DEMOLITION ASSOCIATION CONVENTION

9-11 June, 2022  
Paris, France  
[www.europeandemolition.org](http://www.europeandemolition.org)

### HILLHEAD

21-23 June 2022  
Hillhead Quarry, Buxton, Derbyshire, UK  
[www.hillhead.com](http://www.hillhead.com)

### BAUMA 2022

24-30 oktober, 2022  
Messe München, München, Germany  
[www.bauma.de](http://www.bauma.de)

### BAUMA CONEXPO INDIA

2022  
Gurugram, New Delhi, India  
[www.bcindia.com](http://www.bcindia.com)

### BAUMA CHINA 2022

22-25 Nov, 2022  
Shanghai Exhibition Center, Shanghai, China  
[www.bcindia.com](http://www.bcindia.com)

### DEMCON 2022

November 24-25, 2022  
InfraCity, Stockholm, Sweden  
[www.demcon.se](http://www.demcon.se)

### CONEXPO-CON/AGG 2023

14-18 March, 2023  
Las Vegas Convention Center, Las Vegas, USA  
[www.conexpoconagg.com](http://www.conexpoconagg.com)



## Industry looks forward to bauma 2022

Following TrendSet, the pilot trade fair for Messe München under coronavirus conditions was held successfully in July, IAA Mobility took place in September with an elaborate safety and hygiene concept. The measures were well received, showing that it's possible to hold trade fairs again in these challenging times.

Three exhibitors aiming to attend bauma, which is being held in Munich from 24 to 30 October 2022, participated, all reporting positive feedback. Anke Hadwiger, from Zeppelin Baumaschinen GmbH, stated, "After seeing the new trade fair conditions after coronavirus for myself in person on site during IAA, the hope and anticipation of having an almost normal bauma 2022 are growing even more. The trade fair developed and implemented new and forward looking concept ideas. We're now preparing ourselves for the industry gathering with interesting inspiration, impressions and a positive mood." Joachim Strobel, managing director of Liebherr-EMtec GmbH, added: "The pandemic showed us lots of potential for alternative communication and collaboration, but at the same time also confirmed the huge importance of personal contact and dialogue

with the customer, partners and business associates."

Komatsu's Marco Maschke stated that the importance of bauma 2022 is also undisputed: "For Komatsu, bauma was, is and remains the leading trade fair for our industry worldwide. Our customers and sales partners tell us time and again just how important direct contact with the manufacturer is in our industry – at the proper distance, of course. In that respect, the hygiene concept shown at IAA Mobility convinced me that bauma will be a very safe and, as always, very successful event."

As an international industry gathering, bauma offers a comprehensive overview of market leaders and innovations. At the upcoming edition, the focus will also once again be on a wide variety of future themes in the construction, building materials and mining machinery industries through live presentations, rounds of discussions and lectures. The trend topics for bauma 2022 consist of, 'The road to zero emissions'; 'Digital construction site'; 'Construction methods and materials of tomorrow'; 'The road to autonomous machines' and 'Mining: sustainable, efficient and reliable'.

[www.bauma.de](http://www.bauma.de)



## Komatsu Europe announces sale of 'FrontRunner' autonomous haulage system to Boliden

Komatsu Europe is pleased to announce that Komatsu FrontRunner will be deployed on 11 x 930E-5 'ultra-class' haul trucks at Aitik, one of Europe's largest open pit copper mines which is located in northern Sweden and owned by the Swedish company Boliden. Boliden is a metals company with a focus on sustainable development within the fields of exploration, mining, smelting and metals recycling. Together with Hesselberg Maskin AB, the local Komatsu distributor, Komatsu Europe will also provide training and support throughout the project.

The FrontRunner system is expected to be a significant upgrade to Boliden's fleet at its

Aitik mine, providing automation that can yield substantial benefits for its mining operation. Combining the reliability and durability of Komatsu's electric drive trucks with the power of innovative autonomous haulage technology, the system is designed to help customers increase productivity and reduce total cost of ownership while promoting zero harm.

FrontRunner AHS brings together ultra-class dump trucks with the 'Dispatch' fleet management system. This is said by Komatsu to be the preferred management system in a large number of the largest mining operations in the world, providing compliance to its proven optimisation methodology.



## Steelwrist adds SQ90 to its range of fully automatic quick couplers

Steelwrist has introduced the SQ90, the largest model in its 'SQ' 'Auto Connection' quick coupler range for excavators up to 70t specifically involved in demolition activities.

After the SQ quick coupler launch in 2017, the range today consists of the SQ60, SQ65, SQ70, SQ70/55 and SQ80 being now followed by the introduction of the SQ90. SQ couplers aim to provide increased safety and provide the ability to change hydraulic powered work tools in seconds without leaving the cab. The addition of the SQ90 coupler meets demand from the demolition industry, where many fast work tool changes are common. "The Steelwrist SQ Auto Connection quick couplers have been appreciated by the customers from day one. In the demolition industry, with its frequent work tool changes, it is all about using the right tool for the right job at the right time. SQ allows operator and machine to work continuously at all times and work safety increases when operators can easily change and use the best tool for the job," says Stefan Stockhaus Steelwrist AB CEO.

SQ90, as well as all other Steelwrist SQ products, follows the global Open-S industry standard for fully automatic couplers for excavators. The standard makes it easier for machine operators and contractors to choose quick couplers, tiltrotators and work tools from different manufacturers and be confident that they function together. Furthermore, all SQ couplers come with 'QPlus' technology which enables higher hydraulic flows with less pressure drops than many other systems on the market.

The SQ90 also benefits from Steelwrist's 'Front Pin Lock' which is a mechanical lock of the front shaft which significantly limits the risk of an unintended drop of work tools. The patented technology has been upgraded to a second generation in order to support heavy demolition work tools.





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# Erkat supports RockFeel project

**The founding team of the RockFeel project at the Technical University (TU) Bergakademie Freiberg is celebrating a milestone with the commissioning of a mobile cutting test stand. RockFeel has been developed to detect changes in rock strength, material differences, chisel blockage and wear during operation, making mining, tunnelling, civil engineering and demolition significantly more efficient, safer and environmentally friendly in the future.**

“Several industrial partners were heavily involved in achieving this important interim project objective, which, through advice and action, ensured that, with a tight project budget, we could operate a drum cutting machine specifically adapted and equipped for our requirements on a medium weight tracked excavator on a well-equipped site with all the necessary emissions permits,” explained Dr. Jörg Bretschneider on behalf of the RockFeel team.

**Erkat drum cutter and extensive user training**  
Erkat adapted an ER 650 transverse drum cutter for the cutting test bench and intensively instructed the team in the optimal handling of the cutter on a tracked excavator. Next, excavators and drum cutter were equipped



with various sensors so that the wireless transmission of data could be tested so that the actual data collection and analysis could begin.

After a brief project presentation, visitors were able to experience the challenges from the sensor technology live when the drum cutter was used to make initial cuts into the concrete test specimen as preparations for the first measuring cuts. How the preliminary examinations were carried out was also demonstrated on the fixed test bench.

## Safer, more efficient and good for the environment

“Reliable real time analysis of the rock would bring a whole range of advantages for our customers,” explains Erkat managing director Martina Schierholz. For

example, the yield of a deposit would be improved and, according to RockFeel, waste material would be reduced by at least 10%. Mining safety would be increased by timely detection of the risk of caving. An extended pick life would result in fewer interruptions for the pick change providing more time for extraction. Environmental benefits include significantly less water and energy consumption, fewer chemicals and no more explosive gases. By streamlining the process chain, RockFeel would enable ‘lean mining’, a cheaper and greener mining system. “We save time, improve yield, increase safety and contribute to our environmental protection efforts. We couldn’t ignore these many good arguments,” added Schierholz. “We are following the progress of the RockFeel project with great interest and hope that this innovation will be a milestone for our customers.”



## TACKLING HIGH ALTITUDE ROAD DEVELOPMENT IN INDIA

When a local authority in India announced a new road project located at 4,400m above sea level, it did not come as a surprise that not many bidders were ready to jump in. 12km of the 38km road was to be located at high altitude, with the closest crushing site being 45km away. However, the main concern was that the area was not well connected, with rain and snow for most of year which made road transport well-nigh impossible.

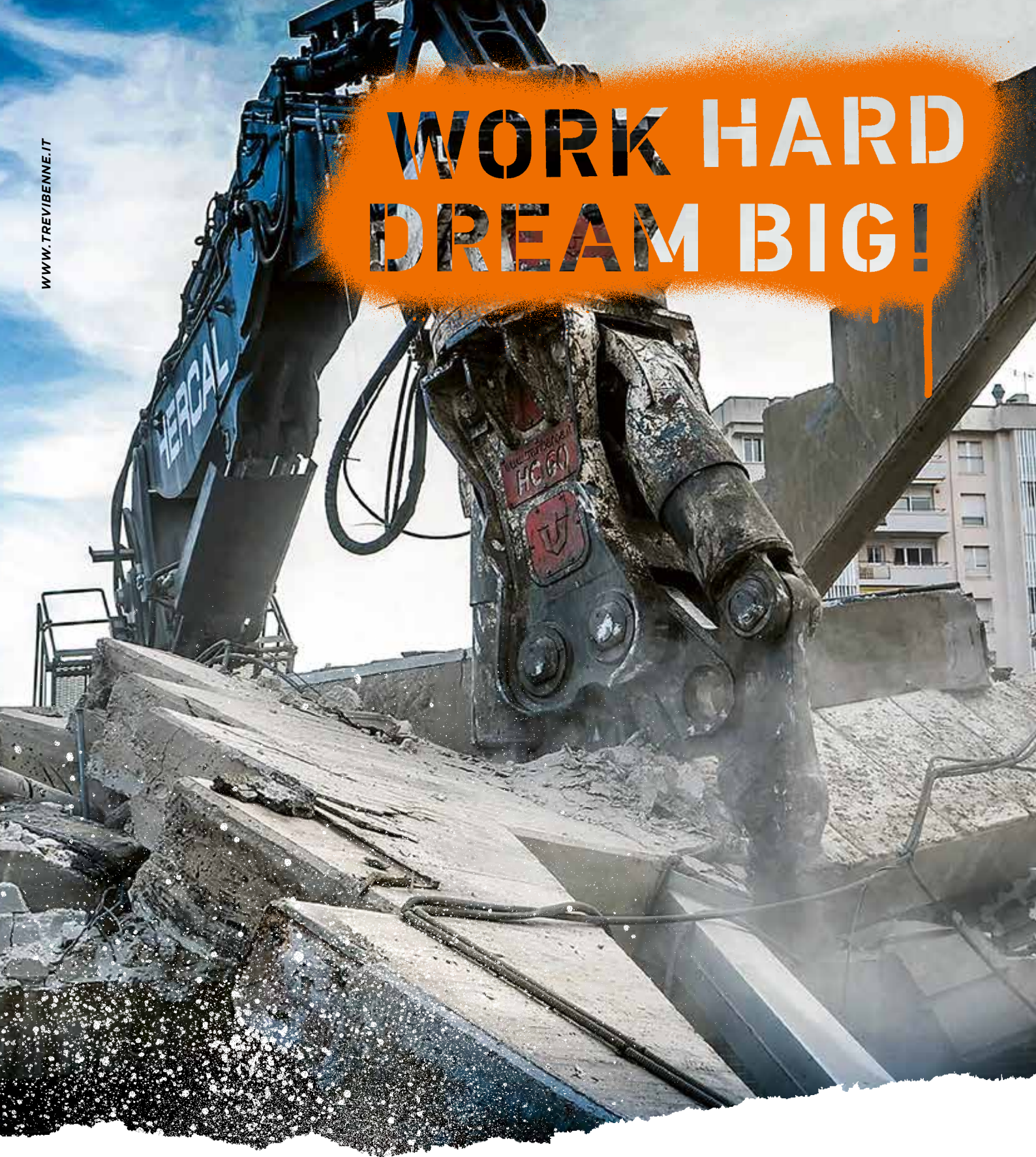
An MB customer successfully met project aggregates requirements with the help of a MB BF90.3 crusher bucket on a previous road project. This meant it knew the technology could be relied upon when it won the tender to undertake the road construction project. The MB bucket is compact, being attached to a carrier, so

it is easy to transport to the road construction site. This enabled a large amount of rock to be sourced from the surrounding area and prepared as a huge pile of sub base aggregate readily available for the project. River boulders were also crushed, thus eliminating dependency on third party aggregate suppliers as well as saving on expensive transportation costs.

The contractor thus created a crushing plant directly where needed, at a high altitude, cutting costs to such an extent that another two crusher buckets were acquired for use on the project. The contractor was able to produce GSB 6mm down and WMM 40mm down as per the project requirements, as well as being able to complete the project ahead of deadline.



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## A BATCH OF NEW MACHINES AND TOOLS FOR

# CONCRETE FLOOR PREP, GRINDING AND POLISHING

***Every year since 2000, PDi Magazine has published a special feature on floor prep, concrete floor grinding and polishing. And it is no different this year!***

In this year's annual feature we take a look at new equipment for floor preparation, concrete floor grinding and polishing as well as new tools, machines and systems.

### **Ashine Diamond Tools expanding its production capacity**

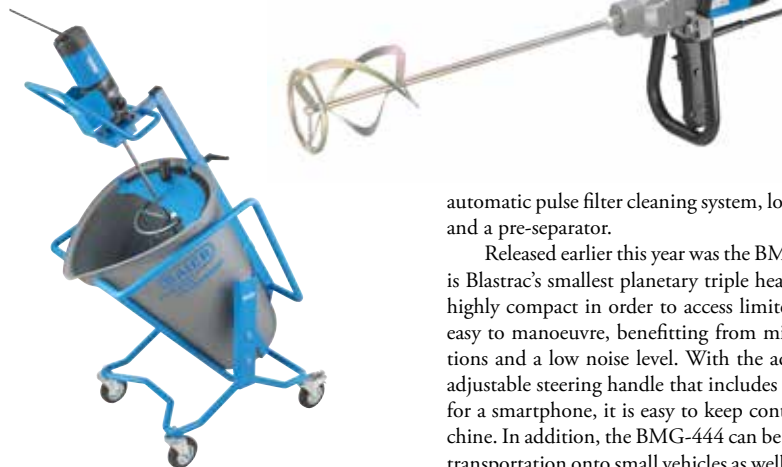
The Chinese manufacturer of diamond tools for grinding and polishing concrete, Ashine Diamond Tools in Xiamen, China, has recently inaugurated a new and modern production facility. The large facility has been built to significantly increase production, increase efficiency and guarantee stability in the production chain. Ashine Diamond Tools was founded in 1993 and will soon celebrate 20 years in the industry. We hope to present Ashine's new production facility in an upcoming issue of PDi Magazine.

**[www.ashinediamondtools.com](http://www.ashinediamondtools.com)**

### **Flooring tools for perfection from Baier Tools**

German manufacturer Baier has produced high quality power tools for over 80 years. Located in Stuttgart, and exporting to over 65 countries, it considers itself a world leader in quality and innovation. Baier produces in house power tools with a product depth of 60%. For professional flooring work, Baier offers a complete range, from soft surface treatment with the BDN511 up to 50mm wide, efficient dust free retrieval with the BFF 222 using different tools, or adding of coatings (concrete, epoxy, terrazzo) with the 'Giant 120' or for smaller quantities with one of the various rapid mixers.

**[www.baier-tools.com](http://www.baier-tools.com)**



### **New machines and tools from Blastrac**

The new Blastrac BMG-2200 is a large scale ride on floor grinding machine designed for large horizontal surfaces. With two drive wheels fitted to the front and a swivel castor to the back, this makes the machine very manoeuvrable both on and off jobsites, and is both effective and ergonomic to operate. The operator is seated with arm rests on both sides, along with joysticks, push buttons and a touch screen. Three powerful BMG-780Pro grinding heads produces extensive coverage and effective distribution of grinding pressure on each individual head. This means each grinding head can be operated individually. The machine comes as standard with variable grinding speed, rotation direction, and an independent suspension system. It is designed with an integrated powerful dust collecting system with HEPA 14 filters, which makes it virtually dust free according to OSHA regulations. It is also equipped with an

automatic pulse filter cleaning system, longopac system and a pre-separator.

Released earlier this year was the BMG-444, which is Blastrac's smallest planetary triple head grinder. It is highly compact in order to access limited areas and is easy to manoeuvre, benefitting from minimum vibrations and a low noise level. With the advantage of an adjustable steering handle that includes a storage place for a smartphone, it is easy to keep control of the machine. In addition, the BMG-444 can be folded for easy transportation onto small vehicles as well as being easily dismantled into three parts. Its planetary system is located in a completely casted housing for 100% sealing of the lower belt against dust and water, which also makes it very easy to clean. In addition, it is equipped with a







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self-tensioning upper belt which means there is no need to adjust the belt tension making it easier to maintain belts. A floating shroud is made of a single piece allowing easy locking for changing tools and transportation.

Like all other Blastrac triple disc grinders, the BMG-444 will be delivered as standard with a 'Slidemag' adapter plates that can be equipped with any type of Slidemag wings, including grinding wings, PCD wings, polishing and ceramic pads. Furthermore, it is equipped as standard with a local dust exhaust of Ø76mm and an extra nozzle for better suction performance and a water hose connection with an easy adjustable ball valve flow control.

The mentioned new Slidemag system is featured on all Blastrac triple grinders with the new Diamag quick release system to replace or remove diamond tools from the adapter plates. The new system does not require any tools to insert or remove the grinding wings from the adapter plates. There is also a safety lock with an interlocking system and a magnet, making it easy to insert the tool into its seat so that the contractor is ready to grind.

**[www.blastrac.com](http://www.blastrac.com)**

#### **New smart chassis from BW Manufacturing**

Michigan based US manufacturer BW Manufacturing develops and produces equipment for shot blasting, scarifying, concrete floor grinding and dust collection. Its new D-1800-FT4 chassis provides the functionality of three machines in one durable and easy to use package which has been designed by industry professionals for industry professionals, to save time, labour, and money with its standard setting features. Interchangeable attachments allow for shot blasting, scarifying, and diamond grinding which can be swapped in minutes. On board air pulsation keeps filters clean, which keeps equipment and crews safe from silica dust. A one touch control and unobstructed operator seating allow for sightlines while blasting or grinding. Caster supported blasting heads allow for high manoeuvrability whilst a built in hydraulic dump bin ensures easy and safe disposal of silica dust. Variable speed allows for different surface textures, whilst its sturdy chassis can tackle roads, bridges, airports, warehouses and more.

**[www.bwmanufacturing.com](http://www.bwmanufacturing.com)**

#### **Magnetach tooling system from General Equipment Company**

Another US manufacturer, this time from Minnesota, General Equipment Company, has been operating since 1955, and is a family owned manufacturer of hole digging, surface preparation, dust collection, portable ventilation and air scrubbing equipment. It has introduced its 'M-Series' surface grinders, which feature a convenient new magnetic tooling system. Designed for use by both contractors and homeowners alike, these low speed surface grinders are compatible with a wide range of industry standard magnetic type attachments, including those in its Magnetach tooling system or attachments utilising the Lavina/Edco magnetic mount tooling.

The M-Series includes five different single and dual head grinders. These consist of the single head, electric driven SG12EM; the dual head, electric driven SG24EM; the dual head, electric driven SG24E3HP50M; the dual head, electric driven SG24E3HP60M and the dual head, gas powered SG24GHM (featuring a Honda GXV370 four stroke engine). They all provide the reliable performance and durability of General's long established line of 'Legacy Series' grinders, but use magnetic retention for quickly and easily switching attachments, instead of the traditional wedge system. Compatible attachments include: PCD coatings removal system, tungsten carbide coatings removal system and diamond segment diamond grinding system. These attachments make the grinders ideal for a wide variety of surface preparation projects

including grinding concrete (green to fully cured) and removing various thin film coatings, epoxies, thin to medium glues, mastics, urethanes, concrete levellers and paint.

**[www.generalequip.com](http://www.generalequip.com)**

#### **'The Orange Revolution' from Husqvarna**

Husqvarna Construction Products at the beginning of the year announced the rebranding of all its products for floor preparation, floor grinding and polishing. The former black colour of the HTC products was turned into yellow under the tagline - The Orange Revolution. By combining two existing eco systems, floor grinding customers now have a much wider choice of products, features and solutions all under one roof and one brand. "We are thrilled to introduce the most comprehensive product range on this growing market for surface preparation. With this powerful combination we open up a whole new world of options for our customers," said Stijn Verherstraeten, vice president Concrete Surfaces & Floors. To further build on the strong heritage of HTC, Husqvarna Construction has launched a series of product innovations. These include a new family of high performing polishing tools; a tool holder 'Multi' allowing the fit of both 'Redi Lock' and 'EZchange' tools; a new portfolio of edge grinding tools for hand held grinders; a new range of chemicals for the creation and maintenance of polished concrete floors and an enhanced process of the 'Superfloor' method to polish concrete floors.

**[www.husqvarnacp.com](http://www.husqvarnacp.com)**

#### **Klindex's new 'Expander 2000 RX/AT'**

It has been a while since the Italian manufacturer of floor grinding equipment, Klindex, was featured in the magazine, but now Klindex has released its new grinder Expander 2000 RX/AT. This is a radio controlled professional floor grinding machine with three planetary heads, working pressure control, integrated batteries for autonomous transport and an autopilot grinding system. The modern floor grinder saves time and labour for greater profitability. It is the largest floor grinder produced equipped with technology developed by the company throughout its long history. It contains







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[www.klindex.com](http://www.klindex.com)

### **Schwaborn ergonomics optimises the heavy grinding work**

German manufacturer Schwaborn has announced new standards in health protection with remote controlled machines and optimised dust reduction for machining floors, walls and ceilings. The mechanical process generates dust which is not only hazardous to health, but also means that it is harder to find workers for performing the activity. Furthermore, in order to maintain productivity, necessary renovation work in industrial halls must increasingly take place, with the company's 'Schwaborn System' now offering solutions for these activities.

High levels of dust concentration endanger the health of workers and result in increased cleaning efforts. This leads to unwanted and excessively long interruptions of operations and delays. The most obvious and best solution is to prevent the dust that inevitably arises from the work from escaping to the outside in the first place. "Basically, this was the last technological weak point of modern grinding technology. Because due to the increasingly differentiated grinding tools, such as diamonds or pads, which are tailored to specific substrate conditions, as well as the ever increasing surface performance of hi tech grinding machines," emphasises Schwaborn CEO Eckart Schwaborn who adds, "A high level of efficiency is now almost guaranteed with a perfect configuration of machine and tool."

This means that in recent years Schwaborn's R&D department has focused more and more on health protection and ergonomics. The result has been, firstly, the development of remote controlled grinding machines such as the Schwaborn DSM RC Series, which not only reduce workers' levels of exertion, but also their exposure to dust by keeping them away from the grinding process. The next step was to develop new industrial vacuum cleaners and dust extractors whose performance

and thoroughness (so the company states) can result in dust reduction of up to 99.999% via a three stage HEPA filter system. The industrial vacuum cleaners in the Schwaborn 'STS' range are all equipped with these high performance particle filters, and almost all models have 'H' certification to meet the highest standard.

"In the end, however, it was not the machine performance of the vacuum cleaners that was the problem here either, but primarily the connections between the



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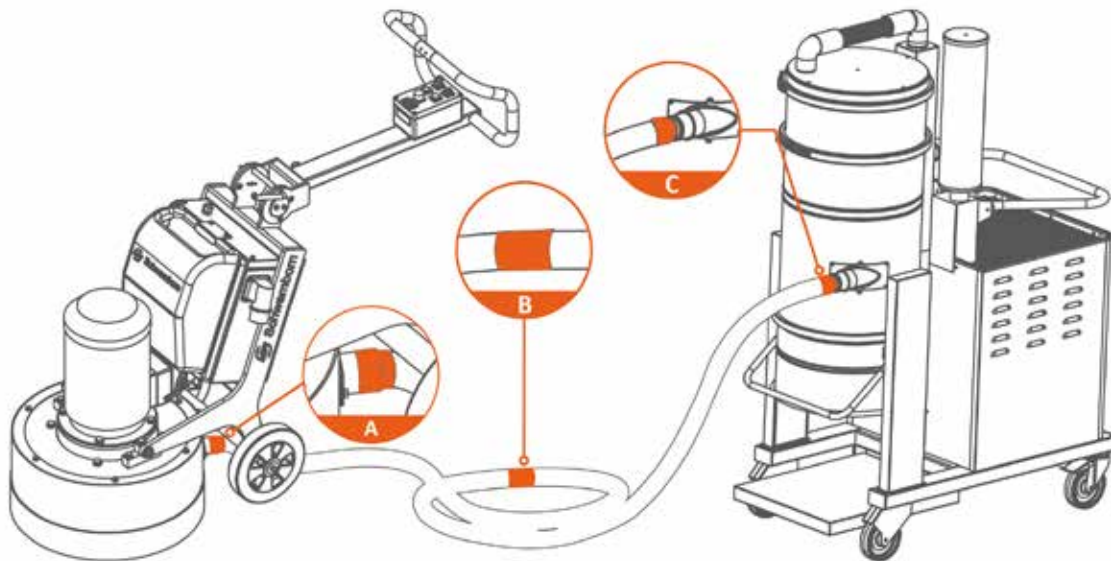
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machine, dust separator and vacuum cleaner, which rarely withstood the dynamic movement of the grinding machines,” explains Eckart Schwamborn. Therefore, as a final step towards optimising dust reduction, Schwamborn has developed a machine-hose adapter system that reflects the reality on the construction site and is easy to implement in practice. “Our new suction system is a considerable workload easement on the construction site. This increases the likelihood that it will actually be used in practice,” explains the CEO, of the Swabian mechanical engineering company, alluding to the often neglected handling of dust reduction on construction sites. This is not least due to the often impractical handling and the time required. The system consists of a very easy to use click system, anti-static hoses and a robust quick coupling system for hose extensions. In combination with remote controlled grinding machines and powerful industrial vacuum cleaners, the system has thus been created that enables the best possible dust reduction, even during heavy grinding work.

**[www.schwamborn.com](http://www.schwamborn.com)**

### **Superabrasive states that when it comes to grinding and polishing large industrial floors, productivity is a big deal**

Superabrasive, which has large production facilities both in Bulgaria and USA and a head office in Bulgaria, states that its ‘Lavina’ line has the widest range of electric and propane grinders. The company believes that the range is known for reliability, versatility, and ease of use. For large scale industrial projects, Superabrasive offers a fast and cost effective system for polishing with power trowels, called ‘Trowel Shine’, which is compatible with almost any trowel. In 2022, the company is adding two new ‘Lavina Elite Power Trowel’ models: the LP30E which is an electric trowel with 1,555mm work path that enables access through standard doors providing productivity in a small package. The second new release will be the LP36GE which is propane driven, powered by a ‘Kohler Command Pro EFI’ propane engine (PCV740) for more uptime, better fuel efficiency and performance. It has a 2,032mm work path with free spinning tool holders and updated steering. Both trowel machines also feature an integrated wheel set and a crank system for changing

tools, a heavy duty shroud, a transport wheel and other user friendly features.

**[www.superabrasive.com](http://www.superabrasive.com)**

### **Exciting development for Von Arx**

In June last year PDi Magazine wrote about the new owner of the manufacturer Von Arx. Fredrik Åkermark,



formerly part owner of Pullman Ermator, who has also worked for Husqvarna Construction Products, acquired all the shares in the company. But what has happened since then? PDi spoke to Åkermark a while ago and he said that since the buyout Von Arx has worked very hard and intensively on product development and investment in the company. “This has been our main emphasis. To begin with, we adapted and further developed existing products. The FR200 and VA30 models got improved dust collection and the FR200 had a significantly reduced vibration level,” commented Åkermark.

In addition, together with a subcontractor, Von Arx has developed slats or lamina with extremely high service life and productivity. These new and improved slats come as standard with all Von Arx machines.

Since two years back Von Arx has also been working on developing completely new products that will be launched in spring 2022. Åkermark has revealed that





the company will introduce a large groove cutter that can saw 2.5cm deep and 35cm wide. The machine will be called the DTF35 and will be sold in two versions: 15kW for 32amp connection and 22.5kW for 63amp connection. "It will carry 17 to 79 pieces of 230mm diamond blades depending on what you want to do with the floor. The machine will be outstanding in its class," says Åkermark.

Von Arx has also developed a groove cutter with a propane motor. The concept is based on its existing platform for the DTF25 groove cutter. A Honda GX690 engine converted to propane provides high performance and efficient production. Last but not least, Von Arx has developed a series of floor strippers, one manual machine and two with electric drive. The machines will be called SC23, SC25 and SC30. "The machines are like our cutters intended for professional users who use these machines daily and at the same time designed to be simple and attractive for the rental industry," says Åkermark. Von Arx also has four to five other secret projects underway, but due to long lead times on components, these will not be launched until next autumn at the earliest, hopefully at bauma 2022.

[www.vonarx.com](http://www.vonarx.com)

### Werkmaster's 'Raider XL5'

said to be like a concrete grinder on steroids Canadian manufacturer Werkmaster is releasing a new concrete floor grinder raider called the 'XL5'. Werkmaster's chief operating officer Ralph Newbegin quotes a testimonial from Mark and Dakota Hunt at Central US Coatings: "The Raider XL5 is like a concrete grinder on steroids". Raider XL5 has six counter rotating heads

which, according to Newbegin, gets the machine to places the competitors machines cannot. "This is an aggressive and powerful surface prep and polishing machine that is budget friendly," says Newbegin. The Raider XL5 is compact and easy enough to transport, but powerful enough for the commercial contractor. It edges to within 3mm of the wall, and can remove thinset, epoxy, glue, paint and mastic on concrete. It also works on spalled and rained out concrete. The engine runs on 220V, one or three phase or 110V with adapter. Raider XL5 has an adjustable, foldable handle for easy transport, and features WerkMaster 'Multi-Disc' technology with six counter rotating heads and the versatility of using Werkmaster's 152mm 'Ultra-Flex Plug N Go' tooling system.

Additionally, all WerkMaster machines come with a machine specific tooling guide helping to make the right

tooling decision based on the machine the contractor is using. The guide is presented in a sequential order for each process. It also features easy to follow info graphics. In this guide the user will find tooling for surface preparation (CSP 3), coatings, glues, mastics, thin set and epoxy removals, polished concrete, cementitious terrazzo, epoxy terrazzo, stone floors and polished toppings. "No matter who is using the machine, you will always be on the same page with the Raider XL5 machine specific tooling guide," concludes Newbegin.

[www.werkmaster.com](http://www.werkmaster.com)



## 'Blue Bull' goes crazy of the floor at Tour & Taxis

One of Blastrac's valuable customers recently acquired a BMG-2200 ride on floor grinder to grind and polish large surfaces. The first job took place in a large former industrial building in Brussels, Tour & Taxis. Originally a postal facility, Tour & Taxis underwent a massive renovation to transform the historical site into an attractive and inclusive multipurpose environment including accommodation, seminar venues, retail outlets and leisure facilities.

The customer required that the concrete floor of an old warehouse at the site be ground as part of the renovation. In order to do this, the Blue Bull, BMG-2200, was equipped with the brand new 'Slidemag' grinding wings from Diamag. The BMG-2200 is said to be the largest floor grinder on the market, being ideal for large grinding and polishing jobs. Thanks to its integrated dust collection system, there is also no need for external units to collect any dust.





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## Mecalac adds to rail offering

Mecalac has positioned itself as a major player in the field of railway works with the launch of its brand new range, the 'MRail-Series'. This consists of four models: two rail road excavators on tracks, the 106MRail and the 136MRail (from 10t to 13tons) and two on wheels, the 156MRail and the 216MRail (from 15t to 21t).

Mecalac's new range of rail road excavators, the MRail-Series, is the result of the company's work with rail partners for over many years leading to the acquisition of expertise in a highly specialised and very demanding segment. The company has established a new division dedicated to the rail business, from research and development to product and sales support. This gives the manufacturer the means to target and meet efficiently the specific needs of this market, while benefiting from a solid industrial organisation.

The 106MRail and 136MRail tracked excavators build on the 'MCR' concept where the fusion of a compact loader and an excavator brings the speed and productivity of a loader to the 360° rotation of an excavator. They are designed to be the ultimate utility machine for the majority of service and maintenance works. They are also ideal for tunnels or in tight areas. The 106MRail is the smallest machine in the series and features a two piece boom with offset as standard and is extremely compact. The 136MRail provides even higher performance to increase overall productivity on national rail networks. Equipped with extensive safety features, it can be fitted with a pneumatic system for rail trailers and rail car brakes.

The 156MRail and 216MRail wheeled excavators are based on the 'MWR' concept, providing solutions for all types of tracks and a high degree of freedom of movement. The 156MRail is designed for urban networks, subways and private tracks. It is a medium sized machine that meets the requirements for rail applications without the costly and complex systems linked to regulations. The 216MRail is designed for tough jobs with high levels of manoeuvrability, agility and compactness. It is compatible with the EN15746 regulation and has all the necessary safety features and the pneumatic system for trailers.

The new range of rail road excavators combines high performance and agility for freedom of movement in the highly constrained areas of the rail industry, with the patented boom design providing weight distribution for balance and force.

Full 360° direct visibility is a major safety benefit for both the operator and the people on site with all features making the MRail-Series ideal for rail use throughout the world. Mecalac will display these new models at the IAF international trade fair in Münster, Germany, from 31 May to 2 June 2022.



## Volvo launches world's first vehicle using fossil free steel

**Volvo Group is proud to reveal the world's first vehicle made of fossil free steel from SSAB made at Volvo Construction Equipment's facility in Braås, Sweden. Volvo has also announced that more vehicles will follow in 2022 in what will be a series of concept vehicles and components using fossil free steel.**

The newly developed load carrier for use in mining and quarrying was unveiled at a 'green steel' collaboration on 13 October in Gothenburg, hosted by Melker Jernberg, president of Volvo CE, and Martin Lundstedt, president and CEO Volvo Group. The event was broadcasted online with the attendees seeing the world's first machine made of fossil free steel. In addition, insights about other sustainable steel collaborations were shared. In attendance was the EU commissioner for internal market, Thierry Breton, the Swedish minister of enterprise and innovation, Ibrahim Baylan, as well as Martin Lindqvist, CEO SSAB.

Melker Jernberg says of the innovation: "Our ambition is to have fossil free steel used across all our products, with a step by step approach. This machine is proof that we really can make fast progress when we work together in strong partnerships, when we are determined to act, and we enable our skilled people to contribute to building the world we want to live in, not only for our generation, but for generations to come. Our team in Braås is understandably proud to help make this innovation happen."

"This initiative with SSAB sets the benchmark for a fossil free future. Just as the nations of the world come together at COP26 to address climate change, so too must organisations and industries work in collaboration

to develop innovative new solutions for a greenhouse gas emission free future. Volvo Group is committed to pioneering partnerships such as this with SSAB to develop attractive, safe and efficient new vehicles and machines that pave the way for a more sustainable transport and infrastructure system adopted for the future," added Martin Lundstedt.

Volvo has committed to be climate neutral and achieve net zero value chain greenhouse gas emissions by 2040. Along with the electrification of its offering, Volvo is determined to reduce the carbon footprint of its entire supply chain and this latest innovation is one step forward on this path. "Having the world's first actual vehicle made using SSAB's fossil free steel is a true milestone. Our collaboration with Volvo Group shows that green transition is possible and brings results," says Martin Lindqvist.

A move toward green steel is an important step for Volvo Group, as well as for the transport and infrastructure industries as a whole, particularly considering that around 70% of a truck's weight comes from steel and cast iron, with the figure for Volvo machines being even greater. This first concept machine, produced at Volvo CE's facility in Braås, is just the start, with smaller scale series production planned by 2022, and mass production set to follow.





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### WHAT IS STEEL BLASTING?

Blastrac steel blasting system is the most effective and environmentally friendly method of removing paint, coatings, non skid and other contaminants from both horizontal and vertical steel surfaces. Blastrac steel shot blasting systems use steel shot and angular steel grit, or a mixture of the two in a variety of sizes allowing the operator to achieve a wide range of anchor profiles needed for almost any type of coating application.



## HYDRODEMOLITION SPECIAL FEATURE

*There's been a lot happening in the world of hydrodemolition, with what was once considered to be a revolutionary demolition technique, now being commonplace throughout the world. Its benefits are being utilised by contractors and companies in a variety of fields including construction, civil engineering, tunneling, and of course, demolition. Here we take a look at some of the most recent developments and how they are benefitting the demolition industry.*



Conjet Connect is a cloud based solution for easy fleet management, including real time monitoring of operational data, diagnostics, and data history.

## CONJET ON THE MOVE

***As one of the most important manufacturers of hydrodemolition equipment in the world, Conjet is right now going through a dynamic period of development and expansion.***

Conjet earlier this year introduced 'Conjet Connect'. "Our goal is to be in the forefront of new technology and to always meet customer demands as well as to be compliant with industry standards and regulations. Conjet Connect complies with 'Industry 4.0', and we are proud to introduce this cloud based solution for easy fleet management including real time operating data, diagnostics, and data history. The solution also monitors the location of each machine for easy tracking and planning," says Robert Kreicberg, CEO Conjet. The term Industry 4.0 (the fourth industrial revolution) was first used at an exhibition in Germany in 2010 with its cornerstones being interconnection, technical assistance and decentralised decisions.

### How Conjet Connect works

By utilising the tools for analysing collected data, owners and fleet managers are provided with the means to further improve the utilisation of proper resources. The data is accessed through a normal mobile or station-

ary device such as a mobile phone, tablet or a PC. It supports Windows, Linux and Mac. Conjet Connect combines the user friendly 'GUI', incorporated in all machines in the company's 7-series, with key sensors in the under laying design of the machines to communicate with the internet where variables are stored for instant (or later) retrieval. Data variables include operating and auto-hours, active alarm, serial number, fuel level, system pressures, operating status and so forth, in real



The new Conjet head office in Dalarö, just south of Stockholm.



Conjet's North American Team: Stephen Sistrunk, Rick Larsson, Andy Antle and Tim Best.

## Conjet opens North American HQ

Conjet AB, the manufacturer of 'Automated Concrete Removal' (ACRTM) robots, has opened its North American headquarters in Charlotte, North Carolina. The headquarters consists of offices, indoor/outdoor training areas and a large warehouse, and are aimed at helping Conjet achieve its primary goals of helping customers to be successful on every project, and growing the overall market demand for hydrodemolition services.

Specifically, the headquarters will provide a large inventory of 7-Series spare parts, available for overnight delivery and training facilities to help customers' personnel improve their skills. The demonstration facilities are designed to help educate asset owners, engineers and other specifiers on the techniques and benefits of hydrodemolition, whilst the service area is for equipment maintenance and repair. The corporate offices will house Conjet's sales, aftersales support and the back office team in North America.

The headquarters are located at the CLT Logistics Park, which is less than ten minutes from Charlotte International Airport. Stephen Sistrunk, the North American CEO of Conjet Inc., stated, "The Charlotte location was chosen based on a number of factors, one of the most important being ease of access for our customers. Since our headquarters is located less than 10 minutes from the CLT airport, ranked #4 nationally in direct domestic flights, most of our customers and other industry stakeholders can fly into Charlotte in the morning for demos and training, enjoy a full day of education, and easily be back home in time to sleep in their own bed that evening. We are extremely excited to be able to offer this level of accessibility to the market."

Daily operations at the Charlotte headquarters will be handled by Andy Antle, who recently joined Conjet as operations manager. Prior to joining Conjet, Andy graduated before working for Amazon at the Charlotte distribution facility. At the new Conjet headquarters, Andy will oversee order administration, inventory and logistics. Stephen Sistrunk commented, "Opening the Charlotte headquarters is a huge step forward for Conjet as we execute on our goals of providing the highest possible level of support to customers and growing the overall market demand for hydrodemolition services."

"Team Conjet is very happy to finally have a central base of operations in North America where we can meet with our customers face to face, provide educational opportunities and further enhance our level of support. In the near future, we will be hosting an open house where we will bring together industry participants, perform equipment demonstrations and offer training on ACRTM techniques and benefits. Stay tuned for more details on our next open house. Until then, please feel free to drop by and visit us in Charlotte any time!"



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A photograph of a red NPK excavator bucket in the process of demolishing a concrete structure. The bucket is shown in a dynamic pose, with dust and debris flying around it. The background shows a construction site with trees and other structures.

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## Mariusz Stabryla appointed Conjet production manager

Conjet AB is excited to announce that Mariusz Stabryla has joined the team as its production manager, responsible for managing and strengthening assembly and warehouse at the company's Swedish facilities. Mariusz has extensive experience as a manager, latterly being employed as the production manager of Scanreco AB, where he managed a team of 30. Mariusz has been a key player in Scanreco's transformation from a small company to an industrial organisation with a global presence, thus bringing valuable knowledge and experience to Conjet. Mariusz also has experience of working with production technology, purchasing and planning.

Ola Wagner, Conjet CEO, stated, "We are extremely happy to welcome Mariusz to 'Team Conjet'. We are in a critical phase in our focus on operational excellence and Mariusz's experience and skills are critical in helping us to develop our operations processes and continue improving the service to our customers. Warm welcome aboard Mariusz!"



## Conjet has recently entered into a global sales agreement with Reprotex GmbH.

time, for instant monitoring and diagnostics of the running system.

### Sales agreement with Austrian Reprotex

Conjet has also recently entered into a global sales agreement with Reprotex GmbH. Reprotex, headquartered in Austria, develops and manufactures mobile wastewater treatment plants. Reprotex's plants are used around the world for containing, treating and recycling wastewater that is produced in all types of high pressure (HP) water applications, including hydrodemolition, tank cleaning, ship repair and de-coating, pavement demarcation and many other industrial cleaning operations. With this innovative system, the wastewater can also be recycled and reused, further decreasing environmental impact and operating costs for contractors. "The partnership of our two companies merges two innovative technologies into a new and unrivalled application: hydrodemolition

in a closed water circuit. Safe, cost efficient and sustainable. And perfect match for our clients as well as the environment," says Robert Kreicberg.

### New headquarters and distributors

Conjet AB has now relocated its head office from Haninge, where the company has been present since the early '90s, to new office and production facilities in Albybergströgen 118, Dalarö, Sweden. The relocation is a result of Conjet's growth over the past few years due to the increased interest in the company's products and solutions, which also seen the workforce increase to 30 people in Sweden. "The relocation of our operation is the culmination of an exciting year for us in 2021," explains Robert Kreicberg. Further, Conjet has recently started up a new North American headquarters and also several new distribution partners in Europe, Asia and South America.



Robert Kreicberg, CEO of Conjet AB.

# Conjet's European Demo tour

In order to show the advantages of using hydrodemolition technology, in September 2021 Conjet went on a European demonstration tour. "We want to show our clients what our amazing robots can do," said Conjet service manager Conny Tångring. "For over 35 years, we have led the development of robotic hydrodemolition technology – a technology with a proven track record as the most sustainable and effective method for concrete removal and other types of surface preparation," said Conjet CEO Robert Kreicberg.

Hydrodemolition technology uses the tensile strength of the water that, in combination with high pressure, penetrates the concrete, creating an overpressure that 'blasts' the concrete away. Conjet has incorporated its technology and long experience into state of the art robots which enables the contractor to do the work of multiple jackhammer operators, reducing cost and increasing productivity and safety. Some of the other advantages using hydrodemolition include providing an optimal bond as it does not create micro cracks in the remaining structure which ensures that any repair will be long lasting and high quality. It further extends the useful life of the structure, whilst eliminating vibrations and dust as well as dramatically reducing noise.



Hydrodemolition is also precise enabling the selective removal of damaged concrete only, or non-selective removal to a predetermined depth.

The demonstration tour started in September and ended in October with three of Conjet's distributors in the Netherlands, France and Portugal being visited. "Hydrodemolition is still a pretty unknown technique that we want to show to the world. Everyone can see

that a robot looks good on paper, but customers need to see it in real life to fully understand the greatness. We are certain that if potential users can see the benefits of our automated concrete removal robots with their own eyes they will never choose anything else for concrete removal, surface preparation and paint removal," said Conjet sales director for Europe, Middle East and Africa Michel Duras.



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Hydrodemolition is an impact free concrete removal method that is up to x25 faster than jackhammers and other handheld equipment.

## AQUAJET ADVISES ON USING HYDRODEMOLITION

# TO FIX COMMON CONCRETE ERRORS

***Concrete errors can wreak havoc on timetables and budgets. Thankfully, advances in robotic removal methods are making it so an improper pour doesn't necessarily mean starting over. Here Keith Armishaw, business development manager for Aquajet North America, explains how to use hydrodemolition to fix five common concrete errors.***

**P**ouring concrete is a complex process. One slight miscalculation on any of the numerous variables can spoil a whole batch. While concrete errors can certainly cause problems for timetables and budgets, advances in robotic concrete removal methods are making them easier to fix without demolishing and starting over. For large, multi-phase construction projects, hydrodemolition offers a fast, cost effective solution that can minimise the overall impact of concrete errors. There are five common concrete errors hydrodemolition can help solve:

### Formwork failure

Whether it's a minor shift or a full on blowout, formwork failures can spell disaster in terms of lost productivity, since correcting it often relies on handheld equipment. There are several downsides to this approach. First, it's slow, backbreaking work that takes a huge physical toll on crew members. Additionally, heavy vibrations damage rebar and leave micro cracks throughout the remaining concrete, which leaves contractors with no choice but to demolish most, if not all, of the structure.

Hydrodemolition is an impact free concrete removal method using high pressure water jets to blast away layers of concrete, cleaning and descaling rebar in the process. This method also eliminates the risk of micro fractures, creating a structurally sound foundation for

any necessary concrete repairs. This high tech, robotic solution also minimises labour requirements to keep the job on schedule. For one contractor dealing with a formwork shift on a small overpass project, hydrodemolition provided an ideal solution. While part of the pour met specifications, the contractor needed to remove part of the deck and abutment to a depth of 0.9m and repour to correct the shift. Using hydrodemolition, the contractor was able to complete removal with minimal impact on the structure.

### Concrete segregation and other batch problems

Another contractor relied on hydrodemolition's selective removal capabilities to help solve a difficult concrete segregation problem. When water infiltrated the forms and washed out the cement paste, leaving just the aggregate behind, the contractor was able to set parameters for the hydrodemolition robot that removed just the segregated material. The sound concrete was left intact and ready for repair. Due to the lack of finesse found with breakers, as well as possible damage, breakers do not differentiate between segregated and sound concrete. In cases of obvious segregation, this might not be as much of a concern. But when removing poor quality concrete in close proximity to good concrete, it might result in contractors removing too much or too little material.

Hydrodemolition robots also allow contractors to

adjust the robot's stroke to control the depth of cuts and vary the pressure of the water jet depending on whether they are removing loose, deteriorated concrete or lowering the sound concrete to a pre-determined depth. This enables accuracy in concrete segregation and bleeding situations. Once parameters are set, the robot manoeuvres over the designated area removing material according to set values. In some situations, this might include taking out everything to a specific depth. In others, it might involve demolishing only weak or deteriorated concrete by adjusting the hydrodemolition robot's settings, such as stroke or flow.

Additionally, the hydrodemolition robot's selective removal capabilities can provide a cost effective solution for other concrete mix problems. For example, during a recent bridge construction, delivery of a bad batch of concrete threatened to derail the entire project. The concrete was already setting as crews poured. Vibrating and other correctional methods were unsuccessful, and the concrete fell 350mm short, leaving a mesh of exposed rebar. The contractor used hydrodemolition to selectively remove the poor quality concrete without damaging rebar or the overall stability of the structure.

### Off-spec imbedded materials

Sometimes the concrete error isn't a result of the concrete mixture itself. In situations where off-spec materials

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For large, multi-phase construction projects, hydrodemolition offers a fast, cost effective solution.



Independent pull off tests have shown that the bonding strength of hydrodemolition is much higher than what is often achieved with a jackhammer or mechanical method.



Hydrodemolition robots can be programmed to cut shapes, allowing contractors to remove just enough material to reach the imbedded items just below the surface.



Hydrodemolition allows contractors to quickly go in and remove only the weak material without jeopardising the overall structural integrity of remaining concrete or damaging rebar.

such as rebar or anchors need to be removed from set concrete, hydrodemolition provides the power and precision necessary for fast, efficient removal. In addition to setting parameters for stroke and pressure, hydrodemolition robots can be programmed to cut geometric shapes, such as circles, triangles, squares or parallelograms. This allows contractors to remove just enough material to reach the imbedded item. One contractor discovered it needed to replace bolts on anchors imbedded 1m into the concrete. To reach that depth with a jackhammer would require a large hole, not to mention the resulting micro fractures and damage to rebar and anchor. The hydrodemolition robot enabled the cutting of circular holes just big enough to free the anchors. The contractor was able to correct 12 to 15 anchors in 12h using a hydrodemolition robot.

### Concrete repairs to existing structures

Hydrodemolition also provides an efficient solution for fixing concrete errors in existing structures. One contractor tasked with removing an over 2m thick concrete pier on an active construction site for a hydropower plant was able to remove 140m<sup>3</sup> in just 53 days, averaging 4m<sup>3</sup> in a 12h shift. Once the demolition was complete, the repoured concrete benefited from the superior bonding surface created by the hydrodemolition process. The main reason for this is the absence of micro fractures thanks to the impact free process. Hydrodemolition also provides a cleaner surface, which eliminates the need for additional steps, such as sandblasting after using a jackhammer. The hydrodemolition process also leaves behind a rough, irregular surface. These combined features create the perfect profile for superior bonding strength, resulting in repairs that can last up to three times longer.

Hydrodemolition is recognised as one of few methods capable of achieving Concrete Surface Profiles 3 through 10, making it a versatile option for surface



Using Hydrodemolition's selective removal capabilities, contractors can remove only the poor quality material, leaving the sound concrete intact and ready for repair.

preparation applications. For example, a contractor could tackle a concrete water tank where old coatings need to be removed and the surface roughened to apply new paint or epoxy. This might require a CSP 3. On a subsequent project, where a bridge pillar needs reinforcement, the same contractor might be asked to provide a CSP 8 for the application of new concrete. This wouldn't be a challenge with a hydrodemolition robot.

### Compressive strength failure

Hydrodemolition is often the ideal solution for concrete fixes that require productivity and precision, such as when facing compressive strength failure. Once a failure has been identified, hydrodemolition allows contractors to quickly remove only the weak material without jeopardising the overall structural integrity of remaining concrete or damaging rebar. When removal is complete, a superior bonding surface that will provide a lasting correction is left. Additionally, hydrodemolition robots are highly manoeuvrable, allowing contractors to tackle compressive strength failures wherever they occur. Some manufacturers also offer additional equipment that extends the robot's reach or allows for specialised removal applications such as around columns, inside tunnels or under water. Lightweight, highly adaptable models are also available for confined space applications.

Concrete errors can happen to anyone. Being ready with a fast, cost effective solution allows forward thinking contractors to maintain productivity in the face of unexpected delays.

### About the author

Keith Armishaw is the business development manager for Aquajer's North American subsidiary. He has more than 25 years of industry and leadership experience.

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## **NEW ESD 162 DESIGNED FOR DRY DRILLING OF THE HARDEST MATERIALS**

Since 1919, the Saxon power tool manufacturer Eibenstock has been producing innovative and high quality products for tough construction site use, with more than 90% of all components produced in-house. All power tools incorporate the experience and knowledge gained from decades of development and design work, always keeping in mind the practical relevance to the construction site and the user. Professionals are said to appreciate the quality and durability of the products in daily use, with the well thought out solutions making work easier and also delivering time and cost savings. Using diamond core drilling technology, mixing technology and countless machines for the renovation sector, the company offers solutions for a wide range of users.

With its new ESD 162, Eibenstock is launching a new powerful soft impact core drilling machine for dry drilling up to a diameter of 202mm (optimum 162mm) in particularly hard materials, such as reinforced concrete or highly compacted sand-lime brick. The specially developed 'IHT' gearbox is extremely sturdy due to its innovative 'Impact Hybrid Technology' (IHT). High precision toothed rim geometry enables

optimised impact pulse delivery to the drill bit and thus faster drilling progress. The soft impact can be conveniently switched 'on and off' via a rotary knob.

Moreover, the machine is equipped with the intelligent digital 'EDMC Pro' motor control, which protects the machine from overload and informs in time before the carbon brush wears out. The dust extraction system is integrated in the spindle and protects the user from hazardous mineral dusts. The user achieves best results using the system with the matching BST 162 H soft impact drill rig and the specially developed IHT soft impact drill bits.

The ESD 162 is particularly a problem solver for drilling hard materials in water sensitive areas in existing construction, where wet drilling leads to consequential damage. The drilling range makes the machine suitable for making wall and ceiling openings in sanitary, heating and ventilation construction. The machine will be available in early 2021. Furthermore in spring 2022, a larger dry core drilling motor is also to be added to the product family of soft impact machines.





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# renovation

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***With decades of experience in new construction and commercial renovation, general contractor and construction manager Arguson Projects Inc. understood the logistical challenges posed by a multi-year, multimillion euro parking garage renovation project in Toronto's East End.***

The 39 year old structure needed to remain open while crews removed 18,581m<sup>2</sup> of material from the second and third levels. Building tenants required parking to remain open, as well as continued access to the roof deck, which provided amenities for employees. Seizing an opportunity to reduce not only the project's carbon footprint, but also the overall cost, Arguson, in conjunction with the property owner, turned to Conterra Restoration and a suite of Aquajet hydrodemolition equipment for an eco-friendly solution.

## Parking problems

The suspended slabs within the parkade were heavily contaminated with chloride ions, or road salt, resulting in significant corrosion related deterioration and cracking. The concrete needed significant repair/replacement to address structural integrity concerns and overall aesthetics of the suspended slabs. Working with RJC Engineers, a Canadian based engineering firm specialising in parking facility design and restoration, Arguson determined hydrodemolition was the only concrete removal option that fitted the unique needs of the project.

"The main concerns for this project were noise and vibration generated by construction activity, as well as the vast amount of concrete that needed to be removed to properly rehabilitate the suspended parking slabs," said Philip Sarvinis, P.Eng., managing principal with RJC Engineers. "Hydrodemolition allowed the contractor to work through the day without disrupting building tenants or the neighbouring properties, while at the same time removing large amounts of concrete. The process

works extremely well with the added bonus that it doesn't physically damage the remaining concrete left in place compared to traditional jackhammering operations."

Arguson brought in Conterra Restoration, a contractor with extensive hydrodemolition experience. Conterra sourced an Aquajet 'Aqua Cutter' 710V from Cor-Blast Services Inc. which could provide more productivity than a large crew using conventional equipment. The 2,350kg robot uses a water jet which removes concrete by widening existing pores and micro

cracks in the weakened structure. Since the process is impact free, there are no vibrations, and therefore less risk of micro fractures. The plan also featured a quiet Aquajet 700 'Ecosilence' high pressure pump. "With the Ecosilence, the pump and diesel engine are inside a container with this machine, which dampens the sound enough you could run it under a window downtown and still be quieter than normal traffic," said David Porciello, general manager for Conterra. Additionally, the Ecosilence allowed Conterra to work throughout the year, even when temperatures hit -20C. The contractor also included an 'EcoClear' water treatment system as part of their tender for on-site water treatment in real time. After passing through the EcoClear, wastewater can be released into the sanitary sewer system.

"Environmental stewardship has always been an important part of the conversation for us," Porciello said. "With the Aquajet equipment we saw an opportunity to not only provide fast, high quality results, we could also drastically reduce our impact on the environment. From eliminating the gas and exhaust of vac trucks to minimising crews and the associated emissions getting them to and from the worksite, we were able to present not only an economic solution, but an eco-friendly one as well." In addition to hydrodemolition, Conterra bid for subsequent phases of the project including pouring new concrete, applying a waterproofing system and painting lines.

## Record removal

The project was broken into two phases over two years, commencing in December 2019. Conterra set up a staging area outside the parkade for the Ecosilence

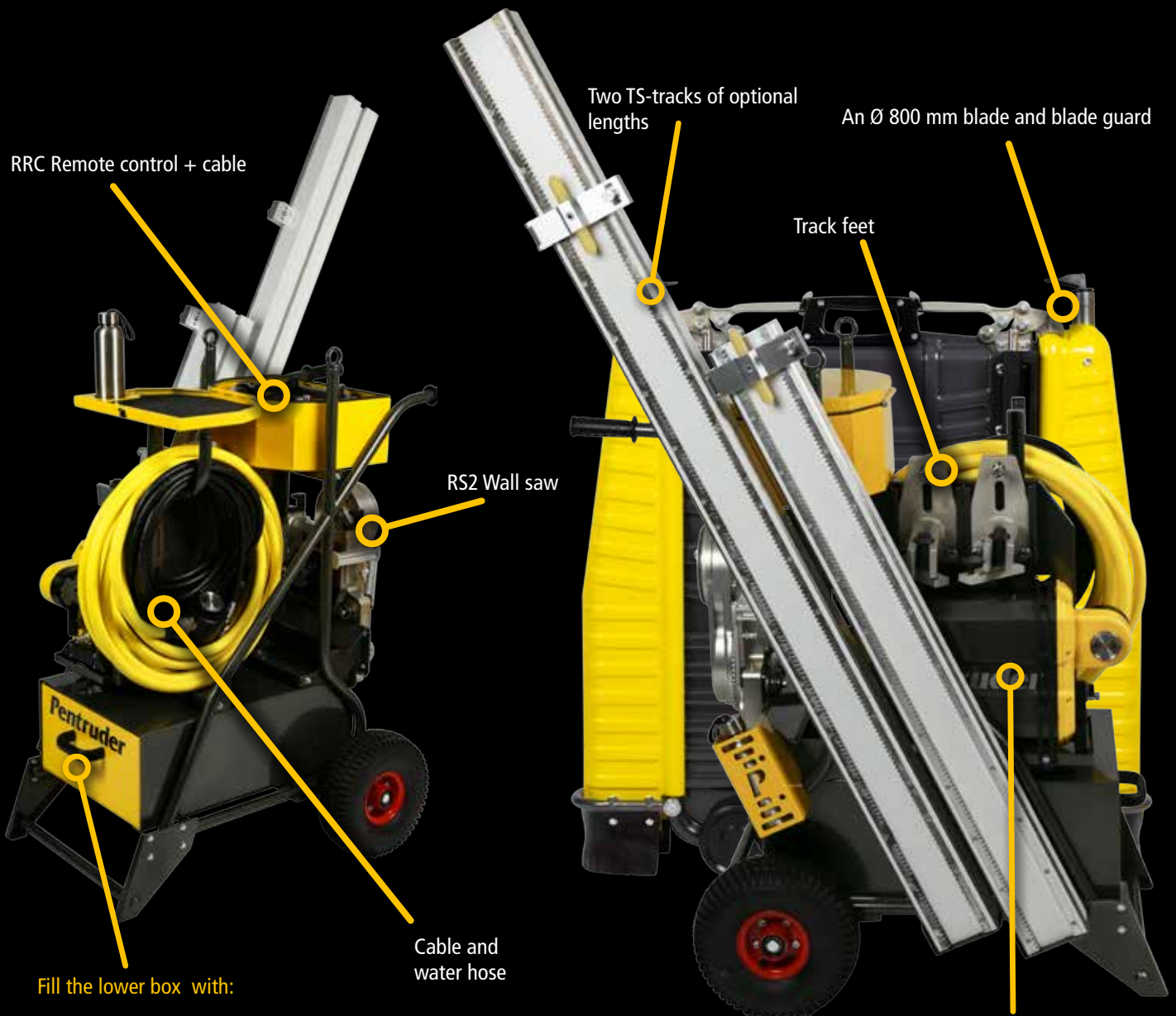


The robot's high pressure water jet removes concrete by widening existing pores and micro cracks in the weakened structure.



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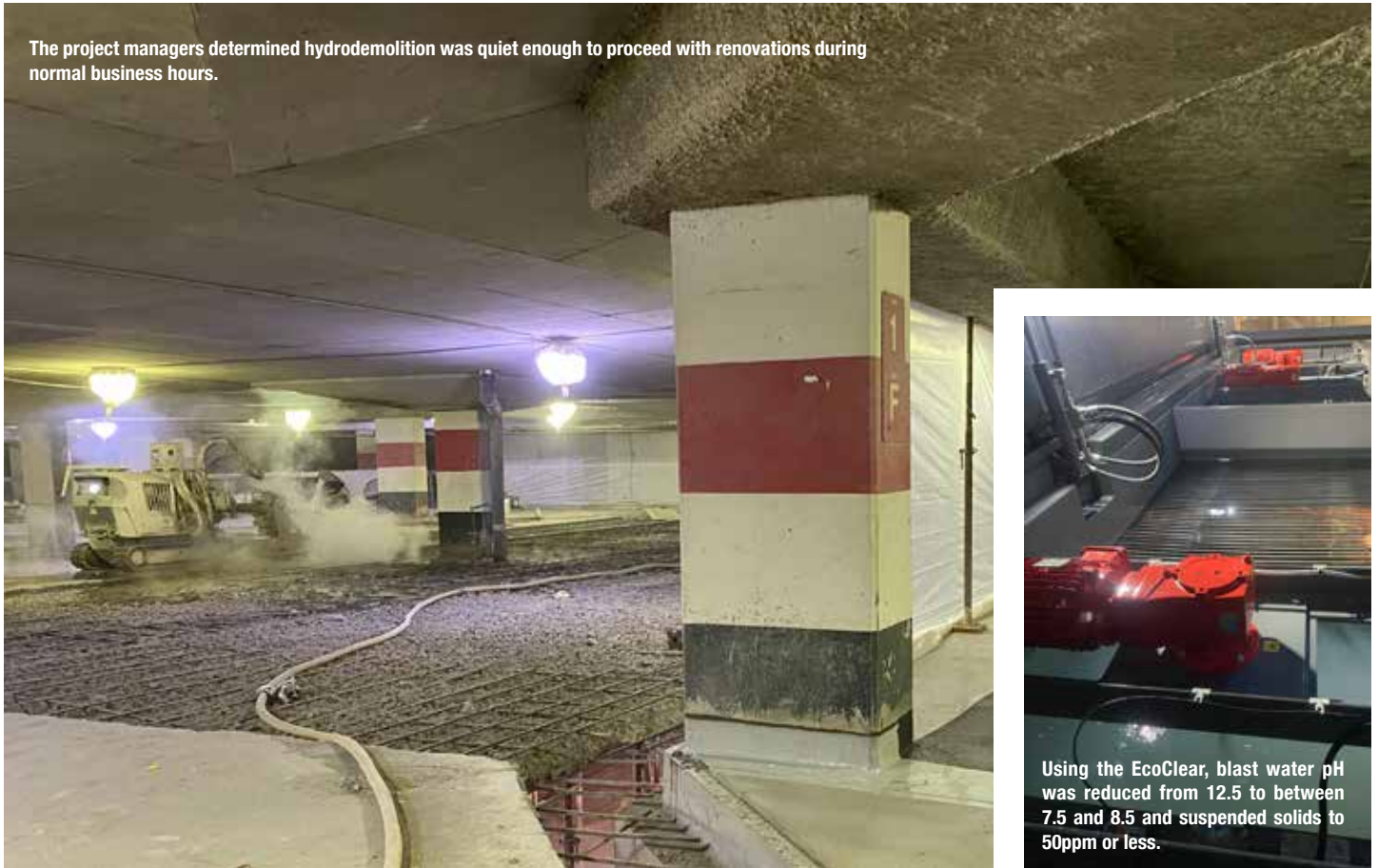
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## CONCRETE CUTTING SYSTEMS

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The project managers determined hydrodemolition was quiet enough to proceed with renovations during normal business hours.



Using the EcoClear, blast water pH was reduced from 12.5 to between 7.5 and 8.5 and suspended solids to 50ppm or less.

and EcoClear with Arguson and Conterra having a dedicated crew of workers and subcontractors on-site with a small contingent running the Aqua Cutter and support equipment. The hydrodemolition removal process is monitored by one operator/technician with some assistance monitoring the EcoClear. Additionally, a team follows up behind the robot to remove the demolished concrete. Other crews are employed removing through slabs, forming and other tasks throughout the site. For the most part, the robot removes concrete to a depth of 100mm to 130mm.

"The Aqua Cutter finds what most engineers can't every millimetre of bad concrete," Porciello said. "The robot can be programmed to remove a certain depth; however, the removal could be deeper in certain areas if the strength of existing concrete is not adequate. This assures that all deteriorated concrete is removed and a sound substrate remains for superior bonding of the new

concrete overlay. This gives us a clean slate of good concrete for stronger, longer lasting repairs." During an 8h shift, Conterra sees removal rates of 55.7m<sup>2</sup> to 92.9m<sup>2</sup>.

#### Working with water

Water is routed through existing drains and a system of clear stone filtration to a catch pit near the staging site. From there, it is pumped through the EcoClear which can process as much as 20m<sup>3</sup>/h on its way to the sewer. "The EcoClear system gave us a distinct advantage for this project," Porciello said. "We're the only group in Ontario with equipment that can provide documented, quantifiable results on-site and on demand. With these amounts of water, we didn't even consider alternative treatment methods. The carbon cost was just too great." With the EcoClear, Conterra can reduce blast water pH from 12.5 to between 7.5 and 8.5. The system uses carbon dioxide rather than mineral acid to reduce pH.

This eliminates the risk of acidifying the water and requires less in the way of oversight, training and PPE. The EcoClear also reduces suspended solids to 50ppm or less. "We've gotten as low as 15 ppm," said Porciello.

"Hydrodemolition put us on the cutting edge of industry trends," Porciello said. "With hydrodemolition robots, we've been able to adapt quickly. This speaks to how manufacturers like Aquajet listen to their customers and plan for the future of construction. From eco-friendly solutions to eliminating silica dust to reducing health risks like white fingers and hearing loss, smart equipment developments keep us ahead of the curve."

## Case short reach excavator delivers sustainable recycling solution

Case dealer Robert Coates Plant Sales Ltd recently sold a CX245DSR excavator fitted with a 'Powerhand' VRS 200 recycling system to Moores Metals which has been providing scrap metal recycling services since 1911. Robert Coates' sales manager Richard Parry explains: "They needed a zero tail swing excavator able to operate on a congested site with an attachment nimble enough to

extract wiring looms and starter motors." Moores Metal's Andrew Burkinshaw adds: "In the changing landscape of vehicle dismantling, our new Case CX245DSR excavator allows us to segregate different metals for resale. Overall, the solution is more sustainable because separating out metals and plastics means that the materials that remain at the end of the process will be cleaner."





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# THE SAWING TEAM IS WORKING

***To a concrete cutter, a floor saw is the same as a 'piece' to an army officer. Just like a trained military man who can disassemble and reassemble his gun with his eyes shut, a professional concrete cutter knows by heart all the ins and outs of a floor sawing job. PDi's Andrei Bushmarin presents the latest innovations in the floor cutting industry.***

## **'Compact and classy' 'Multicut' 400 from Lissmac**

Thanks to the 'scissor principle' of its frame, the Multicut 400 from Germany based manufacturer Lissmac, is a compact and easily manoeuvrable walk behind floor saw. Powered either by a 25HP Perkins Stage V diesel engine or a 35HP Kohler Stage V petrol engine, the Multicut 400 is built for the most demanding floor and pavement sawing tasks. For deep cutting applications, this model can be optionally fitted with a 1,000mm blade to reach a depth of up to 415mm. A

high performance V belt ensures efficient and reliable power transmission. A robust finely dosed hydrostat takes care of the drive. The Multicut 400 is built on a torsionally rigid frame, which combines compact design with enhanced stability. The height adjustable handles contribute to the overall ergonomics, while a low centre of gravity and adjustable rear axle guarantee a precise straight cut. The Multicut 400 comes with a number of features that help streamline day to day operations. The saw blade is lowered and lifted by an electro-hydraulic system with cutting depth display.

For overcuts, the blade guard can be folded up at the front. The changeover from left to right hand operation is rapid, and the central maintenance points are readily accessible. The position of the drive unit provides easy access to the battery, air, oil and fuel filters. A parking brake and a free wheel are provided as standard. Various blade guards from 500mm upwards, a 2,800/min rotational speed conversion set, a hazard warning lamp and a water pump set with water filter are optionally available for this model.

**[www.lissmac.com](http://www.lissmac.com)**



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#### Niagara Machine features 'Diamapro' floor saw and crack chaser

The Diamapro 10" walk behind joint cutter from the US based supplier of sawing and surface preparation solutions, Niagara Machine Inc., is a powerful and mobile unit designed for cutting new and cleaning out existing control joints. Thanks to its powerful electric power head and an

integrated 50mm dust port, the floor saw generates zero emissions. When used together with Diamapro 'SVX' dust extractors, the unit produces virtually no dust. The machine's robust steel frame makes it suitable for both indoor and outdoor environments. Other highlights include excellent dust control, ease of operation, durable powder coated finishes, quick depth adjustment and an integrated blade wrench holder. Also new from Niagara Machine Inc. is the Diamapro 'crack chaser'. The machine increases productivity by getting the operator off their hands and knees which boosts safety and alleviates fatigue. The swivelling rear casters permit the blade to follow the tightest cracks. A large 50mm dust port allows for dustless operation. A thick steel frame helps hold the tool to the ground keeping the blades secure.

[www.niagamachine.com](http://www.niagamachine.com)

#### Kern-Deudiam: a family you'd be glad to meet

With over 40 years of experience in machine and diamond tool manufacturing, Germany based Kern-Deudiam exports its cutting and drilling solutions to

more than 30 countries on four continents. It goes without saying that floor saws are an integral part of Kern-Deudiam's range. As a family owned company, the manufacturer prefers to think of its innovations as members of its extended family. And just like in every family, each member has its own individual features. The differences begin with the power rate - 7.5kW, 8.7kW, 11kW or 15kW - and continue with overall dimensions and maximum cutting depth and end with the type of engine used, whether petrol or electric. The decision regarding what kind of floor saw should be used in each individual case depends solely on the task at hand. If one has many miles on a highway to cut, it makes little sense to carry a cable around all the time. However, if one needs a robust and compact machine for indoor applications, the decision is often made in favour of an electric driven model.

[www.kern-deudiam.de](http://www.kern-deudiam.de)





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## ENVIRONMENTAL AND CIRCULAR FOCUS

# at Ecomondo 2021

***Rimini, a city often associated with tourism, is this time of the year the arena for the exhibition Ecomondo. PDi Magazine reports on what's new in the circular economy and renewable energies within the demolition industry.***

**E**comondo and Key Energy took place at the Rimini Expo Center. It saw more than 1,000 different brands exhibiting, 500h of conferences and seminars and an almost 85% attendance compared to the last pre-Covid exhibition. It was a unique exhibition experience indeed, since all the visitors had their temperatures checked, and had to present Covid-19 certificates before entering the exhibition halls.

### Mantovanibenne exhibits SD20 shear dismantler

One exhibitor was Italian manufacturer Mantovanibenne, which highlighted its SD20 shear dismantler. The model features an optional blade kit for wiring, continuous hydraulic rotation, sharp jaws for extraction, long and straight cutting edges as well as interchangeable and reusable blades for in-height demolition and vehicle dismantling. According to Mantovanibenne, its narrow jaw design ensures precision in selecting parts picked and moved while the cylinder grants high cutting power. Optional tools include standard blade, wire cutting blade and wire pads. It is designed for excavators of 18t to 26t, has a tool weight (including Mantovanibenne top bracket) of 1,760kg, an opening of 795mm and height of 2,100mm. "We've had more and more requests for this model in Europe," said Paolo Mantovani, vice president of Mantovanibenne. "The recycling industry is becoming more active. With this machine, you can

separate parts from cars, trucks and buses, as well as strip plastics, engines and chassis."

[www.mantovanibenne.com](http://www.mantovanibenne.com)

### WLP's cannon

#### 'Demolitor 70' with integrated pump system

WLP's Demolitor 70 is a nebulisation and environmental sanitation cannon which features a maximum

throw distance of 60m, an installed power of 13.5kW, -20° +45° pitching and 340° rotation. It can be used on and off road, whilst the 'gun' can be rotated with a lever. One of the main characteristics is the submersible pump, which is integrated into the chassis. "Other competitors usually place the pump on the side, for example. The model has a very clear design without items on the outside. It is also very well protected," explained WLP's owner Mario Passeri. WLP also exhibited its dust suppression cannon WLP700 (with a throw distance of 60m to 70m), as well as the sanitation machine 'Sanitank 70', which draws on the company's expertise in the management of high pressure water and D50BP NCA which uses the Demolitor cannon as a base frame. As to the pandemic, Mario Passeri said: "For WLP, the pandemic has not been a problem because we have transformed a machine for the use of sanitation. During Covid we have been able to provide good service worldwide, for example in the Far East and Asia. 2021 has been a really, really good year for WLP. We have grown as a company and actually have more business than pre-Covid. WLP are present in South America, the United States, and we're back in Germany. In general, we're growing really strong."

[www.wlpdust.com](http://www.wlpdust.com)



### New pedestal boom from Brokk

The Brokk 'Pedestal Boom' had pride of place at company's stand, being a compact, stationary breaker boom system for the aggregates and mining industry.



The machine allows operators to apply the power of Brokk's demolition robots to primary breaking tasks that feed mobile crushers, jaw crushers, gyratory crushers and grizzlies. It features a three part arm system with a 360° slewing. The unit can be operated by either the tethered remote or from a control room. "The biggest advantage is that it can be totally remote controlled and that you can be 1km away with cameras," said Carlo Montorfano, sales manager at Brokk Italia. "Camera connection, software, everything. It's all in one package." Also shown was the Darda MC300 metal shear, the big brother of MC200. It has a 60t cutting force and is suited for building core removal. It has a 35cm jaw opening and is suitable for 2.5t to 9t carriers, and is designed for both recycling and demolition. Despite the limitations brought on by the corona pandemic, Brokk has stated that business has been good.

[www.brokk.com](http://www.brokk.com)

#### Industrial shredder 'Shark400D Eco' from Tana

Tana's industrial shredder Shark440D Eco is designed for shredding a wide range of materials from 50mm to 500mm. The range is equipped with the 'Tana Control System' (TCS), for controlling the operation and optimising production, with TCS monitoring and controlling all machine functions via 12 pre-programmed routines for different types of materials and shredding purposes. In addition, extra customer specified routines can be added. Tana's 'ProTrack' remote management system further provides information about production capacity, whilst the reporting system enables the operator to calculate production efficiency and evaluate different operators during a certain time period.

[www.tana.fi](http://www.tana.fi)

#### VSE-30 with 'FIT' feature from Simex

Simex exhibited the VSE-30 screening bucket with an innovation that Simex wanted to highlight during the exhibition. VSE-30 features FIT, a screening tool configuration system where each element is composed of five independent parts designed to interlock with each other with no welding, all being easily replaceable. With FIT, it is possible to replace only one separate single disc or

blade as the system allows multiple configurations depending on the materials to be screened. "Before, when you had to change a disc you had to change the entire thing, but now you can just pick one," said Alessandro Ferrin, marketing manager at Simex. "This means 75% lower maintenance costs, because you can replace just one single disc or blade."

Simex also exhibited its new 'CBA' asphalt granulator bucket for the first time. Its cylindrical drum is composed of interchangeable teeth activated by direct drive high displacement radial piston motors. The back grille determines the size of the spoil piece and is available in different setups. The result is a reclaimed asphalt pavement, RAP with certifiable and measurable granules.

[www.simex.it](http://www.simex.it)

#### Arjes' 'Impaktor' 250 Evo with combined track system

Arjes' Italian distributor, SCAI, exhibited the Impaktor 250 Evo, which features a combined track system, a hook lift version, shaft quick change and an 'SCU' control. In addition to construction and demolition waste, the mobile shredder is also suitable for processing railway sleepers, roots, old and fresh wood. It is easily transported to any work place, has a quick change system for tool shafts, as well as mechanically adjustable side combs.

[www.arjes.de](http://www.arjes.de)

#### New wheeled excavator from Hitachi

SCAI also exhibited a brand new wheeled excavator from Hitachi, the 'Zaxis-7 155W'. The excavator has engine rated power of 105kW and an operating weight of 16.2t to 17.6t. The Stage V compliant wheeled excavator

delivers 5% less fuel consumption than previous models and can be further fine-tuned. The 'HIOS' V hydraulic system increases efficiency and front speed, and reduces fuel consumption according to Hitachi.

[www.hitachicm.com](http://www.hitachicm.com)

#### Gehl R165 skid loader with amped-up hydraulics

Also on SCAI's booth stood the Gehl R165 skid loader, which features an amped-up hydraulic system incorporating intuitive design for precise controllability. The height to hinge pin (fully raised) is 3,023mm, rated operating capacity of 748kg and gross power of 52kW at 2,500. The model has a net power of 51kW and a maximum torque of 241Nm.

[www.gehl.com](http://www.gehl.com)

#### Nordtrack line from Metso Outotec

Another new development shown by SCAI was Metso Outotec's Nordtrack line of mobile crushers, screens and stacking conveyors which are purpose designed for asphalt recycling, concrete demolition, small scale aggregate production and for screening of organic materials such as topsoil and wood.

[www.mogroup.com](http://www.mogroup.com)

#### New 350MH material handler from Atlas

On the stand of Italian distributor Varini stood the large material handler 350MH from Weycor by Atlas



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Weyhausen. The Atlas material handlers include mobile industrial machines and industrial tracked machines, which work on applications such as special recycling and bulky goods. Some of the advantages include fast cycle times, optimised handling and a range of diverse equipment. "This new 350MH comes with the new Stage V engine, as well as new options such as joystick steering," said Devis Varini, general manager of Varini. Varini also exhibited the Weycor AR560 wheel loader for recycling, construction and agriculture. With an operating weight of 8.25t, an engine output of 95kW and a bucket capacity of 1.6m<sup>3</sup> to 2.2 m<sup>3</sup>, the AR 560 is the largest wheel loader in the 'XL' performance class.  
**[www.weycor.de](http://www.weycor.de)**

#### Long version shredder from Hammel

Hammel exhibited the VB 750 DK (long version) primary shredder for domestic, C&I and bulky waste. The model is hydraulically operated with two slow moving shafts. It features a Cat C9.3 Stage V motor, as well as a drive train of 380PS. It weighs 22.5t (plus 1t magnet) to deliver high levels of performance for higher throughput and low energy consumption. User friendly handling comes from 'IFM' control, with the model being designed for low noise emissions, and comes with a tilting hopper with an increased angle, a magnet and a longer shredding unit. The model is available as a mobile version on tracks or as a semi mobile version on hook lift. The shredder has a discharge height of

approximately 4,600mm, a shaft length of 2,000mm and a shaft diameter of 650mm. The engine features exhaust after treatment system, DPF and AdBlue tank.  
**[www.hammel.de](http://www.hammel.de)**

#### Indeco exhibits IMP 20, HP 100, and more

Italian manufacturer Indeco exhibited a sample of its range including the multiprocessor IMP 20 (combi cutter configuration) for excavators between 17t to 36t, as well as the micro hammer HP 100, designed for mini excavators from 0.7t to 0.8t for working in restricted working areas. Visitors could also find the IHC 75, which belongs to its line of hydraulic compactors, which is fitted with the same mounting bracket as other Indeco







hydraulic equipment enabling the switching from one tool to another. Suitable for excavators from 4t to 14t, the IHC weighs 485kg. Also exhibited was the IRP 11 X pulveriser for excavators between 10t to 25t with a 1,150kg attachment operating weight. Michele Vitulano of Indeco also shared his reflections on the pandemic: "I think we should learn to live with corona and come back to some sort of normality, which hopefully will be possible with the vaccines, face masks, et cetera."

**[www.indeco.it](http://www.indeco.it)**

#### 'Hercules' telehandler from Dieci

Dieci displayed the fixed telehandler Hercules 230.10 which has a 23,000kg maximum capacity, 10.15m maximum lifting height and 135kW maximum power. The Hercules family consists of telehandlers positioned

in the 'giants' category. The model features a Stage V engine as well as a new cab design. Other models shown included the telehandlers 'Pegasus' 60.21 and 'Apollo' 20.4. When discussing the pandemic's effect on the market, Francesco Fogliano at Dieci raised an issue that echoes many other companies: "The market is at an incredible speed, we've sold a lot of machines to dealers. However, because of corona, there have been some issues with delivery times, we haven't been able to give some machines to dealers because of delays with components."

**[www.dieci.com](http://www.dieci.com)**

Unacea, the Italian association for construction equipment, was also present at Ecomondo. Founded in 2010, it counts around 70 member companies that are active in producing and importing equipment for earthmoving,

drilling, attachments and tower cranes. At its booth were representatives from the digital communication agency Flow Digital. "Although we're a digital agency, we see that there's great importance in meeting face to face. From a merchant point of view, this is an important kind of occasion for connecting," said Flow Digital's Andrea Marinsalta.

Other companies at Ecomondo were Baioni which highlighted its soil washing plant installations; VTN, exhibiting its 'VD' vehicle dismantler; Idrobace, exhibiting the 'Elefante 90' fog maker with 90m fan jet as well as companies Lindner, Rozzi and Zato. The exhibition was considered a success with many visitors and lots of products shown. It marked a 'light at the end of the tunnel' being a long awaited comeback after one and a half years without trade shows. The next edition of Ecomondo will be held from 8 to 11 November 2022.





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THE LATEST IN

# waste handling equipment

***Striving for a circular economy has become increasingly important with one essential ingredient being improved equipment for the handling of waste material. Here are the latest newcomers.***

## **New 'Long Version' primary shredder from Hammel**

Hammel has launched a new generation of shredders, the Hammel primary shredder type VB 750 DK Long Version, which is the successor of the VB 750 DK. The machine is characterised by a modified shredding unit with 2m long shredding shafts. Bulky and large volume material, such as clamping plates and bulky waste, is drawn in even better and can easily be fed by a wheel loader. The interlocking knives of the now extended shafts are designed in such a way that multifunctional shredding is possible, whilst a neodymium magnet separates ferrous metals. This is installed in a modified position on the discharge belt to enable metal separation. Through the lightweight construction of the neodymium magnet, the machine's overall weight remains the same as the previous shredder model. The newly designed discharge belt achieves a discharge height of approximately 4,600mm. The shredder features a new Cat C9.3 Stage V motor with 380hp and hydraulics. The machine is currently on a demonstration tour and is being tested on a variety of materials. The shredder models VB 750 D (semi mobile on hook lift) and VB 750 E (stationary with electric drive) will be converted to the Long Version and will soon be on the market.

[www.hammel.de](http://www.hammel.de)

## **BHS-Sonthofen introduces new universal pre-shredder**

BHS-Sonthofen's new 'Rapax' combines design and functionality in one pre-shredder suited for processing



BHS-Sonthofen enlisted the support of an industrial designer to develop the Rapax.

various metal fractions, commercial waste, industrial waste and construction waste. The control system also facilitates pre-shredding in every running direction. Rapax was developed in close collaboration with an industrial designer with the aim to outfit the technology with an intelligent design. According to BHS, the focus was on functional design elements that make the Rapax sturdier and easier to maintain, such as the intersecting struts on the funnel. The surface, wall thickness and shape of the funnel feature precise edges to avoid signs of wear and material build up. The two planetary gears with belt drive are positioned side by side, as opposed to diagonally opposite, so as to save space.

BHS offers the Rapax pre-shredder in a number of different designs and sizes to facilitate processing of a range of input material. It is available as part of either the '15xx' or '20xx' series in three different sizes, with shaft lengths ranging between 1.2m and 3.2m. Two different tool geometries are available, depending on the design: either the highly serrated 'Bat' shape version for a higher throughput in the case of light waste, or the sturdy 'Janus' shape for heavy input material. The tearing table is located below the two shafts, which can be used along with the number of tools to determine the particle size. The electrical drive is also available in different power outputs with up to 400kW being able





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The distance between the two Rapax shafts ensures optimal material infeed.



The Rapax pre-shredder shafts and tearing table can be quickly and easily replaced.

to be installed on request. A hydraulic pusher device is also available.

The centre distance of the two shafts on the Rapax has been selected to ensure that the tools do not interlock. According to BHS this ensures an optimal infeed torque with minimal energy consumption at the same time. Rubber buffers have been installed on the drive unit to absorb the impact and protect the gearbox from damage. The design of the tool and the reversing control system prevent material from wrapping around the shafts or adhering to them. The machine is designed to ensure that wear parts such as the shafts and tearing table can be easily removed and replaced. The shafts can also move synchronously, asynchronously and in reverse, with the Rapax being designed to shred material in every

running direction. The control system makes it possible to select the appropriate programme consisting of different movement sequences for every input material. Plans for the future include using artificial intelligence to make it able to react more flexibly to the input material. BHS is still collecting the appropriate data for this, but every Rapax is already equipped to utilise it in principle. BHS also offers services to customers' onsite.

[www.bhs-sonthofen.com](http://www.bhs-sonthofen.com)

#### **Powerscreen presents new 'Titan' range**

Powerscreen has launched its Titan range, a new range of secondary scalping screens that provide a cost effective solution in high volume, smaller sized, or recycling applications. The Titan range, which includes three

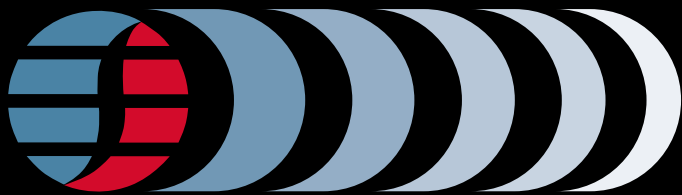
models (Titan 600, Titan 1300 and Titan 2300), is a simplification of Powerscreen's 'Warrior' range, using key features from the Warrior machines and tailoring them to a different section of the market at a different price range.

The Titan 1300 is said to 'pack a punch' while having a compact footprint for ease of transport. It has an extra-large capacity twin drive feeder at the rear of the machine with a 1,100mm feeder belt, with the feeder coming complete with hydraulically folding extensions to allow for side loading. It is able to withstand heavy loads due to having impact bars under the belt in place of impact rollers, and also has a folding rear door. The screenbox has a total screening area of 10m<sup>2</sup> and comes complete with a variable angle to allow for tailoring the machine to suit various applications, and also has 'lift-up' functionality at discharge. According to Powerscreen, side conveyors have wide fines belts and excellent stockpiling height.

The machine is equipped with a single lever set up which aims to deliver a very quick set up time, while the side conveyors are able to be configured as either standard or fully reverse from the factory. They can also be fully configured onsite to allow both conveyors to operate out of the same side of the machine. Each







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Gerald Hanisch.



conveyor has its own independent speed control to tailor each conveyor to its own loading. According to Powerscreen, the Titan 1300's tail conveyor has the optimum combination of rollers and impact slips for durability while maximising the power draw of the machine, and has a 'fold' to minimise transport length.

The Titan 2300 is a new machine to Powerscreen in terms of concept and design, encompassing the largest belt feeder on any of the Powerscreen range at 1,500mm, with twin gear box drive and a combination of impact bars and impact rollers for optimum power usage. It also has the steepest hopper ever designed by Powerscreen to enable ease of emptying without bridging, which has been developed specifically for the recycling market. The body of the hopper is manufactured with wear resistant steel and a rear folding door to take a crusher feed. A low speed feeder is fitted as standard, with a medium speed option for low density material which, while sacrificing some torque, can run at up to 50% faster than standard.

The machine also has an adjustable screen angle, with media options including mesh (both woven and welded), punch plate and 3D punch plate. The Titan 2300 has full access walkways down both sides of the screenbox designed to be regulatory compliant. 'Hybrid Dual Power' is also available on the Titan 2300, being powered using standard diesel or connected to an external electricity supply once the machine has been set up. The side conveyors are standardised at 1,050mm plain belts, with chevron belts also available. The plant is customisable with conveyors that can be reversed, can be discharged on the same side, or can be converted to a two way split. To cater for the recycling market, there is an option for magnetic head drums to

carry the metallic material back down the conveyor and away from the stockpile. The tail conveyor features a 1,600mm chevron belt, the widest in the Powerscreen range, with a combination of impact slips and rollers as standard to remove the need for full length skirting and reduce the power draw of the conveyor. Powerscreen states that the large tracks of the Titan 2300 ensure a stable working platform, but have a high tracking speed to provide high versatility.

[www.powerscreen.com](http://www.powerscreen.com)

### Rubble Master launches the 'RM XSmart' system

RM XSmart, a new fleet management and condition monitoring system, is Rubble Master's next step towards a digital future where construction sites are connected from the individual machines that interact with the operator, and with each other, to the central power supply. "When I founded RM 30 years ago, I never imagined that one day the RM team would file a patent to do with artificial intelligence and digitalisation," says RM founder and CEO Gerald Hanisch. He further puts buzzwords like construction site 4.0, zero emissions, connectivity and the like into perspective: "Yes, these terms describe current trends. But for us it's important to keep a 360° view. We take a look at everything directly on site together with the customer to find potentials for how we can drive the construction site of the future."

RM XSmart is the abbreviation for 'NeXt Level Site Management by Advanced Remote Technology'. As RM's digital technology platform developed in house, it combines satellite based location tracking and advanced telemetry with cloud based software packages

and mobile apps. RM XSmart is designed to enable the RM Group to combine fleet management and condition monitoring in one tool as the next stage in the development of 'RM Go! Smart'. While operators can still display all data and troubleshooting routines on their smartphones, in the future the data will not only be available via the machine's Wi-Fi network, but anytime and anywhere. RM XSmart records and provides access to information relating to operating data as well as operating times. The data can be broken down to the exact day and time, and as the operating hours are recorded automatically, it is not necessary to log hours at regular intervals manually. Down time is said to be reduced as both diesel and AdBlue levels are recorded continuously so that tankers can be dispatched in good time without the machine operator having to make a call. Fuel theft can also be detected at an early stage.

The machines are managed and deployed using the platform, with the machine owner and the dispatcher being provided with an overview of which machines are available, which are currently being serviced and which are already in operation. Tags and notes can be used to pass on additional information. RM also states that RM XSmart also eliminates the searching for the exact location of a machine by service technicians or transporter drivers as location coordinates are noted in the system and can be shared any time. In addition, the nearest postal address is also provided. While autonomous crushers and screens are still at the development stage, RM Group already offers its customers' assistance processes in the form of the 'Performance Indicator' and RM XSmart to optimally feed crushers and screens.

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## 'AUTOMATED CONCRETE REMOVAL' (ACR)

# saves the day in Salt Lake City

***To support expected economic growth, experts predict that massive global infrastructure investment will be needed between 2017 and 2035. The question arises however if the labour market will be able to support any investment.***

**C**learly, there is a need for automation that can maximise productivity, particularly when it comes to infrastructure construction projects. Fortunately, innovative equipment manufacturers, such as Conjet AB, and its customers, are working hard to solve these challenges. An ongoing car parking deck rehabilitation project in Salt Lake City, Utah, provides an excellent case study on this subject.

### High profile renovation project

In December 2019, the Church of Jesus Christ of the Latter-Day Saints (the 'Church') began a large renovation project in the heart of downtown Salt Lake City, Utah. The plaza sits between the Church's administrative buildings and consists of an impressive landscape of fountains, flower gardens, grass and other vegetation. The Church hired Jacobsen Construction to serve as general contractor in charge of the overall renovation of the Salt Lake Temple and Temple Square, with Paul Shingleton as project manager on the project.

Below the plaza sits an underground, three story carpark built in 1962. This had been experiencing some leakage from the water circulation system and landscape directly above. To clear the landscape area for renovation and address the leakage, the entire plaza of landscaping and concrete architecture would have to be removed along with the waterproofing layer on the carpark's concrete roof. Complicating matters, the water proofing layer contains asbestos from the original construction. As structural engineers developed the scope of work and renovation timeline for the plaza, they estimated that excavation would reveal 2% to 5% delamination of the concrete roof.

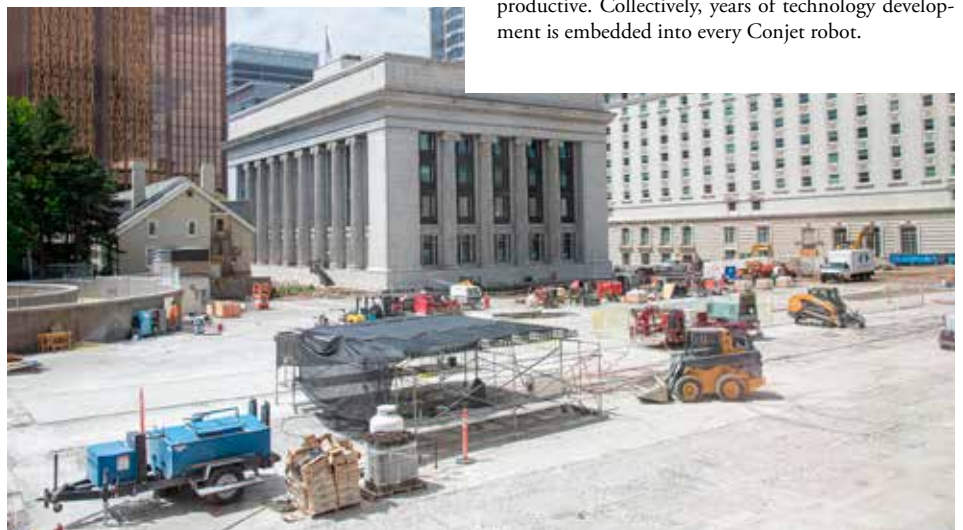
In March 2020, renovation work began and the site was excavated, where it was discovered that there was

in fact a 70% to 90% delamination across the entire 200,000m<sup>2</sup> roof area. This unknown, unanticipated condition presented a major risk of significant project delays. Jacobsen quickly called in a demolition subcontractor to start removing the top layer of damaged concrete, totalling between 13,000m<sup>2</sup> to 16,722m<sup>2</sup>. The subcontractor immediately got to work with a crew of 12 operating six large jackhammers. However, it became clear that the project would be delayed by an additional two years, minimum, due to the massive amount of concrete to be removed. At this point, Jacobsen's culture of resourceful creativity came into play as it searched for innovative

technologies that could automate and increase efficiency compared to the manual jackhammer removal process. Fortunately, it did not take them long to discover the ACRTM robots manufactured by Conjet AB.

### Increased efficiency

Conjet, headquartered just outside of Stockholm, Sweden, with additional offices in Charlotte, North Carolina, is a leading manufacturer of ACRTM robots. Conjet was established in 1990 by a small group that had developed hydrodemolition technology as a division of a larger company in the mid-eighties. Since then Conjet has been focused exclusively on making the hydrodemolition process easier, more precise and more productive. Collectively, years of technology development is embedded into every Conjet robot.







After discovering the ACRTM robots through online searches, Shingleton contacted Conjet's North American team to investigate its potential utility on the plaza renovation. Shingleton and the Conjet team had a detailed meeting where Conjet explained the efficiency, safety, and quality advantages of ACRTM and hydrodemolition. Shingleton then connected Conjet with one of its most capable subcontractors, TID Demolition, which could further investigate the application and advantages of ACRTM for the renovation. TID Demolition, based in North Salt Lake, has over 25 years of experience in retail spaces, office towers, medical facilities, government projects, manufacturing and residential work. Through a combination of experienced, skilled personnel and specialised equipment, TID is able to successfully execute complex and challenging demolition projects while providing a safe, clean and productive job for its customers.

Although TID had no prior experience of hydrodemolition, Conjet's team was able to explain the process and answer all of TID's questions, such as the key factors to consider when performing hydrodemolition, the ACRTM robots' operation, productivity capabilities as well as how to handle water containment and treatment. In addition to the clear productivity advantages of ACRTM, Conjet was also able to educate both Jacobsen and TID on its other benefits. For example, worker safety is improved due to the elimination of silica dust and vibrations, along with drastically reduced noise. Also, the useful life of the structure is extended significantly because the hydrodemolition process results in a 2.5 times stronger bond between residual concrete and the new overlay. After multiple meetings with Conjet, Jacobsen and TID decided to try out the ACRTM technology. In June 2021, TID purchased a Conjet ACRTM Robot 557 standard model and began work on the Temple Square renovation.

### Preserving the project timeline

As the Robot 557 was delivered to TID, Conjet provided start-up training using the Conjet University ('ConjetU') curriculum. Tim Best, Conjet's customer success manager for North America, led the training. He has over 20 years' experience operating hydrodemolition equipment in the field, as well as planning, estimating, and managing the execution of complex and challenging projects all across the U.S. and Canada.

Conjet's ACRTM robots have been designed with ease of use, precision and productivity as the primary objectives, and the 557 lived up to its design intentions on this project: Within a couple of days, Best had trained TID's primary operator on how to properly use the Robot 557, the accompanying Hammelmann high pressure pump and manage waste water runoff. In the first week of operations, TID's main operator became comfortable using the Robot 557. By the second week, the productivity advantages of ACRTM became clear. The Robot 557, along with two TID employees, was removing on average each hour the same amount of concrete that required the previous contractor to spend three full days with 12 employees using jackhammers.

TID's early productivity results caused project engineers to re-evaluate the timeline once again. The initial phase of work involved a 6,000m<sup>2</sup> removal area. Using jackhammers, it was estimated to take until February 2022 to complete this initial phase. However, with the ACRTM Robot 557 TID finished this removal in September 2021. In fact, due to sequencing conflicts with the garage below, TID has begun moving the 557 for work on other jobsites in between work sprints on the plaza project. In addition to the productivity gains experienced with ACRTM compared to jackhammers, there have been other, more qualitative benefits. Because the plaza is surrounded by offices, Jacobsen was receiving many complaints about the loud noise created by jackhammering. In contrast, the Robot 557 and pump are relatively quiet and have drastically reduced the number of noise complaints from surrounding office workers.



Travis Keenan, TID's project manager overseeing the Temple Square work, stated, "We have been extremely impressed with both the ease of use and the productivity of the 557. With the 'Conjet One' operating system and just a couple days of training from Mr. Best, our field employees were able to quickly become comfortable and adept at the ACRTM process. And the productivity has absolutely blown us away. When we first were brought into the Temple Square project, the general contractor set what we thought was an aggressive target for concrete removal per day. However, with Conjet's ACRTM technology we have been able to actually exceed that target. We could not be more pleased with our decision to bring the ACRTM Robot 557 into our arsenal of tools at TID Demolition." Paul Shingleton also commented: "The amount of time that will be saved based on the jackhammer process will completely save the project. This was my first experience with Conjet's ACRTM technology and hydrodemolition. In the future when we have jobs with concrete removal required, we will most definitely be consulting with TID and Conjet to find the most efficient, effective ACRTM solution."

### Bridging the gaps

When the unexpected bad news was first heard by Jacobsen that the amount of delaminated concrete in the plaza was way higher than the original estimates, the timeline for completion was pushed back two years to July 2023. However, after TID brought in the Conjet ACRTM Robot 557 and quickly learned how to utilise the innovative technology for performing hydrodemolition, the completion date for removal of all delaminated concrete was moved up to July 2022. This is a full year earlier than would have been possible using the manual jackhammer process. In addition, TID estimates that the automation and productivity of the 557 has reduced the amount of labour needed by 30,000 to 40,000 man hours.

The plaza renovation project is a microcosm of both the infrastructure challenges that face our planet, as well as the power of innovation to solve these challenges. There is a massive inventory of aging concrete infrastructure in need of repair, coupled with the aggravating factor of a declining construction work force. Yet, innovative technologies such as Conjet's ACRTM robots provide a viable path forward that is more sustainable, safe and efficient than the old ways of doing things.





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Streamer S210E





Company founder and owner Klaus Ertmer.  
Photo: KEMROC.



KEMROC GETTING

# bigger on all levels

***Kemroc has launched a major product offensive in 2020 through expanding its range of milling machines and cutter wheels for excavators and backhoe loaders. The company is also expanding premises to allow more space for warehousing, production, administration and design to further provide service to customers around the world.***

**K**emroc attachments provide solutions to problematic tasks found in road building, trenching, civil engineering, demolition and concrete renovation, tunnelling, mining, drilling and flat surface cleaning applications. With decades of experience in rock cutting technology, the company provides a comprehensive package of products, technical advice and service. Based firmly on the global success of its products, Kemroc is expanding its portfolio. Company founder Klaus Ertmer explains, “Thanks to the high performance, flexibility and reliability of our attachments, our products have already proven themselves on all continents. We have improved our well established range of chain cutters, cutter wheels and diamond saws by increasing the number of models in each range.”

The product range is now made up of 17 product groups including milling cutters, cutter wheels and saws as well as a wide range of consumables. The patented range of ‘EK’ chain cutters have a cutter chain running between outer cutter drums and are ideally suited for trenching. With the addition of the new EK 220 (220kW), chain cutters are now available for excavators with operating weights from 1.5t to 70t. This concept was extended with the introduction of the ‘EKT’ range of lower cost milling cutters that can be converted to chain cutters at a later date.

Kemroc’s ‘KR’ range of drum cutters is for excavators from 1t to 125t. In 2020, this concept was extended to include the ‘KRD’ range of direct drive drum cutters for use on carriers from 0.5t to 50t and now offers the new ‘KRX’ range of attachments for excavators from 5t to 50t. These attachments can be used as a lengthways drum cutter or as a rotary head for drilling applications. Since 2021, the range also includes the ‘KRM’ range of

rotation modules with stepless, endless rotation for 2t to 70t excavators. For sawing applications, the ‘KDS’ range of diamond saws has been expanded to include the powerful KDS 50 HD. Before the end of 2021, the ‘KTR’ range of trenchers will be extended whilst ‘KSI’ injection attachments are a core component of the Schöckem soil consolidation process.

## Lots of advice, lots of service

Kemroc customers benefit from many years of experience and knowledge that the company has gained from working on many project applications around the world. As Klaus Ertmer explained, “At Kemroc, providing good technical advice is considered to be very important, we want to be sure that the products deliver the levels of performance, cost savings and benefits expected by the customer. Customers should benefit from the technical support available from our application specialists based on their specific project requirements. Technical support is one part of our comprehensive package provided to customers worldwide. In the last couple of years Kemroc has grown from being a manufacturer of specialised excavator attachments to being a well-stocked supplier of a large range of excavator attachments. Together with customers, we want to continue developing our machines into the future.”



The new 1,100m<sup>2</sup> warehouse. Photo: KEMROC.



## VOLVO PROTOTYPE LX03

### *the intelligent future of construction*

The fully autonomous, battery electric prototype by Volvo Construction Equipment (Volvo CE) is said to be the first 'real-world' example of a self-learning concept wheel loader that is able to make decisions, perform tasks and interact with humans. It is also the first time ever a Lego Technic model has been turned into a real machine. While not commercially available, engineers expect that valuable insights from the LX03 will feed into applications.

Inspired by a concept devised by Volvo CE and Lego Technic engineers and designers, the Volvo LX03 is designed to make new ground in smart construction technology. It represents both the next stage in Volvo CE's exploration into machine intelligence and its determination to decarbonize the construction industry. Melker Jernberg, president of Volvo CE, says: "We need to transform the construction industry with smart and more sustainable solutions that will have an impact on a global scale. The unveiling of the LX03 prototype today

represents just that, and is testament to the incredible expertise of our engineers and our united commitment towards positive change. Together with the Lego Group, we are pushing the boundaries of both technology and imagination and the result is beyond anything the world has seen before."

Lars Stenqvist, chief technology officer of Volvo Group, adds: "As transport and infrastructure leaders we have a vital role to play in taking action on climate change and stepping up the pace of innovation needed to deliver on emissions targets. We believe in working with driven and creative partners who, like us, are focused on making innovation real and moving beyond just words." What started out as an exciting project between designers and engineers at the two companies to explore the potential for future construction, evolved over time with the help of a team of 'smart children', into the successful launch of the 42081 Lego. The Lego Group's head of product for Lego Technic, Niels Henrik

Horsted says: "Our two companies have enjoyed an extremely successful partnership over the years in which we have collaborated on several Lego Technic models. But this is the first time we are making a real machine based on a model and not the other way around."

The prototype LX03 has been built by a dedicated team of engineers, programmers and workshop technicians from Volvo CE sites in Eskilstuna, Sweden and Konz, Germany, in collaboration with the design team in Gothenburg, Sweden. The 5t wheel loader has been developed as a modular concept, with the capability of being made larger or smaller with just one or two changes to the manufacturing process. It is designed to be smart and safe and able to adapt to different scenarios, make decisions in real time and interact with people.

## MB says rebar 'no longer a problem'

There's always been a weak point in the demolition and redevelopment industry when it comes to processing reinforced materials. When it comes to recovering reinforced material, rebar, companies have been forced to come to terms with the limitations of the machines they own. MB believes its customers suffer from a common problem, namely that costs and downtime soar when it comes to reinforced materials. Major problems arise from the rebar when it is processed by machinery as it can cut the conveyor belt, causing downtime. A solution is achieved using a MB jaw crusher bucket mounted on a carrier machine to crush the reinforced material down to the desired output size. The rebar simply comes out along with the crushed material. The rebar is then separated from the aggregates using a 24V iron separator, a device that's installed on MB's unit and operated directly from the excavator cab.

An MB customer located in southern Brescia in northern Italy commented that after trying every way to process gratings with a track mounted crusher on site it finally introduced a MB BF90.3 crusher bucket into its fleet. No problems arose processing the metal, and therefore experienced no downtime that would have slowed down the job. A French customer needed to demolish a building to create a new residential complex with 26 units. In this case, using an MB BF90.3 crusher bucket installed on a Liebherr 924 excavator, made it possible to crush all of the reinforced material, separating it from the rebar and reusing the new aggregates for the site's foundation. The customer was pleased with the economic and environmental benefits that speeded up the job.

MB Crusher's range of crusher buckets represents a decisive, quick, and economical way to process rein-



forced materials directly on site. Reinforced concrete, sleepers, light poles and gratings are examples several companies have processed using MB Crusher units.



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## German Demolition Association to meet in March 2022

***In March 2022, the German Demolition Association (Deutscher Abbruchverband e. V. - DA) is again organising the Fachtagung Abbruch at the Station-Berlin, Luckenwalder Strasse. After last year's event saw 1,000 participants and 117 exhibitors attend, expectations are high for the 2022 edition.***

Journalist and publicist Dr. Hajo Schumacher, will give the keynote speech on the topic of, 'Demolition, upheaval, awakening - where is the new German government heading?' Following on, there will be 12 further lectures on current and interesting topics focused around demolition. In the lectures, experts will provide a great deal of practice oriented information on construction site reports as well as on the handling of pollutants, recycled construction materials and legal requirements.

This year, among other things, subjects covered include: 'Pilot project Campus Essen - Essen's highest demolition site aims for platinum status'; 'Problem areas in recycled material specifications for building products'; 'The safe disposal of asbestos containing grinding and milling materials: a real or a contrived problem?' and, 'Selected best practices of controlled blasting of buildings'. Various other specialist lectures are scheduled, including, 'Deconstruction of the Coca Cola building in Bremen - industrial area in the change of time since 1878', and 'Deconstruction of Neckartal-Crossing at Heilbronn'. As the number of international visitors continues to grow, simultaneous translation into English and French will be offered once again.

By end of October, the accompanying professional exhibition with its wide range of products, had already attracted over 60 exhibitors with over 600m<sup>2</sup> being registered. The current list of exhibitors can be viewed on the event website and registration as an exhibitor is still possible until 3 January 2022.

### **Dialogue evening**

A dialogue evening will also take place in the Station-Berlin with the exhibition remaining open and located parallel. This improves the exchange and information opportunities for both participants and exhibitors as well as providing a variety of networking opportunities. The event has been able to stand in its own right due to the participation of sponsors. The DA would like to thank its supporters for this.

### **Programme and registration**

The event programme may be viewed on the website: [www.demolition-conference.com](http://www.demolition-conference.com) which will be available from around the middle of November. Here there may be found further information and details about the event as well providing a portal for registration.



## IACDS networking event at bauma 2022

After the two year absence of the IACDS Annual Convention it has now been decided to hold an IACDS networking event in conjunction with the bauma tradeshow in Munich. Bauma 2022 takes place from 24 to 30 October, 2022, with the preliminary IACDS General Assembly 2022, Networking and the IACDS Diamond Award Ceremony set to be held on Thursday 28 October. There will also be an informal dinner held that evening. Most likely, all these events will take place on the afternoon of the 28 October located on the premises of the Messe München (details to be announced at a later date). This decision has been made due to the number of representatives from the global sawing and drilling industry who will be visiting bauma making the show itself to be the most convenient location in which to hold the scheduled activities. More information to be published about this event at a later date.

[www.iacds.org](http://www.iacds.org)



## IACDS Diamond Award 2022

The moment the concrete cutting industry has been waiting for, as the IACDS is again organising its Diamond Award, with submissions already being welcomed. This year there are two categories announced for this international competition: job and product. Through the award, the IACDS seeks to recognise the expertise of contractors and the innovation of manufacturers, whilst simultaneously promoting best practices and the professionalization of drilling and sawing activity around the world. Those eligible to enter the awards are companies that carry out drilling and sawing projects and drilling and sawing equipment manufacturers, whether IACDS member or not. Any kind of drilling and sawing product, or job carried out between 11 April 2019 and 30 June 2022, are eligible for entry. The submission period is now open, with the deadline for entries being 30 June 2022.

[www.iacds.org](http://www.iacds.org)





## Komatsu PC390HRD-11

The Komatsu PC390HRD-11 demolition excavator was designed and manufactured as a fully-specified demolition machine, and offers quick and safe on-site configuration changes. With operating weights ranging from 45 to 61 tonnes, it can handle attachments up to 4 tonnes.







## AVANT TECNO OY ANNOUNCES *changes to operational management*

**T**he 30th fiscal year of Avant Tecno Oy ended on the 30 September 2021. At the same time the company announced a change of generation to run the company, which has been prepared by the family business for several years, and which will be implemented when the founder and long term CEO, Risto Käkälä, steps down. He will continue as chairman of the board for Avant Tecno Oy and Leguan Lifts Oy, posts he has held since founding of the two companies.

"The company is now in excellent condition and growing strong. During the last 30 years our turnover has fallen only once compared to the previous fiscal year, and not once we have made a loss. All in all, we could say that it's easy to continue from this. The new generation will certainly bring a lot of new ideas and thoughts and I'm confident that the growth rate will accelerate further. However, it needs to be remembered that it's about the state of mind when it comes to success: the urge to be the best. This has supported our operations until now and for sure we will continue on the same path also in the future," commented Risto Käkälä.

Jani Käkälä, who has been the sales and marketing

director of the company for the last 11 years has been nominated as the new CEO. He has been involved in



**Jukka Kytömäki.**

the company's operations practically since he was a child. He says, "Continuing the family business has been self-evident for me for a long time. During the history I have participated a lot in the company's operations and gradually gotten more responsibilities when growing up. At the moment we have a clear growth strategy and we have already done a lot to secure our excellent competitiveness. The future steps are clear and our operation will be continued with decisiveness."

As replacement for Jani Käkälä, Jukka Kytömäki has been nominated as the new sales and marketing director of Avant Tecno Oy. He has been with the company for the last 10 years, previously serving as the president of Avant Tecno USA. Jukka knows the operating environment and the products very well and transfers to his new position with enthusiasm. Also, the managing director of Leguan Lifts Oy, which is a subsidiary of Avant Tecno Oy, is set to change when the long term post holder Antti Otava retires on the 30 September 2021. Otava leaves the company with strong international growth to his successor Esa Vuorela, M.Sc. (Eng.) who has extensive experience in different development and management positions in industrial companies.





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## Asynchronous technology and flywheel energy storage from Lindner

Nestled at the edge of the Lower Oder Valley National Park, the Schwedt power plant, which belongs to EEW Energy from the Waste Group, supplies the local paper industry with electricity and process steam. In line with circular economy principles, the plant recovers paper mill, commercial and industry waste. To optimally prepare the waste for the fluidised bed boiler, the company relies on Lindner shredders.

Kraftwerk Schwedt GmbH & Co. KG has specialised in recovering energy from waste since 2010. Highly calorific SRF is produced from specially processed municipal solid, commercial and industrial waste. The power plant, in turn, generates electricity, heating and process steam which are used to supply Germany's third largest paper mill, whose waste is also used for energy recovery. The high demands placed on calorific value and throughput require powerful and energy efficient recycling machines. Therefore, in spring 2020, the Schwedt power plant decided to replace a stationary shredder that had synchronous technology and gearbox with Lindner's 'Polaris' 2200 and its tried and tested asynchronous technology. The Polaris performed much better, offered improved technical availability, mainly due to its drive concept, and led the company to replace another two shredders in 2021 with Lindner Polaris 2200.

At the Schwedt power plant, the shredders have been shredding 33t/h in a three shift operation a week since 2021. "We chose Lindner's shredders based on



the recommendation of another Lindner client and were not disappointed. The Polaris 2200 has an efficient cutting system and, after one year in full operation, has achieved a 30% higher productivity than machines with synchronous technology in the past," says Steffen Kunkel, production manager of post processing at the Schwedt power plant.

Generally speaking, the Polaris can be used for a variety of applications. Although the material delivered to the Schwedt power plant is predominantly free of FE

parts, the input material might still contain unwanted and difficult to shred objects. The robust shear cutting system is, however, resistant to non shreddables, which in turn positively affects the throughput. In terms of output material, the Polaris can achieve three dimensional particle sizes from 40mm to 120mm in a single pass. For the Schwedt power plant's fluidised bed kiln, it produces a particle size of 80mm. Commercial, industrial and waste wood used to fire calciners in cement plants is also shredded to the same size.



## Idrobase Group announces new 'Elefante 90' fog maker

The Idrobase Group has announced the releases of the Elefante 90 which is a fog maker with a 90m fan jet and a motor of only 18kW. It is a solution that the company says matches the requirements of the industry and is equipped with an easy and intuitive touch screen and can be controlled remotely. The performance of the Elefante 90 is the result of the careful improvement of its main features. These include a 90m fan jet using a 18kW motor; 135 nozzles that produce a drop size of 17 micron, whilst nebulisation is at 80bar, with the fog maker also having an elevation of -20°/+45° and a fan diameter of 340°. The new fog maker can be used to meet most needs including dust suppression (also PM10 and PM2.5), odour neutralisation, cooling and sanitation. Elefante 90 also embraces the corporate philosophy of 'clean breathing' and, like all Idrobase Group solutions, is able to nebulise sterilised water, eliminating any existing threats.



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# bauma Innovation Award 2022

***New categories along with a call for entries from the construction industry have been announced for the bauma Innovation Award ceremony which will again take place at the bauma trade fair which will be held from 24 to 30 October 2022.***

The period for entries started on 3 May 2021 and ends on 3 May 2022. All necessary information on the conditions of participation can be found at: [www.bauma-innovationspreis.de](http://www.bauma-innovationspreis.de). Those wishing to enter can submit their documentation via a form on the web portal.

VDMA Construction and VDMA Mining, together with Messe München and the leading associations of the German construction industry HDB, ZDB and bbs, will be administering the multi stage competition process as well as hosting the awards ceremony at the Max Joseph Hall of the Munich Residence. Martina Scherbel, project manager of the bauma Innovation Award, will be happy to answer any questions about the participation procedure (e: [martina.scherbel@vdma.org](mailto:martina.scherbel@vdma.org), T: +49 69 6603 1257).

## AWARD CATEGORIES HAVE BEEN REVISED TO

- Category 1 Climate protection
- Category 2 Digitalisation
- Category 3 Mechanical engineering
- Category 4 Building
- Category 5 Research

The VDMA represents around 3,000 German and European mechanical and plant engineering companies. The industry stands for innovation, export orientation, medium sized businesses and employs around 4M people in Europe, with more than 1M of them in Germany alone.



## Tilly Manutention announced as authorised EvoQuip distributor

EvoQuip is delighted to appoint Tilly Manutention as its authorised distributor for North Eastern France. It will supply the full range of EvoQuip equipment including compact crushing, screening and conveying equipment, genuine spare parts and provide machinery maintenance throughout the North East of the country.

Tilly Manutention was founded by Joseph Tilly, Grandfather of Pierre Tilly, 75 years ago. Starting out with agricultural machinery, the company soon branched out further and into material handling, and now has four branches located in Metz, Verdun, Epinal and Morhange. This allows it to provide excellent access to parts and aftersales with several highly trained technicians at each branch, ready to provide quality service.

Conor Grogan, EvoQuip territory manager said, "We are delighted to welcome Tilly Manutention as an authorised distributor for North Eastern France. Their years of experiences make them an ideal addition to our distribution network, and I know this will be a successful partnership." Romain Bernard, of Tilly Manutention said, "To represent the EvoQuip brand is an exciting opportunity for us and one that we will work hard at. We look forward to providing this quality product to our new and existing customers and enhancing their operations with compact crushing, screening and conveying equipment."



## New managing director of Komatsu Europe

Effective as of 1 April, 2021, Mr. Tadashi Maeda has been appointed as managing director and CEO of Komatsu Europe International N.V. He succeeds Mr. Masatoshi Morishita who returned to Japan after five years in Europe in order to pursue his career with Komatsu Ltd. as a senior executive officer.

Mr. Maeda, 50, joined Komatsu Ltd in 1994 to work in sales at Komatsu Iwate, a distributor in Japan.

In 2000, he moved to Komatsu HQ, first as a manager in the Logistics Sales Department then, in 2006, in the Overseas Marketing Asia/Oceania Group as marketing manager for the Asian region. In 2009 he was promoted to president director of Komatsu Marketing & Support for Indonesia in Jakarta.

In 2016, back at Komatsu HQ, he became president of the Asian Business CE Marketing Division, and in

2019, president of the Americas & European Business CE Marketing Division. A father of two sons, Mr. Maeda graduated from the Faculty of Law at the Waseda University, Tokyo, Japan.



**MESSERSÌ TURNS EARTHMOVING**

# INTO FINE ART

**S**enigallia is a port town on Italy's Adriatic coast in the province of Ancona. After WWII, the place became a popular summer holiday destination with Italians and foreigners alike. With an estimated population of some 44,000 inhabitants, Senigallia is home to two Michelin starred restaurants, one being the world famous establishment Uliassi. However, fine dining and gorgeous seascapes are not Senigallia's only trademarks. The community also boasts a well-developed industrial area where many leading manufacturing brands are located. Messersi S.p.A. is one such company.

## Pioneer in dumper technology

Even though the company started out in the late 1950s, it was not until the 1970s when dumpers came into the picture for the first time. It was then that Messersi built its current production facilities in Casine di Ostra, some 15km from Senigallia, and began manufacturing two and four wheel drive dumper trucks with manual and hydraulic unloading systems. That first foray into the dumper market proved a success and laid the foundation for the company's future development. In the 1980s, Messersi won a major contract to supply a thousand wheeled dumper trucks within a six month period to a Middle East country, which further strengthened the company's position in the market. But the real breakthrough came in the early 1990s when Messersi became the first company in Europe to design and manufacture

*Established by two brothers, Italo and Fabio Messersi, in the charming seaside town of Senigallia, in central Italy, Messersi S.p.A. is a benchmark name in the mini dumper industry. Since its foundation in 1957, Messersi has come a long way from a five man family enterprise to now being a major joint stock company. PDi's Andrei Bushmarin recaps the long and winding story of the Italian manufacturer.*

a tracked dumper with hydrostatic transmission. It was also during that decade that the company launched the production of its first ever mini excavator series – the second largest product group in Messersi's portfolio.

## Driving at full throttle

Messersi entered the new millennium with all guns blazing. A new line of zero swing mini excavators was launched, and the range of tracked mini dumpers was expanded with the introduction of the TCH-2500 model boasting a lifting capacity of up to 2.5t. The company's growth continued unabated even through the pandemic. In 2015, responding to the market trend towards electrification, Messersi designed a brand new line of electric tracked dumpers and in 2020 unveiled the TC350d - its biggest dumper so far. Powered by a 48.6kW Stage V compliant turbo diesel Kubota engine, the TC350d can carry a whopping payload of 3.5t, which transcends the notion of a 'mini dumper'. Supplied either with canopy or closed cab, the machine







**Marco Grucci, Commercial Sales Manager who has been with Messersì for 22 years.**

has two speed ranges (0-5.5Km/h and 0-11Km/h) and features a 180° rotatable driver's seat with integrated joystick controls.

### **Making it work in a new world**

Undeterred by the Covid-19 meltdown, Messersì keeps on expanding its product portfolio and conquering new territories. Today the company employs 130 staff, some 100 of whom are engaged in production. Messersì products are sold on every continent via a worldwide web of dealers and distributors, with Europe, North America



**Mini excavators - the second largest product group in Messersì's portfolio.**



**All machines are manufactured at Messersì's 30,000m² factory to order.**



**Messersì's manufacturing facilities in Casine di Ostra, some 15km off the town of Senigallia.**



**Apart from mini dumpers and mini excavators, Messersì offers a series of compact loaders consisting of three models.**



**In 2015, responding to the market trend towards electrification, Messersì designed a brand-new line of electric tracked dumpers.**



**Mini dumpers are Messersì's signature product.**

and Oceania accounting for the major share of total sales. All machines are manufactured at the company's 30,000m² factory in Casine di Ostra to order, with an average annual number totalling some 3,000 units. Mini dumpers, which are indisputably Messersì's signature product, are split in five basic lines: 'Utility', 'Trusty', 'Evolution', 'Zero Emission' and 'All Terrain'. The main differences between the lines are in machines' operating weight, payloads and types of engines and pumps used.

According to Marco Grucci, commercial sales manager, who has been with Messersì for 22 years, the compact Utility and mid-range Evolution machines are currently the most popular types with customers. A new dumper model with a payload of 5.5t is now in the pipeline and will most likely be unveiled next year. Once launched, it will be the biggest dumper in the manufacturer's range. Messersì's mini excavators come in nine models that vary in operating weight from 1.3t to 6t. Last but not least, there is a series of compact loaders consisting of three models that is available from the Italian manufacturer. Apart from the construction machines, Messersì also offers tailor made solutions for viticulture and photo-voltaic installations.

**[www.messersì.it](http://www.messersì.it)**



# HEGER'S INNOVATIVE DIAMOND TOOLS HELP WITH SUSTAINABILITY

***'Sustainability' is currently an industry key word. The EU Green Deal pushes individuals and businesses forwards, with new regulations popping up on a daily basis, seeing companies in the industry striving to keep up. Heger decided to address these issues by being proactive, and as a participant in the SEAM programme of the European abrasives association FEPA, the company now holds a certificate for sustainability.***

**S**EAM stands for 'Sustainable European Abrasives Manufacturer' and Heger is proud to be one of the first diamond tool manufacturers to receive SEAM certification. Energy and waste management, social engagement in communities as well as anti-discrimination efforts regarding the company's international workforce, are some of the key indicators Heger set as targets to address. One highlight of this approach is its photovoltaic power plant, and even though Covid caused disruption throughout Europe, Heger invested to reduce its fossil energy consumption, with the 200kW peak installation saving roughly 100t of CO<sup>2</sup> per year.

High quality products and innovation continues to drive the company, with its 'Titan Wave' shape on cutting blades delivering outstanding results. The company began developing floor sawing cured concrete, expanded to asphalt and wall sawing and is developing systems for green concrete applications capable of 15m/min for what the company says are lifetime results. In the field





of green concrete speed and reliability are essential for the job as any joints must be straight and cut in time to avoid cracking while the concrete is curing. For wall sawing the second generation is already on its way with an improved steel core design producing even faster cutting, with the more m<sup>2</sup> cut per day the greater the profitability for cutters. If the efficiency of cutting can be improved so significantly, the price of the diamond tool is not a key factor in the equation. Very soon the 'Turbo Wave Drill' will be launched, with selected customers currently working with the 'Zero Series' to collect final results to fine tune the compositions' into an industry bench mark.

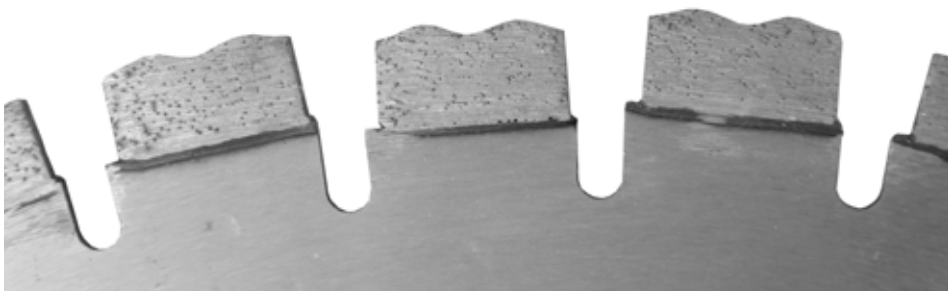
Further complicating matters is that the coronavirus pandemic has caused problems to the global supply chain, with the steel market especially being subject to increased prices and long delivery times. However, thanks to Heger's 'buy local philosophy', the company is still able to serve its customers in a fast and reliable way, with the logistics team striving to get the required parts on time. Heger's workshop has increased its flexibility to adjust material in stock to meet market demand, with the good relationships it has developed with local carriers leading to timely shipments, even overnight when required, with reliability and flexibility being the key factors.

There are more challenges however to be faced as more and more metal powders and elements are seen as critical by European institutions. Sophisticated production processes protect Heger's workforce, with new people employed to specifically take care of safety and health related issues. Heger is investing to keep its European production safe, healthy and sustainable. The company further has committed to keep production in Europe, choosing to adapt to conditions and not move production to places where there are less stringent regulations and importance given to working conditions or protection of the environment.

To keep in tune with market trends and regulatory developments companies must be able to act in a timely manner. Therefore, Heger is an active member of the most important associations in the abrasives industry. Heger has oSa certified safety standards for its products, and manufactures according to the EN13236 safety standard. It further participates in standard revisions to keep track on all developments ensuring that whatever is manufactured follows those standards, with everything being focused on safety and sustainability.

Markets and people change, but the construction industry moves on, with the backlog caused by the pandemic, and its after affects, resulting in urgently needed European infrastructure work that is keeping Heger busy. Heger is proud to be adapting to the increased emphasis placed on sustainability, environment, health and safety, and a work life balance. It has accepted and adapted to the challenges these developments have placed on it, and has embraced the future as a proud European manufacturer.

**[www.heger.com](http://www.heger.com)**





## Ausa DR601AHG reversible dumper wins Smopyc Gold Award

At a new edition of the Technical Innovations Awards that Smopyc organises as part of its events related to the trade fair in Zaragoza, the Gold Award in the 'New machinery developments' category was awarded to AUSA's DR601AHG dumper with reversible driving. The jury, made up of independent experts from the construction industry, recognised the commitment to R&D, quality, environmental engagement, sustainability and safety at work that AUSA has brought to the fore with the development of the dumper.

Specifically the jury highlighted the innovation in terms of the reversibility of the driving position, allowing driving in the direction of the hopper or in the opposite direction without having to stop the machine. They also placed value on its hydrostatic transmission, the Stage V engine and a long list of technological advances that

facilitate maintenance while enhancing the safety and productivity of the machine. AUSA will exhibit the winning DR601AHG reversible dumper at the Smopyc trade fair at its stand in hall 6. The compact all-terrain vehicle manufacturer will exhibit up to a total of twelve vehicles, including the main innovations it has launched recently and that will be exhibited for the first time at a fair in Spain.

### Dumpers

As well as the DR601AHG reversible dumper with a 6t payload, the new D1001APG will be exhibited, the brand's largest model, with a 10,000kg payload and a swing skip. The D450AHG, with a 4,500kg payload and hydrostatic transmission, the D300AHG with a 3,000kg payload, the compact D150AHA with 1,500kg

payload and skip tipping at height and the D201RHGS rigid dumper with a 2,000kg payload and hydrostatic transmission will also be shown.

### All-terrain forklifts and compact telescopic handlers

AUSA's new range of all-terrain forklifts has been completely redesigned recently, incorporating a long list of equipment for greater all-terrain capacity, value for money and connectivity. The new models will be exhibited for the first time at a national fair. The machines that will be exhibited are the C501H, the largest in the range with a 5,000kg payload, the C351H with a 3,500kg payload, the C251H with 2,500kg payload and the C150H, the most compact, with a 1,500kg payload. In the telehandler section, AUSA will also exhibit its latest developments with the updated T144H, the ultra-compact telehandler with a 1,350kg payload and a lift of 4m, as well as the new T235H, the largest in the range with a 2,300kg payload and a maximum lift of 5m.



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## Agder Gruppen appointed as Powerscreen distributor for Norway

Powerscreen, the provider of mobile crushing and screening equipment, is pleased to announce the appointment of Agder Gruppen as its authorised distributor for Norway. Agder Gruppen will join Powerscreen's strong global network of distributors to supply the full range of Powerscreen's crushing, screening and conveying equipment, genuine spare parts, and provide machinery maintenance throughout the Nordic region.

Agder Gruppen is a total supplier to the construction industry in Norway with a head office based in Kristiansand, and service points in Bergen, Trondheim, Flekkefjord, Sandefjord and in the Oslo area. The company has around 100 employees and has a wealth of technical, electrical and mechanical engineering expertise. Stephen McLarnon, Powerscreen territory manager for Norway said, "Agder Gruppen is a welcome addition to the Powerscreen family. Their extensive industry experience and impressive network of service centres means that we can count on them for reliable customer support. Powerscreen has an enviable range of reliable solutions for the crushing, screening and conveying industry; this along with Agder Gruppen's excellent reputation across Norway will contribute towards a strong partnership in the future."

Svein Arne Upstad, CEO of Agder Gruppen said, "We are enormously proud to have been selected as the agent for the well-known brand Powerscreen. Agder Group emerged as first choice in competition with several established suppliers who all wished to represent this strong brand. Powerscreen is one of the world's leading manufacturers of mobile crushing and screening machinery and Agder Group will now become the principal supplier of this brand in Norway. Agder Group will assume responsibility for sales, service and parts sales for the entire range of Powerscreen products. This is an extremely important initiative in Norway and will provide Agder Group with the opportunity to achieve our vision of becoming the preferred full service supplier to contractors in the Nordic countries."



Christophe Sanchez (right) is succeeding Martin Schickel (left).

## Christophe Sanchez replaces Martin Schickel at Liebherr

The Liebherr Group has announced that Martin Schickel is to retire after more than 44 years with the company. He is handing over the reins to Christophe Sanchez as commercial director as of 1 November 2021. Sanchez joined Liebherr-France SAS in 2002 as export manager for Italy, Spain and North America. In 2007, he became sales manager for industrial and electric excavators and from 2012 to 2020 was general director of Liebherr EMtec Italia SpA. On 1 June 2020, he took over the management of Liebherr-Location France SAS from Martin Schickel and now takes over the latter's commercial director role following Schickel's retirement.

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***“At RM, the product is just right, you receive good service and you have the personal contact. I will definitely stay with Rubble Master if I know that I can rely on everything like that,” says Helmut Hauser, owner of Hauser Transporte GmbH.***

**B**ased in Stumm in Zillertal, his ‘RM 90GO!’ is his fourth RM crusher, with Hauser being particularly enthusiastic about the single deck mesh screen and the pivoting refeeding belt. “The mesh screen is easy to operate and can be transported together with the crusher. We simply unload our RM at the job site and can start crushing. In addition, RM crushers are extremely versatile. You can’t do that with other crushers,” says Hauser. The crusher recycles C&D waste, concrete and asphalt around 500h a year, and granite or limestone for another 500h. Hauser entered the processing business in 2001 when the company purchased an RM 80, with this area now accounting for 20% of the firm’s business.

## Excellent service

Günter Prast, managing director of Halbeisen & Prast KG in Dornbirn, tells a similar story. “Service has an extremely high priority at RM, who has had a 24h service hotline since the beginning, something very few suppliers offered 20 years ago. In addition, at Rubble Master someone who knows what they are talking about answers your call; few manufacturers have that either. Every spare part arrives within 24h, which is really sensational. We have a lot of comparisons with products and service provided by other suppliers, which is why we always choose Rubble Master.”

Prast remembers buying his first RM crusher in 1999. That was when he watched RM founder and CEO Gerald Hanisch at a machine demonstration with the

RM 60, which later became Prast’s first RM crusher. Since then, processing accounts for around 50% of the total volume of material handled. The RM crusher is in operation for around 1,000h annually. This spring, investment was made in the latest technology to be able to operate in the mountains with a Euro V engine even though natural stone processing accounts for only about 20% of material handled. Mostly the new RM 90GO! recycles C&D waste and asphalt in the greater Dornbirn area. Business is doing well and in the past four years around 20 new employees have joined the company, which now employs 45 people.

## In action when needed

“I only buy machines that I know are reliable, and everything works in terms of service and spare parts,” says Hermann Dünser from Bizau. As a two person company in the Bregenz Forest region, the reliability of



**Hauser Transporte’s mobile crusher has been ideal for working in the mountains.**

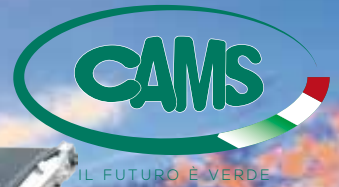
the machines is particularly important to Dünser. Most of his jobs are for private customers, with small commercial companies and municipal operations accounting for around 20% each of business. “If I have to transport 200m³ of rubble and then bring new material to the job site, it costs me too much time. My own crusher makes me more flexible. The Rubble Master crushers are very handy, easy to transport and ready for immediate use. They are also convenient for small business owners like me. If I ever need spare parts, RM always has them in stock and they send me the right part,” says Dünser, who is also extremely enthusiastic about the throughput of RM crushers. “They are awesome. The throughput is unique in this weight class.”

The company states that was the case twenty years ago, and in 2007 switched to the larger RM 80 model before recently upgrading to a previously owned RM 90GO!. Even though Dünser only uses the RM 90GO! for around 200h a year, it pays off. “My depot is quite small, so it is practical if I can reuse material on site straight away, otherwise I would have to pay landfill fees for construction and demolition waste. The crusher enables me to turn this waste into valuable raw material again. RM impact crushers produce high quality material with well-defined edges. This creates a material cycle,” says Dünser. This illustrates one of the key philosophies that has driven Rubble Master since its inception in 1991: namely sustainable materials management using clever crushers and screens to conserve resources and protect the environment.



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## Cutting technology for tunnelling

Cutting technology is playing an increasingly important role in the tunnel projects undertaken by the Austrian construction company Porr and is being used currently during a major infrastructure project in Poland. Porr has been commissioned with the planning and construction of the 16km long section III Bolków-Kamienna Góra of the S3 motorway which will connect the Baltic port of Swinoujscie with the Czech Republic and Austria. One of the most complex engineering tasks is the construction of a 2,300m long twin tube road tunnel which by the end of July 2021 had seen the excavation about halfway advanced.

### Cutting in shale

While there are hard mineral conglomerates in the southern tunnel sections, which are loosened by blasting, soft shale rocks dominate in the north. Here, vibrations caused by blasting could damage the bedrock which resulted in the decision to use tunnel excavators and cutting attachments for the excavation. A total of five cutters are in use in the two northern tube sections: four standard rotary drum cutters from the company's own plant fleet and an EK 140\_800 chain supplied by Kemroc.

According to project manager Norbert Hörlein, the cutters complement each other: "Chain cutters are not comparable with blasting in terms of their driving performance in hard rock. However, where cutting works economically, chain cutters are more efficient in excavation than rotary drum cutters. For scaling, on the other hand, rotary drum cutters are better suited overall. We install steel lattice arches covered with shotcrete as rock support. These are at risk when working with chain cutters because these machines are designed longer and the operator – with a required precision in the centimetre range – cannot see his working area quite as well as with rotary drum cutters."

Norbert Hörlein concludes by comparing the cutting process with the blast free excavation by tunnel excavator and demolition bucket with ripper teeth. "With this method the rock is torn out of the rock mass arbitrarily and with sheer force the rock breaks out in undefined size based on fissure bodies and cracks – a mechanical failure of the rock mass. In comparison, cutters work in a minimally invasive way, like fine medical surgical instruments. They also allow the excavator operator to cut the desired shapes very precisely."

# TYROLIT DRILLING SYSTEM USED SUCCESSFULLY ON UNDERWATER PROJECT

For two months at the beginning of 2021, an artificial lake in Milan, Italy, was the setting for the use of Tyrolit drilling equipment. The task was a demanding one as in a first step, 32 holes had to be drilled and then poles had to be inserted to serve as a mooring point for boats close to the shore. The contractor of the project was Expertagli Aosta, a subsidiary of the Edil Taglio Cemento Group, which is well known for professional drilling and cutting works in northern Italy. For this demanding job, the company decided to rely on Tyrolit

equipment, as it was not feasible to be carried out with conventional machines.

Particularly challenging was the fact that the work had to be carried out in a water depth of 4m to 5m with the visibility underwater being very poor, with another challenge arising from the sediment on the bottom of the lake. For this reason, the use of Tyrolit special tools and machines was decided upon. In total, 32 holes with a dimension of 350mm x 4,000mm had to be drilled. With a capacity for diameters up to 1,000mm and with an optimised drill bit attachment for larger diameters, the DGB1000 drilling gearbox from Tyrolit was the ideal tool for this project. The DGB1000 was supported by the 25kW PPH25RR drive, providing optimum cutting speeds with its four stage control.

The project was completed successfully within two months and the Tyrolit machines proved to be ideal for versatile and complex tasks.



The Tyrolit DGB1000 drilling gearbox proved to be ideal for the underwater drilling task.



In total, 32 cores with a diameter of 350mm had to be drilled for the installation of the docking poles.



DGB1000.

PPH25RR.

## Arjes shredder helps reduce flooding debris

At the beginning of July 2021, Western Europe suffered severe flooding and rising water levels in several river basins. Unfortunately, the floods had a devastating effect in the north eastern Eifel region, where numerous towns and a large number of communities were affected. After the immediate relief and rescue efforts, the main focus of attention continues to be the clean-up and reconstruction of the affected areas which is estimated to take several months.

German company Remondis was given the task of taking over the disposal and treatment of debris and waste in the Bitburg and Vulkaneifel regions. In order to process materials arising from the flooding, the company agreed a rental of an Arjes VZ 850 DK shredder. This was

put into operation at the Remondis Bitburg recycling plant where more than 3,000t of debris and waste from the region has been delivered since the end of July 2021.





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