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CONTINOUSLY CHANGING

EPIROC ER 3000 DRUM CUTTER CLEARS THE (FLOW) PATH INTO THE FUTURE, PAGE 33



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## **IACDS ANNUAL CONVENTION 2023**

IACDS will return in 2023 stronger than ever to serve drilling and sawing professionals. Next year, IACDS will travel to the city which is the epitome of art, romance, and food: Venice, where the IACDS Annual Convention and meeting 2023 will be held from the 25 to the 27 of May. It will be an excellent opportunity to reunite with colleagues and professionals from the industry, with the event open to all professionals, direct members of IACDS, members of the national associations, and other organisations. It will present the perfect opportunity to meet face to face with members and colleagues of the association, talk and participate.

#### **Programme**

#### Thursday 25 May 2023

15:00h - IACDS board of directors Meeting

16:00h - General assembly meeting

19:00h - Formal dinner which will be help at an incredible venue so do not miss this opportunity.

#### Friday 26 May 2023

09:00h - Professional programme

Coffee break

15:00h - End of the professional programme

19:00h - Informal dinner

#### Saturday 27 May 2023

Leisure programme which will provide the opportunity to visit Venice with all it has to offer, this guided visit will be unforgettable.

#### Call for papers

Is your company coming to the Annual Convention? If so you can submit a topic of your choice and be one of the speakers at the upcoming event. All panellists will get their invitation to the convention for free! In order to be considered, please complete the questionnaire which may be accessed at the link below and submit your proposals before 8 February 2023.

To register for the event follow the link https://www.iacds.org/activities/annual/iacds-annual-convention-2023.

www.iacds.org

# Doosan ADT wins 2022 Highest Retained Value Award

The Doosan DA30 articulated dump truck (ADT) has won the EquipmentWatch 2022 Highest Retained Value (HRV) Award for rear dump trucks. This is one of 30 award categories covering construction, lift/access and agricultural equipment. The awards are a culmination of more than 100 analyst hours reviewing and ranking more than 27,000 equipment models. EquipmentWatch produces database information on products for the construction equipment industry and is the world leader in independent, third party heavy equipment research. Beka Nemstsveridze, ADT product manager at Doosan, said: "Our Doosan ADTs are known for their performance, durability and reliability. We are delighted to win this Highest Retained Value award from EquipmentWatch, which confirms for our dealers and customers that they are making the right choice with Doosan."

The latest generation ADTs from Doosan are the DA30-7 and DA45-7 Stage V compliant models. The DA30-7 and DA45-7 have payloads of 28t and 41t respectively. The DA30-7 is powered by the Scania Stage V compliant DC09 nine litre diesel engine providing 276kW of power. The DA45-7 is driven by the Scania Stage V DC13 13I diesel engine with an output of 368kW. Like all Doosan ADTs, the DA30-7 and DA45-7 models feature an articulation hinge positioned behind the turning ring to provide equal weight distribution to the front axle even during maximum steer articulation. This combined with a free swinging rear tandem bogie ensures equal distribution of weight to each wheel and provides permanent six wheel contact and drive



for equal power distribution and performance.

Collectively, the forward turning point, the unique tandem bogie and the sloping rear frame results in what Doosan claims is 'best in class' rough and soft terrain capabilities. The unique body shape and sloping frame ensure equal load distribution on all the wheels. The design of the articulation also provides equal load distribution on the wheels on both the left and right hand side when turning, which is very important for the traction and stability of the machines.

Complementing these standard, 6x6 ADT models, Doosan has now launched a new 4x4 version of the DA45-7 ADT. Intended to compete with rigid dump trucks (RDTs) in the 40t class, the new 4x4 ADT was one of several world premieres from Doosan at bauma 2022. In the new 4x4 ADT, the front truck and cab unit is the same as in the 6x6 models, with modifications being made on the rear dumper unit only. Featuring a ZF EP8-420 transmission, the 4x4 DA45-7 is a two axle ADT with twin wheels at the rear, and with a dumper section similar to that on RDTs in the 40t class.

#### Daniel Lexander appointed Allu dealer manager for South East Asia

Daniel Lexander has joined the Allu as its dealer manager for South East Asia. Daniel studied mechanical engineering and has been working in sales since 2005. Daniel has had various roles primarily based in the Middle East but also in other regions. Daniel has previously worked as a sales engineer, general manager and sales director. In his spare time Daniel enjoys reading, travelling and various sporting activities. Allu is delighted to welcome Daniel to the Allu Family, where he brings a solid sales and management background to the role.

Allu designs, manufactures and sells products for adding value in numerous applications such as processing, separating, sorting, mixing and crushing materials. Typical applications include soil and waste material recycling, processing contaminated soil and transforming waste into usable material. Driven by customer needs, the company has innovated the methods and equipment for

transforming the processes and operations of its customers. The history of Allu goes back for over 30 years and today over 95% of the business is done with international customers globally. The serving network for Allu consists today of its own subsidiaries and a dealer network in more than 30 countries.





### Record attendance expected at German Demolition Association's Fachtagung Abbruch 2023

On 3 March, 2023 the German Demolition Association will hold its annual convention again called FACHTAGUNG ABBRUCH 2023 at the STATION-Berlin, Germany. More than 1100 attendees are expected and around 130 exhibitors at the tradeshow. The tradeshow is open for registration and will be open until 19 December, 2022.

The German Demolition Association's Fachtagung Abbruch is the largest conference and tradeshow for the European demolition Industry. Some 20 key persons will hold speeches during the event. PDi Magazine will of course participate and report from the event that has been postponed two times due to the Covid pandemic.

www.fachtagung-abbruch.de







# **BEST-IN-CLASS EQUIPMENT AND TOOLS**

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# THE ROAD BACK IS CROOKED

Soon another year will have passed and the world is still in a state that we can hardly really recognise from before. The world is on the way back to recovery though, but the road back is not exactly straight, as the pandemic has left large parts of the world behind to some extent. The situation nowadays is manageable thanks to the vaccine, but the war in Ukraine is still ongoing and no one knows for how long it will go on for. This has created great concern around the world, not least regarding the global economy.

Accelerated by the war and the energy crisis it created, the economy of many countries has been transformed and we are struggling with high inflation. Due to the world's economies being much more interconnected than before, any effects in one market spread more rapidly than previously. A global crisis can flare up in just a few weeks and then just as quickly turn into an upswing. So the situation we are in right now may very well look completely different in a few months, it may have worsened or improved.

There is no doubt that our world economy has changed due to the pandemic and the war. A clear example was the mega fair bauma, which was held in Munich in October. Although our industry has started to meet again and more and more trade shows are being held, there is still a sense of restraint. We love getting together again, but many have realised that we may not necessarily need to meet in the same way and to the same extent as before the pandemic. bauma was a wellreceived reunion for many and the attendance was still high. But both the number of exhibitors and visitors decreased by between 15% and 20%.

Although bauma is truly a global trade show compared to many other trade shows that claim to be global, those who had to travel long distances to attend bauma were noticeably fewer than at previous shows. Many of the visitors from Asia chose to stay at home and also those from North and South America etc. However, visitors from across Europe were well represented, perhaps to an even a greater extent than before. In this issue you will find the first report on bauma and its outcomes. However, the scope is so large that we have chosen to split the review into two issues of PDi, this issue and in issue 6-2022, which will be published at the turn of the year.

You will also find a number of other interesting articles in this issue. In connection with bauma, IACDS held its annual meeting and handed out its Diamond Awards 2022. It also took the opportunity to elect a new president in Douglas Walker from the American contractor Walker Cutting Services, who has for many years been active within the American industry organisation CSDA. In this issue you can read his first editorial column. We also report on all the nominees and winners of the IACDS Diamond Awards. Other interesting articles include features

on new machines and tools for grinding and polishing concrete floors, new floor and road saws as well as a report on the Nordic demolition trade show Demcon. Added to these are a series of news articles and worksite reports.



Jan Hermansson Editor-in-Chief jan.hermansson@pdworld.com

## Hilti ranked eighth in the World's Best Workplaces, 2022

This is the sixth time in the past 11 years in which Hilti has received the coveted GPTW recognition. The ranking captures the perspective of both the employees and the organisation, the former accounting for two-thirds of the final score. The employees share their perspective via an anonymous survey (Trust Index) while the organisation reports on a list of key performance indicators (Culture Brief) and undergoes an evaluation of its human resources processes and measures (Culture Audit) conducted by GPTW. To be recognised as one of the best workplaces, organisations must achieve a Trust Index of at least 70% and meet the criteria established in the Culture Audit.

"Our company's caring and performance oriented culture is the foundation of our success. Hilti's business model is built on direct. customer relationships and innovation, so our team members are the key to this success. We are relying on highly engaged, self-motivated and skilled colleagues to do their best every day! It is our deep conviction, and data supports this, that only engaged employees can lead to loyal customers. This is why we cater equally to the bottom line and to the engagement and well-being of our teams. Being recognised as one of the best companies to work for globally is extremely gratifying, as it confirms that we 'walk the talk'." stated Matthias Gillner, member of the Executive Board.

Great Place to Work gains insights from over 100M employees in 90 countries worldwide. This year the global accolades reflect Hilti's ranking on 22 national Best Workplaces lists during 2021 and early 2022. These comprised of Austria, Belgium, Canada, Chile, Denmark, Finland, France, Germany, India, Italy, Mexico, the Netherlands, Panama, the Philippines, Portugal, Qatar, Sweden, Switzerland, Turkey, United Arab Emirates, United Kingdom, and the United States.

The Hilti Group supplies the worldwide construction and energy industries with technologically leading products, systems, software, and services. With about 32,000 team members in over 120 countries the company stands for direct customer relationships. quality, and innovation. Hilti generated annual sales of around €6B in 2021. The headquarters of the Hilti Group have been located in Schaan, Liechtenstein, since its founding in 1941. The company is privately owned by the Martin Hilti Family Trust, which ensures its long term continuity. The Hilti Group's strategic orientation is based on a caring and performance oriented culture and the goals of creating enthusiastic customers and building a better future.

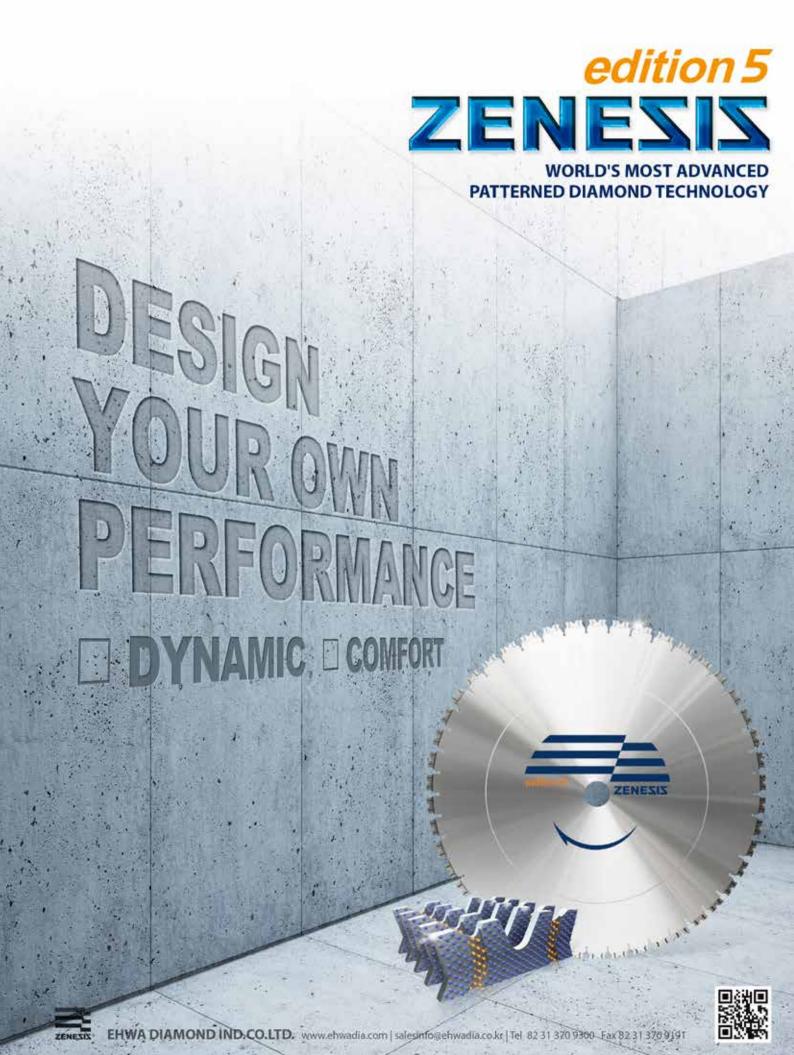
#### Doppstadt to relentlessly pursue growth with a competent partner

In the rapidly growing recycling market, Doppstadt wants to position itself as a leading enterprise and to continue growing. To this end, the company has searched for a strong partner for strategic growth with business synergies.

The growth strategy of the Doppstadt brand, one of Ferdinand Doppstadt's principal holdings under the umbrella of LIG, is proving its worth right now in the present situation. Raw materials and energy shortages, climate change and rising prices offer the potential to enable the acceleration of organic growth and participate in the consolidation of the market. An equal partnership with the financially strong private investor, Custos Vermögensverwaltungs GmbH, allows the implementation of this growth strategy more quickly and consistently, thus strengthening the Doppstadt brand in the long term. Both partners will have a 50% share in the company.

"It was not the economically most attractive offer I chose, but the partner with the greatest business overlaps," Ferdinand Doppstadt explains. Furthermore, Custos Vermögensverwaltungs GmbH is a family run enterprise, which identifies with a long term and rather conservative growth strategy as followed by Doppstadt.

The managers of the group of the Custos companies domiciled in Graz, Austria, are Dr. Wolfgang Leitner and his wife Dr. Cattina Leitner. Dr. Wolfgang Leitner has many decades of experience in strategic business management and development. The chemist (PhD) and manager is one of the most successful entrepreneurs in Austria. Together with Custos Vermögensverwaltungs GmbH, the Doppstadt Group will push on with its strategic growth strategy in the coming years.



#### Words from the EDA President

## European Demolition Association Convention 2023

The dates for the EDA Annual Conven- Gala dinner at the National Maritime tion 2023 have now been set with the city the event. The professional programme of place on the 15 and 16 of June 2023. In addition, there will be a leisure programme for companions of attendees on the Friday the 16 and one for all attendees on Satur-

The EDA is an international reference organisation for the DDR industry with the conference presenting the ideal opthe newest projects and learn from their international colleagues. This edition will be held in collaboration with the Dutch the European Decontamination Institute, EDI. The meeting will take place at the ner being held at the National Maritime

tion about the convention programme the detailed programme, marketing and sponsorship opportunities as well as a great deal more. The programme is outlined below. The EDA is also making a call for papers to interested parties who would like to share information about projects, etc.

#### **Programme**

#### Thursday 15 June

- 19:30 Welcome cocktail party

#### Friday 16 June

Multilingual conference with simultaneous translation at the Corendon Village Hotel

- 9:00h Official opening
- Conference session 1

Coffee break, networking and exhibition

• Conference session 2

Lunch, networking and exhibition

- Conference session 3
- Coffee break, networking and exhibition
- Conference session 4

17:30h – End of the professional programme

Museum (recommended dress code is black tie)

- 20:00h Reception20:30h Museum visit
- 21:00h Gala Dinner

#### Saturday 17 June

Leisure programme to consist of a sightblematic places and discover unexplored

#### Call for papers

If your company coming to the convention, it may be interested in submitting a topic of choice, and if selected, be one of the speakers at the upcoming event. All panellists chosen will be invited to attend for free. In order to apply, please complete the questionnaire at the link below and send in proposals before 3 February

#### About FDA

The EDA was founded in 1978 and is the leading plat-

info@europeandemolition.org www.europeandemolition.org



Stefano Panseri, President of EDA, **European Demolition Association** 



## **PD**i business



## **AQUAJET ADDS DISTRIBUTORS IN BELGIUM, DENMARK AND NORWAY**

Aquajet, a leading designer and manufacturer of innovative hydrodemolition technology, has added three new distributors to its global dealer network.

The distributors include Brokk BeNeLux BV in Belgium, Sihm Højtryk A/S in Denmark and Pump Supply in Norway. As an Aquajet distributor, each offers full sales and support for 'Aqua Cutter' robots and accessories, including sales, training and commissioning as well as service and repairs.

"Just as Aquajet strives for excellence in product design and service, our distributors are committed to providing the best hydrodemolition solutions to meet customers' needs," said Roger Simonsson, Aquajet's managing director. "As aging infrastructure and labour shortages continue to be a challenge, the expansion of our distributor network will help us reach more businesses so they can tackle the toughest hydrodemolition jobs with some of the most versatile and advanced products on the market." The new distributors in Belgium, Denmark and Norway will offer a broader sales network with expertise on the specific hydrodemolition challenges of that region. With a growing drive for automation to meet the challenges of a shrinking workforce, the need for local support and expertise is something Aquajet sees as critical to long term growth and

Brokk BeNeLux BV is based in Tessenderlo, Belgium, and covers The Netherlands and Luxemburg in addition to Belgium. The company is well established in its market as a Brokk demolition robot distributor. By adding Aquajet equipment, customers will now have local access to innovative hydrodemolition equipment for concrete restoration. Sihm Højtryk A/S is located in Esbjerg, Denmark, and covers the Faroe Islands, Iceland and Greenland along with Denmark. The company is a leading manufacturer and supplier of high pressure equipment for the oil, gas, marine and energy industries. The addition of Aquajet equipment ensures that its customers will have access to expansive and advanced hydrodemolition equipment. Pump Supply, located in Solbergelva, Norway, is a major supplier of pumps and equipment for the oil, gas, marine and energy industries. It has gained a reputation for offering high quality, reliable products, and aims to put customer success and satisfaction at the core of its values and philosophy.

"We believe in going beyond the initial sale and serving as a resource to our customers through every step of the hydrodemolition process," Simonsson said. "Whether that means offering ongoing training, troubleshooting problems or supplying parts, our distributors have you covered." Aquajet's global distributor network includes North and Latin America, Europe, Asia, Oceania, Africa and the Middle East. For more information or to find a distributor, visit https://aquajet.se/ contact/#global-dealer-network.

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### **EVENTS**

#### WORLD OF CONCRETE

17-19 January, 2023 Las Vegas Convention Center. Las Vegas, USA

www.worldofconcrete.com

#### BAUMA CONEXPO INDIA

31 Jan - <u>3 Feb, 20</u>23 India Expo Centre, Greater Noida, New Delhi, India

www.bcindia.com

#### **FACHTAGUNG ABBRUCH 2023**

German Demolition Association Convention 2023 3 March. 2023 Berlin, Germany

www.deutscher-abbruchverband.de

#### CONEXPO-CON/AGG 2023

14-18 March, 2023 Las Vegas Convention Center. Las Vegas, USA

www.conexpoconagg.com

German sawing and drilling association convention 23-25 March, 2023 Willingen, Hochsauerland, Germany

www.bebosa.com

#### **SAMOTER 2023**

3-7 May. 2023 Verona Exhibition Centre

www.samoter.it

## **IDA CONVENTION AND**

28-29 september, 2023 Bangalore, India

www.indiandemolition.org

INTERMAT 2024 April, 2024 Villepinte, Paris Nord,

www.intermat.fr

#### DEMCON 2024

Septemb<u>er 19-20, 2024</u> InfraCity, Stockholm,

www.demcon.se

#### **BAUMA CHINA 2022**

26-29 Nov, 2024 Shanghai Exhibition Center, Shanghai, China

www.bauma-china.com



## **Challenging environment affects Hilti Group results**

In the first eight months of 2022, the Hilti Group increased sales by 6.1% to €4,252M

The operating result declined by 36% due to global supply chain disruptions, the Russian invasion of Ukraine, negative currency effects, as well as significant investments into building up the software business. In addition, the results were impacted by strong negative base effects that will level out by the year end.

In local currencies, sales increased by 9.1% with the strongest contribution coming from the Americas (+15.8%). Europe (+7.5%) and Asia/Pacific (+6.7%). The Eastern Europe / Middle East / Africa region (+3.0%) made disproportionally low contributions to the overall growth over the first eight months of the year.

"2022 is an exceptionally demanding year for Hilti due to the challenging external environment as well as a strongly back loaded year in Europe triggered by the launch of our new battery platform 'Nuron' in September.

We are making massive efforts to limit our margin decline caused by the tremendous cost increases in our supply chain while staying the course with strong strategic investments, especially into our software business. With a successful launch of Nuron we expect our results to improve until year end to above 10% growth in local currencies and a profit decline to below 15%. This corresponds to our pre-Corona 2019 profit level before software investments," says CEO Christoph Loos.

Going forward, the Hilti Group expects a diminishing growth dynamic in the global construction market. "We are able to cope with these challenges fairly well due to our healthy financial position and the long term perspective of our shareholder. This allows us to continue with long term investments even in demanding times," closes Christoph Loos.

# **Bobcat** and its dealers

optimistic about African market

Africa as a market is highly important to many global businesses. For Bobcat, this is truer than ever as the African market continues to recover following the Covid-19 pandemic. Nicolas Dumont, district sales manager for Africa comments: "The compact industry is still rather marginal compared to heavy construction equipment in Africa. This is mostly because of the established mentality and the availability of cheap labour. But the potential growth is enormous as Africa will continue to develop. This is reflected in the past few years, when we have launched new products such as our backhoe loader, new mini excavators and light compaction equipment and they are perfect for our existing customer base.

"We are being so active in the dealer network, strengthening existing dealers in certain countries and appointing strong new dealers. As a whole the compact industry in Africa has not yet returned to the level of 2019. At the end of 2021, the industry was still 12% under the pre Covid demand. But if we consider the trend at country level, the reality is extremely different. For example, market conditions have been very difficult in Algeria owing to a range of factors. But when Algeria is excluded, the data shows that the industry in Africa has returned to its pre Covid level. The most significant growth is in the mini excavator segment which exceeded pre Covid levels and is showing a year to date growth of 32%."

Three of the newest Bobcat dealers, Sodim TP in Gabon, Machinery Exchange in Zimbabwe and Albadri Power Co. Ltd in Sudan, echoed Dumont's and other dealers in the Bobcat network by expressing increased optimism in their respective markets.

# New Doosan dealer

Agrimag Rental and Sale has been appointed as the new Doosan dealer for the provinces of Valladolid and Salamanca by Centrocar, the exclusive importer for the Doosan Construction Equipment range in Spain, Portugal, Angola and Mozambique. Agrimaq has extensive experience in the sale and rental of machinery for the construction, maintenance, agriculture and livestock sectors in Valladolid and Salamanca. The company has impressive facilities with 5000 m<sup>2</sup> of covered space and another 12,000 m<sup>2</sup> of open areas for exhibiting and demonstrating equipment.



Oscar Pulido and Agustin Roncero - sales representatives for Agrimag Rental and Sale and Francisco Gamero from the commercial side of Centrocar Madrid.

# MEISTERWERK.













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# The LSM 400 sets new standards in diamond tool production

With the new saw blade laser welding machine LSM 400, Dr. Fritsch aims to reinforce its position as a leader in the diamond tool industry.

ith numerous new technical features, the LSM 400 has been developed to set new standards in diamond tool production and increase the added value for users in the construction industry.

#### New standards in productivity, process and cost efficiency

The laser welded saw blade has been indispensable in the construction industry for more than three decades. The laser welding machine LSM 400 received its global launch at Dr. Fritsch's bauma stand (Hall A1, Stand 432). It replaces the previous LSM 300 generation and is said to set new standards in terms of increased productivity as well as process and cost efficiency. "The LSM 400 is designed for operation with fibre lasers. The combination with a line scanner ensures penetration depths of up to 6mm (with 3kW fibre lasers), a significantly better connection between segment and blade as well as a visually more attractive welding seam. In addition to the increase in productivity, above all, the operating costs are reduced, e. g. through reduced power consumption and eliminated laser maintenance costs," explains Volker Wörn, sales manager, Dr. Fritsch Sondermaschinen GmbH.

Inside the machine, up to four cameras ensure precise monitoring of the machine interior. Two of them are used to check the welding seam on the screen. In addition, set up times are significantly reduced when changing over to other segment shapes. Accessibility of the machine is optimal in all areas, especially for segment feeding and blade loading at the front. Finally, the LSM 400, which was developed in close cooperation with the company Diamond Tools Austria, has a modern design.

#### New benchmark

"An important further development of the LSM 400compared to the previous machine generations is the maximum blade diameter of the blade of up to 2,000 mm. This feature was regularly requested by our customers and previously considered as not feasible," adds Volker Wörn. "Along with the increased diameter the possible segment heights and thicknesses were also expanded. This in turn requires a powerful laser source that makes it possible to weld even thick segments from one side." For example, cutters for laying fibre optical cables can easily be welded with the LSM 400. Furthermore, it is possible to select a specific side clearance for each individual segment. "By adapting the helical axis, we can weld all common helical segment shapes, even for large diameters," states Volker Wörn.

#### Advantages for customers

Thanks to the new and intelligent programming, the operator saves valuable time during set up. With additional (optional) motorised setting aids, infeed belts are controlled fully automatically, which saves time and prevents operator mistakes. "The new programming of the LSM 400, which also performs an automatic calculation of the helical welding path, suggests pre-set parameters, depending on tool dimensions or assists with the parameter set creation. This sets new standards," says Volker Wörn. The graphic panel ensures maximum clarity of operation. During development, Dr. Fritsch placed special emphasis on the protection of sensitive machine components. Optimally placed protection and suction systems have reduced process related dirt and fumes to a minimum. "In addition, we are preparing a laser power measurement, a segment strength test unit and a marking station. These will be available as options," concludes VolkerWörn.

# Dr. Fritsch: technology leader for laser welding machines

Dr. Fritsch is the world market leader in the diamond tool industry. The innovative company has a unique selling point in the industry: the combination of manufacturing know-how and expert knowledge of material production. PDi spoke to Uwe Funk, head of development at Dr. Fritsch Sondermaschinen GmbH about the development of laser welding machines.

#### PDI: Uwe, please briefly describe the advantages of the new LSM 400 blade welding machine from Dr. Fritsch for users in the construction

Uwe Funk: "The LSM 400 is the fourth generation of laser welding machines from Dr. Fritsch. The most important advantages are the wide range of tool dimensions that can be welded, the very good operability of the machine, the short set-up times when changing segment shapes and the very high productivity. I would also like to point out the modular design of the machine, which enables us to respond to individual customer requirements and the energy efficiency of the fibre laser technology."

#### PDI: For more than three decades laser welded blades have been indispensable in the construction industry. How did this development come about?

Uwe Funk: "In 1989, when Dr. Fritsch launched the first laser welding machine LSM 800, the rather conservative industry reacted quite sceptically. Until that time, brazing had been the common method of attaching segments to the blade. Dr. Fritsch, however, continuously developed the laser technology and launched the second generation of innovative laser welding machines in 1998. Almost 100 units of the LSM 240 were sold and many of them are still in daily use at our customers. The next development step was the LSM 300, introduced in 2009. This machine particularly impressed with its robustness and several new features."

#### PDI: What about the application in other areas, like the stone industry?

Uwe Funk: "The development of laser welded tools for the stone industry is progressing more slowly. However, there are signs of change. After all, laser welding as an alternative to brazing offers considerable potential for cost saving and automation. With the development of the LSM 400 and its advanced features Dr. Fritsch is well prepared to meet the requirements of the construction and stone industry."







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## Bobcat machines and new tech at bauma 2022

At bauma 2022, Bobcat presented a display of new and existing equipment on the company's stand.

Scott Park, Doosan Bobcat CEO, commented: "As the world's leading construction machinery trade fair, bauma provides a truly global forum for Bobcat to present the most advanced innovations in our industry today, as well as the possibilities that lie on the horizon. We are excited to show how developments in Bobcat machinery and technology continue to overcome even the toughest challenges for our customers."

#### Innovations and concepts

Bobcat used bauma to showcase an array of innovations from the fields of electrification, autonomy and connectivity. "At Bobcat, we never develop technology purely for the sake of bringing something new to market," Scott Park added. "On the contrary, we only ever greenlight innovations that deliver meaningful and practical benefits for our existing products and technologies, which is exactly what our operators have come to expect. Bobcat customers are among the most inventive and skilful people around, which is why they demand world-class solutions. They are the pioneers; our mission is simply to develop tools that enable them to break new ground." To this end, Bobcat showcased innovations/ concepts including: the T7X, the S76 skid steer loader and selection of transparent display concepts.

#### New product launches

In addition to upcoming innovations, Bobcat's stand

featured a host of developments from the manufacturer's line up of machinery and attachments. Models receiving their bauma debuts included the E19e, Bobcat's new 'GME' ground maintenance equipment range, the TL25.60 telehandler, and the S86 and T86 compact

Bobcat also expanded its 'R-Series' range of telehandlers with the launch of the new 'super compact' TL25.60 model. Designed for simplicity of use, the TL25.60 offers stability, comfort and safe operations across a range of applications.

Of the S86 and T86, John Chattaway, loaders product manager at Bobcat, commented: "The S86 and T86 follow on from the very successful introduction of the smaller S66, T66, S76 and T76 loaders. One of the most exciting new aspects of the S86 and T86 is that both machines offer a choice of three different auxiliary flow outputs. Their standard flow configuration provides 87 l/min for load and carry applications involving low hydraulic flow attachments. Those who require extra performance can select from two additional functions that make use of our new electronic displacement control (EDC) pump: a high flow function that delivers 138l/min and an industry leading super flow function, which increases the auxiliary flow to 159 l/min."

#### **Doosan Portable Power**

Doosan Portable Power (DPP) launched its G100 Stage V compliant generator. Providing a prime power output of 100kVA, the new model is powered by a Cummins F3.8 82kW diesel engine. Despite featuring an identical footprint to its predecessor, the Stage V G100 offers improved performance in most areas, including customer connections, autonomy, fuel consumption and noise levels. Thanks to its Cummins engine, service intervals have been extended to 1,000h and the risk of engine issues at low loads has been eliminated. The G100 is also compatible with hydro treated vegetable oil (HVO), also known as renewable or green diesel, further reducing emissions.

# 'BLUE AIR'

Blue Air is a new Dynaset product family of hydraulic compressors comprising of 'HK' hydraulic piston compressors and 'HKR' hydraulic screw compressors. They have a new design and improvements for an even longer product life. The new features Dynaset has introduced includes oil free models developed to produce cleaner air and models with 13bar pressure. Production is set to start in 2023, with the Blue Air compressor family being introduced at bauma 2022.

Blue Air HK hydraulic piston compressor The HK 450 and HK 1000 models have new features along with a new look with structure paint which has been developed to give better resistance for hard usage. The HK 1000 will have a new frame with less welding points which is designed to increase the frame durability. The K 450 also includes oil free models for a more versatile range of applications, and installation is no longer limited or the operating angle constrained due to the oil free technology. The oil free compressor is said to be easier to maintain as it doesn't require an oil change. The oil free compressors are designed to produce a cleaner air flow.

Blue Air HKR hydraulic screw compressors Dynaset is also introducing three new HKR hydraulic screw compressor models producing 13bar pressure in addition to a large selection of screw compressors.

www.dynaset.com



# New 'HMG Pro' hydraulic magnet generator with smart features

The new HMG Pro hydraulic magnet generator series from Dynaset now includes smart features. The new magnet generator versions have updated design and functionalities called 'Dsmart'. The magnet generators are said by Dynaset to still have the world's fastest demagnetization time (the company says less than one second). In addition to Dsmart functions, the magnet generator frames have been significantly reduced in size. For example, the HMG Pro 20 is about half the size of the previous model but still maintains its power level. Since the frame sizes have shrunk significantly, the new magnet generators are easier to install on machines. The new models were introduced at bauma 2022 and production is set to start in 2023. The new magnet generators can be equipped with the Dsmart control which is a mobile application which allows users to adjust the magnet generators and monitor their performance, with Dsmart providing data regarding magnet generator usage. **www.dynaset.com** 



# WACKER NEUSON GROUP ENJOYS A SUCCESSFUL BAUMA 2022

Under the motto 'Meet the Future!', Wacker Neuson and Kramer welcomed guests to their 5,000m<sup>2</sup> stand.

"After more than two years of pandemic, we were particularly looking forward to bauma," says Alexander Greschner, chief sales officer of the Wacker Neuson Group.

#### The complete zero emissions package

Visitors to the 'Meet Green' section of the stand were able to find out about the zero emission offering, which was expanded at bauma to include a number of machines and services. "With our zero emission portfolio, an entire inner city construction site can now be operated with no local emissions," explains Alexander Greschner. Amongst the latest developments in this section was the new TH412e electric telehandler, the RD28e electric roller, a charging box for mobile power supply, and the very compact DT05e dumper. 'Battery One' was also presented, a standardised and user friendly battery system that focuses on carbon free and sustainable use of construction equipment. The battery can be used in construction equipment from other manufacturers.

Another highlight was the reversible battery plate APU3050e with the 'DireX' direct drive which ensures efficiency and longer runtimes. In addition, the third generation of the WL20e e-wheel loader with a lithium ion battery was unveiled. Kramer also showed innovations in the zero emission sector including the 5065e electric wheel loader and the 1445e E-telescopic handler.

#### **Practical solutions**

In the 'Meet Innovation' area, the very latest developments were shown. One highlight was the Wacker Neuson EW100 wheeled excavator. This has been designed with a focus on safety thanks to its excellent sightlines and stability. The 10t excavator is said to be equipped with powerful drive hydraulics and high basic working capacity enabling it to perform tasks that would otherwise require a 14t excavator. Another innovation was the 'Dual View Dumper' DV45, the smallest Dual View model. The electro hydraulically rotatable cab can now be rotated 180° forwards and backwards and 90° to the side at the touch of a button. In this 'Multi View'

mode, the DV45 can also be driven with the cab turned sideways. Wacker Neuson also showcased other developments including the 20kg BH40 gasoline breaker.

Kramer presented its full range of all wheel steering wheel loaders and telescopic loaders and, as a highlight, the fully hydraulic 'Smart Attach' system. With this, attachments with hydraulic auxiliary functions, such as a sweeper or folding bucket, can be coupled and uncoupled in seconds without the operator having to leave the cab. Operation of the system remains simple and is carried out via the joystick directly from the cab. Kramer states that the system enables existing attachments to be used thanks to the consistent dimensions of the quick change plate. The attachments also fit corresponding Kramer wheel loaders in the existing portfolio. In addition, the Kramer telescopic loader series for payloads between 3t to 5.5t received a facelift for bauma.

#### Benefits through digitalisation

Visitors learned how digital solutions bring greater efficiency and transparency to the construction site under the heading 'Meet Connectivity'. One example was the new assistance system for concrete consolidation – 'ConcreTec'. This enables concrete components to be compacted easily and transparently and in high quality in a reproducible manner. Wacker Neuson also presented the cloud based software solution 'EquipCare Pro'. This enables customers to manage, schedule, and evaluate all telematics based machines, implements, and construction site equipment regardless of manufacturer or brand, thus boosting the productivity of their machine fleet.

Also exhibited was the mixed reality 'Smart Glasses' which have already been implemented for real world use in South Africa since the beginning of the year. When a customer needs help, the dealer's service technician, equipped with the Smart Glasses, can connect live with the experts and share the view of the machine or transfer the support screen to the glasses. Digitalisation also plays an important role in the development of machines with the new EW100 wheeled excavator having an intelligent attachment management system that supports the operator during attachment changes.





#### WORLD PREMIERE FOR GOLDHOFER 'FT' SERIES AT BAUMA

Goldhofer Aktiengesellschaft has reported high levels of interest in its new products at bauma which included the FT Series, the 'Stepstar' and the 'Cargoplus'low profile tyre.

Other lines that showed high levels of interest at bauma were demonstrations of the 'PST/ SL-E' split combination with the FTV850 blade transporter. "bauma 2022 once again did justice to the event's high standing in the industry," says Robert Steinhauser, vice president sales & service Transport Technology at Goldhofer . "With the presentation of Goldhofer's latest world first in the form of the FT Series we have definitely hit the bull's eye and introduced a vehicle that will change the transportation market for years to come. Universal combinability with existing Goldhofer modules and accessories means lower acquisition costs and opens up new business models in the field of cooperation with partners and cross rental activities.

There was also much interest shown in other Goldhofer solutions presented at bauma including the 'Arcus P6'. Visitors were said to be particularly impressed by the self-tracking trailing dolly combination for transporting concrete beams and other long items and can also be converted into a wind turbine blade carrier in conjunction with 'Blades'. This again results in a much wider range of applications and a faster return on investment. The biggest crowd puller of all, however, was the PST/SL-E split combination demonstrated in combination with the new FTV 850. This solution gave an impressive demonstration of the fact that the decisive factor for blade transportation is not metric tons but lateral stability.

"Once again, bauma has been the perfect opportunity to meet with proven experts in the construction industry and talk about new transport solutions. The discussions held are mutually stimulating and lead to new ideas and approaches for innovative solutions, whose results we hope to present at bauma 2025," says Matthias Ruppel, CEO of Goldhofer AG.



There weren't so many new products introduced at bauma this year but there were a number of new models for grinding, polishing and cleaning surfaces.

very year we publish our special feature on new concrete floor grinding and polishing equipment in PDi 5. With the bauma show just a few weeks ago, one could expect that there would be more new developments on the market introduced at bauma. But in general, the flow of new products was quite low at this year's show. But in this feature we are able to introduce some of the latest from manufacturers. With a big focus on battery power, one could expect to find some new battery driven floor grinders launched at bauma, but perhaps the industry is not ready for that yet with the current battery technology unable to provide that power.

#### **News from Airtec**

Swiss manufacturer Airtec introduced two new products. First out is the new diamond drum concrete shaver 'Shave Master SM-320'. The new shaver is equipped with a switch box with an on/off button, emergency stop and a control for the supply voltage. It has a speed control for power forward and reverse and has a variable drive speed between 0-4m/min to 5m/min. It is equipped with a single level for drum engage quick lift. The cutting depth can be micro depth measured for fine tuning of the depth of the diamond drum. It is said to have a unique wheel transmission and drive for on spot U-turns. The hydrostatic drive unit is completely sealed and the machine has a full safety operating unit with a security switch. The shaver has a built in vacuum connection for a close to dust free operation.

The second development is the BS-270 floor grinder for the removal of coatings, glue and adhesives. It is also suitable for cleaning dirty surfaces, built up concrete, asphalt or wood panels. It has also been developed for abrading latex, mastics, sealers and adhesives as well as smoothing rough concrete surfaces and rain marks. Airtec states that it is ideal for levelling high spots on concrete floors. It also has a unique floating system for



particularly difficult jobs. It is easy to transport thanks to its light weight and compactness. It is sturdy and has a heavy gauge steel construction. It is equipped with a vacuum cleaner port for dust free operations. The handle may be elevated and the machine has a detachable dust shroud for easy grinding of wall edges or vertical surfaces. The machine's working width is 270mm and the speed is 1,500rpm and it weighs 57kg. As an option it can be equipped with speed regulation.

The BS-270 is equipped with the unique and patented Airtec 'Flipair' system. This system causes a suction effect during the grinding process due to the rotation of the tool plate. The suction effect generated significantly increases the air flow and at the same time the fine dust is directly captured from the diamond tools and the grinding surface. The increased flow orientates the dust exhaust air towards the industrial vacuum cleaner, prevents overheating of the diamond tools and at the same time reduces frictional heat. Thanks to the clean, dust free floor surface, the diamond tools produce a better sanding performance with a longer service life. The significantly increased exhaust air also prevents the dust particles from escaping sideways. The innovative and sustainable dust solution also ensures greatly improved air quality for the user and the surroundings. The Flipair assistance system is part of Airtec 'Dust-Away' technology line. BSs-270 is available with or without the Flipair system.

www.airtec.ch

#### Dynaset 'SCU' surface cleaning unit

Dynaset is getting in to the surface cleaning sector by launching the Dynaset SCU surface cleaning unit. The SCU attachment cleans parking garages and other large areas with flat surfaces. The unit washes the surface with high pressure water and the vacuum collects the dirty water for recycling. The unit leaves a clean and dry surface behind without making any mess to the surroundings. Users are said to able to clean up to 60,000m<sup>2</sup> per day. The unit is safe to use due to a splash cover and is able to easily can clean around cars, windows or any objects without any fear of dirtying or damaging them. The unit's vacuum can collect over 90% of the washing water. Additionally, it is possible to use the unit to collect, for example, rain water from surfaces. The unit makes surface cleaning extremely efficient, with optimal washing results even at 5km/h. The attachment is said to be ideal for cleaning parking garages, car parks, terminal areas, large factory floors, paved market areas, boulevards, logistic areas, paths and pavements, mall surroundings, storage areas, large indoor areas, tradeshow areas, etc.

The unit has a maximum operating speed of 5km/h. The water pump's output is 50l/min, maximum water pressure is 220bar and the working width of the unit is 150cm (whilst weighing in at 720kg).

The water tank has a capacity of 540l/min, the vacuum is 8kPa and the airflow is 3.4m<sup>3</sup>/s.

#### www.dynaset.com

#### New surface products from Husqvarna

Husqvarna Construction has launched the first wave of its rebranded Blastrac and Diamatic surface preparation product range. Since 8 June, the fully integrated offering, including floor scrapers, scarifiers and floor grinders, is available to order in all key markets.

The acquisition of Blastrac was completed in January last year and it was late in 2021 that Husqvarna Construction publicly announced its intention to further consolidate brands in the surface preparation segment with a supporting campaign labelled, 'The Orange Evolution2'. "We have showcased our rebranded product range at multiple trade shows, it has been very well received and we are really happy to announce that we are now ready to start delivering to our broad range of customers in the surface preparation industry," says Stijn Verherstraeten, senior vice president Concrete Surfaces & Floors, Husqvarna Construction.

The additional offering has considerably enhanced the existing Husqvarna surface preparation portfolio by bringing advanced shot blasting, scraping and scarifying solutions to Husqvarna customers and partners. In turn, Blastrac customers and partners now have access to adjacent products such as compactors, concrete placement equipment, sawing and drilling equipment as well as demolition robots and a wide (digital) service offering. "We are extremely proud to provide our customers with what is most likely the best and broadest surface preparation range in the industry and all of this under one strong brand," says Stijn Verherstraeten. With this first wave of rebranded Blastrac and Diamatic products, Husqvarna has further shaped and complemented its offering for floor grinding, scarifying and scraping.

At bauma 2022, Husqvarna Construction showcased some of the products that will be part of the second wave, targeted for introduction in spring 2023. This will include shot and steel blasting solutions and associated dust extractors. Steel shot blasting goes broader than just construction and is a cost effective and efficient



solution for paint removal and surface remediation in applications such as windmills, ship decks and petrochemical storage vessels. Until 2023, these products will continue to be available under the Blastrac brand. Along with the extended surface preparation offering, Husqvarna Construction featured its new high capacity ride on grinder, BMG 1500. With a working width of 1,500mm, it has been designed for large scale grinding projects, where high performance and time efficiency is of the essence. The grinder has an ergonomic design and is easy to operate using joysticks, push buttons and a touchscreen.

#### www.husqvarnacp.com

#### New radio controlled grinder from Klindex

The new 'Expander 1000' from Klindex has been designed to grind on wide surfaces remotely. The radio controlled floor grinder is fully automatic and features six counter rotating heads, variable speed and adjustable work pressure. The model features autopilot technology and a gear box with thermos hardened steel gears. It comes with traction batteries, and features automatic tilting for an easier tool change. Other features include an automated tool change system (the head rotates 90° allowing the operator to change the tools without having to lift the grinding machine); adjustable work pressure from 500kg to 1,350kg and a metal gear system



within the 'Planetario' head without a belt drive. The 380v-480v model weighs 1,347 kg with dimensions of 170mm x 150mm x 105mm.

## Scanmaskin launches new model in 'Move Edition' line

The Swedish manufacturer launched a new model to its 'World Series' Move Edition line at bauma, the Scanmaskin 28, which has a 700mm grinding width. Previously the company introduced the Scanmaskin 32 with the Move Edition being Scanmaskin's most ergonomic floor grinders. This is a further development of the World Series line which features a robust cast planetary with what the company says is unmatched durability. The simplistic design allows for easy and quick repairs on common service items, enabling fast



## **PDi** special feature



movement. The Move Edition features a new handle with two adjustment points and 360° degrees of rotation on the hand grip. This also enables a good hip support along with high and low positions to accommodate any operator. The new motor also is said to weigh less without compromising performance. The detachable new front wheel also reduces weight when removed and provides improved ground clearance and makes it easier to move. The company has updated the wheels to ergo solid wheels with a larger diameter which provide up to 40% less resistance when moving the machine. The goal with the new Move Edition grinders was to make contractors' workday easier and less strenuous, without compromising performance.

#### www.scanmaskin.com

#### **News from Superabrasive**

The Bulgarian-American manufacturer Superabrasive used bauma to introduce its latest developments. The new additions to the 'Lavina' line at bauma included the updated single head grinder L14EU and slurry vacuum V16EU. L14EU is a compact and versatile 335mm grinder that can grind and polish edges and small areas. It is single phase, 200v-240v model, with a 2.2 kW motor and variable speed. It weighs 63kg and

can be separated in two pieces for easy transportation and storage. The V16EU is a dry and wet vacuum, providing strong suction to complete a variety of clean up tasks on the job site. It features a stainless steel body with a 50l tank, automatic overfill shutoff, and washable hydrophobic filter. An optional slurry squeegee is available for vacuuming liquid and slurry.

#### www.superabrasive.com

#### Tyrolit focuses area floor grinding

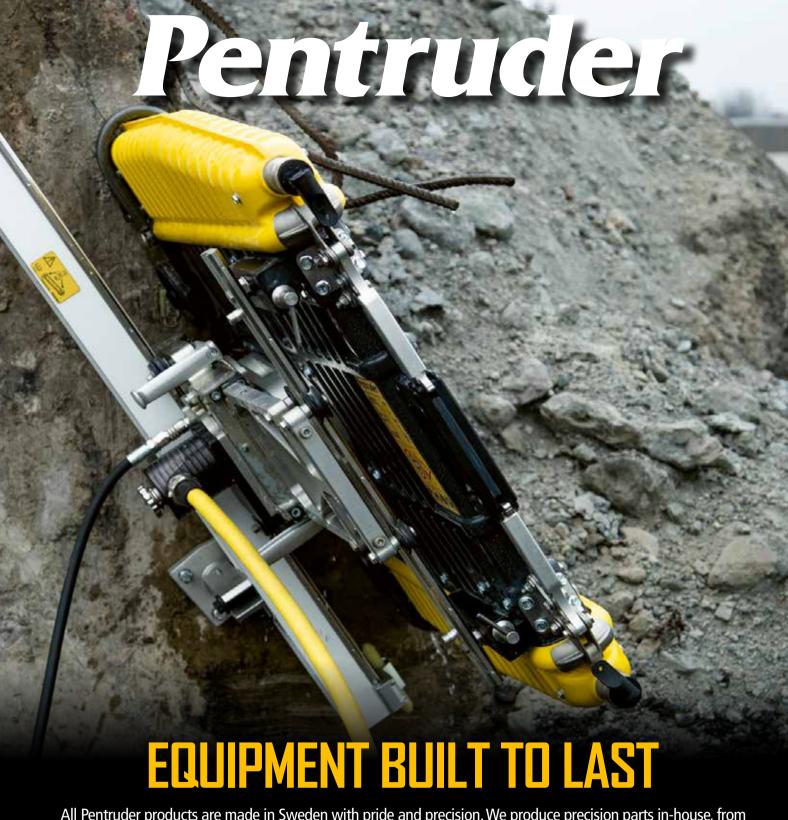
As PDi mentioned in the special bauma issue Tyrolit is working on a complete in-house product range for floor grinding. Thus several innovations with this focus area were presented at bauma. In the future, customers will be able to choose from a wide range of coordinated floor grinding products. In addition to classic floor grinders and corresponding tools, the assortment will also include chemicals, various machines for removing surfaces and coatings, special vacuum cleaners and polishing tools. The offering at bauma included newly developed floor grinding machines such as the FGE515 and FGE280 floor grinders for floor preparation and polishing, as well as a range of brand new metal bond floor grinding shoes. Tyrolit also released the stoft extractor VCE1200.

www.tyrolit.com

#### VonArx introduces large concrete shaver DTF35

VonArx, founded in 1941 and now a leading global market player in surface preparation equipment launched a large concrete shaver at bauma 2022. In 1989 the first shaver, DTF25, was launched and has become very popular in the global market. The new DTF35 has been developed following customer requests and demand for a machine that can cut deeper and faster. The DTF35 comes in two versions in 400v, 15kW and 22kW. The 15kWversion can be supplied by a 32amp connection and the 22kW with 63amp. In addition, there is a U.S version in 25kW 480v power. The shaver can cut up to 2.5cm deep and 35cm wide. When cutting only 5mm to 6mm, the shaft can be fully utilised for a 40cm cutting width. The hydraulic drive system has been designed to secure durability in dusty and wet environments. Two series of diamond blades are available: the 'Blue' series for regular/medium concrete and the 'Yellow' series for hard concrete. Different blade set up configurations are possible and for a 35cm cutting width a 98pcs blade set up with 2mm spacers can be offered, which is designed to provide a very smooth structure of the surface. VonArx has for some time been manufacturing in Bulgaria.

www.vonarx.com



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# Genesis and NPK together at bauma 2022

For the first time Genesis GmbH presented hydraulic attachments together with NPK Europe on a stand of almost 600m² at this year's bauma. NPK, one of the world's largest manufacturers of hydraulic attachments for all types of carriers, gave an insight into its product groups for the demolition and construction industry. These included hammers, crushers, pulverisers and grabs for demolition work in different dimensions. According to the Genesis motto 'Promise of Performance', its entire product range of high quality and reliable hydraulic attachments for scrap, demolition and recycling was also presented to trade visitors and customers.

#### Powerhouse in focus

The focus of the stand at the world's leading trade fair for construction machinery was on being impressive; it featured the 5m long Genesis XT 995 scrap shear which has a total weight of 8.9t. Due to its power to weight ratio, the GXT 995R is said by the company to be a real powerhouse and provide the ideal fit for various applications from ship wrecking, large steel demolition projects and scrap processing.

#### **Demolition and demolition multi shear**

Genesis' demolition focus included various models from

the Genesis GDT demolition shear range and the latest model in the Genesis family, the 'Razer X' demolition multi shear. The Razer X demolition multi shears are specifically designed for the demolition and recycling industries and their special requirements. The shears have three jaw sets that are designed to be changed in less than two minutes without assistance and without the excavator operator having to leave his cab. The user friendly multi shears are available for excavators from 20t to 50t.

#### **Graffiti live performance**

The attraction at the stand that pulled in most visitors was the 'art-shear'. The Genesis XT 665R formed the canvas for a live graffiti art performance on the booth and was turned into a piece of art. The motif of the artwork, a koi fish, was chosen to symbolise not only strength, prosperity and a long life, but also luck, longevity, endurance and courage (depending on the presentation of the fish). It was chosen to represent how proud Genesis is to be part of Nippon Pneumatic Mfg.Co.LTD - NPK.

## Environmental protection and emission reduction

The art-shear aims to also convey the ecological aspect clearly. The use of scrap shears saves emissions and CO2 and is a clean alternative to flame cutting. Genesis scrap shears are therefore not only ecologically advantageous but also provide benefits in terms of economic efficiency. When cutting instead of burning is chosen, this not least also protects the employees, because the emissions produced during cutting do not only harm the environment or endanger health.

www.genesis-europe.com

# WHAT A WASTE

C&D waste contributes to over 600Mt of waste each year. If all this waste were put into trucks, it would circle the world three times. As can be seen, C&D waste is an enormous problem that needs to be reduced without reducing the tonnage.

Recycling provides a simple solution but this is much easier said than done. Recycling even the most recyclable material can be costly and laborious. At times it may require specialised equipment or cost more than simply disposing of it. MB Crusher is well aware of these obstacles and has aimed to make a difference in recycling/upcycling reusable material. As so, the company has dedicated its approach to building attachments that can help tackle these obstacles with units that can create new materials out of existing reusable materials.

For example, one customer in the US, a large concrete manufacturer, needed a solution to handle its ever growing waste concrete stockpile. The company knew there was money to be made in recycling the waste concrete but only wanted to invest a manageable amount of money in new machinery. It turned to MB

Crusher for the solution, purchasing a BF135.8 crusher bucket which rapidly began to eat away at the stockpile by crushing it directly on site. The customer not only kept many tons of concrete waste out of landfills but also turned the now recycled material into a new revenue stream.

Concrete in itself may not be the most challenging material to recycle, but reinforced concrete can be more problematic. It involves double the materials that can be recycled but the obstacle of doing so also doubled, as reinforced concrete can create a many problems when recycling, let alone separating, unless the right tools are available. A customer purchased a BF90.4 crusher bucket which was used to process reinforced concrete by crushing the concrete off of the rebar and then separating them, simply and quickly, and only using the excavator already owned.

Other challenging building materials include bricks that are recyclable, but require extensive processing. Similar to the example above, brick recycling can be easily accomplished with the right tool. An MB Crusher

customer purchased a BF120.4 crusher bucket turning the company's excavator into a recycling centre, crushing the stockpile of bricks directly on site.

MB crusher offers a variety of attachments that can help its customer base overcome the obstacles of repurposing C&D waste. The company focuses on creating viable, cost effective, and, most importantly, simple solutions. It does this by making sure the attachments work on its customers' job sites with the heavy machines they already own.



## **PD**i site report



# New Hilti wire saw cuts four bridge abutments in South West Canada

Andreas Kuelz from Canadian Cutting & Coring, a concrete cutting division of Pacific Concrete Cutters Ltd, has used Hilti concrete cutting equipment for work done in British Colombia in Canada.

Canadian Cutting & Coring was hired by Hanna Infrastructure to wire saw four bridge abutments on Highway 3, east of the small town of Hope in British Columbia. This is located in the far southwest corner of Canada, sitting almost on the border to the USA and very close to Vancouver. The precise location of the site was Highway 3 and the Cambie Creek bridges, Manning Park, British Columbia.

#### Purchase of a new Hilti DSW 1510-CA

For the job, Canadian Cutting & Coring's estimation and operations manager Andreas Kuelz decided to purchase another wire saw for the company. "The high demand for the wire saw work and the fact that our Plattner saw needed a major overhaul made us decide on purchasing a new Hilti DSW 1510-CA", says Kuelz. "Hilti managed to deliver the new saw to the job in just 10 days, which is quite impressive in the times we are experiencing in these days."

The crew members Chris Beaudoin and Giacomo Ceccolini mobilised to the site on a Monday and cored the holes required for the wire. On Tuesday morning Hilti's 'Heavy Diamond' specialists Rick Russel and Diana Surwilo joined the team to show them the new features on the wire saw. Hilti spent the day onsite with the Canadian Cutting & Coring crew to make sure every detail had been covered.

#### **Good cooperation**

Andreas Kuelz says that for him it was very helpful to learn about the new equipment from Hilti directly on a site. "On sites like this everything must run very smoothly. There is no cell phone reception in a remote place like this. One satellite phone for emergency calls and delivery's to site turns out to be costly due to the remote locations," says Kuelz. The Canadian Cutting & Coring crew finished the four abutments on the following Saturday afternoon. Each abutment was also cut into three sections to the end client's satisfaction. Each abutment measured 11m long and with 1.3m depth, being cut to a 20° angle.

www.cancut.ca





# **Golden years** for Gallagher Group

As Hitachi Construction Machinery (Europe) NV celebrates its 50th anniversary this year, one of its loyal UK customers will soon reach the same milestone. Over the last 49 years, Kent based Gallagher Group has become one of south east England's leading building, civil engineering, quarrying and property development businesses, employing more than 500 people.

A Hitachi customer for more than three decades, Gallagher Group has invested in hundreds of machines over the years. Today, its fleet for construction and civil engineering projects comprises of more than 100 models ranging from 3t to 35t. In addition, the quarrying part of the business utilises seven medium and large excavators from 35t to 85t. The roots of the company extend back to a small groundwork contracting business established by Pat Gallagher in 1973. Now chairman of the Gallagher Group, he explains the reasons why he has continued to invest in Hitachi construction machinery: "Firstly, I look at residual value, you can sell Hitachi anywhere in the world. Second, reliability; you turn the key and it performs. Third is driver comfort. Hitachi scores highly on all three."

#### Reliable partner

The company keeps its new machines until they reach 8,000h and then trades them back for new models approximately every three years. It has developed a strong working relationship with representatives of Hitachi Construction Machinery UK as Pat testifies: "What they say they'll do, they do. That's all we need. And when you have a problem, they are there to help you." People are also vital to the successful growth of the Gallagher Group over the last 49 years. "We employed some of the best people in the south east of England, and we still do today. That's been the foundation of this business and its success at every level."

Looking back, Pat is proud of what they have all achieved together: "We started at zero and we have come a long way. I wanted the very best of whatever I was involved in. I've still got that ambition to be the very best at everything we do. We have an expression within the business: 'Excellence Delivered.' I still want to be excellent and 50 years on, it's even more important to us. Now I'm looking to the next 50!"



# EUROPEAN MANUFACTURER OF DIAMOND CORE DRILLS







# **HYUNDAI LAUNCHES MINI EXCAVATOR RANGE AT BAUMA 2022**

Hyundai Construction Equipment has updated its mini excavator offering with the launch of a comprehensive range of award winning EU Stage V machines. With operating weights of 1.7t to 5.5t, the 'A Series' mini excavators have been designed to deliver lower emissions, increased hydraulic capabilities and improved operator comfort.

Features found on the range include the Prestigious Red Dot Design Award for distinctive 'Tiger Eye' design language and a load sensing hydraulic system for models over 4t. All models have proportional joystick controls as standard, along with quick coupler piping and safety valves on boom, arm and dozer blade cylinders. The large quiet cab (on models over 3.5t) is said by the company to provide excellent service access

Four of Hyundai's comprehensive range of eight machines, were shown at bauma. The introduction of these models will complete Hyundai's range of 11 compact excavators, from the smallest 1t HX10A micro, through to the versatile HX85A, which competes in the 9t-10t segment when equipped with a two piece boom.

As part of the new range, the HX35A Z, the HX40A and the HX48A Z have been recognised as winners of the Red Dot Design Award from Design Zentrum Nordhein Wesbalen in Germany. Centred around the Tiger Eye lightning theme at the rear of the machines, the excavators have also been praised for their eco-friendly features and ease of operation. All Hyundai mini excavators benefit from an EU Stage V compliant diesel engine, reducing exhaust emissions and boosting fuel economy for the customer.



# **New mechanical couplers**

Bobcat has extended the company's quick coupler portfolio with a full selection of new mechanical pin grabber systems available for the entire Bobcat mini excavator line up. They are said to be ideal for use in many applications including construction, rental, roadwork, landscaping and agriculture.

The new mechanical couplers offer increased comfort and productivity, with a single visit design to help operators change between attachments quickly, easily and safely on the jobsite. Coupler systems like this can convert mini excavators into tool carriers, enabling the operator to switch between buckets and a wide range of other attachments within minutes, thereby maximising efficiency and output.

As well as speed and versatility, the reversibility of the new couplers allows operators to work closer to walls or under pipes. Pin on attachments are also simple to attach, an attractive feature for rental businesses and their customers, increasing the adaptability of machines and the return on investment.

Thanks to the hook shaped engineering design of the coupler, the bucket does not fall when unhooked. A perpendicular lock system ensures there is maximum safety when working with Bobcat mini excavators.

The proven and tested design offers peace of mind as there are no greasing requirements and very few moving parts with no maintenance requirements (other than a daily inspection), ensuring, says Bobcat, that these are hassle free couplers. The open and simple design is meant to work in mud thus material does not get trapped in the system and block the mechanism. The mechanical pin grabber couplers are manufactured using extra high strength steel increasing durability, while optimising weight and the mini excavator's performance.

### **HUSQVARNA CONSTRUCTION EXPANDS ITS BATTERY RANGE**

With the DM 1 'Pace', Husqvarna Construction has expanded its offering to customers needing battery powered products to do heavy duty jobs. This includes the recently developed battery core drill, which is powered by Husqvarna's own Pace battery system. "The demand for electrified equipment is growing in many of our segments and markets. Our award winning K1 Pace high power cutter has paved the way, showing the capabilities we have to support our customers in the shift to a low carbon, resource smart economy. It's been very well received by our customers," said Joe Taylor, Sr. director, Global Product & Service Management at Husqvarna Construction.

With the 'i-Series', and Pace systems, Husqvarna Construction offers two proprietary battery solutions. bauma 2022 in Germany provided a great opportunity for discovering these, as well as Husqvarna Construction's latest range of battery and corded machines. Husqvarna Construction also showcased a number of new battery products at its booth at the world's largest trade show for construction equipment.

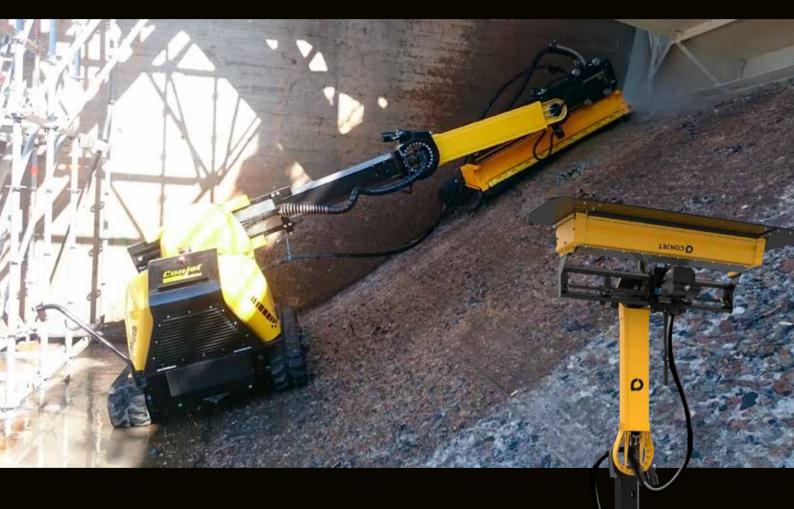
We presented additional equipment on our Pace 94V battery system, the battery core drill DM 1 Pace and the dust extractor DE 120 Pace, two powerful machines that make the Pace system a strong alternative for customers who prefer to operate with the mobility of cordless equipment with a zero emission mind-set at a construction site," said Joe Taylor.

'In a way, our presence and new introductions at bauma 2022 reflect the societal challenges the construction industry at large is facing, with sustainability being an integral part in all our product development for a long time. Equally important is that we, as a total solutions provider and partner with local presence all over the world, can support a very wide range of our customer's present and future needs.

We're here to support our customers in shaping the future; the urban environments of tomorrow are built by professionals and their success is ours. We do that by combining our passion for innovation and sustainability. Our commitment covers many aspects that are close to our heart and key to our customers; the health and safety of those who operate our equipment, premium quality, efficiency, productivity and the end results being delivered while minimising the impact on the environment," said Joe Taylor.



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Electric range and new branding at bauma

Ausa, the manufacturer of compact all-terrain industrial vehicles, was back at bauma again, the world's largest construction sector trade show, which was held in Munich from 24 to 30 October. During a frantic week in which over 495,000 people attended the event, Ausa showed off its range of electric vehicles for the first time and launched a new brand image that is being applied to all of its machines, enhancing their lines and updating their look.

#### **Exceeding the best forecasts**

Ausa was present at bauma with a large outdoor stand where it displayed thirteen all-terrain vehicles, most notably the new range of electric vehicles, the D151AEG dumper and the T164E telescopic handler. "After three years and numerous global incidents since the last edition, we knew that the sector was looking forward to attending this event," remarked Josep Soler, Ausa country manager. "During this week we were visited by a large number of customers who were interested in our range of compact machinery, especially the new products with zero emissions. We exceeded our most optimistic forecasts for bauma, arousing a great deal of interest in everything that Ausa produces and the efficiency, reliability and innovations that our machines are able to offer. We are leaving this year's event very satisfied."

#### Range of electric vehicles

Following the digital presentation of its new electric models, Ausa physically displayed them at bauma as



its standout new products. The D151AEG dumper is Ausa's first electric dumper with a 1,500kg payload. It is a dumper with compact dimensions that is ideal for working in small spaces where good manoeuvrability is a must. Ausa says that the T164E is the first electric telescopic handler with a 1,600kg payload on the market. With its all-terrain capabilities and a maximum lifting height of 4m, it is ideal for working in emission free spaces such as greenhouses, enclosed spaces and even working at night, due to its minimal noise emissions

Both models have been designed with an operating range of at least one full working day. The battery pack is managed electronically to offer maximum power in a smooth way and all-terrain conditions that match diesel vehicles. Also, when the accelerator is released, the electric motor reduces the speed instantaneously while the energy is regenerated, thereby extending its range.

#### New branding for machines

With the launch of its new products and the introduction of a new look with more angular lines in keeping with the latest trends, Ausa came to bauma with a fully updated image for all of its machines. The brand's new aesthetic design only uses black to complement the corporate orange, thus reducing the overall visual load and enhancing the angular lines of the dumpers, all-terrain forklifts and telescopic handlers.



# **BROKK LAUNCHES 'MY BROKK' NEW ONLINE SERVICE PLATFORM**

Brokk, the manufacturer of remote controlled demolition robots, has launched My Brokk, a comprehensive online support platform that offers multiple services in a single resource. The My Brokk portal offers two new online services: a library of manuals and other technical documents along with a web shop for ordering parts and attachments, as well as providing access to 'Brokk Connect', Brokk's robot and fleet management system. The new portal makes it easier than ever for Brokk

customers to access essential services any time of day, from any device or location.

Brokk provided My Brokk demonstrations at bauma, in Munich, Germany, at both its indoor and outdoor stands. "My Brokk is the next step in Brokk's digital journey," said Martin Krupicka, CEO of the Brokk Group. "Along with efficient equipment, customers also need efficient access to information and services to run their businesses and optimise their Brokk robots or fleets. My Brokk offers that and will continue to evolve with new services."

Through My Brokk, Brokk owners have online access to equipment manuals, technical data, CE markings and diagrams for the first time. The information is available through My Brokk's Documents module, allowing a customer to find and download accurate, up to date materials at any time. The documentation is available for all current Brokk models and attachments, as well as older models. The web shop also offers online purchasing for the first time, providing faster order processing and shortened delivery times. Users can view and order a full range of Brokk original spare parts and attachments, such as extra hydraulic breakers. Users can easily locate the correct parts for their robots and see prices listed in their local currency. The web shop also includes parts for older Brokk models.

Brokk Connect will also continue to evolve, providing real time updates on machine run time, upcoming maintenance needs and machine location. Wi-Fi is new and optional in addition to the mobile network connection. If a robot loses connection to the mobile network, offline mode is activated. The offline mode saves machine data to be uploaded to the mobile network when the connection is re-established. My Brokk availability will vary from market to market. Those interested are advised to contact their local Brokk distributor for availability.



# FULLY ELECTRIC WHEEL LOADER PROTOTYPE

Komatsu exhibited a prototype of its first fully electric compact wheel loader on its demo area at the bauma 2022 international fair in Munich. Recently designed and built together with Moog Inc., the global designer, manufacturer, and integrator of precision control components and systems, this new connected and automation ready construction machine is battery powered and zero emission. The prototype is now ready for joint testing.

Moog's intelligent electric system includes an electric traction motor, lift, tilt and steering electric cylinders, power electronics, system control computer, battery, and battery management system. The integrated control system connects and coordinates the actions across the machine, while the all electric actuators and motors provide the force for the machine's traction and loading system. The integrated nature of the system enables what Komatsu says is industry leading system efficiency and controllability.

"To achieve our CO2 emission reduction targets from products in use of 50% by 2030 from 2010 levels, to achieve carbon neutrality by the end of 2050, we are looking for promising technologies from suppliers to accelerate our electric machine development," said Seiichi Fuchita, chief technology officer (CTO) and president of Development Division at Komatsu. "The machine built together with Moog combines the strengths of both companies and was finalised within a short period of time and we expect the joint testing will show the advantages of a full electric machine and will prove collaboration is beneficial for both sides."

Both companies plan to jointly test the fully electric loader after bauma to prove that it can achieve a new level of efficiency, operating time, and comfort. The companies' joint test will show that the machine's operating cycle is extended, and, with innovative assist functions, that it provides a 'fatigue proof' and comfortable environment for the operator to manage the machine and his day.

The prototype's intelligent machine electrification system is designed to be connected and automation ready. The system has the sensing and control capabilities needed for automation while the integrated software framework comes with built in tools to coordinate multiple axes of motion and precisely control torque, velocity, position, and force.





# AUSA'S NEW RANGE OF FULLY ELECTRIC VEHICLES

Ausa has launched an electric vehicle range online, consisting of the D151AEG dumper and the T164E telescopic handler. With these new products, Ausa is taking another step to tackle climate change and move towards a more efficient, emission free and environmentally friendly world.

#### Power for the whole day

All of Ausa's electric vehicles have been designed with an operating range of at least one full working day. The li-ion battery pack is managed electronically to offer maximum power in a smooth way and all-terrain conditions that match diesel vehicles. Also, when the accelerator is released, the electric motor reduces the speed instantaneously while the energy is regenerated, thereby extending its range. All of Ausa's electric vehicles feature a charging cable so they can be connected to the mains via an 110V, 230V or 415V socket with a fast charger whenever necessary.

#### **New horizon**

With the new products, Ausa has expanded the possible uses of its products, contributing vehicles to the market that will multiply the applications for users, enabling work in enclosed environments with no air circulation, environmentally protected spaces or work carried out at night, all thanks to the drastic reduction in noise emissions. At the same time, the safety of the operator also increases significantly, as the reduced noise levels also lead to less worker fatigue, while making communication with other colleagues much more fluid.

#### The D151AEG dumper

The new D151AEG is Ausa's first electric dumper with a 1,500kg payload, and has compact dimensions that make it ideal for working in small spaces. It features a 7.6kW electric motor with a maximum peak of 17.3kW and permanent 4WD with excellent all-terrain capabilities, meaning its performance matches that of its diesel equivalent. The D151AEG has been designed with an operating range of at least one typical working day with a

battery capacity of up to 12.3kW/h. The power delivery is managed electronically to obtain the best performance with less consumption.

The regeneration of the batteries when the accelerator is released or when driving downhill also allows its range to be extended. Whenever necessary, it can be connected directly to the mains or a generator with the cable included in the vehicle. The batteries of the D151AEG electric dumper charge from 20% to 80% in just two hours when charging at 230V.

#### The T164E telescopic handler

Ausa states that the T164E is the first electric telescopic handler with a 1,600kg payload on the market. With its all-terrain capabilities and a maximum lifting height of 4m, it is designed to be ideal for working in emission free spaces such as greenhouses, enclosed spaces and even working at night, all due to its minimal noise emissions. It has a power of 8.4kW, with a peak of 21.2kW, giving it strength and all-terrain capabilities for working on difficult surfaces and gradients of up to 32%. It can be charged by connecting the integrated cable to the mains or a generator, going from a charge of 20% to 80% in just three and a quarter hours at a power of 230V.

#### Ausa at bauma

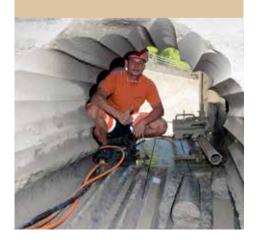
The all-terrain compact vehicle brand was shown at the construction sector's leading trade show, bauma in Munich from 24 to 30 October. On this occasion, Ausa displayed 13 all-terrain vehicles, with the highlight being its aforementioned new electric range, consisting of the D151AEG dumper and the T164E telescopic handler. The company also presented the new T164H, the combustion engine version of the same electric telescopic handler, with a 1,600kg payload and a maximum lifting capacity of 4m. Additionally, and for the first time at a trade show, Ausa exhibited its D301AHG dumper with a 3,000kg payload, launched on the market in the first half of the year. The rest of the display consisted of other dumper, all-terrain forklift and telescopic handler units from the company's current catalogue.

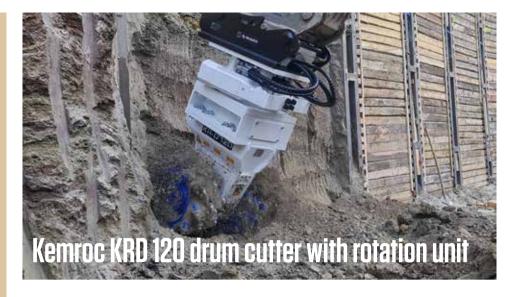
# A valuable contribution to renewable energy

Renewable energy sources are in demand and undisputedly one of the main topics of the day. Not only for this reason, but also because of the increased demand for electricity in Glarus, Switzerland, the hydroelectric power plant in Luchsingen is currently being expanded in an extensive project. The available reserves will be tripled through this expansion, which will lead to a significant increase in flexibility in electricity generation. By expanding the storage reservoirs, peak energy can be produced for up to seven hours independently of the sun or wind.

The project also requires concrete demolition works on the old reservoir as well as openings for the connecting channels to the new reservoir. A. Eichmann Betontrenntechnik GmbH from Rieden, which has very experienced employees in this field, was contracted for the project. The tasks included sawing and drilling of both concrete and natural stone, including sawing with large blade diameters of up to 2,200mm. For this, Albin Eichmann used Tyrolit tools and machines, as he is always happy to fall back on them: "I have decided to work only with Tyrolit products. The simplicity and modularity of the products convinced me," says Albin Eichmann.

For the large number of cuts and drillings, the following Tyrolit products were used: the WSE1217 wall sawing system, the FZ-4S hydraulic wall saw with the AD-S4 drive, as well as the SK-SD wire saw. In addition, the team of Albin Eichmann used Tyrolit CD drill bits with diameters ranging from 125mm to 800mm, WSL wall saw blades in the 'Fast-Cut' version with diameters ranging from 800mm to 2,200mm and DWM-C diamond wires. The result achieved by the skilled workers is quite impressive and Albin Eichmann is also visibly satisfied: "With the right equipment, it was easy for us to take on the challenges of this project. We are happy to use it time and time again."





The sides of an excavated pit in Leonberg (Germany) were made safe by Swabian demolition and construction company Berb. Using a drum cutter attachment with rotation unit from Kemroc mounted on a 26t excavator, the pit walls were precisely and safely cut back to allow wooden planks to be fitted between girders.

An industrial area in Leonberg near Stuttgart is changing its appearance. Here, the developer is replacing an outdated manufacturing centre with a modern building. After demolishing the structure that stood above ground level, the company Berb from Bösingen took on the task of removing the basement structure, including the concrete foundations, creating a 6,000m<sup>2</sup> excavated pit that needed to be secured. Thanks to a Kemroc KRD 120 (120kW) drum cutter with a KRM 60 rotation unit mounted on Berb's own crawler excavator, the retaining walls constructed from girders with timber lagging, were installed quickly and efficiently.

#### **Combining assets**

Bantle Entsorgung und Rückbau in Bösingen, Berb, was founded in 2017 by Georg Bantle. This is a sister company of the road and civil engineering company Gebrüder Bantle from Bösingen on the edge of the Black Forest. With qualified personnel and its own machine and equipment park, Berb has completed important demolition, disposal and earthworks projects throughout southwestern Germany. Kemroc excavator attachments have been part of the joint equipment arsenal of both companies for some time now. A patented chain cutter attachment is used for gypsum mining at a gypsum deposit owned by the Bantle brothers, whilst Berb also use a 6t cutter wheel attachment.

The demolition of the remaining building structure in Leonberg was initially carried out with an excavator plus hammer and shearer attachments. However, to then create and secure the excavation pit for the future building complex, a previously untested approach was taken. A company owned 26t excavator with a drum cutter attachment was used to install the girder and plank shoring system.

Installation of this shoring system (also known locally as 'Berlin shoring'), requires double-T steel girders to be rammed into the ground at regular intervals and then wooden planks are used to fill the space between the girders. To create space for the shoring, the soil is normally removed using an excavator with bucket. However, if the bucket removes a large boulder, voids are left behind the shoring which then needs to be backfilled. To avoid this, it was decided to try a new method using an excavator with a KRD rotary drum cutter attachment. The range is a relatively new addition to Kemroc's range of excavator attachments with nine sizes available for excavators from 0.5t to 50t operating weight.

In Leonberg, a KRD 120 was delivered to the construction site. It was mounted on the excavator together with a Kemroc KRM 60 rotation unit. This range of endlessly rotating rotation units for excavators from 2t to 70t enables accurate positioning of the drum cutter attachment at any angle to the material to be milled from any excavator position. While working in Leonberg from February to May 2022, the drum cutter attachment was used to remove material from between the steel girders from the bottom to the top producing straight, vertical walls, without the operator having to continuously reposition the excavator to move from one section to the next. The result was smooth, flat walls with the correct amount of space for insertion of the timber planks.

"Thanks to this combination of equipment, our operator managed to remove the correct amount of material quickly and accurately from different layers containing rocks or soils with large amounts of stones," reported Berb site manager Florian Eisele after the completion of this project. "We also produced a very small amount of excavated material, keeping removal and landfill costs within tolerable limits. In any case, in this type of application, success is not determined by the production rate of the Kemroc attachment, but rather about accuracy." Using the combination of equipment in conjunction with a fully hydraulic quick coupler and a standard bucket had additional benefits as Eisele further explained: "The operator could quickly and easily alternate between milling and loading the excavated material, so the excavator was utilised in the best way possible. This saved us from having an additional 8t excavator in Leonberg."

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In order to keep the Rhine navigable for freight transport despite low water levels, the shipping channels must be regularly adjusted.

The powerful yet extremely gentle Epiroc ER 3000 drum cutter proved to be the tool for the job. The company says that it performed underwater due to its high quality technology, precise performance and environmentally friendly components.

## The initial situation – serious but not hopeless

Climate change and the particularly long periods of high temperatures this summer had a severe impact on the Rhine, meaning that supplies to companies along the river could only take place under difficult conditions and with restrictions. Shipping and the associated transport of goods have suffered enormously. For one of the most frequented goods transport routes, it is therefore particularly important to keep the channel navigable, to improve it, to prevent water levels falling and to secure the infrastructure for the future.

#### The task

Milling work must be carried out in the Middle Rhine area, between Östrich and Geisenrücken, in order to guarantee a target depth of 2.10m below GIW (equivalent water level). For this profiling of the channel, ob-

stacles (such as crags) are removed underwater at specific points. The scaly, cracked material with a hardness of up to 100MPA requires suitable drum cutter sizes and carriers. The project – funded by the Federal Ministry of Digital Affairs and Transport – proved challenging for all parties involved as the use of hydraulic breakers or blasting is not permitted due to harmful vibrations and uncontrolled sediment formation. Special conditions for working underwater also apply not least nature conservation requirements.

#### Implementation – first class and sustainable

The Wesel based company Hülskens Wasserbau GmbH & Co. KG. is an experienced hydraulic engineering company. It utilised two floating pontoons for the aforementioned purpose, on which the required technology is permanently installed. A Demag-H95 special excavator mounted on the front pontoon serves as the carrier. The usual tests for harmful metal (such as armaments) was undertaken with large amounts of scrap being uncovered.

The work required a powerful solution in sensitive conditions which proved to be ideal for Epiroc's ER 3000 drum cutter, equipped with additional equipment.

It was fitted with special wear protection for extreme underwater use, and also an additional suction hood installed in the first construction phase, which encloses the drum cutter over a large area. With this tried and tested technique, the excavation material produced during the milling work is extracted and transported to the rear pontoon in a controlled manner. There is also a technically sophisticated filter and separation system as well as a loading container for the excavation material.

The underwater work requires environmentally safe operation; however, the Epiroc drum cutter is not only powered by bio hydraulic oil, but also special bio oil for use as the gearbox lubricant. During operation, the ER 3000 is supplied with an oil quantity of 420l/min. All in all, the work has so far been carried out without any difficulties or damage. The low wear on the cutting tools once again underlines the high quality of the ER 3000.

Erkat's milling technology has been part of the Epiroc Group since 2017 and as the case demonstrates, has proved to an essential tool in a combination of equipment, procedure and know how.

# **EXTENSIVE TRAINING AND CONTINUOUS SUPPORT PRODUCE PERFECT RESULTS**

From the beginning of March to mid-April 2022, the Tyrolit customer Subterra renovated an old railway tunnel in Adamov near Brno in the Czech Republic. One of the major tasks of the project was to make several drainage cuts with a total length of 1,800 running metres, so that accumulating water can ideally drain off in the future.

The project proved to be perfect for the use of the Tyrolit 'TEW' tunnel mill, especially as it enables continuous and efficient semi-circular cuts. However, as Subterra had not worked with this tunnel mill before, Tyrolit organised cross border training on the use and maintenance of the TEW for the team in charge. The first part of the training took place at the end of February together with Tyrolit partner Brun AG in

the Hagersbach training tunnel in Switzerland. At the beginning of March, the training was completed directly at the project tunnel near Brno in the Czech Republic. The entire training and the first days of the following operation were accompanied by Tyrolit project managers and application engineers.

During the actual use, the tunnel mill and the matching PPH40 drive were mounted on a specially constructed truck chassis. The cutter was equipped with four WSL 'Premium' wall saw blades with a diameter of 650mm and spacer discs with the respective widths. The goal was to cut three drainages per working day, a task the committed team also managed to do. In total, 1,800 running metres with a cutting depth of 20cm were cut



The training participants in the Hagersbach training tunnel in Switzerland.

with the Tyrolit TEW tunnel mill by mid-April. Thanks to good planning and shelving spare parts, the cutting works were completed without any interruptions to the tight schedule.





For this year's special feature on Hydrodemolition we are sharing some news from Aquajet Systems about their new robot Aqua Cutter 750V. We are also publishing a case story where Conjet equipment helps repairing a dam infrastructure in Wyoming, USA.

he affinity pattern allows the robot to remove more concrete in a single pass while still reducing shadowing, eliminating the risk of pipe holes and providing an ideal bonding surface. Like all Aqua Cutter Robots, the 750V cleans and descales rebar without causing micro fracturing. It also maintains exceptional horizontal, vertical and overhead reach, making it suitable for a wide variety of concrete removal tasks, such as renovation and bridge and road repair.

The Aqua Cutter 750V shares several similarities with Aquajet's innovative 'Ergo' System. The infinity power head has Ergo style spring tensioned rollers and quick connection to the roller beam. It also uses absolute sensors, which means it automatically adjusts at the touch of a button. With a larger roller width and a new triangulated base frame for improved stability, the infinity power head contributes to precision while improving the hydrodemolition result.

As part of the revolutionary design, the Aqua Cutter 750V also includes an upgraded version of the 'Evolution Control System'. First released in 2004, this innovative control system still features Aquajet's patented 'Equal Distance System' (EDS) as well as the ability to cut shapes and remove concrete at different depths in the same pass. The new version ratchets up its performance even more with an oscillation menu that automatically calculates optimal settings for the operator. This not only maximises production from the machine, but also prevents miscalculations from manual adjustments.

Another key feature is remote 'start-and-stop' of the diesel engine through radio remote control, making it possible for the operator to stop or start the robot from a safe distance and eliminating the need for the machine to run all day. In addition, the machine will automatically shut down if there's no activity for a certain amount of time, saving battery power.

#### Conjet helps repair dam infrastructure in Wyoming

The latest hydrodemolition technology has provided an effective and efficient method for repairing America's ageing dam infrastructure. A recent project to rehabilitate the Alcova Dam in Wyoming, USA, demonstrates hydrodemolition's value proposition for preserving these mission critical assets. The Alcova Dam is owned by the U.S. Bureau of Reclamation (the 'Bureau'). The Alcova Dam is an earth fill dam situated along the North Platte River in Central Wyoming. The dam is utilised for water storage and hydroelectric power generation.

Through a request for proposal (RFP) process, the Bureau chose NW Construction as the general contractor to manage and execute the Alcova Dam rehabilitation project. NW Construction then subcontracted to hydrodemolition specialist, Penn Hydro, Inc., to perform the removal of deteriorated concrete. Penn Hydro's scope of work consisted of concrete removal from the spillway floor, walls and wall caps. Penn Hydro was also responsible for the collection, treatment and disposal of the hydrodemolition wastewater.

The project presented some unique challenges due to the terrain and the weather conditions. The dam's spillway includes some very steep grades, vertical walls up to above 18m in height, and wall caps, all of which contained deteriorated concrete in need of removal and replacement with a fresh overlay. The Bureau's recommendation for commencement of work on the spillway was October 2020. This time of year was selected due to the lower water levels of the North Platte River and safest conditions for all involved. However, the late Fall start could also prove to be difficult given the cold weather in Wyoming at that time of year.

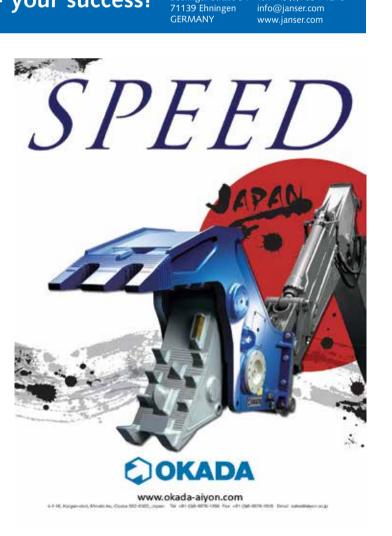
Brad Beaudry, project superintendent for NW Construction, stated that he chose Penn Hydro as the hydrodemolition subcontractor because of its prior experience and expertise with complex dam projects.

Brad also noted that hydrodemolition, when compared to other concrete removal methods he evaluated when planning this project, was 'much faster' and the other alternative 'could not touch hydrodemolition in











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# **PDi** special feature







terms of speed'. According to Brad, the project would have been nearly impossible using any other concrete removal processes or technologies.

Penn Hydro needed a hydrodemolition robot that was highly versatile and would perform consistently in these challenging conditions. Penn Hydro chose to use its Conjet 'Automated Concrete Removal' (ACR) Robot 557 to handle this complex project. The 557 has a number of strengths, including its versatility, productivity and the high level of customer support provided by Conjet's team located in Sweden and North America. Penn Hydro's initial scope of work yielded a schedule of roughly 10 weeks.

The concrete strength of the spillway floor and walls was tested to be 345bar (approx.). The volume of concrete removal was estimated at 160m3 of concrete on the spillway floor and walls for an average depth of 15cm. An additional 107m3 of concrete was estimated for removal on the spillway wall caps for an average depth of 38cm. Penn Hydro stated however that the quantity of removal on the spillway floor and walls continued to grow as additional repair areas were identified.

Penn Hydro is headquartered in Pittsburgh, Pennsylvania, approximately 2,575km from the Alcova Dam jobsite. The Alcova Dam jobsite itself is relatively isolated, being approximately 50km from the nearest major town of Casper, Wyoming. Due to the remote location of the Alcova Dam, it was imperative that Penn Hydro's operators had well-functioning equipment as well as additional spare parts and materials to ensure successful execution. There was a significant amount of preparation that Penn Hydro had to undertake in order to ensure minimal downtime once the project was underway.

Before mobilisation from Pittsburgh, Penn Hydro carefully examined and serviced its Hammelmann pump and Conjet 557 robot. Conjet assisted with the preparations by making its Swedish engineering team available for virtual collaboration with Penn Hydro. In addition, Conjet sent its customer success manager for North America, Tim Best, to visit Penn Hydro's Pittsburgh headquarters prior to mobilisation to ensure that the Robot 557 was working properly. While the Alcova project was ongoing, Tim also visited the jobsite to ensure that the robot was continuing to perform up to Conjet's and Penn Hydro's operational standards. In early October, the Penn Hydro team, along with two tractor trailer loads of equipment, departed Pittsburgh to make the 2,500km trek to Wyoming.

Once onsite in Wyoming, but just prior to Penn Hydro's commencing operations, the Bureau performed a second survey. This second survey uncovered additional areas for repair along the floor of the spillway. The Bureau decided to proceed with hydrodemolition on the newly discovered repair areas as well. As operations began, the spillway was found to have a large amount of algae present that needed to be removed before work could commence. Also, the late autumn weather became very cold, meaning that there was often snow and ice to contend with. Using only the Conjet 557 and no additional attachments or tools, Penn Hydro was able to operate on extremely steep sections of the spillway under sometimes icy conditions.

The Penn Hydro team was also able to reach the high vertical wall sections with the 557's standard, multipurpose arm. Finally, the structurally compromised wall caps had to be removed, and the Conjet 557 quickly transitioned to operating on an uneven dirt platform

above the dam while using its arm to reach out and over the wall caps. Penn Hydro's expertise, equipment versatility and production rates were considered crucial in the effort to expedite the schedule given the expanded scope. Mr. Beaudry stated he was impressed with Penn Hydro's operation of the Conjet 557 based on its production rates, and also because of its versatility in being able to quickly switch from horizontal to vertical removal using the robot's standard arm.

Penn Hydro's president Oliver Scigliano, stated that the Conjet 557 performed extremely well on this project: "The versatility was huge and the robot did a phenomenal job of dealing with challenging, unique terrain and conditions." Safety was also a major priority on the Alcova jobsite. Because the Conjet 557 can be operated using a wireless remote control, the robot operator was able to stand a safe distance away from the robot itself (up to 9m), which minimised the possibility of being hit with flying debris from the demolition. No injuries occurred during the project.

The concrete removal was completed by Penn Hydro in mid-December, a full week ahead of schedule. The early completion was especially impressive given the fact that the project ultimately required even more concrete removal than originally estimated. Brad Beaudry commented that, based on the impressive results from Penn Hydro and the Conjet 557, he believes that NW Construction is likely to start using hydrodemolition on more of its heavy civil projects in the future.

There is a massive global need for the rehabilitation of heavy concrete infrastructure, and as the Alcova Dam renovation project has demonstrated, hydrodemolition is an emerging hero in this battle to preserve such critical assets.



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# CDE SHOWCASES INNOVATIVE WASTE RECYCLING OPERATIONS AT BAUMA

CDE highlighted the role of its technology in supporting the circular economy and zero waste agenda at this year's bauma.

As the construction sector continues to cope with the availability and cost of raw materials, CDE demonstrated the potential of construction, demolition and excavation (CD&E) waste to address the challenges facing the sector. Additionally, on 24 and 27 October, CDE was joined at its bauma stand by a number of its European customers for a series of round table discussions on the future of recycling, and, as part of the bauma exhibitor forum on 24 October, delivered a lecture on the topic of 'Creating valuable in-spec products from CD&E waste'.

### Rethinking construction waste

CDE believes that a circular approach is essential. CDE's head of business development for North West Europe, Eunan Kelly stated: "It can be the means to equip us with the resources needed to supply a sector charged with a key role in the economic recovery while addressing our collective environmental footprint by reducing waste to landfill volumes and extending the lifespan of precious natural materials. All the while continuing to supply a resource intense sector with the materials it requires; materials often trucked out of our urban centres where they are needed most."

CDE showed at bauma how it supports materials processors to realise the value locked in CD&E waste. Using highly innovative wet processing technologies that scrub material, float off lightweights (demolition debris) and classify end products, this waste stream can be repurposed to produce washed materials free of contaminants and suitable for use in high value construction projects. To date, CDE solutions have supported companies around the world to divert over 100M/t from landfill.

"These are far from 'alternative' materials, many material processors utilising CDE technology are successfully producing CE and BSI certified concrete products, including competitive concrete for non-structural, but still high value,

construction projects, with some applications successfully achieving beyond C45 spec," says Eunan. Illustrating Eunan's comments, in Norway, Velde Pukk AS plays a significant role in meeting the material demands in Stavanger. Utilising high quality recycled aggregates and its onsite concrete batching plant, the firm supplies the construction industry with a CE certified concrete from 100% recycled aggregates. DA Mattsson, based near Stockholm in Sweden, diverts almost 100% of its incoming CD&E waste from landfill through its CDE wet processing operation. The company produces high quality sand and aggregates that meet EN 12620 specification, supplying these concrete materials to the Stockholm construction market.

# Rising to the challenge

"We are faced with a myriad of challenges. Set against the backdrop of the Covid-19 pandemic and continued rises in the cost of raw materials, these issues have been heightened and highlight the urgent need to radically adjust how we utilise the resources around us in a more circular fashion," added Eunan. CDE reinforced its message that we can build back greener using sustainably sourced and recycled construction materials. CDE believes that its technology is demonstrating the potential of CD&E waste streams. It enjoyed the opportunity to welcome some of its pioneering customers from the French speaking, DACH and Scandinavian regions to join with it at bauma to talk about their vision, discuss best practice and share their experiences of collaborating with CDE.

The CDE stand used a combination of 3D animations, 360° virtual tours, 3D printed models and augmented reality to introduce a new way of immersing visitors in its process engineering expertise and some of its most innovative projects and products, including the leading 'AggMax' and 'EvoWash' technologies.

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# **'BATTERY ONE'**

Battery powered construction equipment is becoming an increasingly attractive option for construction companies, especially with investments in a battery and charger now being compatible with a growing range of equipment from different vendors. Wacker Neuson equipment has been using battery power since 2014 which now works with eleven different products.

Since 2021, Wacker Neuson's field proven battery has been deployed in Bomag's electrically powered rammers. Now Mikasa, Swepac and Enarco have decided to use the same battery in their compaction equipment. To ensure instant recognisability among customers and users, these interoperable batteries and chargers are all marked with the Battery One branding. "The availability of a multi-vendor interchangeable battery for construction equipment is key to the growing adoption of electro mobility on building sites," states Stefan Pfetsch, managing director of Wacker Neuson Produktion GmbH & Co. KG. "Compatibility provides huge benefits for the customers. We see demand for battery operated equipment growing all the time. With Battery One, we make it easier for customers to go electric, in particular to switch from products that were previously powered by conventional drive technologies."

Battery One's compatibility across different brands and products will further increase the penetration of electric equipment and the sustainability of battery lifecycle management on construction sites," says Ralf Junker, president of Bomag GmbH. "Together with our customers we are helping to make construction sites around the world more environmentally friendly." Hironari Kyoya, president of Mikasa Sangyo Co., Ltd, adds: "A powerful and interchangeable battery solves a number of challenges on the building site, such as the need to extend battery runtimes, accelerate charging times and lower equipment and infrastruc-

ture costs. All of this adds up to greater convenience for our customers." Wacker Neuson's interoperable products are already identified with the Battery One branding. Soon, Bomag, Mikasa, Swepac and Enarco will also be adding the Battery One logo to their compatible batteries. These manufacturers presented their newly branded products at the recent bauma trade show.

Future fit battery technology is a key driver for the development and incentivising the development of sustainable products that will resonate strongly with customers. Building on recent positive experiences with Battery One, Wacker Neuson thus intends to collaborate with the above mentioned manufacturers to establish an open standard for construction equipment batteries. In order to discuss the possibility of a battery standard, vendors will engage in negotiations to establish the exact nature and implementation timeline for this concept while respecting antitrust requirements in particular.

Collaboration is inspired by the idea that customers will benefit from cost savings when they invest in battery powered products, creating strong momentum for the wider uptake of zero emission equipment on construction sites. The establishment of such a standard will also simplify construction site workflows and logistics by eliminating the need to manage different battery and charging systems. The aim is to make the battery system available to further manufacturers in the construction sector.





# New remote control for Ronda 200H and 1800H 'Power'

Battery powered hand tools have become increasingly popular among professional users, placing new demands on the vacuum cleaners used as dust extractors for the tools. Battery powered tools mean more freedom and mobility for the user, but with dust generating tools it remains vital for a good working environment and that the tool is connected to a suitable vacuum cleaner. Conventional power tools with cable are connected to the vacuum cleaner's electrical outlet with automatic start/stop function, whereby the vacuum cleaner starts and stops when the tool is switched on and off. With battery powered tools this is not possible, and you must therefore either switch the vacuum cleaner on and off manually each time the tool is started and stopped, or leave it running continuously, resulting in an unnecessarily high power consumption and machine wear.

The Danish manufactured vacuum cleaners for fine and hazardous dust, Ronda® 200H Power and 1800H Power, which are used extensively in the construction industry and large parts of the production industry, can now be equipped with a smart remote control. This is mounted on the hose near the user and makes it possible to start and stop the vacuum cleaner easily and quickly as required. This is designed specifically to be a great advantage when working with battery powered tools and when using a Ronda® 200H or 1800H Power for dust extraction directly on the tool.

Visual alarm

When working with loud tools such as a concrete grinding machine, hearing protection is mandatory and it can be difficult to hear the vacuum cleaner's acoustic alarm for low air flow, especially if you are standing in some distance from the vacuum cleaner. The new Ronda® remote control is said to be the only one on the market equipped with a visual alarm that flashes red when the vacuum cleaner's alarm is beeping, indicating that the air flow in the hose is lower than the required 20m/s. This typically happens when the collection bag needs to be changed, a filter needs cleaning, or the hose is clogged. The new remote control with alarm thus contributes to a good and safe working environment.

All Ronda® 200H Power and 1800H Power vacuum cleaners manufactured after 1 January 2022 are prepared for remote control, but a communication print must be installed in the motor top of the vacuum cleaner. This must be ordered separately and installed by a professional service technician.





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# New DX245DM-7

Doosan has launched the new DX-245DM-7 31t high reach demolition excavator, replacing the previous DX235DM-5 model. Powered by the Doosan DL06P Stage V diesel engine providing 129kW of power at 1,800rpm.

Typical of the design of the all of Doosan's demolition machines, the DX245DM-7 has a high visibility, tiltable cab, which is particularly suited to high reach demolition applications, and provides a 30° tilting angle. Another key feature of the DX245DM-7, which is shared with the other models in the range, is a modular boom design and hydraulic lock mechanism on the machine. This provides the customer with a complete, flexible solution that allows them to use the same excavator for other applications on site as well as demolition.

The innovative design ensures it is a simple process to change between a demolition boom and an earthmoving boom to accomplish different types of work on the same project. A special stand is provided to facilitate the boom changing operation, which is based on quick change hydraulic and mechanical coupler connections. A cylinder based system is used push the locking pins into place to help complete the procedure.

### Multi boom design increases flexibility

The multi boom design also allows the earthmoving boom to be mounted in two different ways, which with the demolition boom, provides further flexibility with a



total of three different configurations for the same base machine. For the DX245DM-7 equipped with the 18m long demolition boom, the working range allows the machine to work with a demolition attachment to a maximum height of 16m. The recommended maximum combined weight for the attachment and quick coupler in this mode is 2.5t. When equipped with the digging boom in the straight configuration, the DX245DM-7 can work to a maximum height of over 9.8m. In this format, the recommended maximum weight for the attachment and quick coupler is 3.3t. Using the digging boom in the alternative bent configuration, the DX245DM-7 can work with an attachment to a maximum height of 8m. In this mode, the recommended maximum weight for the attachment and quick coupler is 3.3t.

# Hydraulically adjustable undercarriage

The DX245DM-7 has a hydraulically adjustable undercarriage, which extends to a maximum width of

3.74m to provide optimum stability when working on demolition sites. The width of the undercarriage can be retracted hydraulically to 2.54m in the narrow width position, which is ideal for transporting the machine. The mechanism is based on a permanently lubricated, internal cylinder design which minimises resistance during the movement and helps to prevent damage to the components.

# Impressive demolition specifications

Operating from the high visibility, tiltable cab on the DX245DM-7, the operator has an excellent environment particularly suited to high reach demolition applications, with a 30° tilting angle. The maximum pin height of the demolition boom on the DX245DM-7 is 18,070mm. Like all Doosan demolition excavators, standard safety features include a FOGS cab guard, safety valves for the boom, intermediate boom and arm cylinders and a stability warning system.

# Outstanding exhibitor response for steinexpo 2023

Almost 200 exhibitors have now booked their participation for steinexpo 2023. Around 70% of all the available space has now been allocated to exhibitors who are said to be looking forward to demonstrating their offering at the show which will be held from 23 to 26 August 2023.

Trade fair organiser Dr. Friedhelm Rese states: "We are incredibly pleased about the unabated popularity of and support for steinexpo 2023. Of course, we had hoped that our trade fair would remain a permanent item on the calendars of many exhibitors and interested parties, especially after the difficult years all sides had to weather. But even we were positively surprised by the 'trade fair hunger' that has manifested itself. It was already apparent at the long standing return exhibitors' meeting in April that many were eager to finally be able to present themselves and their companies on site in the quarry again." Industry leading companies including Kiesel, Komatsu, Liebherr, Volvo and Zeppelin on the construction machinery side and Finlay, Gipo, Keestrack, Sandvik, Sbm and Wirtgen from the processing sector have already confirmed their participation.

The show will be located at Europe's largest basalt quarry which will provide even more scope and room

for manoeuvre at the demo area A. This area had already been used to demonstrate large construction machinery at the most recent events. This time there will be the additional possibility of creating a high speed track and/ or mogul track for dumpers. In addition, the stationary stand areas are compactly placed in this area. The area for accessories will again be located in demo area B. and compared to 2017, it will now be slightly narrower. The space towards the rear of the upper demo area C is also slightly narrower.

The entrance area will be located on the approximately 15,000 m² new demo area D (former backfill). Arriving visitors can also expect another highlight in this area called 'Quarry Vision' of steinexpo 2023 which will form a representative of the visions within the industry. An area of approximately 2,000 m² in size will provide exhibitors with the opportunity to present their future innovations, which may not necessarily be ready for market yet in a way that is visible and tangible. Highly intelligent machines, vehicles and services will be on display. In general, steinexpo 2023 will also look at ways to help smaller exhibitors present in a way that will

appeal to the public. The area for indoor exhibitors will also have a dual focus with the previous large pavilion being divided into two parts featuring an exhibition pavilion focusing on a specific theme that will be open to visitors at each of two locations on two levels.

steinexpo is backed by MIRO (Association of German Mineral Raw Materials), The European Aggregates Association (UEPG), the Construction Machinery and Building Material Plant Association of the Association of German Machinery and Plant Manufacturing (VDMA) and the Association of the Construction Industry, Environmental Technology and Mechanical Engineering (VDBUM). With the support of the German Demolition Association in 2021, the demolition technology segment is now represented. As of July 2022, the Industrial Minerals Association Europe (IMA) is now also counted as a supporter of the show which will further strengthen and expand the international orientation of steinexpo. Together, the associations of the IMA umbrella organisation represent more than 500 companies in 28 countries with more than 23% of the trade visitors coming from abroad to the last show.



# Bauma 2022

# NO RECORD BUT MEETS WITH APPROVAL ALL ROUN

bauma 2022 may have had the odds slightly stacked against it, but it still proved to be a success. Despite a clear decline in the number of exhibitors and visitors, this year's edition of the mega fair was met with visitor and exhibitor approval. PDi reports.

auma 2022 was a show of strength again despite fears that long distance visitor numbers would decrease. This was true to some extent, but the outcome of the show still met with approval. There were however a few hundred fewer exhibitors and a couple of hundred thousand fewer visitors. Around 3,200 companies exhibited coming from 60 different countries. In 2019, this figure was 3,700 exhibitors, meaning a reduction of around 15%. Several of the major manufacturers were absent, such as Volvo. The show was visited by some 495,000 people from over 200 countries. This is a fairly sharp decrease from 2019, when more than 620,000 people came from more than 200 countries.

### Less new products and innovations

Despite the expected reduction in numbers, exhibitors

that PDi spoke to were very satisfied with the outcome of the show, which defied both the aftermath of a world pandemic and an ongoing war in Ukraine. Even though the show was organised in October, the weather was on bauma's side. On the opening day, 24 October, however, the rain was pouring down the hill, which meant that many visitors chose to stay indoors. The 18 indoor halls were literally swarming with visitors, although not everyone was interested in what was exhibited there. During the remaining days of the week the weather got better and better, and from the middle to the end of the week, it was like high summer making it highly successful for the exhibitors outside.

A slight disappointment, however, was that the show lacked really big innovations in the sectors that PDi monitors, and the news from exhibitors was not as plentiful as one might have hoped for. Sure, a lot of

new things were launched, but not quite to the extent that the industry might have expected. It is quite clear that the pandemic and the war with all that it brought with it have both put a certain strain on the companies when it comes to developing and introducing new products and services. Practical circumstances, a lack of components, delays and other things have of course also had an impact. Or it could also be that large fairs such as bauma have lost their importance to launch new products and that many manufacturers now introduce their new products when they are ready, and choose smaller shows and other occasions to show them. An example is Husqvarna's new battery powered cutters, vacuum cleaners, drills and more that have already been launched but were of course exhibited at bauma. Another example was Hilti's new 'Nuron' series, which might have been previously introduced at bauma.





Hilti however has already launched Nuron and is now carrying out its biggest ever marketing campaign for a product range.

# The decade of battery operation

Regarding construction equipment, a lot of new machines and tools were shown. Many were upgrades to existing products or a broadening of the product range. Hand held battery powered construction machines dominated the stands in many of the halls, such as hall A1. There was also a wide range of machines and tools for milling, grinding and polishing concrete surfaces and associated equipment for handling dust and pollution. In hall A1, all types of hole making equipment, diamond tools, demolition robots and new developments for water forming were also found. With regards to battery

operation, a plethora of new compact construction machines for digging and loading in all its forms were seen. Here too, it was not about any major innovations, but rather new models and weight classes, covering all the above sectors.

# Machines and hydraulic tools for demolition and recycling

Although bauma did not become the big fair for news and innovations, a number of new products and upgrades of existing models were shown on the stands. All of the major manufacturers of customised demolition machines had items newsworthy. These included such companies as Doosan, Sennebogen, Caterpillar, Liebherr and many more. A variety of other new machines such as wheel loaders, compact loaders, mini diggers and dumpers etc. were displayed

by manufacturers such as Ausa, Avant Tecno, Bobcat, Doosan, Caterpillar. Here too, the big news was regarding battery powered machines.

Tool manufacturers such as Epiroc, Indeco, Trevi Benne, VTN Europé, NPK and many more, also had newsworthy items. Manufacturers of mobile demolition waste recycling units such as Rubble Master, Metso, Cams, Simex and others also introduced their latest developments.

Most of the developments and product launches at the fair can be read about in separate articles in the remaining issues of PDi this year and the beginning of 2023. Now we set our sights on the American trade fair ConExpo-Con/Agg which is set to be held in March 2023 and the next bauma which is scheduled to be held between the 7 and 13 April 2025.

www.bauma.de



PDi's bauma review will be split over two issues, this one, PDi 5, and the next one, PDi 6 that will be out around New Year. So don't miss out the second part in PDi 6.



### Cams unveils brand new 'Centauro'

Cams sees itself as a market leader in mobile recycling machinery. Based in Italy, it used bauma to unveil its brand new Centauro XL 150.69 APR. The new recycler combines the features of two shredders, one iron separator and a screening unit in a single machine. Thanks to the innovative in house developed technology, the Centauro XL 150.69 APR is an ideal solution for recycling slabs and milled asphalt at low fuel consumption, operational costs and environmental impact. The key features include built in shredding programmes depending on the type of material, an ability to process wet materials,

> compact transport dimension, low dust and noise emissions. Also thanks to the hybrid drive, the machine can operate in full electric mode.

www.camssrl.it

## **Rubble Master** meets the future with a host of smart solutions

The main crowd puller at the Rubble Master stand at bauma was its brand new scalping screen the RM H50X hybrid, which is said to set new standards in user friendliness and fuel savings. The Austrian manufacturer was buoyed by the positive reception the new scalper received from the audience. The machine is said to deliver fuel savings of up to 25% in stand-alone operation and up to 50% when used together with a hybrid crusher. This environmentally friendly innovation not only significantly reduces operating costs but also enhances operational safety and minimises downtime. The RM H50X hybrid is scheduled

to become available to customers in German speaking markets in the first half of 2023, with the worldwide launch expected in Q4 2023. Visitors were equally impressed by the digital solution RM 'Xsmart', which ensures intelligent networking and smooth interaction between machine, operator, owner and service team. A special app is available to download on any mobile or desktop device providing an overview of the machines at work in real time.

www.rubblemaster.com

### Latest sawing and drilling updates from Cedima

The German based manufacturer of concrete sawing and drilling systems Cedima GmbH presented a diverse range of solutions for professional contractors at bauma. One development was the ride on floor saw CF-6032 designed for microtrenching applications. The new machine comes equipped with a 3.4l 100kW diesel engine, which is compliant with the Stage V emissions





has been proving itself on the international market as a reliable cutting solution for over a decade now.

www.kern-deudiam.de

standard. Also new was the CF-4030 B - a walk behind floor saw powered by a 45kW petrol engine. Reaching a maximum cutting depth of 410mm with a 1,000mm diamond blade, the saw features hydraulic feed, hydraulic steering and electronic cutting depth control. Another addition to Cedima's floor sawing line up at bauma was the new CF-2900 D model. Powered by an 18.4kW Stage V compliant diesel engine, the machine delivers a maximum cutting depth of 360mm. The cutting feed is provided by hydraulic transmission with a fail-safe parking brake. An integrated self-priming water pump provides cooling for the blade during cutting. In the drilling segment, the main attraction was the new self-propelled electro hydraulic drill trailer BW-446 EP. Weighing in at 2,500kg, the BW-446 EP allows core drilling with a diameter of up to 400mm and a drilling depth of 1,100mm. On the wire sawing side, the star of the show was the new all electric wire saw CSA-1002 EP.

# www.cedima.com

# Tdbs presents 'Flughammer Sparrow' and 'Work Buddy'

TdbsHandels GmbH, a manufacturer of innovative solutions for the concrete sawing and drilling industry based in Remscheid, Germany, reported that one of the most sought after products at bauma was its ingenious tool for the removal of concrete cores stuck in drill bits called the Flughammer Sparrow. According to the German company, this solution became popular with users thanks to its simplicity, low injury risk, high added value and agreeable price. Another highlight at the bauma booth at was a cutting, testing and soldering device brand named the Work Buddy.

### www.tdbs.de



# HSD Europe showcases latest additions to the 'EDIA' range

One of Europe's established manufacturers of diamond consumables HSD Europe GmbH based in Eschborn, Germany, used bauma to display three new products produced by the company's proprietary technology EDIA (Evolution of Diamond Impregnation Array). The EDIA battery saw is a low noise diamond blade designed for battery powered saws. The blade, which comes in four specifications, is suitable for cutting reinforced, flint and cured concretes. Also new is the

silent 'Excelsior' blade. Featuring chipping free bond, the blade is designed for sawing such materials as ceramics, porcelain gres and granite. Last but not least, is the brand new range of laser welded core drills called 'Titan'. Designed for dry coring tasks, the Titan drills show excellent performance on extremely hard materials.

# Kern-Deudiam wheels out two new walk behinds

bauma 2022 was a great success for the Germany based supplier of concrete sawing and drilling solutions Kern-Deudiam. A staple exhibitor of hall A1, the German manufacturer wheeled out two brand new floor saws: the electric driven KDF1200-E and the gasoline powered KDF500-B/H - both designed and manufactured in Germany. While the electric auto driving KDF1200-E ensures a cutting depth of up 510mm comes packed with such digital features as joystick operation, selector switch, stepless speed adjustment with soft start, the smaller gasoline model KDF500-B/H is marketed as a powerful and compact all-rounder. Boasting an impressive power rate of 8.7kW, the machine ensures a cutting depth of up to 200mm with a maximum blade diameter of 500mm. This model is a successor to the smaller gasoline powered KDF450-B/H floor saw, which

# Husqvarna premieres floor saw for indoor applications

Sweden based bellwether Husqvarna used bauma to premiere its new electric walk-behind floor saw FS 600 E suitable for indoor applications. "We have developed this model with the operator's health and safety in mind. The machine boasts improved ergonomics and zero CO2







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emissions. It is very handy for small sized maintenance and repair jobs indoors," says Richard Tremain, global product manager, Floor Saws at Husqvarna Construction. On top of that, its electric motor requires less maintenance than a combustion engine, which lowers costs of ownership and operation. The FS 600 E is now

# www.husqvarnagroup.com

### Ehwa introduces 'Zenesis Edition 5' diamond tools

available worldwide.

South Korea based Ehwa Diamond exhibited at bauma for the first time back in 2010. This year's bauma became the fifth edition for the diamond tool specialist and it seems very appropriate that the manufacturer used it to introduce the latest 5th generation of its patterned diamond tools Zenesis Edition 5. These low noise and vibration tools are designed for high performance dry cutting and drilling of green and set concretes. Currently the Zenesis Edition 5 range includes a floor saw blade, wall saw blade, hand held saw blade, multipurpose saw blade and core drill.

www.ehwadia.com

# EXCAVATOR ATTACHMENTS FOR DEMOLITION AND RECYCLING

### Cmb lays out a plethora of new attachments

Cmb Srl., an Italian based expert in excavator attachments, used bauma to present its updated and extended line of work tools. The new 'CRE' series of compact shears equipped with more powerful cylinders for faster work cycles took the front row. Also new was the 'FK' series - a three kit crusher featuring crusher, combi tool and shear interchangeable autonomously by the operator within two minutes thanks to an innovative quick coupling system. The proven CRR20 rail cutter was another highlight of the Italian manufacturer's booth. The 'SM' sorting grapple, the 'MD' multi kit, and the 'FH' rotating pulveriser completed the demolition line



### Promove is happy with turnout

Italy based demolition attachment specialist Promove reported high levels of visitor numbers at bauma, the result of the company's decision to bring most of the product portfolio to the show. According to the Italian manufacturer, the 'SG' range of demolition and sorting grabs, the small sized crushers CP210, CP300 and CF45 and, of course, Promove's trademark breakers, enjoyed particular success with the visitors.

# www.promovedemolition.com

# Successful joint exhibition for NPK and Genesis

For the very first time in its history, Genesis GmbH exhibited its hydraulic attachments at bauma jointly with NPK Europe. The highlight of its 600m² booth was the outsized 5m long Genesis XT 995 scrap shear with a total weight of 8.9t. Due to its excellent power to weight ratio, the GXT 995R is a real powerhouse suitable for heavy duty applications such as ship dismantling, large steel demolition projects and scrap processing. This giant was flanked by various models of the Genesis GDT demolition shear range including the latest 'Razer X' demolition multi shear. Designed for 20t to 50t excavators, the Razer X comes with three





jaw sets that can be changed in less than two minutes without the operator having to leave the cab. Another show stopper was an art object called the 'Artshear'. A Genesis XT 665R model formed the canvas for a live graffiti art performance whose main theme was a koi fish. Symbolizing strength, prosperity, longevity and endurance, it conveys the notion of pride of being part of the NPK Group and the company's unwavering commitment to environmental sustainability.

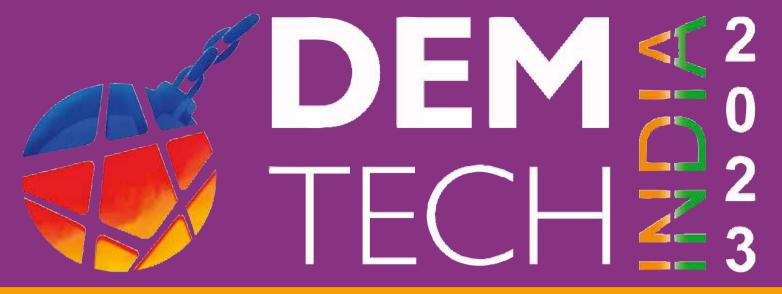
## www.genesis-europe.com

# Remu to celebrate its 25th anniversary after successful Bauma

Remu, a Finland based trendsetter in screening and crusher buckets, used bauma to showcase its screening buckets, crossover buckets with interchangeable modules and heavy duty padding buckets for pipeline and cable laying applications. Apart from excavator attachments, the Finnish company manufactures pontoon undercarriages for excavators for dredging and excavation in hard to reach environments. Later this year, Remu will celebrate its 25 year milestone in business.

www.remu.fi





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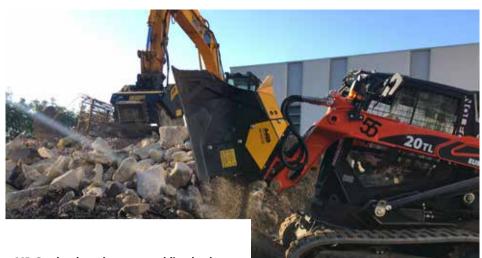
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# MB Crusher launches new padding bucket

Italy based crusher and screening bucket specialist MB Crusher unveiled the new MB-HDS220 padding bucket at bauma. With a weight of 1t and a load capacity of 0.6m<sup>3</sup>, this compact and extremely manoeuvrable attachment is suitable for 4.5t to 11t wheel loaders and skid steers. The 2.20m inlet opening, designed to quickly convey the material to the rotors, facilitates loading by ensuring that the tracks or wheels of the carrier remain clean. The coupling system is built to allow maximum freedom of movement and visibility of the material. Like other 'HDS' models, the MB-HDS-220 permits changing of the rotors directly on site. Conceived and built for gardening, landscaping and urban construction sites, the MB-HDS padding bucket is a handy solution anywhere where there is a need to aerate packed topsoil or to reclaim soil contaminated with various demolition debris.

www.mbcrusher.com

# New demolition, recycling and road maintenance solutions from Simex

Simex - an excavator attachment innovator from Italy - organised a dedicated area for its demolition and recycling solutions at bauma. Simex's proven 'VSE' screening buckets, which allow rapid adjustment of the output size of the screened material onsite, have been updated with a new screening tool configuration system called 'FIT'. This system permits multiple configurations of the working parts depending on the material being screened, which results in up to 75% less maintenance costs. Another highlight was the 'CBA' asphalt granulator bucket designed for volumetric reduction of asphalt slabs to a required grain size thanks to a configurable rear grid. The high performance 'CBE' rotor crusher buckets

completed the bucket section. The 'TF' drum cutters and the 'MP' cutter heads for selective demolition, profiling and tunnelling applications were allocated a prominent spot on the booth as well. These are extremely versatile attachments that can be used for a wide variety of applications ranging from removal of deteriorated concrete to scarifying of shotcrete bumps to milling of industrial floors.

For a few years now, Simex has been working on a cutting edge technology for the recovery of distressed road pavements. This endeavour has now resulted in comprehensive asphalt regeneration technology. Aptly called 'ART' - Asphalt Repair Technology – it involves cold milling, volumetric reduction and remixing of the milled material so 100% of the material present onsite can be reused. The 'PL Next' cold planer embodies Simex's vision for cold planers of the future. Equipped with the two electric motors, it provides a more efficient, precise and stable operation. An enhanced hydraulic system provides improved transmission of power to the milling drum.

www.simex.it

# CONSTRUCTION VEHICLES

# Goldhofer reports a smashing success at bauma

Goldhofer Aktiengesellschaft, a German based transport vehicle specialist, used bauma to unveil a whole array of new products. According to Robert Steinhauser, vice president Sales & Service Transport Technology at Goldhofer, the new 'FT' series of semitrailers was met with success far exceeding expectations. "With the presentation of the FT series, we have definitely hit the bull's eye and introduced a vehicle that will change the



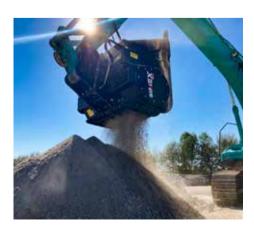
transportation market for years to come," says Robert Steinhauser. "Universal compatibility with the existing Goldhofer modules and accessories means lower acquisition costs and opens up new business models in the field of cooperation with partners and cross rental activities." In the smaller part of the range, the low payload solutions such as 'Trailstar' and 'Stepstar' are said to have attracted a lot of interest from the visitors. An optimised centre of gravity, low deadweight and intelligent lashing system result in high payloads, short setup times, and fast transportation cycles. The 'Cargoplus' low profile tyres provide the double advantage of higher payloads and lower loading heights and became another showstopper at bauma. However, the biggest crowd puller of all was the 'PST/SL-E' split combination demonstrated together with the new FTV 850 blade transporter. This solution gave an impressive demonstration of the fact that the decisive factor for blade transportation is not metric tons but lateral stability, with the new model having a vehicle width of up to 4,010mm for maximum stability and safety.

www.goldhofer.com

# EXCAVATORS, Cranes and Loaders

# A record bauma for Sennebogen

The star of Sennebogen's demolition line-up at bauma was the 48t multifunctional 830 demolition model boasting two new features: a three part long-front boom with 23m reach and a 10t counterweight that can be hydraulically removed to reduce transport weight. On the crane side, in addition to the 200t 5500 G crawler crane, two other models in the 100t weight class were on display at Sennebogen's 2,100m² exhibition area: the 6100 E crawler crane with diaphragm wall grab suited for specialised civil engineering applications, and the recently launched 6103 E telescopic crawler







crane. According to the German manufacturer, the 2022 bauma became a record in many respects; the number of machines exhibited in Munich as well as the number of dealers and personnel to communicate with customers were higher than before, as was the number of quotation requests.

# www.sennebogen.com

### Komatsu debuts a 20t electric excavator

Komatsu used bauma 2022 to debut a 20t electric excavator featuring a lithium ion battery system supplied by US based company Proterra. Komatsu and Proterra have been jointly developing and testing medium sized electric excavators since January 2021. This particular model, which is slated for launch into the Japanese and European markets in 2023, integrates Proterra's lithium ion battery technology with such proven Komatsu components as the hydraulic pump, controller and electric motor. In addition, Komatsu has developed a robust cage structure to provide additional protection for the machine's battery packs. As a result, the Japanese manufacturer has achieved digging performances and durability equivalent to those of engine-driven hydraulic excavators. Electric power makes it possible to work in various environments without worrying about noise and exhaust emissions for up to 8h when fully charged. Zero vibration also helps reduce the operator's fatigue. As global awareness of the climate change gathers pace, Komatsu has declared its intention to achieve carbon neutrality by 2050.

### www.komatsu.eu

# Hitachi unveils prototype 2t electric excavator

Another Japanese heavyweight, Hitachi Construction Machinery Co., Ltd used bauma to unveil a prototype battery powered mini excavator. Thanks to its short tail swing, the prototype ZX23U-6EB boasts exceptional manoeuvrability inherited from the diesel powered ZX20U-5B model already available on the Japanese market. Operators can choose between a battery pow-



ered mode using 18kW/h lithium ion batteries or wired operation by taking power from a CEE 400v A/C three phase source. The combination of both methods allows operators using the ZX23U-6EB to work continuously throughout the day. Owners can also expect reduced maintenance costs and downtime compared to diesel powered excavators. Reduced external sound levels allow greater flexibility in terms of working hours and applications in environmentally sensitive areas. The machine's compact dimensions mean that it can be easily transported between job sites. The ZX23U-6EB will be designed and produced in collaboration between Hitachi and EACP (European Advanced Construction Products GmbH), a joint venture between Hitachi Construction Machinery Co., Ltd and KTEG (Kiesel Technologie Entwicklung GmbH). "With our new battery powered models, capable of working productively and efficiently in small spaces, we are listening carefully to our customers' requirements and working hard to meet the growing demand for zero emission equipment," says Hitachi president Takaharu Ikeda.

### www.hitachicm.eu

### Bobcat launches new electric mini excavator

Bobcat used bauma to launch a new 2t electric mini excavator, the latest in Bobcat's growing line of zero emission compact machines. Robert Husar, Mini Excavator product line director, Doosan Bobcat EMEA, said of the new model: "We launched the E10e, our first battery powered product and the world's first 1t electric mini excavator at bauma 2019. Like the E10e, our new two tonner that we are showing at bauma 2022 was also developed at the Innovation Centre on the Bobcat campus in Dobris, the Czech Republic." Alongside the new mini, the company also presented a number of the latest innovations and concepts including the world's first all electric compact track loader - the Bobcat T7X. This is a battery powered machine, built to be more productive from the ground up with electric actuation and propulsion, quieter with high performance torque and said by the company to be more powerful than any diesel fuelled track loader that has ever come before it. Vijay Nerva, head of innovation at Doosan Bobcat EMEA, added: "Our electric machines shown at bauma are all part of Bobcat's journey in further expanding our portfolio in alternative power sources. In essence, all the components in the power trains of these products are made to measure and we have adjusted the processes with our suppliers so that we can increase the production volumes when needed."

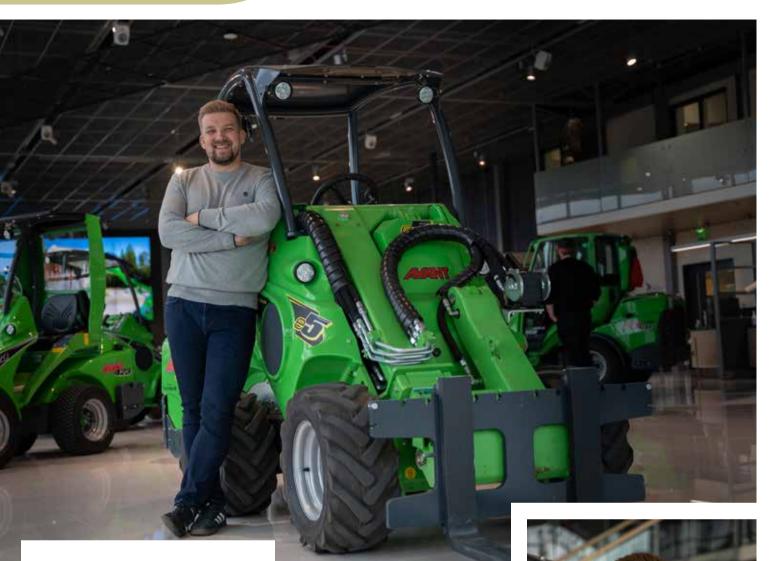
www.bobcat.com











Caterpillar rolls out four electric machine prototypes

At bauma, Caterpillar showcased four battery powered machine prototypes: the 301.9 mini excavator, the 320 medium excavator, the 950 GC medium wheel loader and the 906 compact wheel loader. All machines are currently equipped with an on board A/C charger; however, the manufacturer is planning to offer an off board D/C fast charging option as well. "Caterpillar is well positioned to help customers reach their sustainability goals, including lowering emissions on the jobsite," said Construction Industries Group president Tony Fassino. "It's important we meet customers on their sustainability journey today with a variety of solutions including machines that run on renewable fuels or technology that increases fuel efficiency, as well as supporting them into the future as we power our next generation of machines." Built on the proven Caterpillar technology, the lithium ion battery range features a modular design that offers flexible configurations across multiple applications. The batteries are engineered to be scalable to industry and customer performance needs and maximise sustainability throughout their lifecycle, including recycling and reuse at the end of life. The 301.9 and 906 are expected to be the first commercially available models.

www.cat.com

## Avant Tecno extends electric loader line up

Avant Tecno - a Finland-based manufacturer of compact loaders - rolled out two new models, Avant e5-27 and

Avant e5-13, equipped with the Avant 'OptiTemp' batteries (27kW/h and 13kW/h respectively) featuring a unique thermal management system. The batteries were developed by Avant Tecno's subsidiary Avant Power Oy. The Avant OptiTemp batteries have an extremely high capacity of up to 27kW/h, which allows a whole day's operation with just one charge. The innovative thermal management system has been designed to keep the temperature optimised and ensures the same capacity in both hot and freezing weather. Once the battery is plugged into a charger, the temperature control system is automatically switched on. Thanks to the structure of the battery, users can charge the battery in just 1.5h with a rapid charger. The Avant OptiTemp batteries are fully protected from propagation (thermal runaway from one cell to another) or flame leakage by the battery's structure and immersion cooling system. "The cooperation with Avant Power allows us to build the kind of electric loaders that the market has been longing for. Longer working hours and more affordable pricing have been the key issues with electric loaders until now. With the new e5 models, we intend to tackle them both," says Jani Käkelä, the CEO of Avant Tecno.

www.avanttecno.com



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### Brøndum introduces new remote control

The Denmark based manufacturer of industrial vacuum cleaners Brøndum used bauma to introduce a new smart remote control for its 'Ronda' 200H Power and Ronda 1800H Power models. The control is mounted on the hose near the user and makes it possible to start and stop the vacuum cleaner easily and quickly. This new solution is particularly handy for concrete cutting, drilling or grinding tasks. Using machines like concrete grinders necessitates hearing protection, which makes it difficult to hear the vacuum cleaner's acoustic alarm for low airflow. The new Ronda remote control is equipped with a visual alarm that flashes red simultaneously with the sound alarm, indicating that the airflow in the hose is lower than the required 20m/s. This typically happens when the collection bag needs to be changed or the filter needs cleaning or the hose is clogged. This way the new remote control helps contribute to a safer work environment.

www.broendum.com

# Sprintus flaunts high end dust control and cleaning solutions at bauma

Sprintus GmbH, a German based supplier of dust management and cleaning solutions, used bauma to showcase its flagship products - the pump vacuum N 51/1 KPS and the brand new 'CraftiX' series of safety vacuum cleaners. Capable of pumping out water from any flooded building structure, the N 51/1 KPS can



also be used in civil engineering applications such as flat roof renovation and pool cleaning. Featuring a 900W integrated pump with a capacity of up to 14,000l/h of wastewater and a robust 50l container made out of impact proof plastic, the N 51/1 KPS is designed for challenging professional tasks. A filter net retains leaves, wood chunks and other objects in the container and prevents the pump from clogging. Thanks to a 10m wastewater hose, waste water is continuously drained from the container. With a maximum suction of 230bar and a 360mm wet floor nozzle, the machine can also function as a wet vacuum cleaner.

The new CraftiX series consists of the four certified safety vacuum cleaners designed for 'L' and 'M' dust classes. All machines feature automatic filter cleaning, which, thanks to the patented Hepa 13 cartridge filter, takes place at a constantly high suction power. This allows users to perform sawing, drilling, milling or grinding tasks in a safe and efficient manner. The CraftiX 35 L and 50 L vacuum cleaners are suitable for dealing with L class dust, which is slightly hazardous to health. If hazardous dust of M class is involved, the CraftiX 35 M and 50 M models are a better fit. Due to their standard antistatic equipment, they can easily extract large quantities of fine dust directly from the power tool. The M models are also equipped with an alert system that monitors the suction power. The operator is alerted by acoustic and visual signal if the required airflow is not reached. The heart of the CraftiX is the Hepa 13 cartridge filter. It consists of the two independent chambers, which are cleaned one after the other. Filter cleaning takes place automatically every 45sec. All four models come complete with the maxi chassis featuring large wheels and swivel casters suitable for construction sites. Thanks to their 10m power cord and 5m suction hose, the CraftiX vacuums provide a large operating radius on any construction or demolition site. All models are equipped as standard with a 450mm dry floor nozzle, a crevice, a round nozzle and power tool adapters. Established in 2007, Sprintus GmbH is a family owned manufacturing company located in the town of Welzheim in Baden-Württemberg, some 35km from Stuttgart. Currently the manufacturer supplies its products to over 60 countries worldwide.

www.sprintus.eu

# HIGH-PRESSURE TECHNOLOGIES

# Spir Star – a major player in the high pressure game

Founded in 1989 in Rimbach-Mitlechtern, Germany, Spir Star AG is a manufacturer of ultra-high pressure thermoplastic hoses with spiralled steel wire reinforcements for pressure ranges from 250bar to 4,000bar and inside diameters ranging from 3mm to 32mm. The company's product range also includes valves, adapters, tubing and couplers. One of the product highlights showcased at bauma was the rugged 4/4 UHP-X-3035 hose designed for pipe cleaning applications. Featuring four wire layers and an outer diameter of just 9.9mm, the hose is capable of reaching a whopping working pressure of 3,300bar (approx.). In addition to this, the hose is equipped with the patented robust 'DuraLife Flex' cover, which considerably increases its service life.

www.spirstar.de

# SURFACE PREPARATION

### Janser releases 'Kondor' at bauma

Janser GmbH, a Germany based surface preparation professional, presented an array of innovative products at bauma. The stripper machine range was expanded with the addition of a new 18v electric hand scraper. However, the real limelight stealer was the Kondor - a powerful and robust grinder designed for small to medium sized subfloor preparation jobs. A true all-rounder, the Kondor is designed for aggressive use when removing fillers, flooring residues or adhesive layers with 'PCD' tools. High grinding performance, ergonomic design and easy tool replacement are Kondor's trademark features. The patented tool holder enables tool free changing of the grinding heads. The working angle is adjustable via a level indicator. In the transport position, the machine's height is only 480mm.

www.janser.com

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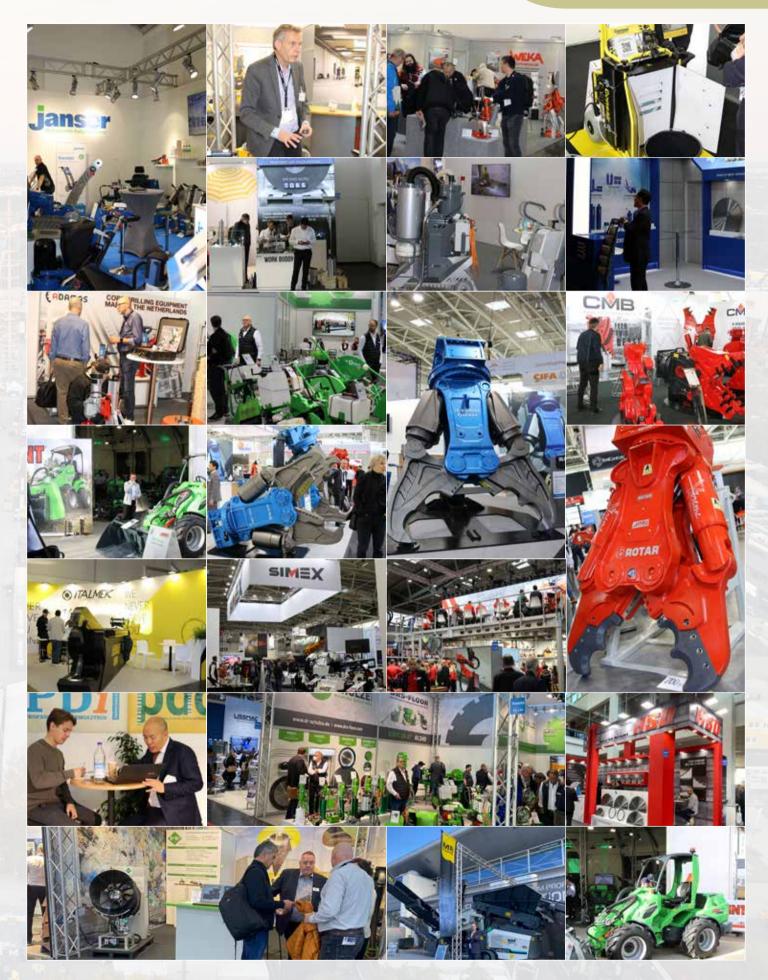
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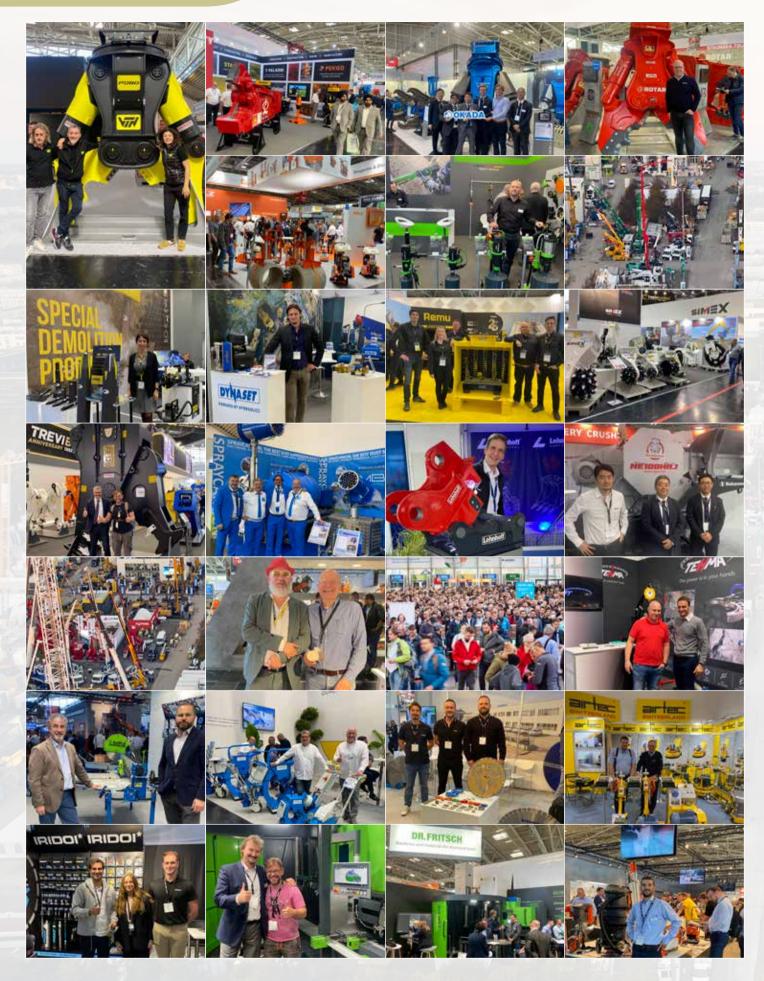
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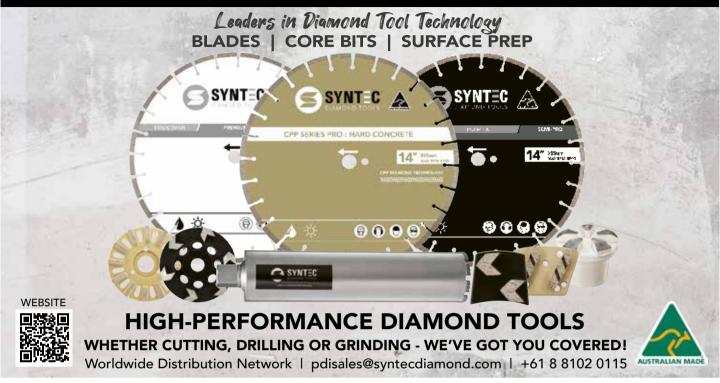
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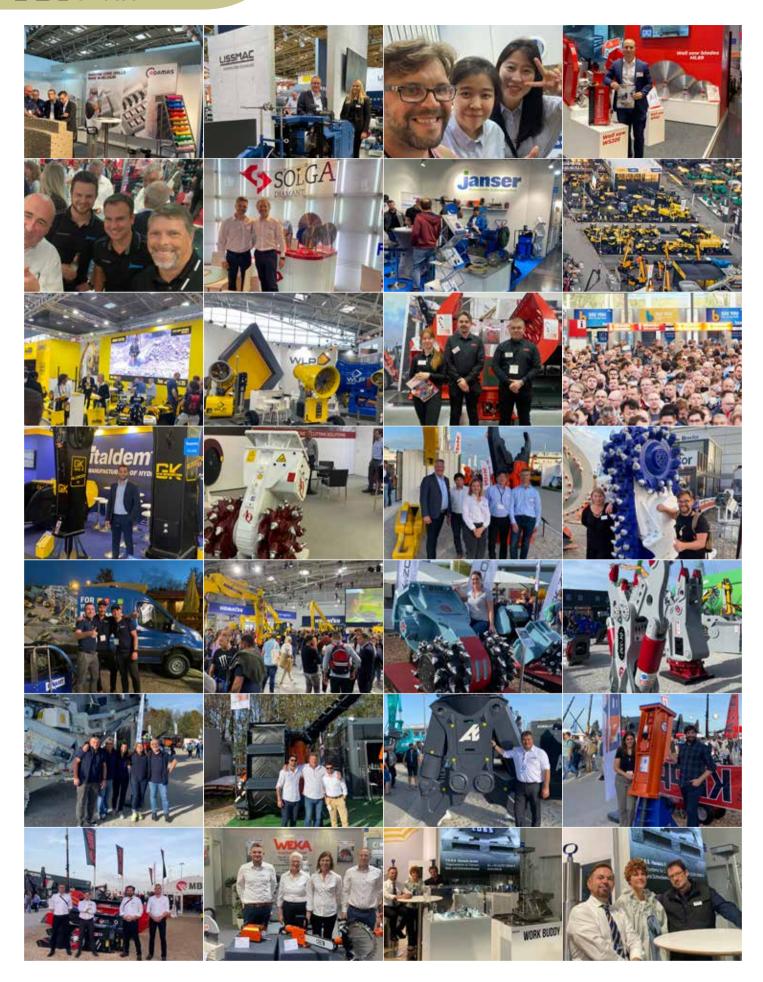
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The International Concrete Sawers & Drillers Association (IACDS) held its annual meeting in conjunction with bauma on the Thursday of the show. The meeting was held at the show with the traditional industry networking event and the presentation of the IACDS Diamond Awards taking place immediately afterwards.

t the IACDS annual meeting, Douglas Walker from the USA was appointed as the new president of IACDS. Walker runs the American concrete cutting company Walker Concrete Cutting Services and has for many years played an active role in the American concrete cutting association CSDA, Concrete Sawing & Drilling Association, where he has, amongst other things, served as president. IACDS outgoing president Michael Findeis was thanked for his efforts since 2019. Due to Sweden's national association leaving IACDS, former treasurer Linda Dahlin was replaced as the association's new treasurer by Georg Lahofer. There were also reviews of the minutes from the previous IACDS annual meeting, the current status of the association and a presentation of an economic report.

After the meeting, the traditional networking event started where contractors and manufacturers from all over the world joined in. About 60 people mingled for about an hour until the ceremony for the IACDS Diamond Award started. The IACDS Diamond Award is an internationally recognised competition for the global concrete sawing and drilling industry which began in 2004. The Diamond Award now has three categories, jobs, products and public, to showcase the expertise of the contractors

and the innovation of manufacturers. This international competition is organised jointly with the national concrete sawing and drilling associations. Following is a summary of the nominations for both categories.

# Job nomination - Stone Divisor

The German company Stone Divisor submitted a project termed 'save the wall'. The work involved perforating a 35m long brick wall, with 1.5m to 4m meters being drilled horizontally and up to 7m vertically at the site of the historic wall in Augsburg between Fischertor and Lueginsland which was threatening to collapse. To prevent this, both horizontal and vertical core holes were attached and then tensioned with steel rods. The job task was to perforate the wall with 250mm diameter holes as a blind hole for support discs. In this hole a 102mm diameter hole starts through the wall with 1.5m up to 4.5m deep. Until the wall was fixed horizontally to the ground, the contractor started with a 102mm diameter to drill through the wall vertically up to 7m with one piece core bit.

### Job nomination - Antal

The second contribution came from the German contractor Antal and concerned the demolition of a former

office building with a glass facade. Antal undertook the gutting, the partial constructive deconstruction of building areas and various building components, as well as the entire structural work etc. The dismantling of the two stair towers alone comprised a total 1,200m² of saw cut area. In the process, walls up to 60cm thick were cut with the aid of several diamond wall and diamond wire saws, and crushed by a demolition robot equipped with concrete shears. In total, more than 15,000t of concrete was demolished in around six months.

### Job nomination – Beton Bearbeitung Mahler

The third nominee was the company Beton Bearbeitung Mahler, also from Germany, which used a Husqvarna demolition robot to demolish the interior of a listed four storey building without damaging the exterior in a densely populated area. Accessing the building via the roof or the outer walls was off limits, so the renovation had to be carried out from the interior, from top to bottom. The first challenge was to get the equipment to the fourth floor via the staircase. The (Husqvarna) DXR 300 demolition robot is only 78cm wide, but the staircase was not much wider, with many twists and turns.





Winner of the IACDS Diamond Awards Public award was he company Dimacon for their new tool to digitalize concrete cutting and drilling companies. Left flank Douglas Walker, IACDS and right flank Michael Findeis, IACDS.



Winner of the IACDS Diamond Awards Job award Edelmiro Santamaria who is CEO of the Spanish contracting company Re-Corta.

After the walls and lift shaft on the fourth floor had been demolished, the machines were moved to the next floor down. After arriving on the floor below, the demolition robot made the ceiling openings. Each of these included an opening of 60m<sup>2</sup>, requiring saw cuts along the outer walls, supports and beams for the existing structures. The staircase could then be removed upwards and all floors subsequently dismantled in the same way. Removing the entire 220m² floor slab was the final task. Because of the densely populated pedestrian area below and the age of the building (1846) it was necessary to demolish all concrete and masonry walling without releasing any emissions. The debris was removed via the lift shaft.

## Job nomination - Dymacore

The fourth contribution came from UK contractor Dymacore and concerned the renovation of an old bridge. Big Arch Bridge, built in 1813, strides Steelworks Road and is part of the Ebbw Vale heavy industrial heritage. The grade II listing reflects the bridge's importance in the context of the area and is unmistakably massive. The arch measured 23m in length by an evolved intrados cross section of approximately 13m. The single span had an arch ring approximately 550mm in thickness comprising sedimentary stone laid with the bedding perpendicular to the line of thrust.

Goldhawk Ltd was invited by Blaenau Gwent County Borough Council to undertake trials of a methodology termed 'interstitial grouting' to determine the feasibility of injecting suitable resinous materials into and above the arch ring to provide a water resistant barrier. The aim being was to arrest the progress of freeze and thaw damage to the arch intrados. The trial was carried out from 9 March until 13 March 2020. Temperatures averaged around 6° with some frosty mornings and some sunny intervals. The trial was carried out following a period of exceptionally prolonged and heavy rainfall.

Following the trial it was determined that not only was water control installation required, but also a mechanical means of retaining some of the loose and friable masonry in place. Goldhawk Bridges Restoration, the sister company of Structural Repairs and Specialist Services was engaged to design and install a retaining 'MARS' reinforcing grid system into the soffit of the arch alongside the water control installation.

Following issuance of the instruction to proceed in November 2021, the services of Dymacore Ltd Drilling were engaged through a competitive tender process based upon it performance on other such contracts in the Reading, Bristol and Bath areas. On commencement of the contract, CADW (Welsh Heritage Board) required the local authority to take the repair further than the original scope, advising that the installed injection and retaining systems had to be 'camouflaged' into the structure. This in turn led to numerous trials and deepening of the required installations in the soffit of the arch barrel.

### Job nomination - Re-Corta

The Spanish contractor Re-Corta undertook the advanced cutting of openings in galleries of a dam body. The job was part of the comprehensive rehabilitation works of the Vilasouto dam's bottom drains. The dam was built in 1969, and is located on the Mao River with a volume capacity of 210Mm3. The bottom drains act as dam fuses, being requited to be able to control releases in case of safety problems in the system. The bottom drain flow must be bigger than the average river flow with a water height equal to half of the dam. The Miño-Sil Hydrographic Confederation decided to undertake the project to ensure that the dam's drains are operational and safe. The work consisted of removing the existing bottom drains, from the valve chamber to their outlet (downstream). This would require the opening of two parallel galleries, 1.20m wide, 2.13m high and 16.50m long. In addition, it was necessary to enlarge the valve chamber.

### Job nomination - Behse betonbohr

The next job nominee was another German company, Behse Betonbohr, which undertook saw work with a circular wire saw at Fichtebunker combining several floors and with the exterior walls being opened up. The work was undertaken by Behse GmbH, with the opening of the outer walls being the technical highlight of the project. The wall had a total thickness of 2.50m, consisting of 2m of reinforced concrete and 50cm of masonry. The openings needed to be a height of 2.77m inside with a radius of 2m and a resulting width of 2m. Outside was a brick window arch, which was to remain as the stop of a new door. After the dismantling of the masonry in the window arch, a height of 2.35m with a radius of 1.17m and a width of 1.17m resulted. The wall thickness of the concrete wall to be cut was 2m.

# Job nomination - D.I.M.A.S. Bohr- und Säge

The Austrian concrete cutter D.I.M.A.S. Bohr- und Säge carried out extensive drilling on the 430m long and 96m high Jauntal bridge over the river Drau, which is one of the highest railway bridges in Europe. The route is part of the Koralmbahn which is being renovated. The exciting thing about the project is that the holes for the injection work had to be drilled up to 20m deep through the foundations. The work for the tendons was carried out on the four bridge piers, which are between 60m and 77m high. In total, approx. 250m of boreholes had to be drilled through the foundations for the injection work, and approx. 1,200m of boreholes for the installation of tendons. The execution was planned together with the executing construction company which required timing and sequence of drilling. The selection of the appropriate drilling method and the required tool was coordinated on site. The Hilti hydraulic drilling system was used for the drilling, partly with automatic feed. Screw in drill bits from Tyrolit were used for the deep drilling. The difficulty was the drilling depth of up to 20m for

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the filling bores and up to 13m for the inclined bores for the anchorages.

## Job nomination -Diamantbohr Group

The last job contribution came from Swiss Diamantbohr Group and concerned work with a mobile drilling unit for channel cutting in Blansko, Czech Republic. The Diamantbohr Group was awarded the job to create drainage sections (channels), some of which had individual lengths of over 20m. These were located in tunnel Nos. 7, 8.1, 9 and 10. The maximum cutting height above the setup position was specified as 8.5m. Diamantbohr Group's workshop built a retractable arm system, which it then deployed to carry out the work. As a safety measure in case of a machine outage, a back-up plan was also developed. This consisted of a sequence of procedures that was worked out in advance. In this way it was possible to ensure that every single component that was relevant to the system was on site within a few hours. The aim of the emergency plan was to avoid any interruption over 24h. The tunnel profile cutter has a hydraulic drive power of 45kW with 320bar, and a maximum reach of 10.5m from the base of the machine (maximum cutting depth of 102cm). The cutting widths were variable and varied depending on the attachment, ranging from 0.50cm to 80cm in width.

Due to the applicable safety standards, the machine was built CE compliant and has a radio control induction sensor. Due to the complexity of the various aspects, four different attachments have now been developed, including a milling drum which can be equipped with up to 42 milling blades to a maximum width of 80 cm. The machine can carry an attachment weight of up to 485kg. The main challenge was the required height at which the cut had to be made (8.5m). Another difficulty was the distance of almost 1,000km between workshop and site. The sophisticated contingency plan was created to deal with any possible complication.

### Product nomination - Braun Centrifugal Cutter

Six manufacturers were nominated for their products and product solutions. First out was Braun with its centrifugal cutter, BCC. The BCC is a special system for the mechanical and internal cutting of contaminated aluminium pipes of very small diameter for the safe dismantling of nuclear facilities. The extraordinary feature of the system is that the feed drive of the tools/saw blades is generated

purely by centrifugal force, and not, for example, by an electric drive. This makes the machine ideal for the safe dismantling of nuclear facilities and thus represents a positive contribution to environmental protection. The BCC, in the course of a cold cutting process, enables the internal cutting of aluminium pipes that have a very small diameter. The machine can therefore be used for tasks where external cutting is not possible.

### Product nomination - Dee Tec HBB2 diamond wire

The second product nominee came from Indian manufacturer Dee Tec and concerned a new type of diamond wire. The HBB2 diamond wire is a wire fitted with 'HIP' brazed beads (HBB) which features diamonds being placed with a very high concentration giving superior cutting life and speed. Diamond wires' for construction applications is a high growth market with applications in concrete, heavily reinforced concrete, steel and offshore. Presently manufacturers include Tyrolit, Husqvarna, and Hilti. Machines are now being developed to be more powerful to allow the cutting of bigger surfaces at faster cutting speeds. Diamond wire is usually made with electroplated, vacuum brazed or sintered beads.

### Product nomination - Dimacon

The third contribution came from Dimacon and concerned its software for the digitalisation of concrete cutting and drilling. Its smartphone and a web app has been designed to write daily reports, plan weekly, monthly and even yearly resource planning, write digital acceptance reports and safety checks (e.g. framework, guardrail). It is easy to photo proof, is attachable to the job and easy to understand and use. Dimacon is the first tool on the market in which the basic idea comes from a concrete cutting and drilling company. The programming was closely accompanied and evaluated by the requesting company and developed in close communication with workers and customers.

# Product nomination -**Edil Services watertight holes**

Edil Services SRL presented it equipment for watertight holes on concrete tanks filled with liquid.

# Product nomination -Maier Kernbohrtechnik Craftplan

The next product contributor was Maier Kernbohrtech-

nik with Craftplan which is a new soft work to simplify every day concrete cutting work.

## Product nomination -Solga new dry cutting wall saw

The last product contribution came from Spanish manufacturer Solga. Its new dry cutting wall saw (C/S wall saw AL2 MS60 H10/2 O800 Laser E60 dry cutting diamond wall saw) was developed for high speed machines and calcareous reinforced concrete. For the development of this new product the company drew on its experience and other products on the market. The best diamond quality was used for cutting pre-stressed hollow core slabs and the bonds used in the stone market, which sometimes need dry cutting alloys for big diameter blades. The segment designed for its wall saws making it possible to create more gap between segments to increase the removal of dust created while cutting.

### And the winners are

The winner of the IACDS Diamond Job Award was Re-Corta Démolición Técnica for the opening of galleries in the dam body for comprehensive rehabilitation of bottom drains. The winner of the product award was Braun Maschinenfabrik for Braun Centrifugal Cutter. The company Dimacon was awarded the Public Award for its new tool to digitalise concrete cutting and drilling companies.

# The award jury and sponsors

The jury of the IACDS Diamond Awards 2022 contained Felix Plattner from the Austrian association VBS: David Potiron from the French association SEDDRe; Manfred Witzke from the German association FBS; Diego Tedoldo from the Italian association NADECO; Jun Ozawa from the Japanese association JCDSA; Fabián Acudia from the Spanish association AEDED; a delegate from the Swiss association SVBS; Colin Walker from the UK association DSA and Douglas Walker from the US association CSDA. Sponsors of the IACDS annual meeting and the Diamond Awards were Adamas, Gssi, Heger, Hilti, Husqvarna, Hycon, Lissmac, Siegenthaler Consulting, Solga and Stone Divisor.

After the annual meeting and Diamond Awards ceremony on the evening of the 27 October an informal dinner was held at the Bavarian restaurant and brewery Augustiner Bräustuben in downtown Munich.

www.iacds.org



Some nominees for the product award.



Some of the nominees for the job award.



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The Italian manufacturer held as usual its bauma press conference at its booth where the company presented new products and news.

ince 2000, Indeco states that it has consistently responded to a progressively differentiated market in search of increasingly specialised products, expanding its product portfolio to include new equipment enriched by the company's technological expertise gained in the manufacture of breakers. From 2000 and onward, Indeco started to develop and manufacturer other types of hydraulic attachments for demolition, scrap and recycling applications. Its multi grabs and hydraulic mulching heads now being produced in Indeco's US manufacturing facilities. At bauma Indeco launched a number of new products and developments to complement its existing product lines.

#### New rail cutter series

In 2022 a new line of equipment has been created. It is designed for specific use connected to the transition from traditional to high speed rail networks. These are the 'IRC' series rail breakers which are specially designed for cutting railway, tramway and metro rails. The particular design of the jaws, combined with the efficiency of the hydraulic system and the robustness of the machine body allow the cutting of rails up to 70kg of mass per metre, with hardness up to 300Brinell.

#### The 'Indeconnect' remote monitoring system

Also in 2022, Indeco introduced its the new Indeconnect remote monitoring system based on the principles of IoT. Through a device mounted on the various equipment supplied with 4G technology for wireless connection and a cloud based web platform accessible from mobile (via app) or PC, the system allows the consulting of data transmitted in real time by each device installed. This enables users to see hours of work done, working position in space, hydraulic oil temperature, ambient temperature, GPS location and so on. This makes it possible to monitor productivity, control the operation of equipment, increase safety, predict and plan maintenance and manage any rented equipment.

### Double plate for double protection

Indeco states that the excellent results obtained, in terms of lengthening the tool's life through the insertion of an anti-wear plate on the mobile jaw of its 'IRP' pulverisers, have pushed Indeco to adopt the same precaution also on the fixed jaw. The interchangeable plate will preserve the supporting structure of the pulveriser, allowing it to withstand strong pressures, abrasions and prolonged use in any type of application.

#### ISS 8/13 shears

Another new development is Indeco's top of the range model to complete its range of 'ISS' shears. A slightly bigger model than the ISS 5/7, it can be used on excavators from 6t. Among its distinctive features are a short and sturdy structure, low weight, balance, the design of the jaws modified to optimise the cutting power and increase maximum opening, the presence of four interchangeable and reversible knives and the latest generation piercing tip.

#### Multi grabs IMG 300

Indeco has expanded its range expands downwards. As has already happened for other ranges of Indeco equipment, the multi grabs have expanded to make room for a new model, the IMG 300, which is compatible



## Multifunctional and powerful

- 3 t load capacity at 23 m working height over 360°
- Numerous equipment options available

## More safety and better vision

- Extreme stability due to wide support area (4.5 m)
- Elevatable and tiltable cab

## Cost effective in transport

- < 3 m transport width
- Hydraulically unloadable counterweight (optional)



For further information
> sennebogen.com/830-demolition



Telehandler

Balancer

Material Handling Duty Cycle Crane Crawler Crane Telescopic Crane Mobile Harbour Crane



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**DEMOLITION** 

**NEW EQUIPMENT** 

**WITH 23 M REACH** 



with small excavators (starting from 3t) which has been increasingly requested by the market.

#### Technological upgrade to the entire range

After recently undergoing radical restyling, the range of Indeco mulchers is now being further modified through a series of fine tuning that is aimed at increasing its efficiency and reliability. Small but significant improvements have been made on the transmission and placement on the drum of the interchangeable teeth that are now equipped with a bite limiter that prevents maximum penetration into the wood. In this way, it is possible to use larger teeth, such as Indeco 'Cobras', to obtain a finer mulching and a more fluid shredding action. This has been developed so that it stresses the machine less and increases its productivity, making the most of the ratio between the weight of the equipment and the hydraulic capacity of the excavator.

#### Indeco 'Lube'

Designed for smaller equipment, specifically Indeco's hydraulic hammers starting from the HP 200, which will now be equipped with a single centralised greasing point to which the Indeco Lube automatic greasing unit can be connected. This is a development said to be requested by users and acted on by the Indeco Research and Development department.

#### Wide global network

Indeco also has number of fully owned subsidiaries located around the world. In 1992, Indeco Australia was founded, with two offices in Melbourne and Sydney and a network of distributors in other regions.

Indeco UK was founded in 1998 based on the invaluable experience acquired by the local Indeco importer. In 2009, Indeco strengthened its presence throughout Eastern Europe with the establishment of a sales office in Russia, Indeco Russia, in order to better support the distribution network throughout the CIS territory.

Indeco Mexico, founded in 2011 and controlled by Indeco North America, deals with sales and aftersales service throughout the entire country. The long standing presence in the Brazilian market was further

strengthened by the establishment, at the start of 2017, of Indeco Brasile. In 2018, Indeco Asia Ltd opened in Hong Kong, becoming a point of reference for the Chinese and South East Asian markets. Indeco Japan has also been recently founded.

Indeco also boasts a series of commercial partnerships in countries such as India, where it is currently experiencing strong growth thanks to its collaboration with various local partners. In most emerging markets such as Africa and the Middle East, where Indeco, through its products and network of distributors, collaborates on some of the most important infrastructural works.

www.indeco.it









# DEHACO. THE BEST EQUIPMENT FOR A NEW BEGINNING...







McCloskey unveils new J4 jaw crusher

McCloskey International has unveiled the new J4 jaw crusher for hard rock applications.

Designed to withstand the toughest conditions worldwide, the J4 aims to deliver high production with an innovative jaw chamber design and enhanced material flow. The 1,060mm x 700mm jaw opening accommodates large feed sizes. The material path is enhanced by a 1,064mm x 4,247mm grizzly pan feeder under the hopper that allows for better sizing of material with a variety of mesh options. Options of either a short pan feeder to suit the pre-screen or a double deck grizzly pre-screen are available. The J4 offers a number of decks offering a choice of either a two deck or one and a half deck system, with the two deck delivering an extra product spec over the mid-size product conveyor.

The J4 aims to provide large stockpiling capacity with wide main and side conveyors for enhanced material flow. The angle adjustable 1,200mm wide 'ToughFlex' main conveyor boasts a 3,912mm high stockpile with quick release and ground level access, with the belt being easy to maintain and service. ToughFlex is constructed with a special weave of two fabric plies and an additional binder warp (without the need for steel wire) resulting in reduced belt weight. The plies are reinforced to resist puncturing and are protected with heavy duty wear resistant top and bottom covers. At



the end of its lifespan, ToughFlex belts can be easily recycled unlike belts reinforced with a metal ply. While a side conveyor remains an option for many jaw crushers in its class, the J4's integral folding conveyor is standard and has an 650mm adjustable speed belt providing a stockpile height of 3.44m. In addition, the recirculation conveyor can be rotated 90° to be used as a stockpiling conveyor.

McCloskey engineers have designed the J4 to meet the evolving requirements of today's projects and operations. Despite the position of the J4 as a powerful unit, portability has not been compromised. Mobility on site and between sites continues to be a feature with remote control tracks to easily move and position the crusher and maximise the efficiency of any project site.

As with all McCloskey equipment, safety is paramount, with the J4 being equipped with a number of features to ensure the workplace and the operator are secure. Engine safety shutdown systems, start up alarms, full safety guarding,

external maintenance access and a tag out capability on the isolator are all designed to contribute to the safe operation and maintenance of the equipment. Ground level access also promotes safety, and allows for quick service and maintenance, reducing downtime for the operation.

"The J4 continues the momentum for our jaw crushing product range, as we continue to develop new products that meet the evolving needs of our customers across industries," said Toni Laaksonen, senior vice president, McCloskey International.

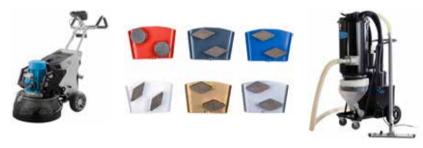
# **New PW138MR-11**

The new PW138MR-11 meets EU Stage V emissions regulations and is designed with new features, options, and values requested by customers. It is said to provide first class operator comfort, smart safety initiatives, intuitive ergonomics, excellent performance, responsive controls, easy service and peace of mind through a proven Komatsu after treatment system.

The PW138MR-11 takes full advantage of Komatsu group synergy and knowhow and is designed to offer versatility, ease of buying, and peace of mind through the factory fitted Lehnhoff 'Powertilt' and 'Variolock' options. With growing demand for environmental solutions, and urban areas becoming increasingly sensitive to emissions, the PW138MR-11 EU Stage V wheeled excavator provides customers with the flexibility to participate in any tender, to demonstrate environmental credentials, and to future proof investment.

Amongst the PW138MR-11's features are modern and distinctive Komatsu styling; an EU Stage V compliant engine with DPF and SCR; enhanced productivity (+3% when compared to the PW118MR-11); trailer pre-setting and new trailer hitch options; a swivel joint with additional electric ports and connector; LED work lamps as standard; Komatsu integrated attachment control and a swing pedal function relocation.





# Tyrolit revises its complete floor grinding assortment

At the 2022 bauma exhibition, system provider Tyrolit gave a preview on its completely revised in-house assortment for floor grinding. In the future, customers will be able to choose from a wide range of ideally matched floor grinding products in order to achieve perfect results. In addition to specially developed floor grinders and corresponding tools, the new range also includes various machines for removing different types of surfaces or coatings, chemicals, dust extraction systems and polishing tools.

The range of newly launched floor grinders includes machines with grinding widths from 280mm to 780mm. Special highlights among these machines are the powerful FGE515 and FGE780 floor grinders, which will be on the market from the beginning of 2023. Both feature an innovative gear concept for maximised productivity. While the FGE515 has been developed to impress with its compact design and dismountable machine parts, the FGE780 is a professional machine

with water tank and dust extraction system that is nevertheless easy and intuitive to operate. Further floor grinders from Tyrolit are in the pipeline and will also be presented in the coming year. The range of floor grinding machines is rounded off by various dust extraction systems, floor strippers, shot blasters and floor milling machines, which are already available.

In addition, the range of floor grinding tools also has been re-developed and revised in order to perfectly match with the new machines. The new, metal bond diamond floor grinding tools are suited for different stages of floor hardness and are already available, as are the high quality bush hammer tools. A brand new range of resin and ceramic bond grinding and polishing tools is also currently under development and will be presented in the coming months. In addition, a selection of tools for the use with the power trowel is also being worked on. This new range opens up a multitude of floor grinding possibilities for the customer.



# Sennebogen unveils its first 'G' series material handler

The Sennebogen 835 G Hybrid material handler is the start of a new generation of machines, the G series. The series is equipped with the latest generation of engine, an innovative 'Green Hybrid' energy recovery system which have been developed using decades of Sennebogen expertise.

The Sennebogen 835 G Hybrid is the first of a completely new generation of material handlers. Ten years after the launch of the extremely successful 'E' series, the Bavarian machine manufacturer is taking another major step. The G series combines the experience gained from demanding material handling with a new, forward looking generation of machines. With the new series, Sennebogen aims to create an all-rounder. With equipment lengths of up to 20m, the machine is aimed at applications in scrap and timber handling as well as port operations. As usual, the Sennebogen modular principle allows customisation using numerous undercarriage variants, from mobile undercarriage to crawler tracks and stationary solutions.

The 835 G has an economical 188kW Stage V diesel engine which is supplemented by the Green Hybrid energy recovery system, which is said to considerably increase the system's overall operational performance. As a result, the machine is said to gain additional working speed and increases handling performance with lower fuel consumption (Sennebogen states that this delivers a reduction of around 30% in fuel costs). The system itself functions like a tensioned spring that supports the boom's working movement. The components, a third hydraulic cylinder on the boom and nitrogen accumulator at the rear, are therefore not only safely installed, but also virtually maintenance free. The theme of efficiency runs through all the innovations in the G series. The efficiency of the material handler has been further increased and the hydraulics has been completely reworked.

An important feature in the further development of the new generation machine is dedicated to operators and service personnel, with the new 'Maxcab' being used for the first time in the new series. The operator's workplace has been optimised, and all settings can be conveniently adjusted via the new foiled keyboard and the 'Sencon' display. Air conditioning elements and air flow as well as shelves and storage compartments have also been optimised. Many tried and tested features however remain including the established sliding door for easy entry and the ergonomic joysticks. The new continuous front and side windows offer an unobstructed view of the surroundings, whilst the design and kinematics of the cab elevation have been further improved and now elevate the operator in an even more comfortable way. The cab can be moved continuously over a height difference of 2.80m as standard, and optionally up to 3.50m.

Sennebogen has also optimised service and daily maintenance features. The components are said to be now even more accessible, and work is made easier thanks to a clearly structured machine design and central maintenance points. Numerous platforms and grab handles provide high levels of safety. The 835 G Hybrid is also available in an electric version. This is said to be able to reduce operating costs by up to 50%. The environmentally friendly, emission free electric motor offers low noise and vibration free operation even in the most demanding of situations.

# Proterra powered electric hydraulic excavator

Komatsu exhibited a 20t electric hydraulic excavator equipped with a lithium ion battery system for the first time at bauma2022. The machine's battery is provided by the U.S. company Proterra, as since January 2021 the two companies have been jointly developing electric medium sized hydraulic excavators and have been conducting PoC (Proof of Concept) tests on advance research machines at customers' construction sites. The machine is scheduled to be introduced to the Japanese and European markets in 2023.

Hydraulic excavators in the mid-size class, in particular, are used in a wide range of jobsites and applications requiring power and durability to withstand a heavy load work. The model exhibited at bauma optimises the entire body control system by capitalising on Komatsu's proprietary coordinating technology. It specifically integrates Proterra's lithium ion battery technology which has a proven track record for use in heavy duty and commercial vehicles deployed in various fields around the world. In addition, Komatsu has developed a robust cage structure to provide additional protection on-board the vehicle for its battery packs. As a result, Komatsu says it has achieved digging performance and durability equivalent to those of engine driven hydraulic excavators. In addition, the high energy on-board the excavator's Proterra powered battery system enables operation for up to eight hours when fully charged. The electric power enables comfortable working in urban and night time environments due to low noise and exhaust emissions levels. Zero engine vibration also helps reduce operator fatigue.

As global awareness of climate change accelerates, Komatsu has aims to achieve carbon neutrality by 2050 with the aim of realising a sustainable society. In collaboration with its partners, Komatsu is developing electric construction equipment to achieve zero exhaust gas emissions and a significant reduction in noise emissions, with the vision of developing safe, highly productive, smart and clean workplaces of the future.

The company's 'Dantotsu' value is defined as customer value creation that generates a positive cycle of improvement of earnings and ESG resolutions in Komatsu's mid-term management plan. Through this, Komatsu aims to strive to create new values in order to take steady steps forward to the next stage for the workplaces of the future as well as helping to deliver sustainable growth. Through this, Komatsu will strive to create new values to take steady steps forward to the next stage for the workplaces of the next generation.







# BOBCAT UNVEILS 2T ELECTRIC MINI EXCAVATOR AT BAUMA

Bobcat introduced a new 2t mini excavator to supplement its range of electrically powered machines.

The E19e – an electric version of Bobcat's popular E19 internal combustion (IC) model – is designed to provide zero emissions, low noise operation and comparable levels of performance to its diesel powered counterpart. The new machine was unveiled during a special launch event at the manufacturer's stand on the opening day of bauma 2022. Scott Park, Doosan Bobcat CEO, commented: "With the introduction of the E19e, Bobcat has expanded its electric line up of zero emission and quiet machines that can match the excellent performance of our conventional models."

#### Clean and quiet operations

The Bobcat E19e features the same profile, external dimensions and comparable performance as the E19 mini excavator. The E19e boasts the same stability, lift capacity and breakout forces as its conventional counterpart, while its constant torque curve (a feature of electric motors) ensures dependable and powerful operations. With a width of just 98cm, the new electric model is easy to operate in even the most confined workspaces, making it ideal for tasks such as demolition as well as outside applications that require quiet, zero emission operations.

Designed around the needs of the operator, with more space between its consoles, the E19e features travel pedals and joysticks, including thumb controls for the 'Aux1' and boom swing functions. The introduction of foldable travel pedals and the absence of floor mounted Aux1 and boom swing offset pedals have served to maximise legroom. In addition to delivering a healthier and more comfortable work environment, the E19e's low noise,

zero emission operations also facilitate communication and productivity on the job site. The E19e features a 3.5h battery capacity and can be recharged quickly using a 'super-fast' charger.

# Designed for reliability and longevity

Thanks to the years of research and development involved in its creation, the E19e has been developed to be a dependable machine. It uses proven components from the smaller E10e, with its premium battery featuring technology equivalent to that employed by the world's leading electric automakers. The E19e is powered by a 17.3kW/h battery, which is larger than the E10e's 11.5kW/h power source. It also produces low noise levels on site, with an LpA (operator noise) of 70dBA, 9dBA less than the diesel powered E19. The model's electrical system and components have been designed for optimised work in harsh environments and, owing to the use of low voltages only (the same as the E10e), the 2t mini excavator is safe and easy to maintain. It also comes with a full manufacturer's warranty from Bobcat, providing peace of mind to fleet owners and end users.

Miroslav Konas, mini excavator product manager, Doosan Bobcat EMEA, concluded: "The E19e electric mini excavator combines a safe, nearly silent, zero emission design with the E19's market leading features and performance as well as its suitability for working in confined spaces. As a result, it is the ideal machine for applications such as indoor and outdoor demolition, landscaping and infrastructure activities, and other tasks that necessitate night time work or low noise levels. The E19e represents an extremely attractive solution for rental companies and contractors alike."



Multifunctional Sennebogen '830 Demolition' machine

At the demolition site, two factors determine the success of a project: high safety and time and cost saving solutions. Sennebogen says that it meets both requirements, in particular with the multifunctional 830 Demolition machine. The tried and tested 48t machine was shown at bauma with two new equipment features that make it extremely versatile. In addition to three part demolition equipment with a maximum pin height of 23m, Sennebogen also presented a fully hydraulically unloadable counterweight, which can be removed at the push of a button.

Demolition work often takes place in urban areas to create space for new construction projects. Urban demolition sites are therefore characterised primarily by confined spaces or limited working areas for the machines used. The 830 Demolition has been designed to work in cramped, inner city construction sites thanks to its state of the art environmentally friendly engine technology, its compact dimensions, flexible operation in 360° swivel mode and various equipment options. In addition to numerous other safety features, the machine is said to have the widest outrigger in its class with a standing width of up to 4.50m. This provides optimal stability and vibration free working, even for dismantling tasks at great height. The elevating cab, which can be tilted up to 30°, not only gives the operator an excellent overview of the work, but also keeps them at a safe distance from the danger zone.

With the machine's powerful hydraulics, a wide variety of equipment can be operated, from demolition



cutters to pulverisers, and can also be changed rapidly thanks to the optional quick changer. The machine also has been designed to deliver excellent sorting performance as in the increasingly important field of demolition recycling the separation of construction waste that is accumulated is increasingly important.

The new long-front equipment for the 830 Demolition enables working from an even greater distance from the demolition object and thus provides even more safety. With the AB23 three part demolition equipment, Sennebogen has designed and introduced an equipment option that not only increases the safe working distance, but also makes the machine even more flexible to use. The 830 Demolition can reach higher heights (23m) and work over projecting edges with its new articulated boom. With the help of the fully hydraulic quick change system, equipment can be picked

up or put down at the push of a button and quickly and safely switched to shorter handling equipment without the operator having to leave the cab. With just one machine, an operator is able to carry out a wide range of tasks and thus save time, fuel and transport costs.

Thanks to the new equipment option with a removable counterweight, the 830 Demolition can also be transported even faster and more cost effectively in up to three parts by low loader. A button on the remote control reduces the transport weight of the 830 Demolition by around 10t using the fully hydraulic ballast rack. In addition, the transport width of the telescopic crawler undercarriage can be reduced to 2.90m. This means that the three part demolition equipment can be transported to the next job in a transport frame providing a simple, cost saving and efficient solution.

# SCHWAMBORN HIGHLY SATISFIED WITH VISITOR RESPONSE AT BAUMA 2022

As one of the few manufacturers of grinding and milling machines, Schamborn was able to gain awareness of its new developments at bauma 2022 in Munich. The innovations include the new milling machine BEF 400RC with remote control, the wall and ceiling grinding machines as well as floor strippers, all presented for the first time and met with great interest.

In fact, the BEF 400RC on the outdoor stand hardly stood still. New visitors kept coming to see the visually impressive milling machine live in action. What the visitors saw left a strong impression. The working depth was particularly impressive with an extremely even milling pattern. This is especially useful for car park renovations and large floor areas, whilst the new machine can be operated by remote control and is agile despite a working width of 40cm. It also provides large area performance when it comes to the deep acting removal of coatings, unevenness and overhangs. The company states that the first sales were sealed immediately after the bauma.

The trade fair visitors were equally impressed by the growing family of wall and ceiling grinding machines. After the 'WDS 530' caused a stir as a finalist in the 2019 bauma Innovation Award, important improvements and product ex-tensions were presented at the 2022 bauma. The WDS 530 can now be used with excavators, which enables walls and ceilings to be grinded and uncoated flexibly at all angles. With the 'little sister' presented at

bauma, the WDS 250, it is now also possible to grind walls and ceilings in small and cramped spaces. Both WDS machines enable mechanical work that previously had to be carried out manually with hammer drills. The company states that this is good news especially for the demolition industry because the requirements for the separate disposal of building materials during demolition are becoming stricter and more expensive when it comes to manual work. With a contact pressure of 200N



to 1,000N, the wall and ceiling grinding machines are said to deliver an infinitely adjustable force that no other solution for grinding and decoating can offer.

In line with the aforementioned, the portfolio of diamond tools has also been revised and further differentiated. Under the name 'Giants', economical tools specialist tools for the respective task and complementary in the work steps at hand, were presented. In addition to a significant improvement in service life, the advantages of the Schwamborn system were said to be highly visible at the show. Depending on the nature and condition of the floor, the grinding machine and tools can be configured for the best possible result.

"We always aim to offer the best possible solution for every type of tillage," says Schwamborn CEO Eckart Schamborn. He explained that what was still missing has now been presented for the first time at bauma. With the new floor strippers, Schwamborn now also offers professional machines for removing floor coverings during renovation work. The spectrum ranges from the removal of PVC and linoleum through to carpets, parquet and floor tiles. "The floor strippers not only remove the covering but also the corresponding adhesives at the same time," says product manager Tobias Raab. "Perhaps the great response at bauma is also due to the fact that we actually put our bauma motto, 'Innovations to make up ground', to the test."



# **TGD® Diamond Tools from TYROLIT**

Highest quality Made in Austria





TYROLIT diamond tools with TGD® technology feature intelligently distributed diamonds that enable even load distribution, optimised cooling and a constantly high cutting performance.

- + Long lifetime
- + Enhanced efficiency
- + High cutting ability
- + Fast availability due to production in Austria

