

PROFESSIONAL p o o a MILLIONER AMERICANS

Your Gateway to North, Central and South America

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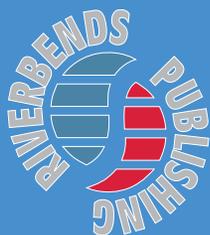
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Manufacturer “Show and Tell” is Not Just For Show

It's always a treat when construction equipment manufacturers open their doors to the trade press, and provide a peek at their operations and products. For one thing, it provides us writers and editors with a welcome change of scenery from our humble writing garrets. But more importantly for our readers, we get a better, more intimate perspective into the respective manufacturers' products, practices, and aspirations—information not so easily conveyed via an emailed press release or a booth visit at a trade show.

After all, even the most well-crafted press announcement is limited by both space and its one-way nature, while trade show exhibitors understandably place a priority on building and renewing customer relationships.

But a dedicated event for media—such as the Hilti and Caterpillar Europe events featured in this issue of PDa—or some of the plant visits and exclusive interviews that we've presented in the past, is usually a win-win-win proposition.

For the manufacturers, these events afford more in-depth demonstrations and conversations, allowing them to share not just what they're companies are up to, but also their inspiration, processes, and—sometimes—challenges in making them a reality. Press events also offer more relaxed settings for frank discussions about markets and business performance, including the factors influencing their decision-making now, and in the future.

To be sure, some companies are more open about their operations than others, and nobody's going to voluntarily release even a modicum of business intelligence that might compromise a competitive edge. Nor are plant tours a given. Even a stray cellphone pic of a production machine control panel or a prototype tool's handle is often enough for a media member's banishment.

Still, this kind of dialogue is what trade journalism is all about. Along with being able to convey the latest product news, we can gain a better understanding of how product introductions and feature enhancements fit with current and emerging industry trends. In other words, it helps us do our jobs better.

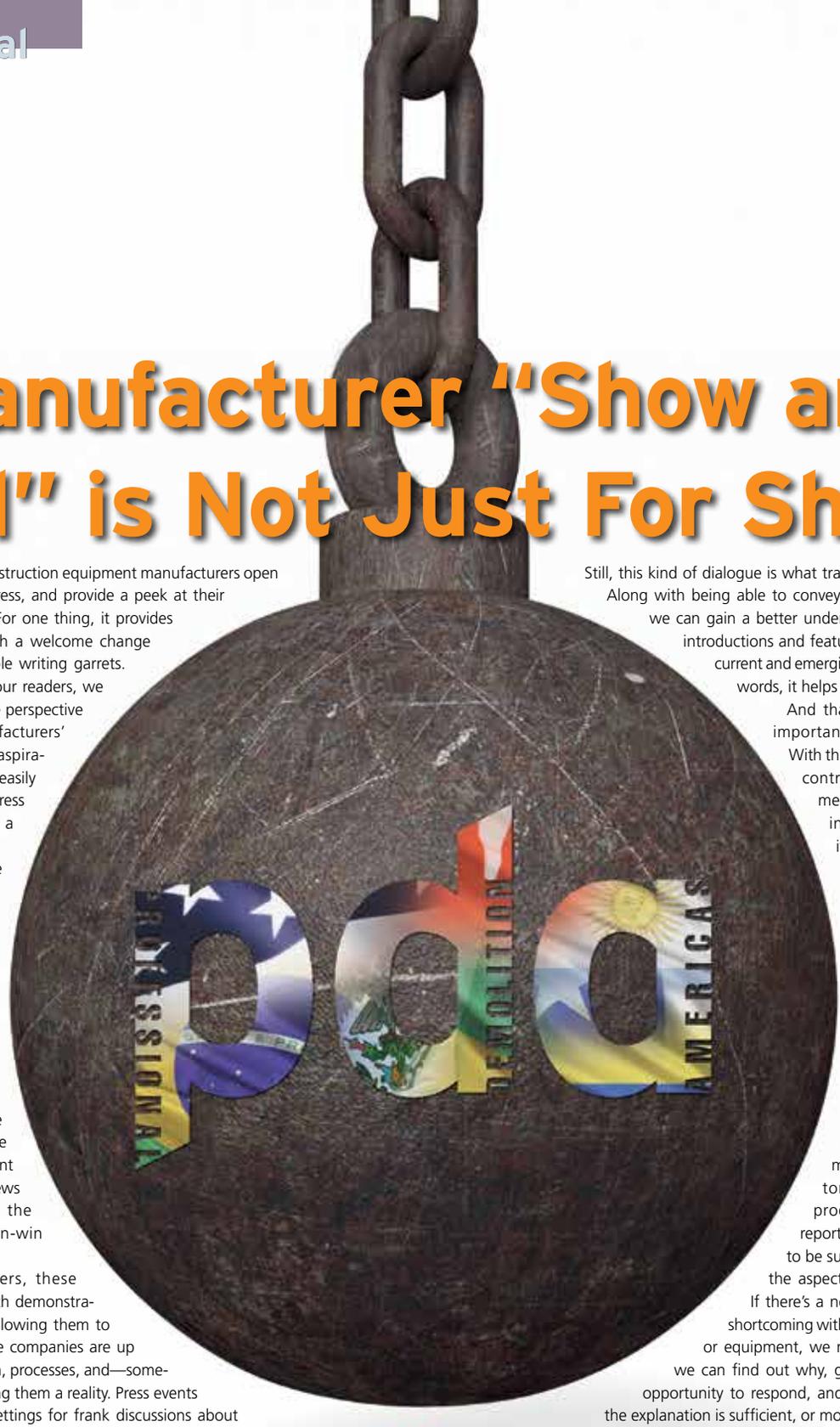
And that brings us to the most important “win” element of all. With this information and analysis, contractors and other equipment users can make more informed decisions when it comes to purchasing or renting equipment. You also get an inside look at what manufacturers are doing and why, and how closely the trends they're addressing or anticipate match up with what you see every day on the jobsite.

It's also important to remember that this is by no means a closed information loop. Just as manufacturers, rely on customer feedback to refine products, we trade journal reporters count on reader input to be sure we are indeed covering the aspects that deserve attention.

If there's a need, a concern, or even a shortcoming with a particular manufacturer or equipment, we need to know about it so we can find out why, give the manufacturer the opportunity to respond, and help determine whether the explanation is sufficient, or more investigation is needed.

So you see, these manufacturer-sponsored press events and visits are not simply junkets or “dog-and-pony shows.” They're opportunities for us to do our jobs, and share with you how well the manufacturers are doing theirs.

Jim Parsons, Senior Editor
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Brokk Hires Great Lakes Region Sales Manager

Brokk has named Phil Gangluff regional sales manager for the US Great Lakes region. Gangluff manages sales for both Brokk robotic demolition machines and the company's Aquajet Systems hydrodemolition robots. He provides support to current customers and is working to bring the safety and efficiency that comes with the company's machines to more jobsites throughout Indiana, Kentucky, Michigan, Ohio, West Virginia, and western Pennsylvania.

"Phil's extensive experience helping customers find equipment that makes them successful is a valuable contribution to our team and helps him provide great insight to our customers," says Peter Bigwood, vice president of sales and marketing.

Gangluff joins Brokk with 40 years of construction and industrial equipment sales experience. Prior to this position he was a regional sales manager at Kärcher North America for 16 years, which gave him experience in high-pressure cleaning. Before that he worked at Streaker Tractor Sales as an equipment sales specialist.

"Robotic demolition has incredible potential in the demolition market," Gangluff said. "I'm looking forward to sharing with customers how fast remote-controlled demolition machines can get a job done and the incredible sawfety impact they have on the jobsite."

www.brokk.com

IROCK Hires Fred Gross as Director of Sales and Business Development

IROCK Crushers has named Fred Gross director of sales and business development. Gross will lead IROCK's sales and marketing teams with a focus on bringing the company's dependable crushing and screening solutions to producers across the globe.

"Fred's passion, experience and commitment to customers make him an excellent match for this position and a strong addition to our company," says Chris Larson, IROCK general manager. "He brings a wealth of knowledge and his dedication and moral compass align extremely well with IROCK's values."

Gross brings 25 years of experience in the crushing and screening industry to IROCK. He previously served as the North

and South American sales manager for Terex Cedarapids, and has held positions with several other businesses in the industry, including WEIR Minerals-TRIO, FLSmidth, KPI-JCI, and Metso.

Gross will focus on strengthening existing dealer relationships as well as growing IROCK's dealer network. In addition, he will play a strategic role in identifying new products to meet the changing needs of customers and to ensure their success during the forthcoming federal infrastructure plan.

"This is an exciting time for our industry," Gross says. "We're poised to be there for customers where and when they need us."

www.irockcrushers.com



Rich Goldsbury, President of Doosan Bobcat North America, Announces Retirement

Rich Goldsbury, president of Doosan Bobcat North America, has announced his retirement after 10 years leading the organization. Goldsbury's last day with the company will be November 30. Scott Park, president and CEO of Doosan Bobcat, will serve as interim president of Doosan Bobcat North America until a new leadership structure is established.

Goldsbury was appointed to the role of president in 2008 to help oversee Bobcat Company's transition from Ingersoll Rand to Doosan. He played a critical role in leading the company through the recession years, and then spearheading the advancement and modernization of the company's facilities, technologies and workforce, through the design and construction of the Acceleration Center in Bismarck, N.D.; the renovation of company headquarters in West Fargo, N.D.; improvements to the Gwinner, N.D., manufacturing facility; and the introduction of new ways of collaborating within the organization.

"Rich's contributions during his tenure as president have driven improved performance and innovation for the business in North America," says Park. "I would like to take this opportunity to thank Rich for his



Kirby Promoted to North American Sales Director- East

Kolberg Pioneer, Inc., Johnson Crushers International, Inc. and Astec Mobile Screens, Inc. are pleased to announce the promotion of Darren Kirby to North America Sales Director – East.

In his new position, Kirby will be responsible for directing, administering and coordinating all domestic field sales operations for the eastern region. In his new role, he will report to Ron Earl, vice president, vice president of sales and marketing, to

establish and attain annual sales goals for his respective region.

Kirby has been employed at KPI-JCI and Astec Mobile Screens since 2007, his most recent position being Regional Sales Manager – Southeast. He graduated from the Virginia Military Institute and has been involved in the aggregate industry since 1996.

"With over 20 years of experience working in the aggregate industry, Darren's unique background, having worked with producers as well as manufacturers, will allow us to better understand and meet the needs of our customers," says Earl.

www.kpijci.com



dedication to the company and congratulate him on a distinguished career. We wish Rich and his wife, Cindy, all the best on his retirement and this next phase of life."

Goldsbury retires with more than 30 years of industry experience ranging across general management, marketing, operations, finance, engineering, product portfolio management, aftermarket, and mergers and acquisitions.

Equipment Considerations for Different Applications

National Flooring Equipment has released a whitepaper to help contractors successfully prepare for multiple floor renovation applications. The paper, produced by Scot Coffey, territorial sales manager; Tom Dunn, director of major accounts; and Dave Bigham, director of national accounts, explains the main factors contractors need to consider when completing surface preparation in different applications, including equipment choice, safety considerations and working spaces.

"Every floor renovation requires different equipment and different considerations — there is no one size fits all in surface preparation," explains Bigham. "National Flooring Equipment has manufactured bespoke equipment for more 50 years to ensure contractors have the right equipment, no matter what the job.

The whitepaper advises contractors on how to get the desired finish and how to complete the work safely and efficiently, as well as the main considerations for starting a new floor renovation—from what to look for when surveying the site, to how to reduce dust exposure when completing work. Other key points include assessing different requirements for residential, commercial, and industrial projects.

Celebrating 50 years of manufacturing surface-preparation machines in the US, National Flooring Equipment offers the whitepaper as a means for sharing its extensive expertise for overcoming challenges in different floor renovation applications. The white paper is available for download free of charge at www.nationalequipment.com.

www.nationalequipment.com



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Event Calendar

M&T Show 2018

Cooperation with Bauma, Messe München
November 26-29, 2018
São Paulo Expo, Exhibition & Convention Center, Brazil
www.mtexpo.com.br

Waste Expo Brazil 2018

November 21-23, 2018
Centro de Eventos Pro Magno, São Paulo, Brazil
www.wasteexpo.com.br

Bauma CONEXPO 2018

December 11-14, 2018
HUDA Ground, Gurgaon, Delhi, India
www.bcindia.com

World of Concrete Asia 2018

November 19-21, 2018
Shanghai New Exhibition Center
Shanghai, China
www.en.wocasia.cn

Bauma China 2018

November 27-30, 2018
Shanghai New Exhibition Center
Shanghai, China
www.bauma-china.com

Concrete Show 2019

February 13-15, 2019
São Paulo, Brazil
www.concreteshow.com.br

CSDA Convention & Tech Fair

St. Petersburg, Florida, USA
Venue and dates to be decided
www.csda.org

Demolition Rockies 2019 US National Demolition Association Convention

March 23-25, 2019
Aurora, Colorado, USA
demolitionassociation.com

Bauma 2019

April 8-14, 2019
Messe München, München, Germany
www.bauma.de

IACDS Convention 2019

April 15, 2019
Messe München, München, Germany
www.iacds.org

Simulation Training Event to be held in Hanover, PA

CM Labs Simulations, developer of Vortex® training simulators, invites contractors, training professionals, and career and technical educators to a seminar and hands-on demo at the corporate headquarters of Conewago Enterprises, Hanover, Pa. The one-day training is available on both October 23, and October 24. The six-hour seminar, with lunch provided, will be presented by Greg Smith, Project Manager for Conewago Enterprises, and Drew Carruthers, Construction Simulator Product Manager for CM Labs Simulations. Conewago is running Vortex training packs for Rough Terrain Crane, Crawler Crane, Excavator, and Wheel Loader. The contractor uses simulators as a safe, sustainable, and cost-effective approach to preparing operators for the work site.

The free education seminar will show how organizations are improving skills acquisition and lower training costs with Vortex simulators, how simulators can be used for recruiting and assessing skills, what to look for when comparing simulator products, and key ROI considerations. Conewago Enterprises will share how the use of Vortex simulators impacted its crane and heavy



equipment training program. The company has realized numerous benefits, including reduced equipment rental costs, improved pass rates on certification exams, and more effective cross training.

Reserve your spot to attend "How to Improve Workforce Training with Simulation." Space is limited for this free event. Register at <http://info.cm-labs.com/PAseminar>

Lippmann – Milwaukee, Inc. Announce Roles and Responsibilities

Lippmann-Milwaukee is pleased to announce three key appointments for the company in the wake of the recent acquisition by McCloskey International. Kevin Kiesgen has been re-appointed to the role as Vice President of Sales at the company, after a successful tenure of serving Lippmann customers across applications and industries.

"Kevin has been with Lippmann for nine years and is a great asset for all areas of the company," says John O'Neill, Senior Vice-President at McCloskey/Lippmann. "We look forward to building on the inherent strengths of both companies and providing our customers with the products they need.



Kevin Kiesgen, Vice-President, Sales.

Kevin will be a key part of that process."

Effective immediately Lippmann-Milwaukee Inc has also appointed Bob Meyers as Vice-President of Business Development. Bob brings years of industry experience to the rapidly growing and evolving organization, most recently as Vice-President of Sales and Marketing at Telsmith.

On his appointment, Mr. Meyers commented, "I have the deepest respect for Paschal McCloskey and the organization he and his team have built over the years. I am truly fortunate to join the Lippmann group at this exciting time to continue building the brand in this industry, and around the world."

Gary Guthrie has been appointed as Senior Vice-President of Lippmann-Milwaukee to lead and integrate Lippmann into the McCloskey Group, capitalize on synergies, and facilitate future growth.

"I've been fortunate to work with a phenomenal team at McCloskey International over the last 10 years," Guthrie says. "Having spent some time with the Lippmann team it's energizing to see such a wealth of talent and experience here that share the same core values and ambitions. As a new group we are strongly positioned to support the industry with its crushing, screening, washing and conveying requirements."

Both Kiesgen and Meyers will be based out of the Cudahy, Wisconsin head office of Lippmann-Milwaukee, Inc. "Having

Blount, Inc Acquires Merit

Blount International, Inc., has acquired Merit Engineering and Equipment Company. The move integrates Merit's brand of concrete cutting products and their manufacturing facility into Blount's Concrete Cutting and Finishing business unit, which the ICS® brand of concrete cutting equipment. CCF is also the exclusive distributor of Pentrunder® wall saws and wire saws in the Americas.

"The acquisition of Merit is very exciting as it adds a new high quality product line to our assortment of premium products designed for the concrete cutting professional," says CCF President Todd Hall. "The combination of Merit's high quality flat saws and the distribution capabilities of ICS, as well as other synergies, create a strong foundation for continued growth."

Adds Merit President Rita Ferguson, "Merit is thrilled to join Blount and the ICS family of companies. We look forward to sharing our unique expertise with an industry leader like ICS to supply professional concrete-cutters with the very best."

www.blount.com



Bob Meyers, Vice-President, Business Development.



Gary Guthrie, Senior Vice-President.

Bob Meyers on board has everyone within Lippmann extremely excited about the future and the possibility for growth and opportunities," Kiesgen says.



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Caterpillar Work Tools Years With Three Ne

Caterpillar Work Tools celebrates 20 years in 2018. PDA attended the celebration in Den Bosch, The Netherlands.

PDA's editor-in-chief Jan Hermansson had the privilege of visiting Caterpillar Work Tools in Hertogenbosch, more commonly known as Den Bosch, about an hour by train southeast of Amsterdam in the Netherlands. He was among the invitees to Caterpillar Work Tools' celebration of 20 years at the facility, following Caterpillar's acquisition of Verachtert, the well-known Dutch manufacturer of demolition, sorting and recycling attachments. Famous for its Verachtert quick coupling range, the company is still a well-known name in the Netherlands.

Very busy production

Caterpillar Work Tools provided a full and interesting itinerary hosted by Bert Heijligers, global marketing consultant, Caterpillar Work Tools, and Francine Shore from Caterpillar corporate trade press relations. Approximately 250 people work at the Den Bosch factory, producing a variety of buckets for excavators and wheel loaders.

The factory also produces a wide, all-encompassing, range of demolition attachments including crushers, pulverisers, sorting grapples, and shears, as well as Caterpillar's orange peel grapples quick couplers, and brackets. Most of the components for the demolition attachments are sourced from suppliers in and outside of Europe, with assembly and testing performed at Den Bosch.

Caterpillar Work Tools plant manager, Laurent Delcher, gave a tour of the production facilities and mentioned that production is very busy at present and has been for quite a while. There is high demand for all types of tools, and in particular, demolition attachments, with every product leaving the factory almost immediately.

"We also see that the mining sector is picking up. This year we estimate an increase in sales of 25%," said Delcher. "For demolition products, we have seen demand increase by over 40% year on year, and it seems to be sustained."

In order to maximize throughput and quality, Caterpillar Work Tools uses a lane strategy in its manufacturing. Lane 1 offers pre-defined configuration of the most popular models ensuring quick availability. Lane 2 is for specific pre-configured products offering customers more choice. Lane 3 is for generic products that are highly configurable, and therefore with a longer lead time. Finally, Lane 4 is for products engineered to order, and built to customers' specific requirements.

Engineering manager Edward van Amelsfoort gave a more detailed presentation concerning the types of products produced for specific product lines (e.g., building construction, heavy construction, forestry, industrial, and demolition and recycling). Amelsfoort also mentioned that Caterpillar offers two lines of hydraulic breakers, the E and B Series. Caterpillar also offers H25 to H180 breakers for hydraulic excavators between 0.8t and 80t.

Caterpillar unveils new multi-processors

Caterpillar Work Tools has expanded its range of excavator attachments with three new multi-processor models, MP332, MP345, and MP365, which add to the company's demolition attachment range. All are equipped with new features aimed specifically at users requiring large, flexible, purpose-built tools that can handle virtually any demolition task.

From the left to the right: Bert Heijligers, Greg Skeels, Bart Finn, and Laurent Delcher.



Is Celebrates 20 New MP Attachments

The design of the new multi-processors allows pairing a basic housing with any of up to six jaw sets thereby increasing jobsite versatility. The design also boosts productivity with the patented features such as a new jaw locking system and speed booster valve.

The new models are compact, and designed with a high power to weight ratio, delivering exceptionally strong cutting and crushing power, while reducing stress on the carrier. Also, the housings used for the new tools incorporate a heavy-duty rotator that provides 3600 movement.

In operation, when the jaws meet resistance, the integral hydraulic booster valve automatically activates. The speed booster system combines a "speed" and "booster" valve enabling the use of a smaller cylinder diameter, which nearly halves cycle time for jaw opening and closing. In addition, depending on the jaw set used, closing force is up to 19% higher when compared to previous series models. This is quite a unique solution since the famous NPK booster patent terminated.

The new models are available with interchangeable jaw sets. These include: Concrete Cutter (CC); Demolition (D); Pulveriser (P); Shear (S); Universal (U); and Tank Shear (TS). The jaw sets are designed to be exchanged in as few as 10 minutes using only basic tools. Larger models feature a pin capture system that retains the cylinder pin with the jaw to further enable fast, safe jaw exchanges.

Compared with previous designs, the jaw sets have

fewer welds (and, fewer stress points) and more replaceable wear parts. Many wear parts are pinned and can be easily and quickly replaced in the field, saving the time and expense of moving the jaw to the workshop for the cleaning, grinding and welding of new parts in place. Jaw configurations D, CC, and P benefit from parts commonality. In addition, jaw configuration P uses Cat ground engaging tools, while D and CC use the same retention system as the Cat ground engaging tools.

The design of the new models provides protection for hydraulic components and hoses, including housing the motor in the frame. The design also allows ready access to the cylinder, which features a protected rod. The number of greasing points has been reduced, compared with previous models, simplifying routine maintenance, which entails only greasing, checking for wear, and replacing worn parts. In addition, each jaw set has a standard transport system, which simplifies moving, storing, and positioning the jaw when making exchanges.

The CC jaw set has been designed to precisely cut and demolish concrete, steel beams, and steel structures, simultaneously cutting and crushing large pieces of heavily reinforced concrete with densely packed rebar. The D set is used for primary demolition, cutting and crushing hard concrete, moderately reinforced structures, and rebar. The P demolishes and reduces concrete in a single step, separating rebar from concrete and reducing concrete to small, ready to recycle chunks.

The S is designed to demolish steel structures, cutting and reducing the size of metal debris, featuring a piercing tip and wear blade in the upper jaw, and a cross blade with additional guiding blade in the lower jaw.

The U jaw set, cuts reinforced concrete into small, manageable chunks for further crushing and rebar separation, and can be used in both primary and secondary demolition. The TS is used for accurate demolition of plate steel, ships, railway cars, tanks (grain, oil, and fuel), warehouses, transit sheds, and other plate steel structures.

The MP300 series multi-processors are fully supported by Cat dealers; customers can order parts and service for machines and work tools from a single source. Every Cat work tool is supported with a comprehensive range of pre and after-sales services that include advice about work tool selection, operator training, equipment management, and a range of financial and insurance solutions.

Heijligers noted that more news regarding demolition



attachments can be expected at Bauma next year.

The Caterpillar demolition solution

Caterpillar global product manager Greg Skeels pointed out that quite a lot has happened during the last four years at Caterpillar, and in particular at Caterpillar Work Tools.

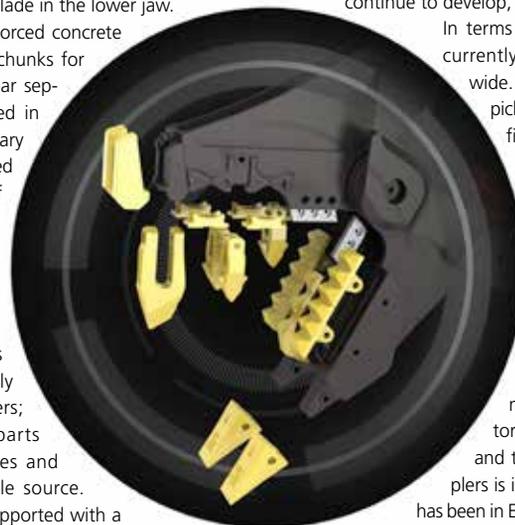
"We are not just selling machines and tools," he said. "We are selling a complete solution to the demolition contractor, a top of the line system that will increase efficiency, safety and the complete working experience with all things involved. It is in this direction we will continue to develop,"

In terms of business, Caterpillar is currently enjoying growth worldwide. The USA and Asia are both picking up, with Europe "doing fine," and Japan among the markets showing strong growth.

Skeels added that US demolition and scrap industries are growing and show promise for the future.

"We also see a change in terms of that now, one demolition excavator uses various attachments, and the need of fast quick couplers is increasing, similar to how it has been in Europe for a long time now," Skeels explained. "Before, a demolition excavator carried one, or maximum two attachments, and tools were not changed that often."

Finn also emphasised the value of deep and close relations with Cat dealers around the world.



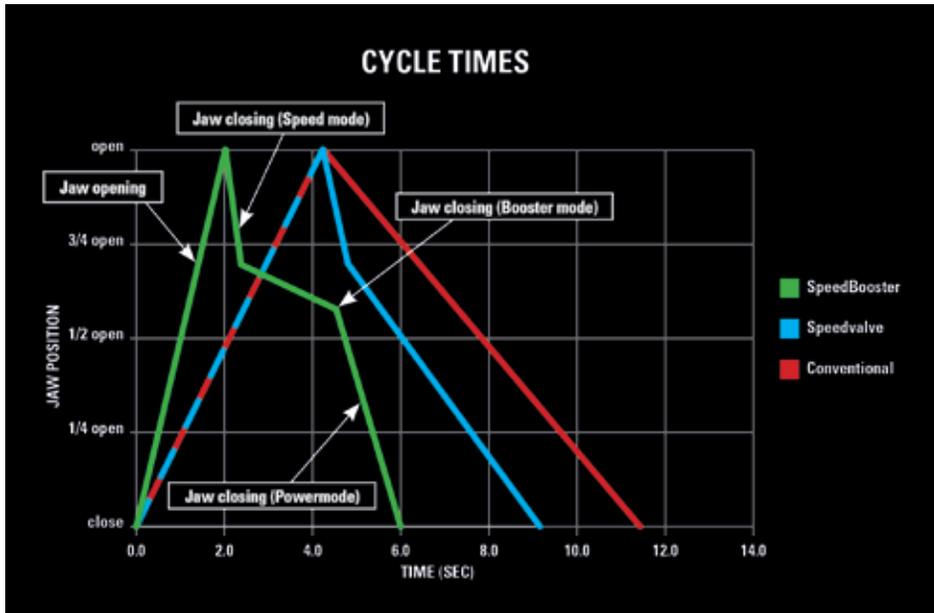
Easily exchangeable wear parts.



and durability of the new grapples, which are available in four-tine and five-tine shell configurations, as well as in closed or semi open versions. In addition, the GSH420 and GSH520 feature a redesigned rotation system, and have been designed to work with the Cat MH3022, MH3024, and MH3026 material handlers.

Long term durability

The design of the GSH grapples is constructed out of high grade, impact resistant steel that protects vulnerable areas, such as hydraulic cylinders. For added durability, high quality bushings with lubrication grooves and hardened pins are used in all pivot points. Tines are configured with replaceable cast tips made from a BHN 445-555 material that resists wear. In addition, solid hinge point construction, and robust end stops, ensures long service life, and routing hydraulic hoses within the tines reduces hose wear. All mounting brackets feature a solid pin to keep the bracket in an upright position for ease of installation. Also, the new GSH grapples feature a standard lifting eye on the bottom of the housing for expanded versatility, such as mounting a magnet. The new HR10 rotation group, featuring a new swivel, significantly reduces hydraulic restriction by increasing return flow capacity by 160% and by increasing open flow capacity by 30%. Less restriction results in faster cycles and lower fuel burn.



Graph showing the cycle times for the new MP attachments.

“We put a lot of effort today to work closely with our dealers, and give them the best support,” he said. “We believe this is very important to help the end user remain continuously efficient and profitable.”

New Cat orange peel grapples

The new Cat® GSH420 and GSH520 orange peel grapples are set to replace the GSH15B grapples, and have been designed for a wide range of applications. These include handling shredded scrap, such as long structural beams

and car bodies; handling rocks at construction sites; and waste at recycling and transfer stations. The performance and efficiency of the new Cat grapples help waste handling operations in particular meet the challenges of increased environmental regulation, growing pressure to recycle a mix of materials, and stringent budgets.

The new grapples feature horizontal placement of the cylinders, thus creating a profile that allows for effective material penetration and efficient bulk material handling. The design enhances the strength, reliability



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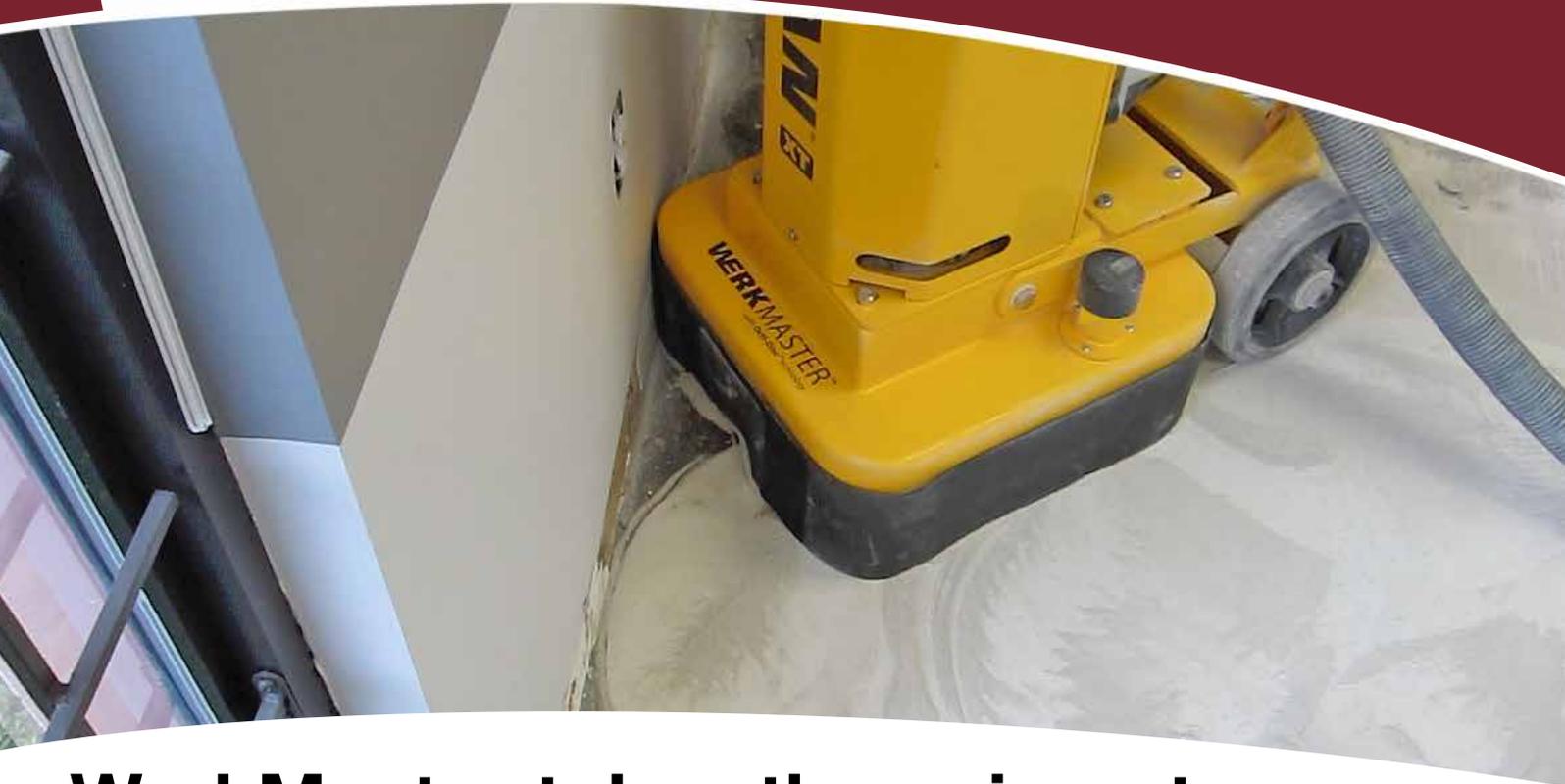
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PDA's Special Feature on New Mini Excavators

EXCAVATOR EXCITEMENT

Everyone has a personal checklist when shopping for a mini- or compact excavator. There are the usual items like power, versatility, comfort, ruggedness, and ease of maintenance. But there are also intangibles such as past experience with a particular manufacturer, recommendations from colleagues, and perhaps even the color.

No matter how specific your selection criteria may be, you're not alone among the shoppers. Industry research estimates that 825 million excavators (encompassing all sizes) were sold during 2017, and projections call for that figure to top one million by 2020. But despite the high demand, excavators remain very much a buyer's market. Manufacturers long ago realized that building machines to meet the least-common denominators no longer passes muster among buyers who don't just want maximum value for their investment. They insist on it; otherwise...well, there are other machine makers out there, after all. And if skilled operators continue to be in short supply, these machines will have to do more than their predecessors.

So keep that personal checklist as you review our annual look at what's new in the increasingly popular mini- and compact excavator category. You may find models that fulfill every one of those "must-have" selection items, and more than a few "nice to have" and "we could really use this" features as well.

Volvo unveils 1.8t ECR18E ultra-short swing radius compact excavator

Receiving its worldwide premiere at Intermat, Volvo's 1.8t ECR18E can squeeze into the tightest of spaces. Thanks to its ultra-short tail design – the shortest radius in the Volvo range – it can work close to obstacles without colliding with them. Featuring a variable undercarriage, the ECR18E can retract to less than 3.3 ft (1m) wide to enter confined areas, or expand to some more surefooted 4.2 ft (1.35m).

Particularly suited to the needs of rental businesses, the ECR18E is designed for low cost of ownership. Robust

by design thanks to a high-profile counterweight, the machine is made for easy maintenance, with 50 hours greasing intervals and a hinged fuel tank providing best-in-class access to the engine compartment. The engine can also be fitted with auto-idle and auto engine shutdown features, which both reduce noise disturbance, service costs and fuel consumption while ensuring a higher resale value.

It may be able to squeeze into tight spaces, but operators will find that the cab environment of the ECR18E is both roomy and uncluttered. With fingertip operation, simple layout controls, and large travel pedals, the machine is both easy and safe to operate, the latter helped by a standard orange seatbelt and optional sensors that lock the controls, preventing movement if the operator is not sitting firmly on the seat.

Transportation is also safe and secure, helped by four easily accessed tie-down points on the upper frame. Thanks to its light weight, it can be safely transported with up to three buckets and a hydraulic breaker on a compact trailer.

Technical specifications ECR18 E

Engine gross power (hp/kW)	16/12
Max. operating weight (lb/kg)	4,167/1,890
Max. digging reach (in/mm)	162/4,120
Max. digging depth (in/mm)	96/2,440
Undercarriage width, var. (in/mm)	39-53/995-1,352

CASE mini-excavators raise the bar on productivity, comfort, and safety

CASE Construction Equipment offers the new C Series mini-excavator line with six models ranging from 1.7t to 6.0t. The new C Series raises the bar compared to the previous range, with better performance, a rich array of features, and even greater comfort and safety – all contributing to outstanding productivity. The C Series mini-excavators are loaded with features that will make the operator's work easier, more comfortable and more productive. They include the new easy-to-read digital cluster that provides useful information and warning lights; the standard Engine Start Limitation (ESL) anti-theft system; the hydraulic Quick Coupler for fast attachment changes; the electric refuel pump; and many more.

Features include ROPS, TOPS, and FOPS compliance, emergency stop switch, travel alarm, and object handling kit. The safety valves prevent loads from slipping in case of hose failure. The pilot system with accumulator enables the operator to put the attachment down safely even when the engine is off. The double-flange rollers minimize the risk of detracking and improve stability. The outstanding all-around visibility and rear-view camera further enhance safety on the jobsite.

The 1.7t CX17C delivers productivity, comfort, and safety without equal in its category, while the 1.8t CX18C stands out for powerful performance, working range and all the features it offers in this highly competitive segment. Both models' compact dimensions enable them to work efficiently with the greatest agility in the tightest spots. They feature hydraulically retractable tracks with inner routing of hydraulic hoses. When the tracks are retracted, the machines are less than 3 ft (1m) wide. The CX17C features a Zero Tail Swing design, which ensures there is





no risk of hitting an obstacle with the back of the machine when swinging, it can work effectively and safely in the most confined spaces. The 2.6t CX26C and 3.7t CX37C models stand out for excellent working range, best-in-class reach, and dig depth and ample boom swing angles. They are available with a choice of long and short arms, which deliver a maximum dig depth of 104 in and 95 in (2,645mm and 2,420mm) respectively for the CX26C, and 135 in and 123 in (3,440mm and 3,135mm) respectively for the CX37C. In addition to the choice of arm length, they are available with additional counterweights and rubber tracks. Steel tracks are also available on the CX37C.

The top-range 5.7t CX57C and 6.0t CX60C stand out for their best-in-class engine power and lifting capacity and comfort features. These include factory readiness to accommodate the latest technologies that make the operator's job easier. It all adds up to ultimate comfort for the operator, who can concentrate on getting the job done efficiently and productively with minimum fatigue. The spacious cab with ample legroom, together with the ergonomic seating and control layout, the fully adjustable, heated seat, multiple storage compartments and sunshades, make for an extremely comfortable operator station. The extraordinarily quiet operation and the low vibrations resulting from the cab being mounted on silent blocks, add to the operator's comfort and fatigue-free work day. The standard auto-idle further reduces the noise when the machine is not working.

Wacker Neuson debuts first battery-powered mini-excavator at Intermat

Intermat visitors got the first look at Wacker Neuson's EZ17e battery-powered mini-excavator, which delivers the same power and performance as gasoline-powered models. Available in 2019, the EZ17e is a new addition to the Group's long-established zero emissions product line.

The EZ17e is powered by state-of-the-art lithium-ion technology, which has been used by Wacker Neuson for years and is constantly being refined. It is characterized by a particularly long service life. The all-electric excavator thus remains operational for a full working day.

An ordinary household power outlet (110-230V) is sufficient to charge the battery overnight. A quick charge by high voltage power supply in four hours is also possible. Thanks to the intelligent charging management, the EZ17e can be used battery-operated or connected to the power supply system and even be charged while being operated. This makes the EZ17e particularly suitable for environments where exhaust fumes and noise are to be avoided. This includes inner city construction sites as well as projects in tunnels or inside of buildings.

The mini-excavator is also a zero-tail excavator, designed without rear overhang. Thus, the operator does not need to worry that he will damage the machine or the surroundings while working near the walls or in confined

spaces. The rear of the electric excavator never reaches beyond the undercarriage. This makes the EZ17e ideal for use in tunneling, demolition and renovation work in small spaces, or for interior restorations. All hydraulic functions have the same performance level as the conventional model. The battery is integrated in the existing engine compartment. The weight is almost identical to the diesel version, so the EZ17e can also be easily transported on a trailer. For the maintenance no additional training of the service personnel is necessary.

Mecalac converts 12MTX into e12 electric mini-excavator

Also new on the zero-emissions equipment is Mecalac's e12, an electric version of the company's 12MTX. The engine compartment houses LiFePO4 (lithium iron phosphate) battery technology for a record capacity of 146 kW hours, giving the e12 up to 8 hours of operating time. The system also supports three times as many charge cycles as conventional batteries, with better safety. There's no risk of fires or battery fluid leaks. The e12 has a charging station that can be used to recharge it on site in 6 to 7 hours. With a structure designed for the city from the outset and two independently operating electric

motors, one powering the excavation mechanism and one for movement, the Mecalac e12 is destined to become a fixture in plant fleets for urban settings. Apart from its performance and range, its 100% electric transmission offers unrivalled tractive force as soon as the engine is started, with brake energy regeneration. Unlike a standard wheeled excavator, the e12 works all day, racking up more time in action than it does standing around every day. Its articulated chassis means it can move easily around any site, and this agility also plays a role in its overall performance. The new Mecalac e12's perfect blend of architecture and technology is paving the way for safer, cleaner and more efficient urban building sites.

New compact excavators from Kubota

Kubota's new U27-4 features adjustable auxiliary flow hydraulics, an auxiliary diverter valve, two-speed automatic downshift travel, as well as best-in-class reach and dig depth. The powerful and well-balanced arm and bucket design allows the operator to dig faster, deeper, and more efficiently even in the toughest conditions.



Engineered to prioritize productivity, the U27-4 boasts a working range (including reach and digging depth) that are best-in-class and a bucket digging force of 7,014 lb (3,181 kg). Operators will enjoy a large, spacious cab with wider entrance, greater leg room, more flow space and a luxurious interior as well as a new user-friendly front meter panel. An enclosed cab option with heat is also available for the new U27-4. The new KX033-4 is part of Kubota's popular KX Series and sits in the three-ton class yet boasts the lifting capacity of a larger machine. Ideal for those hard to reach areas, the KX033-4's optional extendable dipper arm can be quickly and easily extended up to 31 in (787.4mm), boosting productivity as well as efficiency. Its impressive capabilities include a digging

depth of 12.2 ft (3.7m) and a digging reach of 18.25 ft (5.6m). The KX033-4 is powered by Kubota's direct injection diesel engine with auto shift and idle features. Operators will enjoy the easy-open front glass windows, deluxe suspension seat, cup holder, wrist rest and air conditioning. A large, easy-to-read digital panel is user friendly with simple settings and push button operations.

Bobcat expands R-Series line with E85

Bobcat Company has expanded its R-Series excavator lineup with the new E85, the largest machine in the company's compact excavator family. The 8.5t E85 is part of the fastest-growing-size class of compact excavators in North America. The E85 has been redesigned with performance, uptime protection and operator comfort in mind, and features the same bold, distinct design and other cab upgrades as the E32 and E35 R-Series compact excavators that were



in confined jobsite conditions and next to buildings or other obstructions where larger equipment, such as a tractor loader backhoe, can't fit. Bobcat E85 excavator cabs are rated as a Level 1 Falling Object Protective Structure (FOPS). The improved top window and narrower side pillars contribute to visibility that's never been better. Operators can get a better view of the excavator's work group and surrounding areas with class-leading visibility from the cab. Left and right mirrors enhance the operator's visibility from inside the cab. A new sun visor over the top window shields operators' eyes from the

depth check system – an optional accessory available for select Bobcat excavators. The E85 can be equipped with a depth check system, allowing operators to accurately measure depth and grade without exiting the excavator. The depth check system has an accuracy of ± 0.5 in (12.7mm), minimizing excavator operators from stopping the machine to measure depth and potentially entering and exiting a trench with a measuring device. It also helps to minimize over-digging and under-digging, and the costs and time associated with backfilling, compacting fill material and doing manual labor to finalize depth or grade. Another benefit of the system: No additional display screens are required, allowing for more operator space in the excavator's cab because the Bobcat depth check system utilizes the machine's deluxe panel to provide operator guidance and to facilitate operator inputs to the guidance system. A lower engine compartment and relocated hydraulic valves makes it easy to access and service the machine. In addition, greasing intervals have been extended to 50 hours for the swing and slew and to 250 hours on upper work group pivot points for improved uptime. Similar to other R-Series machines, the E85 uses Bobcat genuine oils and filters to simplify stocking parts for fleet owners.

Technical specifications E85

Engine power (hp/kW)	66/49
Operating weight (kg/lb)	18,977/8,608
Bucket digging force (lbf/kg)	16,269/7,379
Rated lift capacity (lb/kg)	9,754/4,424
Max. reach at ground level (ft/m)	23.5/7.1
Max. dig depth (ft/m)	15.5/4.7
Max dump height (ft/m)	16.5/5.0
Width (in/mm)	87/2,210
Aux. hydraulic flow (gpm/lpm)	25.1/95

Yanmar commemorates excavator anniversary with new models

Intermat in Paris was the setting for Yanmar's celebration of the 50th anniversary of its first mini-excavator. So it was appropriate that the manufacturer presented its newest models of midi- and mini-excavators, and other trend-setting technologies. The SV60 is the latest Yanmar short tail midi-excavator. The new 5.7t machine has been designed to respond to the most demanding requirements regarding comfort and stability. Putting the operator at the center of its design initiatives, Yanmar has developed the Universal Design concept providing comfort for enhanced productivity. The cabin offers high capacity which is comparable to 8t and 10t excavators. Operating controls and switches are ergonomically arranged for easy reach. An air suspended seat comes as standard equipment. It is fully adjustable and has a headrest, thus



sun on bright days. The new machine features a standard, easy-to-reach control pattern selector. This feature is conveniently located within the operator's reach, allowing the operator to quickly switch from ISO controls to standard controls.

With the repositioned second auxiliary hydraulic selector switch, operators can toggle between the optional second auxiliary and the boom offset without removing their hands from the left joystick. The design maintains wide-open access to the engine area for daily maintenance checks. Operators have panoramic access to the engine and routine maintenance components for superior service and to help minimize machine downtime.

A new tubular-frame reinforced cab door comes standard, making the E85 even stronger and able to withstand rough jobsite conditions. The tubular frame holds a tighter seal, helping keep out dirt and dust for an enhanced operating experience. Bobcat excavator operators can dig faster using less effort and have greater precision with the

introduced in 2017. The 66-hp (49W) E85 shares the same Bobcat® turbo-charged diesel engine technology that does not require a diesel particulate filter (DPF) or selective catalytic reduction (SCR), as well as similar cab upgrades found on the current R-Series excavators. A new standard lift eye is included, to help operators properly lift and place objects.

The 13 in (330mm) of tail overhang allows the E85 to work in compact environments, including construction, landscaping, utilities, rental and agriculture. The excavator's boom swing frame stays within the width of the machine's tracks as it swings, making it easier to perform



reducing body tension and fatigue. The standard SV60 is also equipped with a rear-view camera with an additional screen offering great visibility and enhanced safety on the jobsite. Furthermore, the SV60 has a last generation Yanmar engine with an output of 44.8 hp (33.4kW) at 2,200 rpm. This is the result of Yanmar's continuous efforts to further develop technological enhancements in terms of fuel consumption and emissions. The ViPPS hydraulic system cumulates the flow of separate pumps in order to obtain the optimal combination in terms of speed, power, smoothness and balance. All operations can be performed smoothly and concurrently, even while traveling. The optimal mass distribution and the design of the midi-excavator result in the improved loading chart and its static stability. The SV60 has a high digging force to be more productive and to work in hard conditions.

Yanmar also presented four renewed models of zero-tail swing mini-excavators between 2t and 4t –the ViO26-6, ViO27-6, ViO33-6, and ViO38-6. The ViO-6 range is equipped with the latest generation of Yanmar TNV engines. Emissions, sound level, and fuel consumption have been sustainably reduced. Neither the counterweight nor the front of the upper frame exceeds the track width. With their compact dimensions, very small turning radius and reduced transport weight, the four models operate easily, even in confined spaces. All Yanmar products can be used with the company's new SmartAssist Remote data management system, which monitors performance, location, operation, and maintenance requirements of the machine, and provides detailed information on the machine's condition and application. With this tool, the technical data can be accessed on computers, tablets and smartphones, regardless the location. It facilitates the daily organization and improves the efficiency of work processes. In addition, the system alerts in case of unusual actions, such as leaving a certain area or any activity outside the hours scheduled. Stolen machines can be quickly tracked with SmartAssist Remote.

New DX17Z mini-excavator launched by Doosan

The new DX17Z mini-excavator from Doosan is ideal for rental and urban construction sites with limited space. It is designed for all types of applications that require frequent mobility, compact size, powerful performance,

and a comfortable working environment for continuous work on confined space sites. The 1.7t DX17Z is a Zero House Swing (ZHS) mini-excavator offering easy transportability and more functionality than a Zero Tail Swing (ZTS) mini-excavator, in that ZHS fully protects the front upper structure corners within the swing circle. As a result, ZHS functionality provides 320° of free rotation while working close to any object. The stability of the Doosan DX17Z is best-in-class compared to all other ZTS machines on the market. When fully retracted, the undercarriage allows the excavator to go through narrow spaces. When fully expanded, it provides optimum stability for the excavator, especially when working over the side. Expansion and retraction are simple and easy via an electric switch on the control panel. The optional long dozer blade also significantly improves front stability, enabling the operator to make full use of the breakout forces the DX17Z can deliver. The extra stability is essential for making maximum use of the exceptional digging forces and lifting capacities available in the DX17Z. Optimum stability is achieved by fully expanding the retractable undercarriage and using the long dozer blade. With the firm foundation of optimized stability and lifting capacity, the DX17Z offers the highest versatility in operating a wide range of attachments.

In addition, the DX17Z can be supplied with an optional certified 'object handling device', which consists of a boom load holding valve, arm load holding valve, hooking device, and overload warning device. The superior dumping height of the DX17Z makes loading trucks an easy process, while the reach at ground level means the operator does not have to reposition the excavator as often as other machines when digging. Incorporating the architecture of a 2t class hydraulic system, with a combination of variable piston pumps and a gear pump, the DX17Z's unique hydraulic system makes the best possible use of the engine's power. Fast cycle times, combined with smooth control of class-leading breakout forces, provide maximum productivity. Boom and arm cylinder cushioning, also unique in this machine class, enhance the overall smoothness of the workgroup. The DX17Z has a standard operating weight of 3,856 lb (1,749kg) and a maximum digging depth of 88.5 in (2,249mm). With a transport weight of less than 1.65t, the DX17Z is towable on trailers for 4,850 lb (2,200 kg) of total weight. The use of highly durable materials ensures the DX17Z is highly robust and easy to repair. The heavy steel gauge covers and tailgate provide class-leading durability and peace of mind while working.

Features include two-piece blade cylinder hoses to simplify replacement in case of damage; wrenchless hydraulic hose technology to help prevent leakage; proven boom and dipper-stick design; protected top-mounted boom cylinder; oversized cylinders for long lifetime performance; a new paint and surface treatment process for durability and extra residual value and a reinforced expandable undercarriage to maximize rigidity. Thanks to the large steel tailgate and openable side cover, all components for daily maintenance are easy to access, keeping downtime to a minimum. Daily maintenance and service points are conveniently located for easy and

immediate access. The side-by-side coolers are easy to clean. Simple diagnostics are used on the DX17Z, with error codes displayed on the control panel and service tool connection. The floor panels can also be removed rapidly for service purposes.

New Trimble Ready option for Doosan excavators

To meet the increasing demand for grade control systems, Doosan Construction Equipment is collaborating with Trimble to introduce a Trimble Ready® factory option for Doosan excavator customers. The Trimble Ready option will be available direct from the factory through Doosan Smart Solutions for use with Trimble® GCS900 2D and 3D Grade Control Systems. The Trimble GCS900 Grade Control System gives operators access to design surfaces, grades, and alignments on a display inside the excavator cab. The system uses GNSS, GPS, laser, sonic, or total station technology to accurately position the blade or bucket in real time, significantly reducing material overages and improving the contractor's productivity and efficiency.

With the GCS900 system, the site plan and grade information can be displayed in the cab, so operators can finish jobs faster with minimal supervision, obtaining higher precision finishing with a reduced number of passes. In addition, there is no need to wait for subcontractors to provide survey and grade checking information, ensuring jobs are completed correctly the first time. This can reduce rework and the need for stakes, hubs or stringlines, which can also reduce costs and the risk of errors. Use of a common grade control platform across an entire excavator fleet allows customers to port the system between machines and machine types. Flexible and scalable components can be used on a wide variety of machines for an even faster return on investment. The improved productivity that results leads to a reduction in personnel and machine costs and accurate grading also helps customers to carefully control material usage and fuel costs. The collaboration between Doosan and Trimble means that customers in Europe will be able to order Trimble Ready excavators to enable a faster and simplified installation of Trimble GCS900 2D or 3D Grade Control System components with no welding, re-painting, drilling or disassembly required. Trimble Control Boxes are not included and must be purchased directly from Trimble's SITECH® dealer channel.





VIDEO



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Decommissioning at the nuclear power plant in Belene, Bulgaria. Image © LBO.

Special Project Solutions at the Highest Level

Tyrolit stands for reliable diamond technology and premium products. However, the Tyrolean manufacturer offers far more than a palette of ready-to-use products for the classic fields of application. In addition to solutions for renovation and demolition, e.g. of bridges, buildings and other large, reinforced concrete structures, the TYROLIT Special Projects Team also provides competent support in far more delicate surroundings, such as nuclear power plants or offshore platforms.

"More than 20 years of experience in the field of special projects make us the number one partner for complex decommissioning projects," says Roland Hettegger, who heads the Special Projects Team. "According to the scope and complexity of the project, we provide our customers with customized support, reaching from bespoke product solutions to planning concepts and feasibility studies to on-site application support."

For complex projects, the Tyrolit Special Projects Team offers a wide range of elaborate solutions for special applications, which are adapted according to the customers' needs. Apart from the classic concrete drilling and sawing equipment the premium producer offers drill rigs for large diameters or deep drilling, curved tracks, or pile cutters for cutting pipes and columns. In accordance with Tyrolit's philosophy to help customers to get the job done as efficiently as possible, the products are usually adapted in a quick and straightforward manner.

The professional partner in controlled decommissioning

Tyrolit, however, is a particularly competent partner in the supreme discipline of special construction, namely the controlled decommissioning of nuclear power plants and offshore platforms. In this field, professional work and a high level of experience are key. Regardless of the location, Tyrolit already lent its support in projects all around the globe, including the restoration of water dams in Australia or South America, underwater cutting in the Atlantic Ocean or the decom-



Besides a wide palette of ready-to-use products for classic fields of application, the TYROLIT Special Projects Team provides competent support in projects in delicate surroundings, such as on offshore platforms. Image © TYROLIT.

missioning of the nuclear power plant in Belene, Bulgaria.

All this know-how directly influences the development of new products, particularly the advancement of diamond wire technology. A major highlight of the portfolio is the ATEX-certified wire saw system. With this system, Tyrolit is the first supplier worldwide to fulfil the stringent EU explosion protection directive and, thus, proves once more to be a pioneer in the field. The system consists of Tyrolit's premium DWH-series ATEX wire, the SB wire saw, and the PPH40RR drive with a certified protective cabin. Alternatively, customers can also use their own, certified drive. The wire saw system is mainly used for cutting pipes or other steel structures in working environments where explosion-hazardous gases can escape

"The system can also be used with other certified

drives," says Hettegger. "Apart from the safety of the performing employees, we can, thus, guarantee a cost-effective and efficient solution. Customers can be confident that all Tyrolit components are already certified and they only have to take care of the certification of the overall system."

www.tyrolit.com

Factbox

The Tyrolit ATEX-certified wire saw system:

- Certified for explosion hazardous areas (EX Zone 1, II 2G, IIA c T3)
- Modular, combinable system, also suitable for the use with already certified drives
- Robust DWH-series ATEX diamond wire with a very high cutting performance, an outstanding lifetime, noticeable smooth running and a high number of beads
- Hydraulic SB wire saw with up to 33 ft (10m) of wire storage, high power transfer thanks to multiple roller transfer, and hydraulic wire tensioner
- PPH40RR drive with certified protective cabin
- For all metals except for titanium
- Wire speed 10 – max. 18 m/s

The robust DWH-series ATEX diamond wire convinces with a very high cutting performance, an outstanding lifetime, noticeable smooth running and a high number of beads



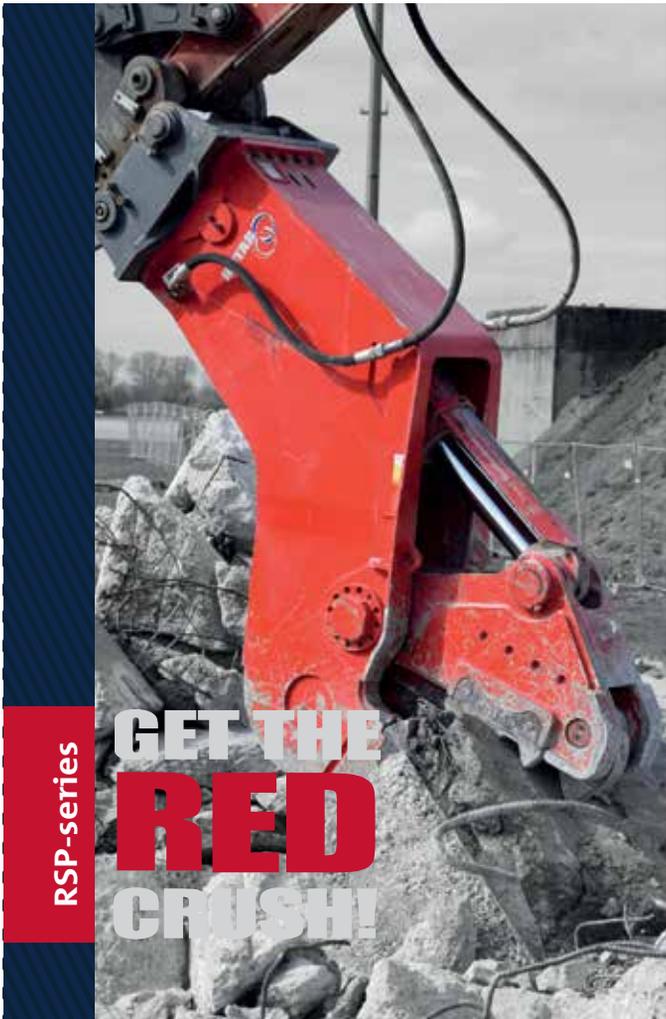
The hydraulic, ATEX-certified SB wire saw SB comes with up to 33 ft (10m) of wire storage, high power transfer thanks to multiple roller transfer and a hydraulic wire tensioner. Image © TYROLIT.



TYROLIT drive PPH40RR. Image © TYROLIT.



The protective cabin for the TYROLIT drive PPH40RR. Image © TYROLIT.



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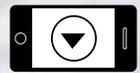


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INNOVATION

Helps Hilti Fly High

An Innovation Day with Hilti USA at the Cavanaugh Flight Museum in Addison, Texas. Jim Parsons reports.

The Cavanaugh Flight Museum in Addison, Texas, provided an appropriate setting for Hilti North America's annual Innovation Day in September. With a collection of classic, envelope-pushing aircraft as backdrop, Hilti proudly demonstrated examples of products and services that have helped propel the North American unit of the Liechtenstein-based manufacturer to the heights of the highly competitive construction tool market. Hilti North America has called the Dallas-Fort Worth area home since relocating its headquarters from Tulsa, Okla., to nearby Plano in 2015. The company's 65,000-sq ft Western Hemisphere Product Development and Tool Service Center was also transferred to nearby Irving. The move, announced as a means for bringing Hilti closer to key talent pools and market segments, has enabled the company to capitalize on, and contribute to, the region's sustained robust construction market.

"The market is good, and our customers are busy," said Avi Kahn, who has led Hilti North America as president and CEO since January 2017. In his Innovation Day welcome, Kahn added that the company has made progress on its 2018 goals of strengthening its connections with customers by providing "VIP-level service," accelerating the delivery of innovation, and, of



The DD-30 coring system (right) competes with a combi-hammer.

course, increasing sales.

Worldwide, Hilti has enjoyed double-digit growth for the past few years, including the first eight months of 2018, Kahn said, stressing that the company isn't simply sitting back and enjoying the ride.

"The strong results from good years like these are being used to help secure our future," he explained, with significant investments in research and development, as well as expanding Hilti North America's direct-sales network. One hundred new account managers were added this year, Kahn said, with a similar number expected to be added in 2019. Hilti is also upgrading its service centers in the U.S. and Canada as well.

On to the demonstrations

But it's innovative products and enhancements aimed at boosting productivity, efficiency, and safety that Kahn said will truly set Hilti apart in North America. A variety of examples were on display at the various demonstration areas set up in the Cavanaugh Museum's hangars and outdoors (mercifully shaded from the late-summer Texas sun). Among them was the DD 30-W diamond coring tool, launched this past June. Equipped with a unique "TopSpin" technology, the DD 30-W is designed to set adhesive anchors in concrete with rebar up to five times faster than conventional methods. Even with operating speeds of up to 8,700 rpm, the DD 30-W is remarkably quiet.

"That makes it ideal for working in tight spaces, or occupied buildings," said product manager Jason Flam.

Designed for use with a stand or separately as a combi-hammer for walls and ceilings, the DD 30-W matches perfectly with the DD-WMS 100 water management system, which Hilti debuted at January's World of Concrete. By recycling its four-gallon water supply up to seven times, the DD-WMS 100 essentially provides a 30-gallon supply for all-day drilling work.

"You can do 30 to 100 cores a day with the DD 30-W, depending on the type of material and other factors," Flam said. Bits for the DD 30-W range from 3/8 in to 1-3/8 in (9.5mm to 35mm).

Another summertime product introduction on



The DSH-600-X goes to work.



Hilti North America CEO Avi Kahn.

display was Hilti's DSH 600-X gas-powered handheld saw. Joining the previous DSH 700-X and DSH 900-X models, the 21.7-lb (9.8kg) saw is optimally balanced for cuts of up to 5 in (127mm) deep in masonry, concrete, and steel using 12-in (305mm) diamond blades. The DSH 600-X is also among the safest saws of its type on the market. Hilti product manager David Stott demonstrated the brake technology that stops the high-spinning saw blade in just over five seconds.

"So after finishing a cut, the operator can raise the saw and move to another location safely," Stott said, adding that an aluminum belt guard is another safety feature that also enhances the tool's ruggedness.

And with silica dust control still very much on contractors' minds, Hilti product manager Ed Selz demonstrated the new cordless VC 75-1-A22 dry vacuum, with a HEPA filter cleaning mechanism that makes it an effective and highly mobile OSHA 1926.1153 Table 1 compliant adjunct to any concrete or masonry drilling operation.

Selz noted that the 75 cfm suction power is double that of any vacuum in its size class, and that an Eco mode is also available to maximize the life of its 22V, 5.2 Ah lithium-ion battery.

"Yet, it's also quiet, with a noise level of only about 70.9 db," Selz added.

The VC 75-1-A22 is powerful enough to allow the



The DHS-P integrated water pump affords safe, convenient cutting.



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DRS-D shroud to adhere to the wall, making drilling more convenient, and can be converted into a blower for clean-up operations. Its 8 ft (2.4m) further extends the vacuum's reach. The breadth of Hilti's cordless portfolio was also exemplified by demonstrations of the TE 6-A22 rotary hammer drill, which includes a chiseling feature for light-duty corrective chipping, and the SIW 6AT-A22 impact wrench with the SI AT-A22 adaptive torque module for installing the company's Kwik Bolt TZ and Kwik Bolt 3 anchors. Hilti product manager Brian Helfrich explained that the combination system allows for fast mechanical anchor while also avoiding over- and under-torquing. Pointing a built-in barcode reader at a box of Hilti Kwik Bolt anchors is all that's needed to control automatically control the wrench's torque. "The module also documents installation work for quality assurance purposes, with the information downloaded via a USB port," Helfrich said.

Technology touchpoints

Demonstrating that accuracy is as important to jobsite performance as tool performance, Hilti product managers Aiden Maguire, Tim Jones, and Sonia Barbier provided details on several of the company's measurement innovations. Among them was the PR 30-HVSG rotating laser level, which with a PRA 30G receiver, can make aligning drywall, ceilings, and utilities a one-person operation.

"The 'HVS' designation stands for horizontal, vertical, and slope, meaning that the laser level can measure any angle," Barbier explained. She also intentionally dropped the PRA 30G several times, illustrating how the device maintains its accuracy amid rough-and-tumble jobsite environments.

The PR 30-HVSG delivers accuracy within +/- 0.04-in



Hilti's Ed Selz shows off Hilti's dry vac line, including the new VC 75-1-A22 (below, left).



Another look at the DD-30 coring system.



Vintage aircraft from around the world complemented Hilti's innovative product displays.

(1mm) at 33 ft 10m. With the PRA 30G, it has a working range up to 985 ft (300m) diameter on detection mode, and 656 ft (200m) diameter on remote mode. Hilti's entrée into asset management technology was also featured with demonstrations of On!Track and the Hilti Connect smartphone app. Product manager Sean McMurray says the cloud-based technology can help contractors monitor the location and condition of their entire equipment fleet—vehicles, tools, even boxes—regardless of manufacturer.

"With On!Track, an inventory question that might have taken 45 minutes to process, can be answered in five minutes or less," McMurray said.

By fitting tools with the AI T380 On!Track smart tag, the Hilti Connect app can provide equipment status within a 100 ft (30m) radius of a user's phone.

"But with multiple users linked together, the range can be vastly expanded," McMurray, said, adding that

the battery-powered tags last about three years. That may sound rather limited at first, he said, "but by then, the tags will have been upgraded to provide even more information and versatility, so refitting them makes sense."

Innovation Day included an understandable element of intrigue—a sneak preview of some of the products Hilti plans to officially introduce at World of Concrete 2019 in January. Though details are confidential, it's safe to say that the company's cordless, 36V technology platform and software-based services will be recurring themes. And considering that next year marks 40 years since Hilti North America relocated to Tulsa, Okla., where it maintains an operations center, some anniversary surprises would certainly seem in order.

"There's a lot to look forward too," Kahn said, "both for Hilti itself, and for our customers."

www.hilti.com

PDA's Crash Course In Demolition Attachments

The headway made by the demolition and recycling industry over the last decades is mind-blowing. From a wrecking ball and hard-to-control implosions demanding weeks of debris cleaning it has progressed to safe and precise demolition techniques involving powerful and sophisticated excavator attachments. PDA's Andrei Bushmarin presents a "crash course" on the latest innovations in the demolition attachment business.

Crushers, shears, multiprocessors, pulverizers and demolition grabs are the most powerful weapon in every specialist contractor's arsenal. Efficient and versatile, they can be applied to a wide range of tasks including primary and secondary demolition, debris recycling and scrap metal processing.

Trevi Benne has really BIG news

Italian attachment specialist Trevi Benne has designed a monster of a crusher for one of its Europe-based customers. Weighing in at 27t, the HC 250 crusher is the biggest model developed by the Italian company for primary demolition tasks so far. It took about four months of hard work including some 120 hours of designing and consultations with the client, 250 hours of welding and 50 hours of assembling to build this monster. The finished product boasts a jaw opening of 10.2 ft (3.1m), height of 16 ft (5m) and a tip force of 545t at 6,527 psi (450bar). The crusher will be fitted on a customized LIEBHERR demolition excavator. When delivering the giant to the customer, Trevi Benne had to custom-build a 6t metal cage to comply with road transportation regulations. The project is its final stage, and more details will shortly be available.

www.trevibenne.it



NPK adds new rotating pulverizer

Japan-based NPK has extended its line-up of rotating pulverizers with the addition of the V250R model. Designed for 24t-35t carriers, the new 2.75t tool has a maximum crushing force of 193 psi (1,330kN). The pulverizer is suitable for diverse applications including demolition of walls, floors and light-steel structures as well as secondary crushing jobs. The V250R is 360° rotatable and comes with an NPK trademark integrated booster. The booster turns on automatically whenever the jaws meet resistance. Using a relatively low oil flow, the pressure intensifier system reduces cycle times and increases crushing force. The booster



also allows for a compact body design and easy maintenance while reducing the attachment's overall weight.

www.npk.co.uk

ShearCore – a new 'shear' force in the attachment game

Located in Wisconsin, ShearCore was founded by Bruce Bacon – a legendary figure in the scrap recycling and demolition



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industries. ShearCore manufactures the 'Fortress' line of attachments, with mobile shears being the company's core competence. Bruce managed to assemble a strong team around him. Fortress mobile shears are designed by Ross Christenson who authored a number of innovations over the past 20 years while designing shears at LaBounty & Genesis. The manufacturing is led by Jim Campbell, who would head the manufacturing division at Genesis for 12 years. Before that he had run the reconditioning department at LaBounty. With professionals of that caliber and experience on board, ShearCore manufactures robust and powerful shears designed with ease of maintenance in mind. The mobile shear series includes seven models ranging in weight from 2.5t to 9.6t.

www.shearcore.com

Hydraram turns 25 and launches new series of fixed pulverizers

Hydraram has introduced this year the HFP-M series of fixed hydraulic pulverizers featuring an integrated magnet. Powered by a 24V battery, the magnet is activated by the excavator driver when needed, for instance, to collect rebar lying around the jobsite or to load and move iron bars. The magnet is equipped with a quick-release system that immediately drops the steel-containing objects when the electrical function of the magnet is switched off. The new series includes the 2.4t HFP-20VM fitting 20t-30t excavators, the mid-range 3.2t HFP-25VM designed for 28t-40t carriers, and the 3.85t HFP-32VM suitable for 35t-52t machines.

www.hydraram.com

Demarec unveils three new series

Netherlands-based Demarec has introduced three new series in 2018. One is the DCC range of two-cylinder concrete crushers designed for demolition of the thickest reinforced concrete structures such as viaducts, quays and heavy foundations.

The DCC concrete crushers fit both standard and high-reach demolition machines. The series ranges from the 1.9t DCC-25 model providing the closing force of 100t on the tip up to the DCC-75 weighing 6.5t boasting the force of 200t. The tools have two pivot points, ensuring that more torque is transferred to the jaws for maximum closing force. A combination of the newly developed DemaPower 2.0 cylinder (featuring four oil chambers) and optimized jaw geometry results in 25% higher closing power on the tip.

Next up from Demarec is the DMS Multi-shear fitting mid-size excavators (7-9t). The DMS is an all-round specialist thanks to a mechanical changing system and a wide choice of jaws. The selection includes jaws for cutting reinforced concrete (DMS-05-C), scrap (DMS-05-S) and cables (DMS-05-V). All jaws are fitted with replaceable wearing parts. And the last but not least from the Dutch trailblazer is the new DXS line of shears featuring an industry-leading power-to-weight ratio, jaw opening size, cycle times and hydraulic efficiency. The line's debuting model is the DXS-50 shears designed for scrap processing, tire recycling and demolition. According to the company, it will soon be followed by the DXS-40 model.

Demarec's new DemaPower 2.0 cylinder technology gives the DXS-50 the same power as shears two sizes larger. That allows the DXS Series to exert up to 25% more power from a smaller attachment. The 4,5t DXS-50 boasts a closing force of 1,203t. The upcoming DXS-40 will have a closing force of some 900t. The DXS-50 is suited for 25t-35t carriers when boom mounted, and 32t-50t carriers when stick mounted.

www.demarec.com

Green Attachments enlarges product assortment

Established in Finland as a supplier of demolition tools for specialist contractors, Green Attachments has been enjoying a steady growth in the past couple of years. The company is

now a staple fixture at construction trade shows, both domestic and international, and its product portfolio just keeps expanding. The company's "Yellow MC" series of multiprocessors counts 11 models designed for 4t-130t excavators. The multiprocessors come complete with different sets of jaws to allow users to solve a wide range of demolition and recycling tasks. The "Yellow RV" range of rotating pulverizers is suitable for secondary demolition applications as well as primary demolition of reinforced concrete structures. The entire line is built from Hardox 400. The pulverizers feature a speed valve for increased performance and reversed cylinder for protection of the cylinder rod. A pressure relief valve is installed to protect the motor. The range includes 10 models intended for 7t to 120t carriers.

www.greenattachments.com

Stanley LaBounty extends mobile pulverize line

US-based Stanley LaBounty has expanded its mobile hydraulic pulverize line with the introduction of the MHP 350 model. This powerful machine is engineered for high-efficiency secondary demolition and concrete recycling. The brand-new design is configured for pick-up, crushing and separation of rebar from concrete. The pulverize boasts a large jaw opening to process the thickest concrete. The lower jaw angle is optimized to pick up concrete slabs with ease. Four-way indexable blades provide four usable cutting edges. Other highlights include a speed valve, bolt-on lower platen for quick maintenance and field-replaceable swift lock teeth.

www.stanleyinfrastructure.com

Rammer enjoys a crushing success in the UK

Bradley Demolition, one of the most established specialist firms in the northwest of England, took delivery of a Rammer rotating pulverizer for a project in York where the company was contracted to demolish a former college complex. The 2.9t, 2.4m RVP29R pulverizer was fitted on to a Hitachi ZX300-6 excavator using a Lehnhoff hydraulic quick coupler. Built from wear-resistant steel, the RVP29R features a reinforced jaw with an opening of 3 ft (900mm) for high productivity and durability. A single tooth top plate allows for better penetration when doing primary demolition. A patented speed valve allows for faster cycle times, with the added benefit of protecting the hydraulic circuit from any pressure peaks. The 1.8 ft (550mm) wide, 2.8 ft (850mm) deep jaws ensure that large chunks of masonry are processed with ease. Bradley Demolition is reported to be extremely pleased with this new acquisition made through Rammer's UK dealer Murray Plant.

www.rammer.com

Daemo adds three new ranges

In 2018, Korea-based attachment manufacturer Daemo has added three new ranges to its product portfolio. The DRP series of pulverizers, suitable for 13t-32t excavators, now offer 130% greater crushing power compared to predecessors. Bolt-on teeth effectively protect the body and can be replaced easily.

The new DMP multiprocessors boast a quick-change function (DMP-Q). Built from "Hardox 400," the attachments feature Daemo's patented pin-guide system. Thanks to it, four types of jaws can be mounted and replaced within five minutes. Also new from Daemo is the DMQ series of hydraulic quick couplers that lock the attachment tightly in place using a triple safety system. Thanks to this solution, the operator can change work tools right from the cab.

www.daemo.co.kr

Cat Work Tools beefs up multiprocessor line

Caterpillar Work Tools has expanded its multiprocessor range with the addition of three new models—the MP332, MP345, and MP365. The attachments' construction allows pairing a basic housing with up to six jaw sets for maximum versatility onsite while a new jaw locking system and a speed booster valve contribute to high productivity. The housings incorporate a heavy-duty 360°rotator for positioning the multi-processor at an optimum angle at any given moment. When the jaws meet resistance the integral hydraulic booster valve automatically kicks in. Depending on the jaw set being used, closing force is up to 19% higher compared to the previous series.

www.cat.com

Indeco tools receive major makeover

Based in Italy, Indeco has been busy this year with a major overhaul of its product lines. The IMP series of multiprocessors has been upgraded with a more rugged body and increased jaw opening. The jaw configuration has been improved to simplify the assemble/disassemble procedure and provide a better grip on the material. The IFP and IRP ranges of fixed and rotating pulverizers now feature interchangeable teeth on the movable jaw (welded on a bolt-on plate and secured with latches) for optimal penetration of the material being demolished. But the biggest news is that the IMG line of demolition and sorting grabs is now available in five different versions: the IMG S sorting jaws, the IMG D demolition and sorting jaws, the IMG 3 + 2 material handling jaws, the IMG L loading jaws and the IMG T timber jaws.

www.indeco.it

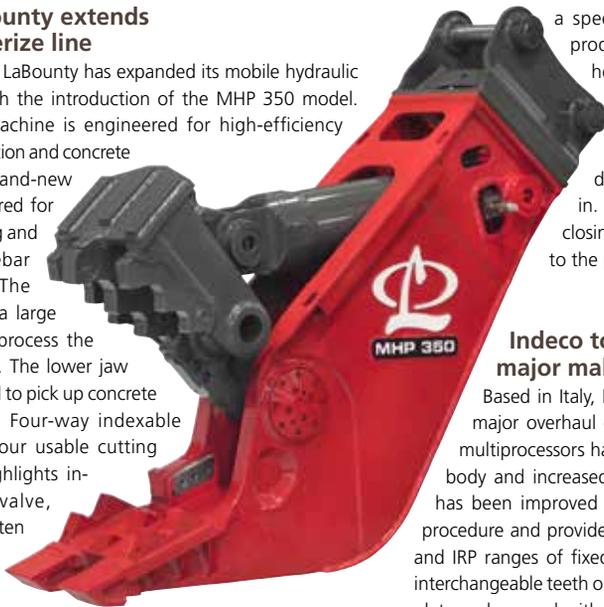
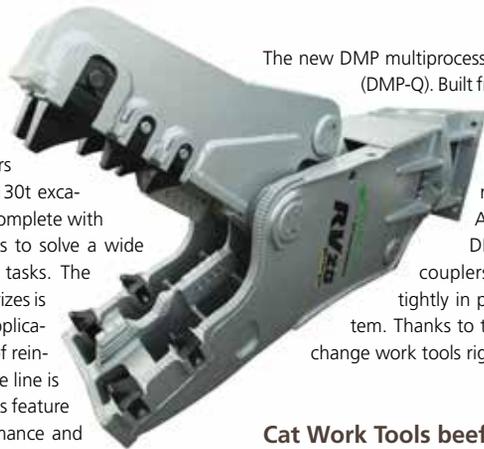
Arden drops a bomb of a sorting grab on US military base

France-based Arden Equipment delivered a S6002B sorting grab—the biggest in its range—to the US military base in Cádiz, Spain. The operation was coordinated by Newimar S.A., a construction company servicing this naval facility, and Finanzauto, a Caterpillar distributor in Spain that supplied a Cat 374F L excavator as a base machine. A monster of a sorting grab, the S6002B boasts an opening of 10 ft (3m), two rotational motors and three hydraulic cylinders. The S6002B will be handling a number of tasks at the base that include transporting large rocks when making new dykes in the harbor, and beach cleaning. Arden Equipment grabs are made of abrasion-resistant steel with enough resilience to absorb shocks resulting from the impact with materials. A wave-shaped design further contributes to shock dampening and allows easy maintenance of the attachment.

www.arden-equipment.com

Don't forget drum cutters

Drum cutters are another example of excavator attachment that





has come to the forefront in the recent years. The feature that sets drum cutters or rockwheels aside from other demolition tools is their versatility. Demolition, grinding, trench cutting, profiling, descaling – that is an incomplete list of tasks that a drum cutter is capable of solving.

Rokla's flagship G series

Germany-based Rokla GmbH is a young vibrant company, whose drum cutters brand-named "Rockwheel" have already become synonymous with this type of excavator attachments.

Rokla's most successful G-series ("G" standing for "gearbox drive") includes the G40, G50, G60, and G125 models suitable for excavators ranging in weight from 35t to 125t. The drum cutters boast rugged design and a twin-motor solution for optimum weight distribution. The range's best-selling model G60 has been developed for 50t-65t carriers. Thanks to the in-house double-motor technology and the gearbox, the G60 is one of the most powerful cutting drums available in the global market today. An efficient water spray system and special safety valves effectively protect both the



attachment and the carrier. The smaller G5 and G5twin drums are designed to work with compact 3t-12t excavators. Featuring the twin-motor technology and a 2:1 gearbox transmission, the drum cutters generate a very high torque. The drum cutters specified for demolition applications come equipped with a heavy-duty hardox plate for cutting through steel rebar.

www.rockwheel.com

MB-R500 – the master of all trades from MB

Italy-based trendsetter in crushing and screening technology MB used Intermat to unveil the brand-new MB-R500 drum cutter designed to turn mini excavators and mini loaders into real milling factories. The MB-R500 is engineered to grind particularly resistant and tough materials, such as fragmented rock, although it works on soft materials like asphalt as well. The MB-R500 is the smallest model in MB's drum cutter range.

Weighing in at only 661 lb (300kg), it has a replaceable cutting head of 1.6 ft (500mm) and is compatible with 3t-12t excavators and 3t-8t skid steers and backhoe loaders. Like other MB-R models, it comes with a full or low-set drumhead kit, which allows users to change the number of peaks depending on the material being grinded. The cutter body rotation kit allows the driver to operate rotation directly from the cab without stopping trenching work. The cutting depth adjustment kit makes grinding edges and levelling possible. The nebulizer kit and the drum cover kit reduce dust emission and allow performing jobs in confined and enclosed areas like galleries and tunnels. The temperature reduction kit lowers the oil temperature during operation without affecting the drum's performance.

www.mbcruiser.com

Simex strengthens the compact range

Another market leader from Italy Simex has added two compact drum cutters to its range. The TF 100 fitting 2.5t-4t mini-excavators together with the TF 50 designed for 1.2t-4t mini-excavators make up the compact end of Simex's range comprising ten models. Featuring an innovative milling system incorporating a central chain, the new drums leave no areas untouched. They effectively cut trunks and roots, which make them suitable for forestry applications. The drums are handy for excavation of small trenches, creating manholes or water conduits, laying down telephone and electrical lines. Thanks to the low noise levels, the TF 50 and TF 100 can also be used indoors for milling of concrete walls, profiling of horizontal and vertical surfaces and removing plaster.

www.simex.it



Husqvarna Construction Products, President:

“We want to create something new that benefits the entire business”

So said Husqvarna Construction Products President Henric Andersson, who since taking over the reins of the Husqvarna Construction Division in 2015, has delivered constant growth for the business. Revenue for 2017 was US\$650 million. PDA recently spoke with Andersson about what is happening at Husqvarna Construction Products.

Could you quickly summarize what has happened at Husqvarna Construction since you started?

Well, first of all, we implemented a new long-term strategy where we defined a new growth agenda, and communicated this clearly throughout the organization. We set a high goal, and agreed on the activities necessary to take us there, such as stepping up in emerging markets, expanding our offering into services, and making key acquisitions. We also redefined and expanded our total addressable market to US\$5.7 billion by including our customers' adjacent process steps. To increase our focus, we also organized ourselves after our new, expanded market segmentation. Perhaps the most interesting segment right now is concrete surface and floors, which has grown considerably during the last two years. We've acquired fantastic companies like Diamond Tools Supply, a leading OEM supplier of resin bond diamond tools for floor polishing; Pullman Ermator, the leader in dust and slurry management systems for the construction industry; and HTC, the global market leader and prime innovator of solutions for grinding and polishing concrete floors.

Recently we also bought out Atlas Copco's business in light compaction and concrete placement equipment, and we're incorporating it under the Husqvarna brand in order to strengthen our offering.

What factors would you say are the ones that drive the company's growth?

Our growth is driven both organically and through acquisitions. For nearly two decades, Husqvarna has continually acquired leading companies adjacent to our core business. However, the light construction equipment industry is still very fragmented, with many specialized players. At the same time, customers increasingly want a single total supplier to turn to for all the equipment and services they need in their op-



erations. Therefore, I'm convinced that the industry is approaching a structural change similar to what we've seen in several automotive industries. And when this happens, I want Husqvarna Construction Products to be at the forefront. We want to create something new, something that benefits the entire business. Naturally, growth will increase the value of Husqvarna as a company, and this will benefit our shareholders. But in order to be successful, our growth strategy must primarily benefit our channel partners and end users. Husqvarna excels at developing and delivering comprehensive system solutions: tools and services that help construction companies' work smarter and more efficiently with concrete, enabling them to increase productivity and profitability. Operator efficiency is crucial to overall productivity. This is why it's so important for us to keep developing new and innovative technical solutions and products that make it easier and safer for the operator to do his or her job. By growing, we can invest more resources here, which, in the end, will benefit our customers.

Would you briefly describe the company's growth strategy?

We want to become even better when it comes to our core areas, while we also want to keep growing within product areas close to our present offering. The Atlas Copco light compaction and concrete placement equipment that I mentioned earlier is a perfect fit for our concrete surface and floors business. This acquisition allows us to offer our channel partners and their customers in the construction business a comprehensive product range that covers the entire process from soil compaction all the way to a finished, treated concrete floor.

By being able to present a broader product offering than anyone else on the market, through a complete, global network of distribution and service, we can provide construction companies, no matter their size, with quality equipment and service in the easiest and most effective way possible. In short, an even better and broader offering in light construction equipment, for even more customers.

www.husqvarnacp.com

Serious London Cutting From Dymatec

Two of the UK's biggest players in the diamond drilling and concrete have recently removed a 5,232 yd³ (4,000m³) slab of concrete from a building in London. The job took 14 months, involved 10,000t of concrete, and required 1,000 diamond blades and cores.

The Grosvenor Place demolition project was located a stone's throw from Buckingham Palace in London. The project involved the removal of a basement slab of a five-story building in one of the most prestigious addresses in the capital so as to allow for additional below-ground construction to convert a property into a new private hospital.

A serious job for two serious players

This was no easy task, especially given the thickness of the concrete, and the need to retain the majority of the slab to support the building. Undertaking this significant challenge saw two of the UK's leading players in the diamond drilling and concrete cutting industries, Dymatec and London Diamond Drilling, combine forces. Dymatec, a supplier and manufacturer of diamond consumables, was retained as the exclusive supplier to the contractor London Diamond Drilling, advising on, and providing, all the blades and cores needed to complete the works.,

The large site shows the extent of the whole project.



Extremely hard concrete

The project plan was to remove a 26-ft (8m) wide section around the entire perimeter of the basement slab. The perimeter had to be removed in sections to allow for the construction of steel structural support needed to hold up the main facade, which was to remain intact. The concrete slab varied in thickness from 3.3 ft to 11.5 ft (1m to 3.5m), with a significant quantity of 1.25 in (32mm) rebar throughout.

As well as being a significant quantity to remove 5,232 ft³ (4,000m³) of concrete, the material was also packed with dense black flint, making it extremely hard. This meant that only the fastest diamond cores and blades would be able to power through it. To tackle this tough, unrelenting concrete, Dymatec recommended the SDF P20 diamond blade and supplied more than 70 of these blades in varying sizes during the project. This powerful high performing blade, manufactured solely by Dymatec, was the only solution to combat the challenging concrete.

The plan was to tracksaw the entire perimeter up to 3.6 ft (1.1m) deep, and cross cuts into sections. However, this was only possible where the concrete was shallow enough. Anything deeper than 3 ft (1m) had to be stitch drilled. To facilitate this process, Dymatec supplied over 900 Turbo S cores. Once the perimeter of the concrete slab had been removed, the slab was peppered with 8.3-in (212mm) diameter holes so it could be broken up using an 8-in (203mm) hydraulic burster. Only when this was complete could a team come in and break up the slab using Brokk 500 and 260 remote control machines.

A 14 month project

During the 14 months it took to cut and drill the basement slab, Dymatec was on site at least once a week, collecting used cores and blades, returning them to its



Dymatec's 8" hydraulic burster successfully breaking up a thick slab of concrete.

UK headquarters to retip and repair, before delivering new and refurbished consumables back to the project. In addition, Dymatec's sales manager David Hibbert visited the project once every two weeks, to ensure the products were performing as they should. To ensure that the project stayed on schedule, and that tracksawing stayed ahead of the steelworks team, London Diamond Drilling was on site most every day during this demanding project.

Work has now started on casting the new concrete slab for Grosvenor Place, with the construction of the new building expected to last a couple of years.



London Diamond Drilling used tracksaws for the perimeter of the site.



Dymatec's SDF P20 blades stacked up and ready for use.



Stitch drilling.

matec



The Brokk's come into play.



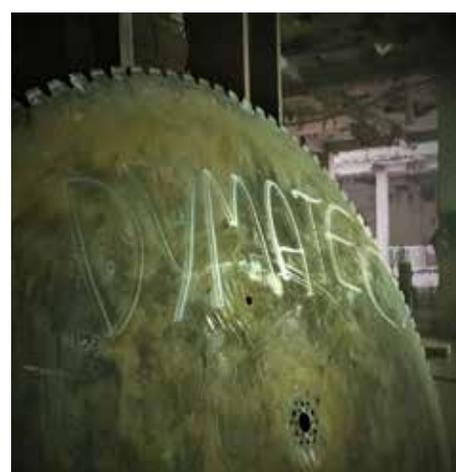
One of the many Dymatec blades being gently lowered.



The heavy flint content in the cores.



The heavy flint content in the cores.



Dymatec was broadcasted far and wide at Grosvenor Place.

Beating the BUZZER on a Tight DEADLINE

Georgia contractor dunks Philips Arena project deadline with demolition machines.

Just as basketball players often need to score big before the buzzer to succeed, the contractors completing the NBA's second-largest renovation ever need to work fast to make sure the athletes have a court on which to compete.

The Atlanta Hawks announced a US\$192.5 million re-imagining of the Philips Arena in downtown Atlanta in June, 2017. The three-phase project involves rebuilding the interior of the building from the roofline to the baseline, as well as making major changes to the arena configuration. The result will be new amenities on every level of the arena, a tremendous amount of open, connected space, new video boards, improved sightlines and the first bar ever on an NBA playing floor.

Demolishing 3,000 tons of concrete

The first phase was chiefly demolition focused, requiring, among other things, removing a six-level wall of suites on the arena's west side to make room for many of the

improvements. Not only did the phase involve demolishing almost 3,000 tons of concrete, it needed to be done in just 12 weeks to be ready for the new basketball season and upcoming concerts. What's more, all contractors would start working on the arena at the same time with no slack time built in.

Brokk method over wire cutting

The traditional method of wire cutting chunks of concrete from the wall of suites and craning them out would take a long time and involve too much use of the general contractor's crane, which would be needed for many parts of the project. Atlanta-based demolition contractor SSD Demolition and Environmental proposed using innovative remote-controlled demolition machines to deconstruct each level, starting from the top and working their way down. The method would improve productivity over handheld tools, as well as keep workers safe from flying concrete and fall risks.

Two Brokk 160 remote-controlled demolition machines were vital to SSD's plan. When the first phase of construction began in June 2017, SSD crews moved quickly, starting demolition of soft ceilings, offices, ribbon boards, retractable seating, pre-cast seating, and vomitory walls. Crews also installed scaffolding as well as deflection shields and chutes for rubble containment and removal.

Demolishing the concrete suites by deadline required a strict six-day-a-week schedule with a 42-person crew rotating through two 10-hour shifts. Starting at the top level, the contractor placed one Brokk 160 at the north end of the stadium, the other at the south end. Two operators manned each machine — one using the remote control and one as a spotter. From there, operators worked their way toward the middle of the suites, demolishing concrete, pillars, and utilities as well as seating, handrails, drywall, floor, and wall coverings and other items.

SB 202 Epiroc breaker

SSD used an Epiroc SB 202 hydraulic breaker attachment,



Watching a game at the arena will be different than any other building with a scoreboard 3-times the size of the previous scoreboard, four unique sponsor pavilions with monster size screens, new concourse design and an improved food/drink experience. Photo courtesy of Atlanta Hawks Basketball Club.

and the unique Brokk three-part arm design allowed them to take advantage of extended reach capabilities and precise demolition. Operators switched to a steel-cutting attachment to cut through rebar, which reinforced much of the concrete.

Moving out rubble during the nights

At night, the second crew cleaned rubble from the level below the day's demolition areas. Workers loaded debris into hoppers by hand and with mini excavators and skid steers. A deflection field composed of plywood and scaffolding on the levels' edges provided both fall protection and a way to contain rubble. Workers also used debris chutes and a service elevator to remove material.

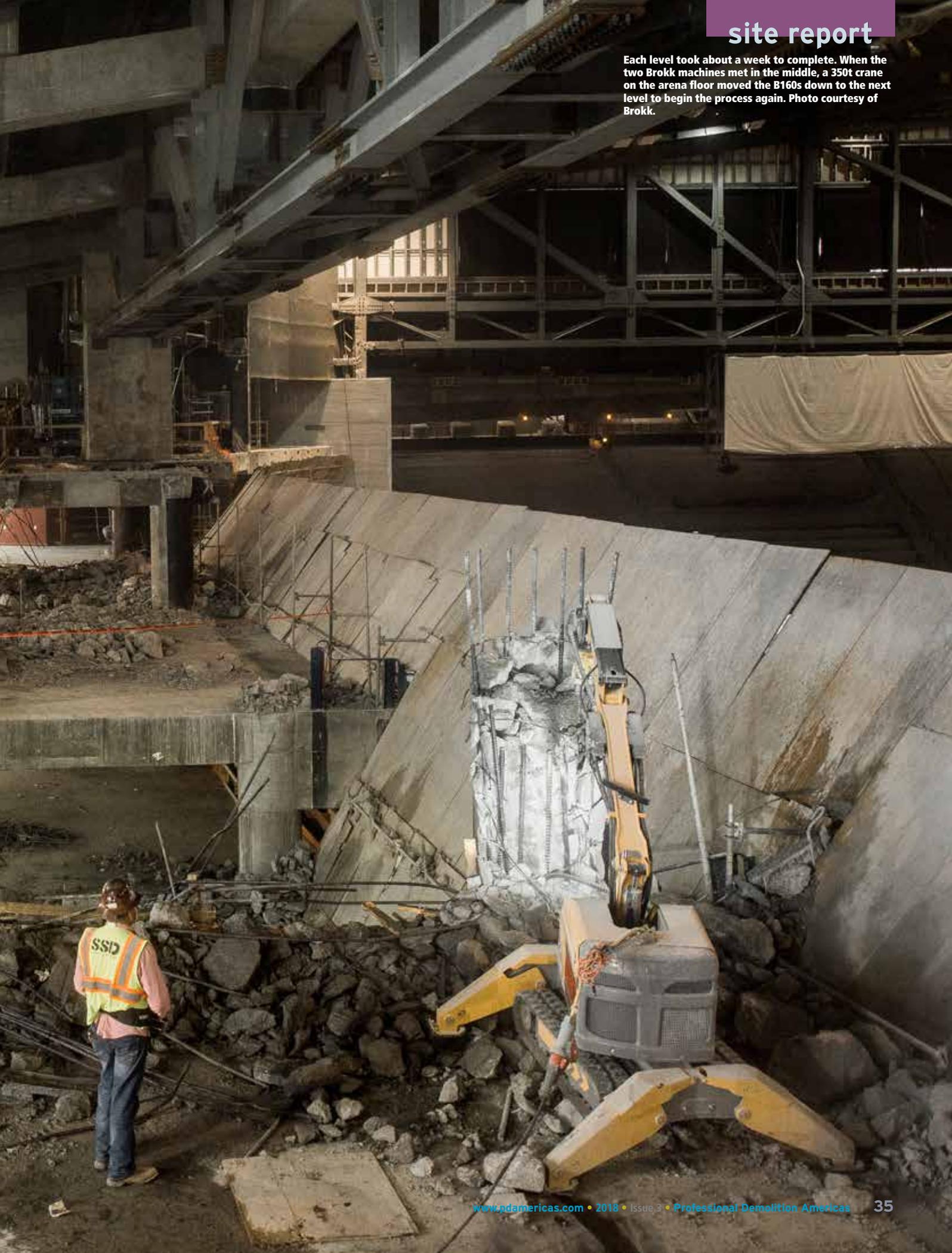
Each level took about a week to complete. The crews removed 300-410 yd³ (229-313m³) of concrete from each. When the two Brokk machines met in the middle, the general contractor's 350t crane on the arena floor moved the B160s down to the next level to begin the process again.

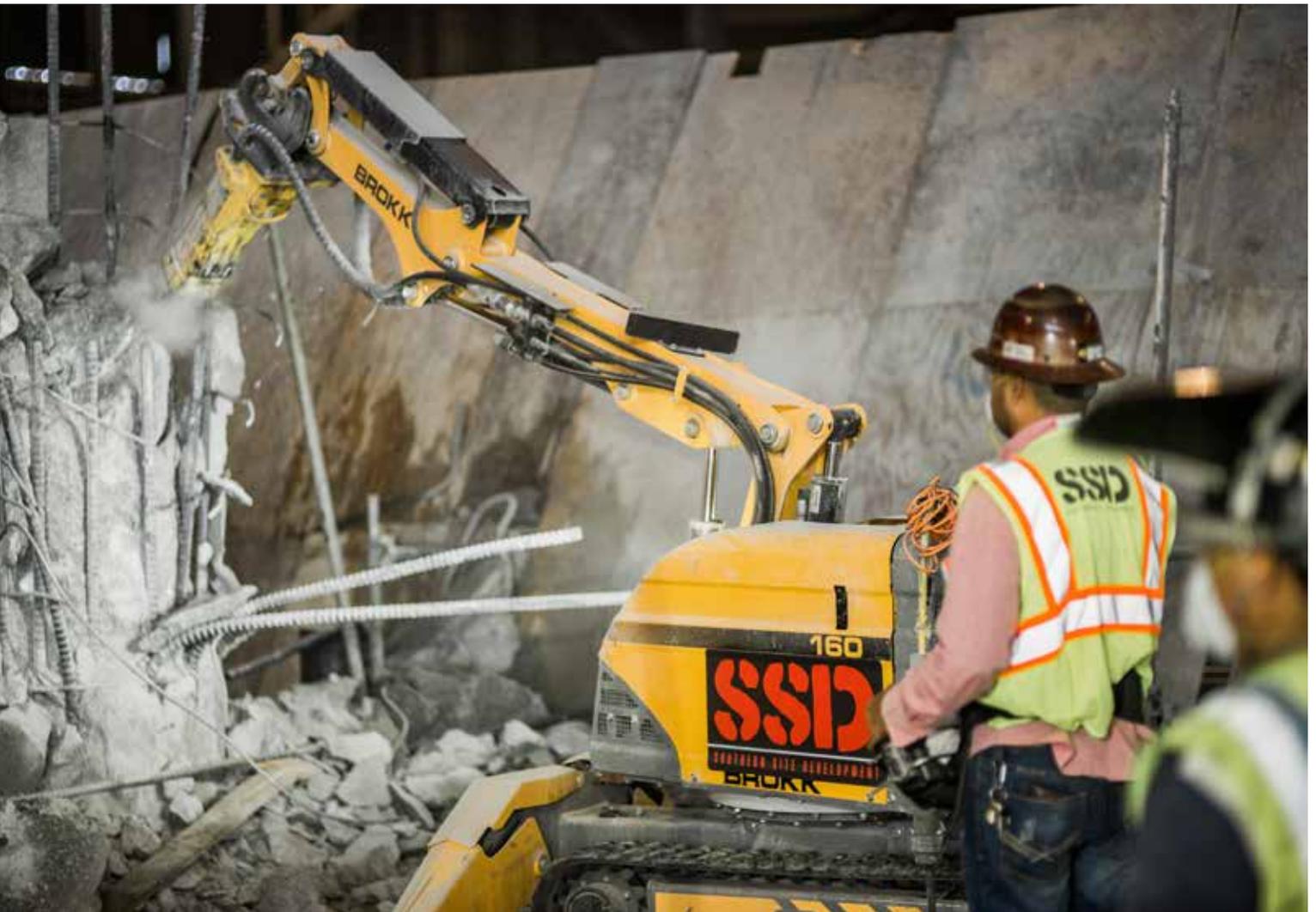
SSD used the Brokk machines for about four weeks to completely remove suites walls. Beyond the suites, SSD



SSD used an Atlas Copco SB 202 hydraulic breaker attachment, and the unique Brokk three-part arm design allowed them to take advantage of extended reach capabilities and precise demolition. Photo courtesy of Brokk.

Each level took about a week to complete. When the two Brokk machines met in the middle, a 350t crane on the arena floor moved the B160s down to the next level to begin the process again. Photo courtesy of Brokk.





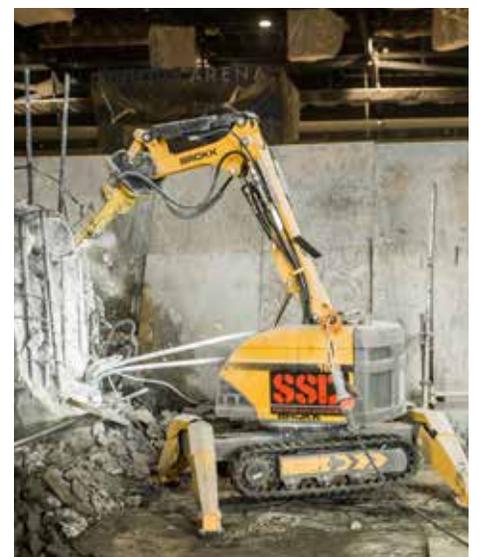
SSD used the Brokk machines for about four weeks to completely remove the suites' walls. Beyond the suites, SSD completed additional architectural and structural demolition of major arena components. This included removing concrete slabs and foundations as well as modifying raker beams and stairs. Photo courtesy of Brokk

completed additional architectural and structural demolition of major arena components. This included removing concrete slabs and foundations as well as modifying raker beams and stairs. SSD wrapped up its portion of the project in September after 74 days of work, three days ahead of schedule. In total, the contractor recycled 2,760 tons of concrete from nine arena levels.

Overall, phase one construction wrapped up in late October — just in time for an Eagles concert and for

basketball season to begin. Work on phase two began in November 2017. Phases two and three involve additional architectural work and the bulk of the construction of the new amenities, additions and layout. The project is scheduled for completion during the 2018-19 basketball season, coinciding with the Hawks' 50th anniversary in Atlanta.

www.ssdco.us
www.brokk.com



Above: SSD knew using remote-controlled demolition machines would improve productivity over handheld tools, as well as keep workers safe from flying concrete and fall risks. Photo courtesy of Brokk.

Right: The US\$192.5 million transformation will result in a completely new arena under the existing roof. The new arena is inspired by the Hawks mantra "True to Atlanta" and the connectivity of the Beltline. Photo courtesy of Atlanta Hawks Basketball Club.



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Correct Angle Blade, Tool Choice, and Maintenance Improve Floor Stripper Efficiency

An experiment by the UK Campaign for Real Ale (CAMRA) found that the secret to pouring the perfect pint of beer is in the angle. Similarly, changing the angle of a stripper blade can also improve the efficiency of floor removal and extend tooling life. The angle a beer is poured is important as the bubbles therein affect the flavor; when the angle is too high, beer hits the glass more quickly, resulting in more bubbles and an altered taste. Instead of the usual 45-degree pouring angle, 15 degrees produces a shorter beer head makes for a much better tasting beverage. It's not only drinks where performance can be affected by angle. Floor strippers must be operated with tools at the right pitch, essentially the angle to the floor, for them to be as efficient as possible. Efficiency is important during surface preparation as it reduces the time and labor needed to remove a floor, ultimately impacting on a project's return on investment. If a job's square footage per hour is down, this could indicate that the machine is not working as it should. Maintaining sharp tooling at the correct pitch is a good way to prevent this from happening.

Keeping up speed

How hard the coating or material is, and how it is stuck to the floor dictate how the pitch

of the blade should be set. The pitch should be adjusted to the sweet spot between the material on the floor and the concrete for maximum efficiency.

Finding the sweet spot is important, as with too much pitch the machine can dig into the subfloor, causing the blade to wear more quickly. The blade can also snap if the operator hits something, potentially damaging the machine. Not enough pitch, and the machine will jump over the flooring without removing it, as it lacks the downward pressure on the blade. Different tooling requires a different pitch. Tool choice is also determined by the material on the floor, so contractors must choose the correct blade for the application, be it removing ceramic, wood, carpet or tile.



Certain tooling types, like wood or ceramic, may have a recommended pitch. However, with carpet and tile floors, finding the sweet spot can only be done by testing. Depending on the machine, changing the pitch can either be done manually or with a lever.

National Flooring Equipment offers scrapers with a dual lift feature, where the pitch and angle can be changed in two places. This combination makes for a much stronger machine. Operators have a choice of adjustments to allow correct blade adjustment, without manually adjusting the front end of the machine. This is more important when removing ceramic and wood, as the specific angle needed can only be achieved with multiple adjustments.

New Right Angle Grinders from Cleco

Cleco® introduces its new line of pneumatic Right Angle Grinders, featuring a powerful 1.7 hp motor for increased power and productivity, backed with Cleco's unsurpassed features, quality and durability, at the most competitive prices available. Cleco's Right Angle Grinders are designed to fit all Type 27, Type 27 threaded hub and Type 1 abrasive discs, and provide quieter operation with rear exhaust overhose standard. The grinders also feature an ergonomic, anti-vibration handle for increased comfort and less operator fatigue, a spindle lock for quick and easy abrasive changes, and dual-layer, high-impact composite housing for extreme durability. A versatile 270-degree adjustable guard for easy access to tight spaces

Cleco's Right Angle Grinders are designed for rigorous use and long life, containing the features and power that are perfect for the most demanding applications found in foundries, shipyards, machine shops and rail car manufacturing.



Next-Gen Cat Excavators Deliver More Choices in 36t Size Class

The Next Generation 36-t 336 and 336 GC excavators from Caterpillar increase operating efficiency, lower fuel and maintenance costs, and improve operator comfort compared to previous models. The new excavators offer unique combinations of features designed to match contractors' productivity and cost targets. Delivering high-production performance, the new Cat® 336 features standard integrated Cat Connect Technology and the most power and lift capacity of the two models. The new Cat 336 GC combines the right balance of productivity features with reduced fuel consumption and maintenance costs. The result is high reliability and low-cost-per-hour performance. The new Cat 336 has the industry's highest level of standard factory-equipped technology to boost productivity. Integrated Cat Connect Technology increases operating efficiency by up to 45% over traditional grading operations.

The standard Cat Grade with 2D system provides guidance for depth, slope, and horizontal distance to grade through the standard touchscreen monitor, making operators more accurate. The system is readily upgradable to Cat Grade with Advanced 2D or Cat Grade with 3D. Standard Grade Assist automates boom, stick, and bucket movements so operators can effortlessly stay on grade with single-lever digging. Cat Payload delivers precise load targets and increased loading efficiency with on-the-go weighing and real-time payload estimates without swinging to prevent truck over/underloading. The E-fence feature prevents the excavator from moving outside operator-defined set points—particularly useful when working beneath structures or near traffic. Cat LINK™ hardware and software connect jobsites to the office and provide customers with machine-critical operating information.

Fuel savings and more

By design, Cat Next Generation excavators consume less fuel than the models they are replacing — up to 15% less fuel for the 336. New Smart mode operation automatically matches

engine and hydraulic power to digging conditions, optimizing both fuel consumption and performance. Engine speed is automatically lowered when there is no hydraulic demand to further reduce fuel usage. The cooling system features a new fan that runs on demand to keep the excavator working at the correct operating temperature for maximum efficiency.

With a new electrohydraulic system built for responsiveness and efficiency, the Cat 336 and 336 GC feature a new main control valve that eliminates the need for pilot lines, reduces pressure losses, and lowers fuel consumption. Fewer hydraulic lines on the excavators result in less oil required, lowering long-term operating costs. Offering extended and more synchronized maintenance intervals, the new Cat excavators do more work at a lower cost and reduce maintenance costs by up to 15% over the previous series. The new Cat air filter with integrated pre-cleaner and primary and secondary filters has double the dust holding capacity of the previous design.

The new Cat hydraulic return filter has a 3,000-hour service life — a 50% increase over previous filter, while the fuel system filters are synchronized for service at 1,000 hours, double that of previous models. The fuel system water and sediment drains and hydraulic system oil level are positioned close together at ground level, making routine daily maintenance faster, easier, and safer. New cab designed to enhance operator performance. With a choice of Comfort, Deluxe, or Premium cab packages, all Next Generation Cat excavator cabs come equipped with standard features like keyless push-button start, large standard 8-in (203mm) touchscreen monitor with jog dial keys for control, and sound-suppressed rollover protective structures (ROPS) to offer the next level of operator comfort and safety. A tilt-up console for the Deluxe and Premium cab designs affords easy cab entry and exit, while advanced viscous mounts reduce cab vibration by up to 50% over previous models. Automatic climate control maintains internal cab temperature settings, regardless of external ambient temperatures. Programmable joystick buttons for response and pattern allow the operator to "dial in" productivity settings. Large front, rear, and side windows enhance visibility; optional 360-degree visibility (in the model 336 only) combines images from multiple machine-mounted cameras to enhance the operator's sight lines in all directions.

www.cat.com

Brokk Introduces New Line of Hydraulic Breakers

For the first time ever, Brokk introduces its own hydraulic breaker series—eight models perfectly matched with Brokk's full range of world-leading demolition robots. The combination

guarantees maximum demolition performance to Brokk customers. The

new Brokk Hydraulic Breaker (BHB) series ranges from the 110-lb (50kg) light BHB 55 breaker for the compact Brokk 60 demolition robot, to the 1,543-lb (700kg) heavy

and powerful BHB 705 for the recently introduced Brokk 500 and Brokk 520D demolition robots.

Just like Brokk's demolition robots, a key feature of the Brokk Hydraulic Breakers is their power-to-weight performance. The breakers are lightweight and compact, yet powerful like heavier breakers from other brands. The new Brokk series of hydraulic breakers are perfectly matched with their respective Brokk demolition robot. And since the demolition robot and the breaker are designed to work at their respective peak effect together, Brokk now has the ability to deliver even more demolition performance from the Brokk machines.

"As the leading benchmark in the industry for compact demolition, it makes sense for us to now take the step to introduce our own lineup of powerful hydraulic breakers to match the power and performance of unique demolition robots," says Martin Krupicka, President and CEO of Brokk Group. "By pairing our industry-leading Brokk demolition robots with their respective Brokk Hydraulic Breaker, we can assure maximum demolition performance for our customers."

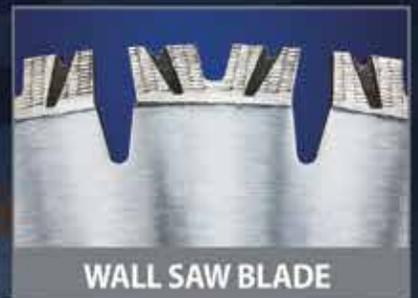
The first breakers from the BHB series were introduced together with the all-new Brokk 170, Brokk 200 and Brokk 300 demolition robots earlier this year. Now, the Brokk Hydraulic Breaker range is complete and available for Brokk's full range of demolition robots.

www.brokk.com



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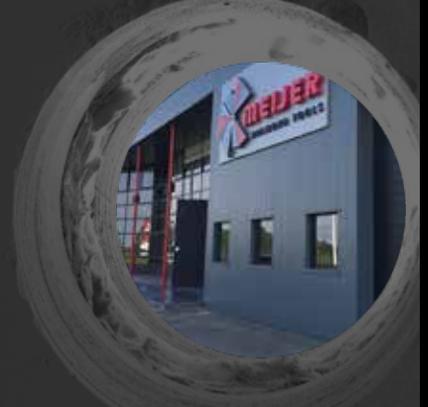
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New Tunnel Version of Epiroc Solid Body Hydraulic Breakers

The new SB 302 and SB 452 Tunnel versions of Epiroc's solid body hydraulic breakers provide application-specific modifications that extend equipment lifetime and reduce overall operating costs in underground applications. Piston lifetime in the advanced Tunnel version is extended by a new piston in stainless steel, while bushing seat wear is minimized by a press-fit, one-piece bushing locked by an additional pin. An exchangeable wear plate protects the hammer body and durability is enhanced by heavy duty retainer bars and a locking pin.

The special tunneling tool with a collar supporting a robust front shield and dust cover minimizes the dust intake when working on overhead areas. Two restrictors are available which enable the performance of the hydraulic breaker to be adjusted for either traditional scaling operations or for more challenging rock breaking jobs. Together these new features add up to less wear, extended lifetime and lower overall operating costs in scaling, tunneling and underground mining applications. The new Tunnel versions are suitable for excavators in the weight class from 4.5t to 13t and standard underground scalars. Service weights are 690 lb (315kg) for the SB 302, and 990 lbs (450kg) for the SB 452.

www.epiroc.us



Epiroc Extends Combi Cutter Offering

Epiroc has added two new models to its Combi Cutter range. Designed for carriers in the 20t-30t and 25t-40t operating weight classes respectively, the CC 2300 and CC 3100 offer a productive combination of short cycle times, easy handling and simple maintenance. The CC 2300 and CC 3100 have all the well-known features that make attachments in the Epiroc Combi Cutter range a popular choice for challenging tasks on demolition sites. They are robust, multi-purpose machines offering low noise, low vibration operation and suitable for practically any kind of primary demolition work. The cutting blades on all versions are replaceable and reversible and the attachments can be equipped with different sized jaws according to requirements.

Like other attachments in the CC range, both the CC 2300 and the CC 3100 are available with two jaw versions, the Universal version (U) and the Steel cutting version (S). The Universal versions are ideal for light- to medium-duty building demolition and heavy-duty industrial demolition involving heavily reinforced concrete. The Steel cutting versions are specifically designed for cutting steel profiles in general steel structures. Both versions are efficient tools for secondary reduction and material separation.

With the CC 2300 and the CC 3100, high productivity is ensured. The stable cutter body features two powerful hydraulic cylinders with integrated speed valves for minimum cycle times and, in turn, minimum fuel consumption. Fully

protected by piston rod guards, the cylinders deliver virtually constant closing force, which remains high even when the jaws are almost closed. Two jaws moving independently eliminate displacement forces on the cutter and the carrier, ensuring controlled demolition of unstable concrete walls, regardless of which jaw attacks the material first.

The hydraulic drive gives 360-degree endless rotation, allowing precise handling and optimal positioning. If the cutter grips the material at an oblique angle a built-in pressure relief valve allows a "self acting movement" that brings the cutter jaw into the ideal position. This valve effectively protects both the carrier and the cutter from potentially damaging reaction forces.

A modular design and the fact that the jaws are mounted on one central bearing pin allow the cutter jaws to be changed easily on-site. Thanks to the CAPS coupling and positioning system, the two jaws can quickly be removed and refitted as one unit. CAPS makes handling of the dismantled jaws much easier as the two jaws remain connected even after they have been removed from the body. Refitting is simple using the special guide system supplied.

www.epiroc.us

New Date Set for M&T EXPO in Brazil

M&T Expo 2018 in Brazil, originally scheduled for June, was postponed due to the country's political strife that resulted in widespread transportation strikes that jeopardized logistics and presented potential risks to the safety of attendees.

Tensions have eased, allowing the international trade fair of equipment for construction and mining equipment to be held November 26- 29, 2018, at the São Paulo Exhibition & Convention Center. Hours for the show will be 1:00-8:00 pm November 26-28, and 9:00 am-4:00 pm on November 29.

"We have spared no effort in bringing together all that is required to still hold the event in 2018 at same location and with the same conditions," explains Monica Araujo, managing director at Messe München do Brasil Feiras Ltda.

Adds Afonso Mamede, president of the Brazilian As-

sociation of Technology for Construction and Mining, "We are looking forward to M&T Expo and are very delighted to meet the needs of our exhibitors and visitors."

www.mtexpo.com.br





Rammer Ramps Up Value

Rammer has announced the introduction of its new Performance Line of hydraulic hammers. Coinciding with the start of the company's 40th birthday celebrations, the new line is designed to allow first-time customers and markets to enjoy the Rammer experience but at optimized investment.

The first models in the new Rammer Performance line, launched year ago were R18P, R25P, R35P, and R45P. The R18P is a 1,240 kg hammer that is suitable for carriers in the 15t-23t operating weight range. The larger R25P is suitable for carriers from 20t-29t, and weighs in at 3,637 lb (1,650kg). Designed for carriers in the 27t-40t weight range, the R35P is a 5,115 lb (2,320kg) hammer; while the 6,500 lb (2,950kg) R45P is aimed at carriers from 32t-53t.

During the year 2018 Rammer introduced following 8

Rammer Performance Line hammers (R01P, R02P, R03P, R04P, R05P, R07P, R10P, R12P) to complete the offering. Each of the new Performance Line hammers meets Rammer's exacting design and manufacturing standards and benefits from low operating noise levels which also makes them suitable for most applications including inner city and urban applications. Rammer reports that these new models are designed for a wide range of applications and are an addition to the company's comprehensive and world-leading range. They do not replace existing models in the Rammer product line. While these new models will be offered at a lower cost, they will share all the proven characteristics for which the Rammer brand is renowned.

"There is no way that we would compromise Rammer quality, performance and brand reputation," explains Kaj

Koskela, Sandvik BU Breakers vice president. "These new models use the same materials, processes, quality controls that are familiar to customers using our Rammer Excellence product range."

According to Rammer General Manager Rafa López, the driving force behind the design of the new Performance Line hammers is a desire to satisfy specific customer demands.

"The new Rammer Performance Line is designed to meet the needs of customers who are looking for economical investment" he says. "These entry level hammers allow those customers to experience the advantage of working with a brand like Rammer and to enjoy the support and expertise of our global dealer network, possibly for the first time."

www.rammer.com



Dynaset's New HPW250 Hydraulic High-Pressure Water Pump

Dynaset released HPW250 hydraulic high-pressure water pump at the FinnMetko 2018 trade show. The output of the new model is 250 bar (3,600 psi) 250bar) of water pressure and 7.9 gallons (30 liters) per minute of water flow. The power-to-size ratio is outstanding. The compact pump's output is 16.7

hp (12.5kW) of washing power. The HPW250 has a forged body and it is made of brass alloy making the pump extremely durable. The pump is self-priming which means the water source can be a lake or even a river if water filtration is considered.

www.dynaset.com

Haver & Boecker's Tyler L-Class Vibrating Screen Delivers Versatility in a Compact Design

Haver & Boecker, a leading equipment manufacturer and solutions provider for aggregates and mining applications, offers the Tyler L-Class vibrating screen for classifying wet or dry material as well as an ideal dewatering method. The compact machine is versatile and easy to maintain, with no timing belts or gears that normally need replacing. Producers can customize the 6-ft (1.8m) wide machine in two lengths--16-ft (4.9m) and 20-ft (6m). Primarily mounted horizontally, the L-Class can also be inclined or declined as much as 3 degrees. The linear L-Class handles up to 400 tph and features a 45-degree mounted double-shaft overhead drive system with direct-mounted motors. Producers can access multiple speed and stroke options by changing the pulleys and plate weights. The application-specific body design offers simplified maintenance with a one-piece removable head and shaft assembly. In addition, unlike most linear-stroke machines, the L-Class does not require timing belts or gears, making maintenance even simpler. The L-Class is also ideal for separating water from product in dewatering applications. When positioned at a negative incline of about 3 degrees, the vibrating screen's g-force moves wet material uphill on the



Haver & Boecker's Tyler L-Class vibrating screen is ideal for classifying wet or dry material or dewatering. The machine is easy to maintain with no timing belts or gears that normally need replacing. Image courtesy of Haver & Boecker.

screen. Gravity and the natural operation of the equipment help screen out water before the material reaches the discharge end. The thick layer of material on the screen also acts as a filter cake and presses water out, as well as traps fine particles that would be lost in a thin layer screening process.

For operations requiring a level of portability, Haver & Boecker engineers pair the L-Class with the Hydro-Clean 1000 WashPlant on a skid structure. Many operations are eligible to receive Haver & Boecker's 36-month Uptime Service Package free with the purchase of an L-Class.

Kinshofer's D-Series Demolition and Sorting Grapples Increase Excavator Versatility

Kinshofer's D-Series grapples offer a new light, compact and flexible shell, ideal for sorting and demolition. The attachments feature 360-degree endless rotation for precise positioning to give construction, demolition and recycling contractors optimal control when grabbing materials. D-series grapples are available for excavators ranging from 2t to 80t. Kinshofer's patented cylinderless HPXdrive system powers the D04HPX, D06HPX, D09HPX, and D35HPX, providing constant closing force compared to competitive grapples and reduces overall cost of ownership by about 50% compared with conventional models.

The D-Series streamlined design offers a compact footprint, ideal for working in tight areas such as urban demolition sites, while a robust Delta-box frame provides durability and reliability for demanding applications such as quarries and large-scale demolition. And regardless of conditions, the grapple's dust-proof axle bearing points keep out dust and debris. To prevent overloading, the D-series is equipped with



The D-Series includes a flat 10t or 15t rotator with 360-degree endless rotation for precise positioning.



KINSHOFER's patented HPXdrive powers the D04HPX, D06HPX, and D09HPX, and provides a greater power-to-weight compared to competitive attachments.

pressure relief valves as well as a perforated shell design that filters fine dust and gravel while keeping larger pieces in the shells. If an operator overworks the grapple, the innovative shells flex to avoid structural damage. The grapples also feature a non-return valve to keep the load secured even if a pressure drop occurs, ensuring safe operation. Side plates are available for handling small-grained bulk material, such as

sand and gravel. Customers can also equip the grapples with a compression rail adapter, allowing the attachment to safely handle and position curbstones and other delicate materials. The grapples' exchangeable cutting edges are manufactured from 500 HB steel for exceptional longevity. The cutting edge is also reversible to further extend service life.

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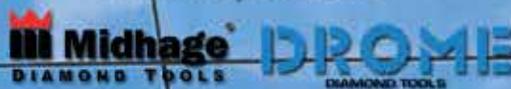
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Trevi Benne Help Swedish Contractor Cream a Former Dairy

The Swedish demolition contractor Remoove Demolering AB was recently hired to demolish a dairy plant to make way for a new residential development. The former dairy contained approximately 13,000t of concrete and 1,000t of steel, all of which bound for recycling. The highest point of the building was 72 ft (22m) which required high-reach demolition equipment.

Remoove's solution was to equip a Caterpillar 324E equipped with Trevi Benne's new CS 30RS 3t demolition shear. A Trevi Benne Multi Kit MK25 (3.25t) with a shear kit was also fitted on to a Volvo EC300D excavator. Erik Östlund, owner of Remoove, is a longtime Trevi Benne customer, so he knew the tools could be counted on to swiftly and efficiently demolish the dairy. He brought in several other Trevi Benne attachments for the job, including a 2.15t F 21P pulveriser, a 2.1t HC 20 primary crusher, and PMG 15S and PMG 20S selector grapples, weighing 1.6t and 2.1t, respectively. For demolishing the tallest parts of the factory, Remoove used a Kocurek attachment fitted to a high-reach Volvo EC 460 excavator.

Though the site has been cleared, elements of the dairy live on in other ways. Most of the concrete was crushed into filling material for the new building complex.

www.trevibenne.com



Improving Renovation ROI

Connie Johnson, vice president of marketing at surface preparation expert National Flooring Equipment, explains how technology can help improve a renovation project's return on investment.

The starting point for a renovation project is to establish what the end goal is for the organisation. In most cases, the project is not just to replace the floor, but actually to meet a business objective. The objective could be something as critical as to bring in more customers or improve a building's efficiency. In a café or restaurant, for example, it is important to install flooring that feels and looks good under a customer's feet, is easy to clean if a drink is spilt and is slip resistant for safety. In a casino, a busy carpet may encourage visitors to look up, resulting in an increase in spending – helping the business to increase its profits. A patterned carpet will also conceal any spills, making the carpet cheaper and easier to maintain.

A floor covering can even impact the energy efficiency of a business. In large warehouses or supermarkets, a reflective polished concrete floor can cut energy bills. For a project to have any real return on investment, it must be clear what problem the renovation is trying to solve and what environment the business is trying to create. Once the goals and objectives of the project are defined, there are several ways that a business can maximise the return on investment of their floor. The first stage is during the renovation itself.

On the job

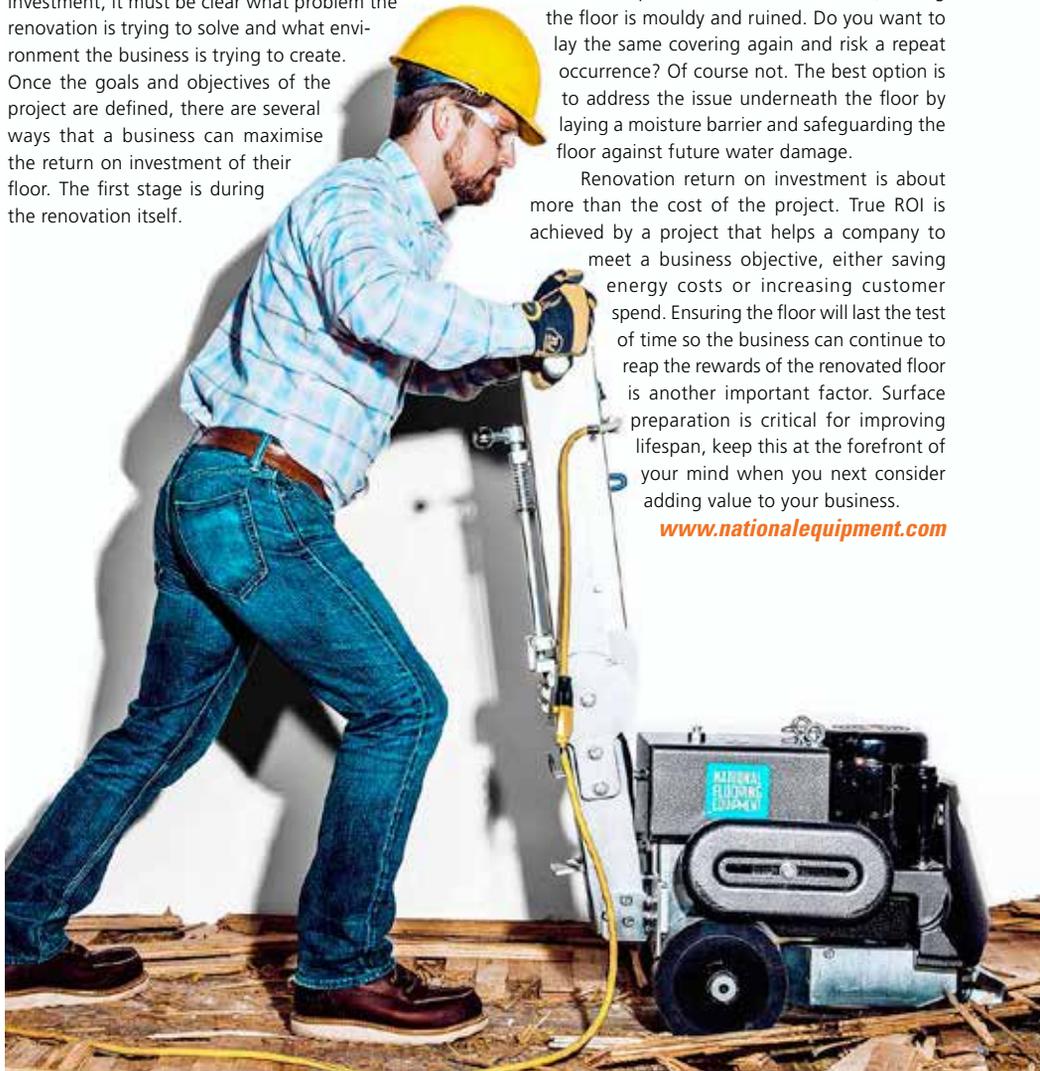
When renovating a business, it's critical that the work does not disrupt day-to-day activities. Many companies remain open during renovation or refurbishments, which means business owners must be conscious of noise, dust and debris. The contractor can choose a battery- or electric-powered machine, use dust collection equipment, and regularly remove any debris or rubble to help keep the business in operation during the project. Technology can help a contractor to perform the renovation more quickly. A commonly overlooked factor is ergonomics – the more comfortable the contractor is, the more quickly the job can be performed. For this reason, surface preparation equipment that can be adjusted can help improve the speed of renovation is ideal.

Versatile equipment on the job site will also improve ROI. For example, with the right tooling, National Flooring Equipment's Helix grinder can grind, polish, edge grind, and scarify a surface – offering four capabilities in one machine. Whether you own equipment or hire a contractor, the use of one machine can improve the speed and ease of which a renovation can be completed. Advances in coating technology can affect the floor's return on investment, both in terms of meeting a business objective and in the floor's lifespan. Consider this example: Your business is flooded, leaving

the floor is mouldy and ruined. Do you want to lay the same covering again and risk a repeat occurrence? Of course not. The best option is to address the issue underneath the floor by laying a moisture barrier and safeguarding the floor against future water damage.

Renovation return on investment is about more than the cost of the project. True ROI is achieved by a project that helps a company to meet a business objective, either saving energy costs or increasing customer spend. Ensuring the floor will last the test of time so the business can continue to reap the rewards of the renovated floor is another important factor. Surface preparation is critical for improving lifespan, keep this at the forefront of your mind when you next consider adding value to your business.

www.nationalequipment.com



GSSI's technology aids field work across industries, from construction sites to public utility work and even search and rescue missions following a natural disaster. A custom controller hardened for field work had met the unique hardware requirements for their ground penetrating radar (GPR) technology, but could no longer keep up with the design cycle and the hardware too frequently became outdated.

The search for a new technology partner led GSSI to Panasonic, which has similar reputation for rugged and durable products. GSSI purchased fleet of Toughpad FZ-G1 and Toughpad FZ-M1 tablets, and designed proprietary software for use with their GPR systems, creating a bundled full-suite package that offers customers full control over these complex, finely-tuned radar systems. Lightweight and portable, the tablet doesn't compromise on performance or screen size and offers portability and offers greater flexibility in the field.

Due to the uniquely challenging environment of GPR work, GSSI needed a device that could withstand the varying conditions of this environment to seal out the elements. GSSI customers are known for being tough on their equipment. Operating in construction and safety zones, these devices might be tossed in the back of a truck, shipped around the world and dropped countless times. GSSI needed to ensure that a tablet-based system could

GSSI, Panasonic Partner to Create Tough Luck for GPR User



endure how their employees handle the devices as much as the environment they work within.

And because GSSI customers primarily work in outdoors environments, visibility and battery life were other crucial features. Particularly in bright light conditions, com-

mercial grade tablets get washed out and critical data is difficult to read on the screen. The ability to ensure visibility in all light conditions was another important aspect. GSSI was also attracted to the added battery life available with the Toughpad. Especially in emergency response and disaster recovery

situations, device failure due to battery loss simply isn't an option. By deploying Panasonic's Toughpad tablet, GSSI now offers customers a highly capable solution in a device that will last, eliminating fears of damage or replacement.

www.geophysical.com



Kinshofer WS-Series Drum Cutters are available with three drum types, a profiling drum for tunneling, a rock drum for quarry and mine applications, and a demolition drum for cutting concrete.

Kinshofer, a leading global manufacturer of high-quality excavator and loader crane attachments, introduces the WS Drum Cutter Series. KINSHOFER acquired the drum cutter line, early 2018, with the purchase of Schaeff Transverse Cutter from Atlas GmbH. The drum cutters feature an exclusive pick angle and optimal chisel arrangement for high performance and minimal wear, making the attachments ideal for mining, tunneling, road construction and demolition.

Drum cutters are a quieter alternative to hydraulic breakers, and the WS-Series are one of the quietest in the industry, making

them excellent for use in areas with noise restrictions. They also produce less vibration than breakers, so contractors can use them where there's a risk of disturbing a nearby structure's foundation.

Kinshofer achieves the low decibel output and minimal vibrations of the attachments through a high-torque hydraulic motor. The motor powers the drum cutter while its gear reduction optimizes torque and cutting force. The higher torque enables the attachment to achieve greater cutting efficiency while operating at a slower speed than competitive drum cutters. The

Kinshofer now introduces WS-Series Drum Cutters

controlled speed of the attachment reduces noise and vibration as well as maximizes operator comfort. Additionally, the hydraulic motor is adjustable to match the output of an excavator's hydraulics.

The rock drum effectively breaks soft to medium-hard rock in mines and quarries with its strategic chisel pattern while the profiling drum's higher density of chisels shapes and levels soft to medium-hard rock in tunneling applications. The demolition drum offers reduced vibrations due to a wear-protected spiral sheet and is ideal for cutting medium-hard to hard rock as well as concrete.

Based on the application, Kinshofer offers four chisel tips that attach to the wear pick--standard, heavy-duty, wear-protected and wood. Standard chisels are excellent for breaking asphalt, argillite and other soft

to medium-hard rocks while the heavy-duty chisels power through medium-hard to very-hard materials such as limestone and concrete. Wear-protected chisels are ideal for abrasive rocks such as sandstone and furnace gravel. The wood chisel is designed specifically for wood applications, such as stump removal. Wear picks can be replaced in minutes, leading to greater productivity and less downtime. The attachment's heavy-duty sealing system enables underwater operation as deep as 82 ft (25m) for applications such as bridge repair. WS-Series Drum Cutters are available in seven models for 2t to 60t excavators. For added versatility the attachment can be paired with KINSHOFER's NOX Tiltrotator, which enables 360-degree continuous rotation and multi-directional tilting up to 55 degrees.

www.kinshofer.com

"Sigi" Forms Siegenthaler Consulting



Ernst 'Sigi' Siegenthaler is a well-known name to competitors, associates and businesses in the international concrete sawing and drilling industry. These contacts have been developed through many activities, including being a fixture at meetings of International Association of Concrete Drillers & Sawers (IACDS) for more than 30 years, first as representative of Hydrostress, and later with Hilti. Last fall, Sigi founded his own company siegenthalerconsulting, making all his know-how of complex diamond applications available to the international concrete cutting market. This is an excellent use of his talents. During his time in the industry, Sigi has worked with, and created, highly efficient concrete cutting solutions on a vast number of complicated applications all over the world. For example, Sigi is a pioneer of dry diamond wire sawing technology, which he has been using since 2003. In the field of nuclear power plant decommissioning, he was the first to cut heavily reinforced concrete dry without additional cooling equipment.

Onshore and offshore

Siegenthalerconsulting offers construction companies with overall project responsibility, but without any diamond competence, its experience and expertise. The company provides the advice and support to NPP decommissioning companies, as well as professional diamond service contractors working in complex applications and decision-making situations. In the field of project engineering, Sigi is able to deliver further feasibility studies, recommendation of method, equipment and tools; dismantling concepts, costs and time planning, coordination and organization on site and much more besides. In the area of product engineering, siegenthalerconsulting is able to advise on the development of special machinery for customer-specific applications, on-site training and application training for users and operators on site.

Huge experience

Ernst 'Sigi' Siegenthaler began his professional career in the diamond service contractor business in 1985 with Hydrostress AG in Switzerland. Hydrostress developed and manufactured machine systems for concrete

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sawing and drilling, capitalizing on its high-pressure hydraulic and in pre-stressing system technology. Sigi played a significant role in developing the first foreign subsidiaries and distribution partners of Hydrostress elsewhere in Europe. In 1990, Hydrostress founded Hydrostress Canada Inc. in Toronto. As general manager of this company, Sigi implemented the Hydrostress hydraulic machine systems methods for the professional sawing and drilling contractors in Canada and the US.

As his reputation grew within the industry, 1997 saw Hilti AG bringing Sigi to Liech-

enstein to work at its corporate headquarters as a project manager in the diamond products business unit. He played a significant part in building Hilti's diamond services contractor business in Europe and Asia. As global key account manager, he successfully undertook and completed many nuclear power plant decommissioning projects in Germany, UK and France, as well as building many customer-specific special machines which were supported by numerous application training programs. In the past, Sigi has undertaken many consultancy projects in the offshore

business in the North Sea, close to UK and Norway. In Asia, he has supported several oil refineries in the onshore business drawing on, and sharing his know-how of diamond wire technology and application training.

"Siegenthalerconsulting now aims to provide and stands for guaranteed decision-making security, the selection of the right technical solutions, cost savings, on-time delivery and, finally, for the success of the project," says a proud Sigi. "It is a competence you can count on."

sigi@sigi-siegenthaler.ch



Record-Setting Attendance at CSDA 2018 Convention

An enthusiastic crowd of industry professionals, including an impressive number of new members, met in Maui to learn, network and enjoy the Aloha spirit at CSDA's 2018 Convention & Tech Fair. The association's flagship event, held March 8-10 at the beautiful Grand Wailea Resort in Wailea, Hawaii, was attended by a record-breaking number of attendees. It was the largest group to come together for a CSDA Convention in 10 years. Attendance was up 68% over the 2017 event in Puerto Rico. CSDA members and friends were captivated by the story of how keynote speaker and shark attack survivor Paul de Gelder had overcome many

obstacles in his life to become a successful and inspiring presenter. His mantra "Improvise. Adapt. Overcome" motivated attendees to look at challenges in their lives from a new perspective. Other informative sessions on the agenda included presentations and panel discussions covering a range of topics. Among these were mitigating insurance losses, best practices for hiring and employing millennials and managing expectations on concrete polished floors. A job story on cutting a large hydroelectric dam in British Columbia was also on the agenda. Two roundtables covered the new HazComm regulations and the evolution of GPR busi-

ness. Aside from all the business sessions, some excellent networking opportunities and social events were available in Maui. The ever-popular CSDA Tech Fair was again part of the convention agenda. Twenty-five leading industry manufacturers and affiliates exhibited at the event, drawing a great crowd, with five first-time exhibitors. Attendees took the opportunity to talk one-on-one with vendors in an intimate setting that often cannot be achieved at large trade shows. Next year, the 2019 CSDA Convention & Tech Fair returns to sunny St. Petersburg, Florida and the Renaissance Vinoy Resort & Golf Club, March 11-15.

CRSI Announces 2018 Honors Design and Construction Awards Recipients

The Concrete Reinforcing Steel Institute announces the results of their biennial CRSI HONORS Design and Construction Awards program. Of the entries received, 19 projects were selected to receive recognition.

Project entries were evaluated on the basis of (1) Satisfaction of Owners Objectives, (2) Development of Innovative Solutions, (3) Maximizing Project Value, (4) Effective Use of Reinforced Concrete and (5) Overall Aesthetics. Twelve submittals received an HONORS Award while seven received a Merit Certificate.

For nearly 40 years, CRSI has recognized design and construction achievement by owners, architects, engineers, and construction managers across North America. This year's entries represented a wide range of project types from all regions of the U.S., as well as Eastern Canada. Each of the selected projects demonstrates excellence and highlights thoughtfully considered solutions brought to fruition through the efficient use and leveraging of steel reinforced concrete's inherent qualities. The following projects were

selected for recognition. Submitting organization is in parenthesis:

Multi-Family Residential/Hotel

- One Thousand Museum Towers, Miami, Fla. (DeSimone Consulting Engineers) – HONORS Award
- Panorama Tower, Miami, Fla. (DeSimone Consulting Engineers) – HONORS Award
- Tower 12, Seattle, Wash. (Cary Kopczynski & Company) – HONORS Award
- Halcyon Hotel, Denver, Colo. (Cary Kopczynski & Company) – Merit Certificate
- Mr. Robinson, San Diego, Calif. (DCI Engineers) – Merit Certificate

Office

- 55 Hudson Yards, New York, N.Y. (WSP) – HONORS Award
- 300 Mission Street, San Francisco, Ca. (Skidmore, Owings and Merrill LLP) – HONORS Award
- 512 West 22nd Street, New York, N.Y. (DeSimone Consulting Engineers) – Merit Certificate
- McDonald's Headquarters, Chicago, Ill. (James McHugh Construction Co.) – Merit Certificate
- McKinney & Olive, Dallas, Texas (Brockette/Davis/Drake, Inc.) – HONORS Award
- Park District, Dallas, Texas (Brockette/Davis/Drake, Inc.) – Merit Certificate

Entertainment

- John F. Kennedy Center for the Performing Arts Reach Expansion, Washington, D.C. (R&R Reinforcing, Inc.) – Merit Certificate

Health Care

- University of Iowa Stead Family Children's Hospital/Hospital Parking Ramp #2, Iowa City, Iowa (CBRE | Heery) – HONORS Award

Cultural

- National Veterans Memorial and Museum, Columbus, Ohio (Gerda) – HONORS Award
- Austin Central Library, Austin, Texas (Datum Engineers) – HONORS Award

Mixed-Use

- Waterline Square, New York, N.Y. (WSP) – HONORS Award

Bridge

- I-90 Dresbach Bridge, LaCrosse, Wisc. (Figg Bridge Engineers, Inc.) – HONORS Award
- I-91 Brattleboro Bridge Improvements, Brattleboro, Vt. (Figg Bridge Engineers, Inc.) – HONORS Award
- Capital Cascades Crossing Pedestrian Bridge, Tallahassee, Fla. (Figg Bridge Engineers, Inc.) – Merit Certificate

Protection in the Line of Fire

Within foundries, weekly cleaning tasks such as refractory removal require operators to hold up 30-lb (14kg) chipping guns and 40-lb (18-kg) rivet busters to remove the caked-on material inside and around the ladles. Such tasks take as long as four hours to complete, which can lead to muscle strain and an increased risk of injuries. And while chipping guns and rivet busters are effective methods to remove refractory, these tools produce heavy vibrations that transfer directly to the operator. Prolonged use can lead to nerve damage, hand-arm vibration syndrome and other chronic conditions. Luckily, Waupaca Foundry — the world's largest gray iron and ductile iron casting supplier, headquartered in Waupaca, Wisc. — found a solution that lets them combat the heat and the danger with remote-controlled demolition machines manufactured by Brokk.

A New Beginning

Waupaca Foundry purchased its first Brokk machine in 2000 to increase the efficiency and safety of the foundry and to reduce injuries to employees. The team started with a 1.6t Brokk 150, used to remove the refractory lining in the 80-ft (24m) tall cupola, effectively minimizing the use of pneumatic tools. After seeing the machine in action, Waupaca's crew knew it was the best alternative. They were impressed with the size and accuracy of the machine, which is less than 5 ft (1.5m) tall and 3 ft (1m) wide. The Brokk 150 allowed operators to stay away from the high temperatures inside the cupola, which minimized the risk of heat exhaustion. In addition, the machines are electric-powered, resulting in no potentially harmful exhaust. More than 15 years later, Waupaca Foundry now uses five electric-powered Brokk machines in three of its seven foundries. They include a Brokk 150, 180, and 250, as well as two Brokk 100s. Incorporating remote-controlled machines completely eliminated the use of rivet busters and dramatically reduced the use of other handheld pneumatic tools. Workers now only use pistol grips to complete any finish work that the Brokk operator might have missed, which usually takes less than an hour.



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