

PODCAST

PROFESSIONAL
DEMOLITION
AMERICAN

Your Gateway to North, Central and South America

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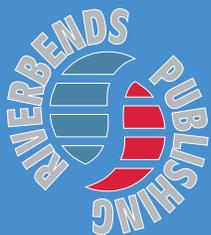
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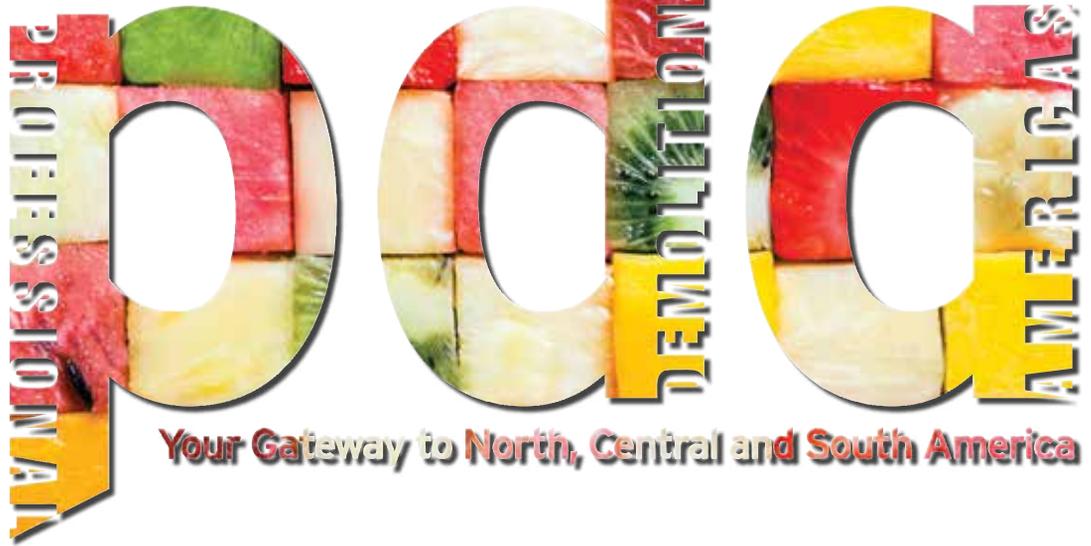
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Don't Wait For "What If"

As this issue of PDA goes to press, the fourth-largest city in the U.S. is drowning

As much as 50 in (1,270mm) of rain spawned by Harvey, a slow-moving tropical cyclone, inundated Houston, Texas, and the surrounding region at the end of August, causing massive flooding that displaced thousands of residents, and untold billions of dollars in property damage. It may be months before the full scale of the disaster is known, and what, if anything, might have been done to reduce its impact, if only a little bit.

Hurricanes and other large storms are nothing new to the Gulf Coast, but experts whose business it is to prepare for natural disasters say Harvey far exceeded even the most extreme planning scenario. And regardless of whether Harvey was a once-in-a-millennium event, or a harbinger of more megastorms to come, the paradigm for natural disaster preparation has been permanently altered.

If you're in the areas affected by Harvey, or have family or colleagues there, our sincerest hopes for safety and a swift recovery. If you're among those watching in amazement as each new image of a flooded neighborhood or heroic rescue, we urge you to do two things: 1) contribute whatever you can to one of the many organizations involved in the relief effort, and 2) think about your own readiness for a disaster.

Hopefully, none of us will ever have to experience anything remotely close to Harvey. But nature isn't choosy. With little or no warning, anything from a relatively small storm to a tornado or earthquake could just as easily paralyze your business indefinitely. So too could a fire, building collapse, gas explosion, or even an act of terrorism. Taking life as it comes isn't always a bad attitude, but there is something to be said for taking that proverbial "ounce of prevention."

A good place to start is by taking a close look at your business insurance coverage. Not all plans include protection from disaster-related interruptions, nor may they cover some of your recent equipment purchases. A review with your insurance agent can help ensure that your coverage is up to date, and applicable to your needs.

Another good disaster preparation step is to store important company records at a secure, off-site location. That's particularly true for electronic records, which should be backed up regularly. If there's any chance you and your staff will have to shelter in place at your office, make sure it's stocked with fresh water, batteries, and other essentials to support what could be a long-term stay.

Speaking of employees, make them know what to do or where to go in the event of an emergency. Many companies use "telephone trees" for employees check in and report their condition and whereabouts. And that landline telephone you've considered disconnecting may well prove to be more reliable in an emergency than the cell and data network.

There are many other resources for business emergency planning—the U.S. Small Business Administration, insurance companies, and the SCORE Association, to name but a few. Setting aside time to review your needs and take the necessary steps may not seem like a priority when juggling a full work backlog under sunny skies.

But a disaster is not the time to be wondering what you'll do, or what you wish you had already done.

Jim Parsons, Senior Editor
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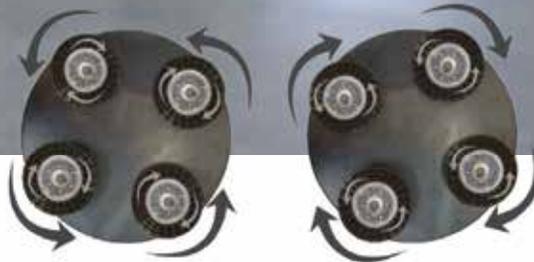


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US Dealer Visit to ALLU Factory a Great Success

Last fall, leading North American foundation equipment distributor, Equipment Corporation of America (ECA), was named ALLU's dealer for its advanced soil stabilization equipment range. Following on from what has already proved to be a highly successful relationship, ECA representatives visited ALLU's factory in Finland for a firsthand look at how the world-leading range is manufactured. During their short but very busy stay, they inspected the ALLU factory, and met with management and staff.

"Although their schedule was busy, and their stay short, we were delighted to host our colleagues from ECA," said Marjut Lindroos Marketing Manager for ALLU. "During our factory tour we were able to show ECA that the ALLU equipment is manufactured to the very highest standards."

ECA possesses a long and proud history, being a leading supplier of foundation construction equipment in eastern North America for nearly a century. Currently the company acts as exclusive distributors for BAUER Drills, Klemm Anchor and Micropile Drills, RTG Piling Rigs, Pileco Diesel Pile Hammers, HPSI Vibratory Pile Hammers, WORD International Drill Attachments, Dawson Construction Products, and Grizzly Side Grip Vibros. With nine facilities, ECA supplies a

complete portfolio of technical expertise and equipment to meet customers' specific maintenance and support needs. In order to provide customers with more advanced equipment solutions, ECA expanded its offering to drilling and pile driving contractors to include ALLU's PMX Power Mixer and PF Pressure Feeder Soil Stabilization Systems.

The components collectively function with an excavator to provide mass stabilization of low quality soils. The process involves mixing binder into soft soils such as peat, clay, sludge, and slurry to provide a stable layer for access. It can also encapsulate and process contaminated soils.

"Having ECA as the ALLU Stabilization Equipment distributor will provide end users with the best service in the industry, specialized knowledge, and the finest equipment for soil stabilization and remediation," says Edgar Chavez, President ALLU North America. "ECA and ALLU share the same values when it comes to business ethics, customer satisfaction and retention, so this is an



(From left to right) Edgar J Chavez, ALLU USA, President/CEO; Ben Dutton, Vice President of Sales & Marketing, ECA; Ray Kemppainen, Branch Manager, ECA; Roy Kern, Chief Executive Officer, ECA; (behind) Steve Stoker, Materials Processing National Sales Manager, ALLU USA; Fredrik Dromberg, Vice President - Process Equipment, ALLU; Mikko Kuronen, Production Engineer, ALLU.

excellent partnership and we are excited to work with ECA as our long-term partner."

www.allu.net

Worker Shortage, Increasing Demand Helps Keep Spring Construction Spending Steady

Construction spending in May was unchanged from April, but increased from a year ago amid growing reports that contractors are struggling to find enough skilled workers to keep projects on schedule, according to an analysis of new government data by the Associated General Contractors of America (AGC).

"Spending on most types of private construction has remained relatively flat from month to month so far in 2017 but at a higher level than in the same period of 2016," Ken Simonson, AGC's chief economist. "At this point in the year, it looks as if private demand for structures remains healthy, but gridlock in Congress and in several state governments will depress public infrastructure spending."

Simonson adds that the year-to-date (YTD) increase of 6.1% for January through May 2017, compared with the same months of 2016, shows overall demand for construction remains positive but that the recent flattening of investment coincides with more frequent reports that contractors and home builders are stretching out completion times because they cannot find enough qualified workers. Private nonresidential spending slipped 0.7% for the month but grew 5.3% YTD. The largest private nonresidential segment in May was power construction (including oil and gas field and pipeline projects), which edged up 0.3% for the month (3.4% YTD). The next-largest segment, commercial construction (retail, warehouse, and farm), decreased 1.0% in May but climbed 15.2% YTD. Manufacturing construction declined 1.7% for the month, and 7.8% YTD. Private office construction increased by 0.8% for the month, and 16.9% YTD.

Public construction spending grew

2.1% from the prior month but declined by 3.5% for the first five months of 2017 combined. The biggest public segment—highway and street construction—dipped 0.9% for the month and 1.3% YTD. Among other major public infrastructure categories, spending on transportation facilities such as transit and airport construction inched down 0.2% YTD. Spending on sewage and waste disposal plummeted 21.5%; and spending on water supply fell 11.0%.

www.agc.org

AEM Names New Senior VP for Agricultural Services

The Association of Equipment Manufacturers (AEM) has named Curt Blades as senior vice president, agricultural services.



Curt Blades

He replaces Charlie O'Brien, who announced his retirement from AEM earlier this year following a 10-year career with the organization. Blades will be responsible for strategic direction of agriculture programs and services for the AEM membership, and will serve as primary liaison with ag-specific industry organizations, customer groups, and government agencies, both in North America and worldwide. Blades served as Group Business Development Director for Meredith Corporation, and as a member the strategic leadership team for Meredith Agrimedia business unit. In addition to strategy, he has extensive experience in management, marketing, sales and research. Blades earned a bachelor's degree in agricultural economics from University of Missouri and a mast degree in agribusiness from Kansas State. He grew up on a 5,000-acre farm in northeast Missouri, and was involved in 4H and FFA. AEM notes that the nationwide search for its senior vice president position was conducted through Kincannon & Reed, a leading global executive search firm focused on the food, agribusiness and biosciences sectors.

www.aem.org



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Event Calendar

Concrete Decor Show 2017

November 6-10, 2017
Innisbrook Resort,
Palm Harbour, Florida, USA
www.concretedecorshow.com

World of Concrete 2018

January 23-26, 2018
Las Vegas Convention Center,
Las Vegas, USA
www.worldofconcrete.com

Intermat 2018

World of Concrete Europe 2018
April 23-28, 2018
Park de Exposition de
Paris-Nord Villepinte,
Paris, France
www.intermat.fr

DEMCON 2018

September 27-28, 2018
Infracity, Stockholm, Sweden
www.demcon.se

The Rental Show 2018

February 19-21, 2018
Ernest N. Morial Convention
Center, New Orleans, USA
www.therentalshow.com

Demolition 2018

US National Demolition
Association Convention 2018
February 22-24, 2018
Austin Convention Center,
Austin, USA
demolitionassociation.com

CSDA Convention 2018

March 6-10, 2018
Grand Wailea Resort,
Maui, Hawaii, USA
www.csda.org

IACDS Convention 2018

May 20-22, 2018
Tokyo, Japan
www.iacds.org

M&T Show 2018

Cooperation with Bauma,
Messe München
June 5-8, 2018
São Paulo Expo, Exhibition
& Convention Center, Brazil
www.sobratema.com

Concrete Show 2019

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



Atlas Copco Celebrates Grand Opening of New South Carolina facility

Atlas Copco celebrated the grand opening of its new production facility in Rock Hill, S.C., with a ribbon-cutting ceremony on May 17. Atlas Copco built the \$25 million facility to enhance its support for the North American construction market. The 197,000-ft² (18,302m²), LEED-certified plant serves as the production and assembly facility for Atlas Copco's North American Construction Technique division. Generators and portable compressors and other equipment are produced at the plant, which officially opened in February 2017.



The May 17 event featured a VIP tour, ribbon-cutting and presentations by: Mats Rahmstrom, President and CEO of Atlas Copco AB; Peter Lauwers, President of the Atlas Copco Portable Energy division; and Andrew Walker, President of the Atlas Copco Construction Technique Business Area. Approximately 400 employees and guests attended. Construction, which began in January 2016, incorporated lean manufacturing features to enable efficient and flexible processes that are sustainable for the environment.

The new Atlas Copco building is in one of Rock Hill's newest mixed-use developments, Riverwalk Business Park, and replaced the company's original facility in the city.

www.atlascopco.com

Caterpillar Announces Vice President Retirements, Appointments and Organizational Changes

Caterpillar has announced that vice presidents Paolo Fellin, Greg Folley, and George Taylor have elected to retire. In connection with these retirements and the company's previously announced plan to review and update its strategy, Caterpillar is also announcing organizational changes, appointing two new vice presidents. During his 37 years of service to the company, Paolo Fellin, vice president of the Global Construction & Infrastructure (GCI) Division, built an unrivaled reputation



for his passion and devotion to finding solutions for customers. After joining Caterpillar in 1980, he held a series of sales and marketing

Paolo Fellin.

positions throughout Europe, Africa, and the Middle East (EAME). In 1992, Fellin moved to products and operations, taking on positions of increasing responsibility.

Saluting Three Industry Leaders

Greg Folley, Caterpillar vice president of the Industry Solutions, Components & Distribution Division (ISCD), spent 22 years with the company after an 11-year career as an attorney. He's held numerous positions in the Human Services Division, including senior labor relations consultant, human resources manager, corporate labor relations manager, and director of Compensation and Benefits. He also served as vice president of the Core



Components Division, chief HR officer, and vice president of the Remanufacturing, Components & Work Tools Division.

Greg Folley.

George Taylor, vice president of the Marketing & Digital Division, joined Caterpillar in 1998 as a strategic business planning services manager. He held numerous marketing, product support and general management positions before he was named the director and general manager of the global on-highway truck group in 2006. In 2015, the Caterpillar board of directors appointed Taylor as vice president of the Customer Services Support Division, and, later, as vice president of the Marketing & Digital Division.



George Taylor.

Snodgrass to Lead New Product Support & Logistics Division

Caterpillar's board of directors has appointed Chris Snodgrass, to the position of vice president of the newly created Product Support & Logistics Division (PSLD). This division will combine groups currently located in other Caterpillar divisions to drive collaboration and implement strategic initiatives. PSLD will include design and manufacturing of wear and maintenance component products, as well as support of prime product and parts distribution, inbound and outbound logistics, warehousing functions, and packaging and container management. Snodgrass joined Caterpillar in 2013 following a successful 20-year career that included senior and executive leadership positions with commercial vehicle and industrial components manufacturer Meritor, and with Daimler AG, including roles in the Mercedes Benz truck division in Europe, Freightliner Trucks in North America, and with engine manufacturer Detroit Diesel Corporation.



Chris Snodgrass.

Damien Giraud New Vice President of Global Construction & Infrastructure Division

Caterpillar's board of directors has appointed Damien Giraud, currently worldwide product manager for Caterpillar's large excavators, as the vice president of GCI. Giraud joined Caterpillar in 1998, following a seven-year career with Colas Group, a French civil engineering and construction firm. During his nearly 20 years with Caterpillar, Giraud has held a number of marketing and product management roles. He has a bachelor's degree in engineering from Ecole Des Mines, Saint Etienne, France and a master's degree from the International Institute for Management Development in Lausanne, Switzerland. Giraud will be based in Geneva, Switzerland.



Damien Giraud.

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BossTek: A New Name for an Expanded Focus



After pioneering atomized mist dust control cannons more than a decade ago with its powerful DustBoss® designs, Dust Control Technology® has changed its name to BossTek™ to better reflect all of the company's successful product lines. These include the OdorBoss® odor suppression technology, with its line of environmentally safe topical and airborne odor treatment agents, and the KoolBoss™ crowd cooling technology for large outdoor events. What hasn't changed, says BossTek President Laura Stiverson, is the company's dedication to equipment quality and customer service. Stiverson explains that the company's expansion into other aspects of industrial air quality has come as a result of repeated inquiries from businesses with unmet needs for solutions to common issues.

"Over time, we began to realize that we were not simply a supplier of dust sup-



pression equipment, but rather a solutions provider with the expertise to address a much wider range of applications," she says "These new segments of our business are growing far beyond our initial expectations, and our updated company name more accurately reflects the firm's commitment to the expanding needs of our customers."

American owned and operated, the company maintains an extensive domestic rental fleet of industrial-strength misting cannons of all sizes for dust and odor suppression, as well as crowd cooling. The firm also customizes equipment for sale both in North America and internationally. Serving numerous industries including landfills, demolition, bulk materials handling, recycling, ports and large event cooling, DustBoss has become the industry's most recognized name in dust suppression, with OdorBoss and KoolBoss quickly following suit.

"We're always developing new technologies and get very excited when we're presented with new opportunities for product designs," Stiverson says. "It's our customers, first and foremost, that drive our innovation and passion, and they will always remain our primary focus."



Prinoth Announces New Dealer in Ohio

Prinoth, one of the world's leading manufacturer of tracked vehicles, has announced that Company Wrench will represent the company's PANTHER vehicles line-up in Ohio.

"With the confidence in the construction industry on the rise, we believe that this market will generate a high interest level for our vehicles," says Alessandro Ferrari, Vice president of Sales at Prinoth. "Since CONEXPO, there is an important demand from dealers wanting to represent the line."

In recent years, Prinoth has developed a distributor network to have dealers in every market where crawler carriers are in demand. Many new service providers were also opened in order to cover the territory and to offer Prinoth customers easy-access to service and parts. This expansion will continue constantly in

order to provide the best possible sales, service, and parts availability for our rapidly growing customer base.

www.prinoth.com

Blastrac NA Opens Location in Commerce City, Colorado

Blastrac NA recently expanded its operations with an additional location at 7140 Ivy Street Unit E, Commerce City, Colo. The location will provide sales, rental, and repair services, and also carry products the local contractor can pick up when working on surface prep jobs. Blastrac NA operates several Sales-Rental-Repair locations throughout North America and Canada.

www.blastrac.com

Allu Appoints New Distributor in Colombia

The Finnish manufacture Allu has appointed FRC Ingeneria as its new distributor throughout Colombia. The company will be supplying a comprehensive range of Allu Transformer attachments and providing aftermarket care, spare parts and customer service. The appointment reinforces Allu's commitment to provide even greater levels of customer focus. It further enhances locally focused customer support, whilst also enabling customers to benefit from dealing with a global company. FRC Ingeneria founded in 2003 and based in Bogota, is well established, with offices and workshops and service engineers located throughout the country. Additionally, when required FRC Ingeneria

will be able to call on round the clock support from Allu's regional office.

"We are sure that the combination of ALLU equipment and global aftermarket support, together with the local knowledge and industry expertise of FRC Ingeneria, will enable Allu customers throughout Colombia to benefit from a winning combination," said FRC Ingeneria group marketing manager Marjut Lindroos.

www.allu.net

Picture from the left: Allu chief executive Ola Ulmala, with FRC Ingeneria managing director Fernando Bautista and sales manager Nicolay Moreno.



Allmand™ Expands into the Mobile Generator Market With Maxi-Power™ Mobile Generators

Allmand Bros. Inc., a subsidiary of Briggs & Stratton, expands its product offerings with the introduction of Maxi-Power™ Mobile Generators. The line includes seven easily maneuverable generators ranging in output from 25-kV to 150-kV amps to accommodate a variety of applications. A heavy-duty, oversized alternator with separate excitation winding provides the capacity to easily start large motors and seamlessly handle variable loads. The automatic voltage regulator quickly adjusts to provide stable and consistent voltage for powering even the most sensitive equipment. For flexibility on any jobsite, Maxi-Power generators easily switch between 50- and 60-Hz. All models adjust between 120, 240, and 277 volts in single-phase power, and 208, 240, 415, or 480 volts in three-phase.

Maxi-Power generators are designed for worry-free operation. A large capacity fuel tank allows for more than 24 hours of operation before refueling. Additionally, external fuel connections extend operational time by allowing the unit to run off outside fuel. Should a Maxi-Power generator run out of diesel, the electric fuel primer and air-bleed (EFPA) pump allow for easy restarting without requiring service for priming. A high-capacity cold start battery provides extra amps for reliable starting in any climate or condition.

Maxi-Power generators feature design elements that reduce maintenance and protect the equipment, operators and jobsite. All fluids are plumbed to the curbside edge of the generator's enclosure for easy maintenance access. A dual filtration system, protected in an acrylic filter housing, removes fine contaminants to enhance protection and prolong engine life. Designed for 110 percent full-fluid containment, the unit captures all leakage in an internal reservoir to avoid site contamination. A lockable switch voltage selector protects the engine by preventing the operator from switching voltage while the engine is running.

Model #	Engine (hp/kW)	Prime Power (kW)
MP25	33.3/24.8	20
MP40	27/20.1	30
MP45	59/44	36
MP65-8B1	98/73	50
MP65-8C1	76/56.7	50
MP125*	152/113.3	100
MP150	190/147.6	120

*available only in Canada

www.allmand.com



Brokk + Darda = More Power and Safety, Less Noise

Brokk, the world's leading manufacturer of remote-controlled demolition machines, introduces the C20 Rock Splitter. The attachment, manufactured by Brokk's German sister company, Darda, offers contractors a safe and quiet alternative to explosives and hydraulic breakers. It increases productivity in industries including mining, quarrying, tunneling, construction and demolition. The C20 Rock Splitter comes in four models; two vertical options ranging from 64 in to 72in (163cm to 183cm) long, as well as two horizontal options, from 70in to 83in (179cm to 211) long. Contractors can use the splitter with Brokk machines ranging in size from the new Brokk 280, if used with counterweights, and up.

The C20 Rock Splitter quickly breaks large boulders and solid rock in mining and shaft sinking applications as well as cross passage work in tunneling. Contractors drill a 3-in (76mm) diameter hole into the rock with a separate attachment before inserting the splitter. The attachment expands with as much as 1,800 tons of force, splitting the rock. The method is quieter, safer and produces fewer vibrations and

dust than breakers and explosives. It presents contractors with a productive alternative in areas where potentially disruptive demolition techniques are not allowed, such as near hospitals, plus it works faster than expanding demolition chemicals, which can take hours. It's also a safer alternative to handheld tools, such as pneumatic breakers, that produce heavy vibrations and can cause worker fatigue that leads to injuries over time.

The C20 Rock Splitter, when combined with a Brokk machine, allows laborers to work from a safe distance using a belt-mounted remote control box. The C20 Rock Splitter is one of more than 70 attachments that operators can quickly interchange on a Brokk machine for greater versatility on a jobsite. Brokk supplies a wide range of remote-controlled machinery and attachments around the world to maximize productivity, improve efficiency and promote safety. Contractors can use the splitter with Brokk machines ranging in size from the new Brokk 280, if used with counterweights, and up.

www.brokk.com

Industry-first Ditch Witch® MT9 Microtrencher Attachment Cuts Costs, Improves ROI on Fiber Jobsites

PERRY, Okla., Aug. 24, 2017 –The Ditch Witch® organization, a Charles Machine Works Company, introduced the new MT9 microtrencher attachment, designed to improve productivity and to reduce the cost-per-foot on small fiber jobsites. Developed to work in tandem with the Ditch Witch line of mini skid steers, the industry-first system is the ideal solution for tight and confined residential areas, such as street crossings.

To reduce ground disruption, the MT9 creates clean, shallow trenches up to 9 inches deep and 0.375 to 1.5 inches wide. A patented blade plunge provides infinite variable depth control while the machine is in operation. Additionally, the microtrencher works with the FX65 vacuum excavator to further create a clean trench in one pass by effectively removing spoils.

"Traditional fiber-installation methods lack the speed and efficiency to be cost-effective for contractors in many residential areas," said Steve Seabolt, Ditch Witch product manager, heavy duty tractors. "Our new MT9 minimizes the space required to operate, avoiding hurdles found in confined, tight and urban jobsites.

Designed specifically for street crossings, an ability to push or pull the microtrencher keeps the saw in the ground for more efficient and accurate cuts. By eliminating the need to realign during a cut, operators are able

to complete the cut faster and produce a better-looking finish.

The MT9 works with the Ditch Witch-exclusive PDC Fiberblade™ that contains diamond embedded carbide. The durable, maintenance-free design of the Fiberblade is proven to last up to 20 times longer than standard blades, enhancing jobsite performance and improving ROI.

Joining the proven FX65, MT12, MT16, Fiberblade and 1CM concrete mixer, the MT9 adds to a growing family of microtrenching solutions – all from the company that pioneered the modern microtrencher. The MT9 is backed by a network of over 175 experienced dealer locations worldwide.



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Intelligent Demolition Power

Scanmaskin Invests In New Industrial Dust Collectors to Meet the Market Demand

Scanmaskin introduces two new Industrial dust collectors, the Scandust 8000 and ScanDust 3600. These two units provide reliability and high performance, and will be a great addition to the Scanmaskin product line.

The new additions to the ScanDust series focus on ergonomics and usability. The ScanDust 8000 and ScanDust 3600 are safe for the operator and easy to operate.

The machines are equipped with Hepa-filters that take care of harmful silica particles, with a filter indicator that informs the user that it is time to clean the filter. A polyester-grade coarse filter package provides a high degree of material separation, which increases the service life. In addition, the design and filter area of these new models in the ScanDust series are designed to provide the most suction capacity.



These models are completely constructed of steel and feature solid non-marking wheels that will never go flat. In addition, both models include locking front wheels which provide an extra safeguard during transportation or when using on uneven surfaces.

Both models take advantage of the Longopac bagging system, which makes managing dust very easy and efficient. With the Longopac system you will get 60 ft (20m) of folded plastic bag, which provides about 25 dust free changes.

www.scanmaskin.com



Maxi Orbit: The Advanced Orbital Floor Machine

Maxi Orbit, the advanced professional multipurpose single brush, makes working on all surfaces easy and quick. Suitable for treatments on marble, concrete, stone, parquet, terracotta and stoneware, Maxi Orbit is also ideal for cleaning delicate surfaces such as carpets and rugs. The oscillating head adapts to all surfaces, minimizing user fatigue. Multiple accessories and large wheels make working simple and efficient. Thanks to its high-frequency oscillations roto-orbital principle, Maxi Orbit offers excellent stability and maneuverability, making crystallization operations with steel wool fast and effortless. Features include a robust and compact chassis, a reinforced rod with ergonomic handle, low weight, and optional main component release system.

www.klindex.it



Filter Kits Now Available for Kolberg-Pioneer Mobile Equipment



Kolberg-Pioneer, Inc. (KPI), has released new filter kits for all mobile equipment. The new kits will further improve engine performance in asphalt and other dusty environments. "Our equipment is well-suited for RAP applications, these filters allow us to build on that strength for even better performance," says Tim Harms, product manager for crushing and screening products. The filter kits cover all access doors and openings. They can be easily retrofitted to any model and serial number. The filter media is easily replaceable using a simple retention system with positive locking pins and clips. Filter media can also be purchased in bulk.

www.kpijci.com



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What makes Rotar unique

At Rotar we believe that people and machines can operate more efficiently. From this philosophy, we develop state-of-the-art demolition- and recycling attachments for hydraulic excavators and wheelloaders. Rotar is a manufacturer, which means that we are responsible for the development and production of our products ourselves. That is the only way to guarantee the well-known efficiency, quality and productivity of Rotar attachments.

Our employees treat your Rotar attachments as if it were their own. Our craftsmen always aim to develop the best products. That is why we are in constant communication with our customers and dealers, and we often develop products based on their experiences, suggestions and ideas. Once your attachment leaves the Rotar Factory, it bears our name. A name that represents a product with unique performance, produced by a unique team. Uniquely for you.

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GET THE **RED** CRUSH!

Volvo Makes a Splash In Colorado



Fitted with a rocksaw attachment, the Volvo excavator cuts the boulders with hairline accuracy.

Nestled in the Animas River Valley, the evergreen forests and babbling creeks surrounding Durango, Colo., are adored by locals and nature enthusiasts alike. With tourism the leading driver of Durango's economy, maintenance on local attractions, such as the Durango Whitewater Park, is necessary. Situated along a 126-mi (203 km) section of the Colorado River System, the park is one of the nation's top whitewater stretches, with flow rates ranging from 200 to 6,000 cfs. The river is also recognized by Colorado wildlife officials as a Gold Medal Water. The status is reserved for waters that consistently support a minimum trout standing stock of 60 lb (27kg) per acre, and at least 12 trout that measure 14 in (355mm) long or more.

To provide a more pronounced, easier passage for recreationists and improve the fish habitat, the park is undergoing a US\$60,000 renovation to widen and lower the existing structures. Whinnery Construction, based in Lake City, Colo., was given the task of turning two of the four whitewater structures in the permanent whitewater park. This includes trimming the rocks, firmly secured in concrete.

Over the last two decades, Whinnery Construction has performed river restoration projects across Colorado, Wyoming, Illinois, New Mexico, and Texas — many completed in conjunction with local engineering firm S2O Design. With prestigious jobs like designing the 2012 London Olympics whitewater course and the Riversport Rapids whitewater center in Oklahoma City in its back catalog, S2O Design is the ideal partner for the Durango Whitewater Park project.

Scott Shipley, three-time Olympic kayaker and founder of S2O Design speaks fondly of the collaboration, noting that, "Whinnery excelled at projects that require precise cutting of natural rock to ensure each piece can withstand fluctuating water currents."

Combining Whinnery Construction's expertise in rock cutting with S2O Design's knowledge of rock placement, the two have set sail to tame and restore the Animas River for the development of the Durango Whitewater Park project. The project includes structural integrity of the rock, recreational performance, and high-quality aesthetics that improve the flow for recreationalists and fish navigation channels.

Muddy waters

"River restoration is a seasonal business," explains Stan Whinnery, who founded his family-owned company in 1990. "The summer is the optimal time because the water is low, but it also happens to be the peak of whitewater rafting and kayaking expeditions. The Spring provides a very small window of opportunity for us; when the weather warms and the water starts to flow."

During the limited time period, in-stream construction likewise presented potential problems.

"We needed to modify the previously placed rocks to change the character of the waves at high flow," explains

Nathan Werner, project engineer for S2O. "The existing rock structures in the park are concreted together, so there was no easy way to make even a minor adjustment."

Because every piece of added or removed rock has an effect on the flow, Whinnery had to be innovative.

"We couldn't use a breaker attachment to crack and reset the rocks because the expansion grout creates small fractures within the rock that would shatter by the force of the breaker," says Whinnery. The solution, as explained by Werner, was thanks to Stan Whinnery, who came up with the idea to use a rocksaw to score the rock, followed by a hydraulic hammer fitted on a skid steer, for a clean finish without shattering or cracking the bedrock.

To meet the demands of the site, Whinnery Construction and S2O Design turned to Volvo Construction Equipment for productive and versatile machines. The equipment spans the size classes, including L250H wheel loaders; EC160, EC250, and the latest EC300E excavators; and A30C and A35G articulated haulers. The larger excavators (EC250D and EC300E) are specified with the proportional two-pump flow, offering greater control for precise and fast operations. Other features work to ensure the work is carried out quickly and efficiently.

"We use a thumb attachment to stack the rocks," says Whinnery. "When you have a four-ton rock on the end of the boom, with a crewmember making sure it's sited correctly, you need a powerful, stable machine. Or, if you are using a rocksaw making a quarter-inch [6mm] wide cut through 36-inch [1m] thick rock, the precision has to be perfect."

Precision isn't just down to the cut, but also involves the selection of rocks. Some rocks might be handled three to four times until the right location for them is found. It is common to sort through 100 rocks before locating the correct size and shape to fill a specific spot, but doing so ensures the deliverables are met.

"On an average river restoration project, we will use three ft. diameter rocks, weighing around 2.5 tons," says Whinnery. "When you are dealing with 12,000 individual rocks for a project, it becomes a logistical issue. We use Volvo articulated haulers to transport the rocks from the source sites to the job site. We try to stay in the 30-ton truck range because they get around easier on softer ground but can haul the heavy loads."

Whinnery adds that much of the terrain is demanding on an excavator. "We have some unbelievably steep river banks—up to 72-percent grade—and the Volvo climbed right up."

When paddle through Durango Whitewater Park later this year, will see the passageway is structurally sound, high-performing and aesthetically pleasing — not to mention safe for water-sport enthusiasts and fish alike.

Photography: Jerry McBride/Durango Herald/Polaris

www.volvo.com

US Milling Service Provider Relies on Wirtgen's Premium, Full-Service Package

Costello Industries, Inc., a milling service provider based in Newington, Conn., relies exclusively on cold milling from Wirtgen. In addition to high-output large milling machines (three W 220s with 8-ft/2.5m milling drums, and four W 210s with 7.25-in/2.2m milling drums), the milling specialist has a variety of small milling machines from different machine generations, including two W 500s, four W 50s, and one W 50 DC. The two W 500 small milling machines have each clocked over 5,000 hours in operation. "It's all a matter of the right maintenance," says Jim Cook, Costello's machine fleet head. "These machines are extremely reliable as long as you regularly change the operating materials, keep an eye on wearing parts and reliably conduct scheduled maintenance."

It's just as important to teach machine operators on site about the right techniques and daily maintenance requirements. For instance, Costello's daily program includes inspecting a machine at the end of a milling job.

"If necessary, Jim and his team go to work and make sure the machine is in top condition again," says Todd Nedzweckas, an operator who has worked with milling machines from various manufacturers.

A maintenance program helps to extend a machine's service life. "We know at all times exactly how many hours the machines have been running and which maintenance tasks need to be done. And we create standard orders for service after 250, 500, 750, and 1,000 hours of operation," explains Cook. "We do that for all our machines and maintenance is carried out in our own workshop."

The team from Costello has already gotten to know several generations of Wirtgen milling machines and can therefore appreciate the changes the machines have gone through in recent years. And even if the operator's stand on the latest models, such as the W 220, look extremely complex with all the computer displays, video screens and lighting, the Costello Team says the new milling machines still are easier to operate.

"They are clearly much more user-friendly than other machines," says Cook. "If an error message comes up, the machine tells you where to look and how to diagnose the fault. It even asks a series of questions to find out what caused the problem."

Even with the increased output, the noise level is much lower and the vacuum cutting system (VCS), which sucks up the odors and fine particles.

Thanks to the "wasp waist" of the W 220, the operator has a better view to the front of the milling drum unit, towards the front crawler unit. Cameras keep an eye on everything the operator can't otherwise see.

When traveling in reverse, the camera also shows what's happening behind the machine, for example passing cars or people. That increases safety on the job site and you don't have to rely solely on instructions from the ground man.

"In other words, the camera eliminates a critical blind spot," says Nedzweckas.



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Shear Pro

Innovation and reliability have made Genesis Attachments a mainstay among demolition equipment manufacturers.

It's not hard to get lost while walking the aisles a major construction trade show. But if you spot the massive yellow-painted shears and other tools that typically punctuate Genesis Attachments' booth, you'll regain your bearings in no time. David Palvere, Genesis Attachments' Director of Business Development says that though the default color of yellow does offer some welcome visibility, it's not the only offering on the company's palette. "We will paint attachments any color our customers want," he says.

And in the 20 years since the Superior, Wisc.-based company fired up its assembly line to produce its debut product, the Magnum Shear, Genesis has given customers in the demolition, scrap and material handling, recycling, and related industry a lot of other things they want—tough, reliable tools that are continually improved via insightful innovations. Genesis has become well known for its full line of strong and durable concrete demolition equipment such as the Genesis LXP® with Pulverizer Jaw, the Genesis GDR Demolition Recycler and the Versi Pro 07 with Concrete Cracker Jaw. The company also produces grapples designed for maximum processing, strength and durability. And, Genesis scrap grapple and skid steer attachments are designed with unique features for maximum performance in scrap recycling and demolition applications.

A Strong and Innovative Brand

But it's the line of demolition and scrap shears that have enabled Genesis to raise its profile at job sites around the world. Among the many innovations released over the years is the

GXP Mobile Shear line, which set the stage as one of the most feature-rich scrap and demolition shears available, offering a proprietary regeneration valve that improves cycle time by up to 33% compared with standard hydraulic systems, plus an exclusive, patented, dual-guide blade system that accommodates heat expansion at the tip. Over the years, Genesis has added new product lines to accommodate contractors' desire to get more jobsite performance from smaller carriers. The shorter, lighter GXT Mobile Shear line has a center of gravity that is closer to the carrier, enabling models to be mounted on machines that previously could carry only smaller, less powerful shears.

Similarly, the Genesis GDT Razer is the demolition tool designed for today's excavators and specialty, high-reach applications to feature interchangeable and reversible teeth. The newest and largest model—the GDT 390 Razer—features a 46-in (1,168mm) jaw opening and 45-in (1,143mm) jaw depth for processing thick concrete and rebar. With a 10.5-ft (3.2m) reach, the GDT 390 fits 45t standard and high-reach excavators. Then there's the Genesis LXP® Multi-Processor, with shear, concrete processor, and pulverizer jaw sets that feature an integrated pivot group configured for a specific application.

"This provides maximum power at the piercing point when shearing, concentrated force at the cracker tips, and peak power when the jaws are fully open for concrete crushing," Palvere says.

Origin of inspiration

Having made an immediate impact on its target industries in its early years, Genesis and its sister companies became part of International Equipment Solutions, LLC (IES) in 2011. The integrated global manufacturing consortium encompasses 18 facilities and more than 2,800 employees in North America and abroad. IES also includes specialty attachment makers Paladin, CWS, and Jewell; auger manufacturer Pengo; and Siac of Brazil, the country's leading cab enclosure builder.

"Being under the IES umbrella and having resources available has enabled us to make investments in product and manufacturing technology, share best practices between divisions and benefit from the cross-divisional systems implemented," Palvere says.

IES also extends Genesis's global reach, complementing its Wisconsin headquarters with sales offices in Memmingen, Germany, and Singapore, as well as a global dealer network. So how do those Genesis innovations turn into reality? Palvere says that while the ideas are varied, the objectives behind each new product are the same—meet customers' new or currently unmet needs, increase their productivity and profitability, and are streamlined with fewer parts to reduce maintenance.

"Many ideas for new products are the result of talking with our customers, learning about their challenges and applications," Palvere explains. "As a product is developed, it's field-tested and modified based on customer feedback."



One of the most recent examples is Genesis Pulse Technology,™ which incorporates the latest sensor and communications technology to provide valuable, cumulative and real-time data about the attachment's performance. Integrated sensors throughout both hydraulic circuits report diagnostic measurements for critical functions such as jaw pressure, jaw circuit oil temperature, bi-directional rotation pressure, rotation circuit oil temperature, and rotational speed and flow. Genesis innovations have translated into thousands of successful field applications, ranging from the routine to the highly specialized. One, the demolition of a former St. Paul, Minn., jail and publishing complex (featured elsewhere in this issue of PDA), saw St. Paul, Minn.-based Rachel Contracting use a GDT Razer 290 mounted on a Volvo EC700C HR excavator bring down walls up to 90 ft (30m) high.

Rachel Project Superintendent, Jim Jude, notes that the 3.5t GDT Razer is light enough to be very maneuverable, even at peak heights, yet still provide the power needed for effective concrete cracking.

"The jail's overall footprint is a strange zig-zag shape, but the interior of the structure also has hallways and walls that seem to run in every direction," Jude explains. "Through a combination of the attachment's rotation and its design, the GDT Razer is able to easily access every area we need to get at, then crack and drop the concrete material"

Jude adds that the GDT Razer's degree of control will be particularly welcome when his crews are at the part of the structure where the tie-backs are present.

"Being able to trim in these areas without fear of messing with the tie-backs will be a real plus," he says.

The versatility and reliability of Genesis attachments, plus the company's after-sale support, are among the many reasons why Rachel Contracting has acquired a variety of Genesis tools over the past decade.

"We like that Genesis is always there when we need them, treats us well and keeps us in the loop with new developments as they arise," says Mark Kraemer, Rachel's vice



ductivity!

president of field operations. "They have the whole package, and we like that."

...and more to come

Palvere says more innovations are on the way as Genesis strives to stay in step with the industry's trends. Among them, he says, are "the move toward lighter attachments that can fit on smaller carriers but provide the power of the previous, heavier models. We also see an expansion in built-in equipment monitoring and diagnostic technology. Our Pulse Technology™ gives us a strong platform to build on in that area."

Genesis is also making the most of its involvement with leading industry trade groups, including the National Demolition Association (NDA), Institute of Scrap Recycling Industries (ISRI), Associated Equipment Dealers (AED), and the Canadian Association of Recycling Industries (CARI). The company's memberships, Palvere says, provide valuable insights into current and emerging issues, including the critical challenge of finding

sufficient skilled labor. Still, Palvere says customer conversations at this past year's trade shows conveyed a generally upbeat feeling about near-term prospects for construction and demolition work.

"Overall, attendees were very upbeat and positive, and have a lot of work scheduled," says Palvere. "They like the innovation manufacturers are building into products—exactly what we've been doing for the past 20 years. And it's what we'll continue to do as we look for new ways to serve our customers."



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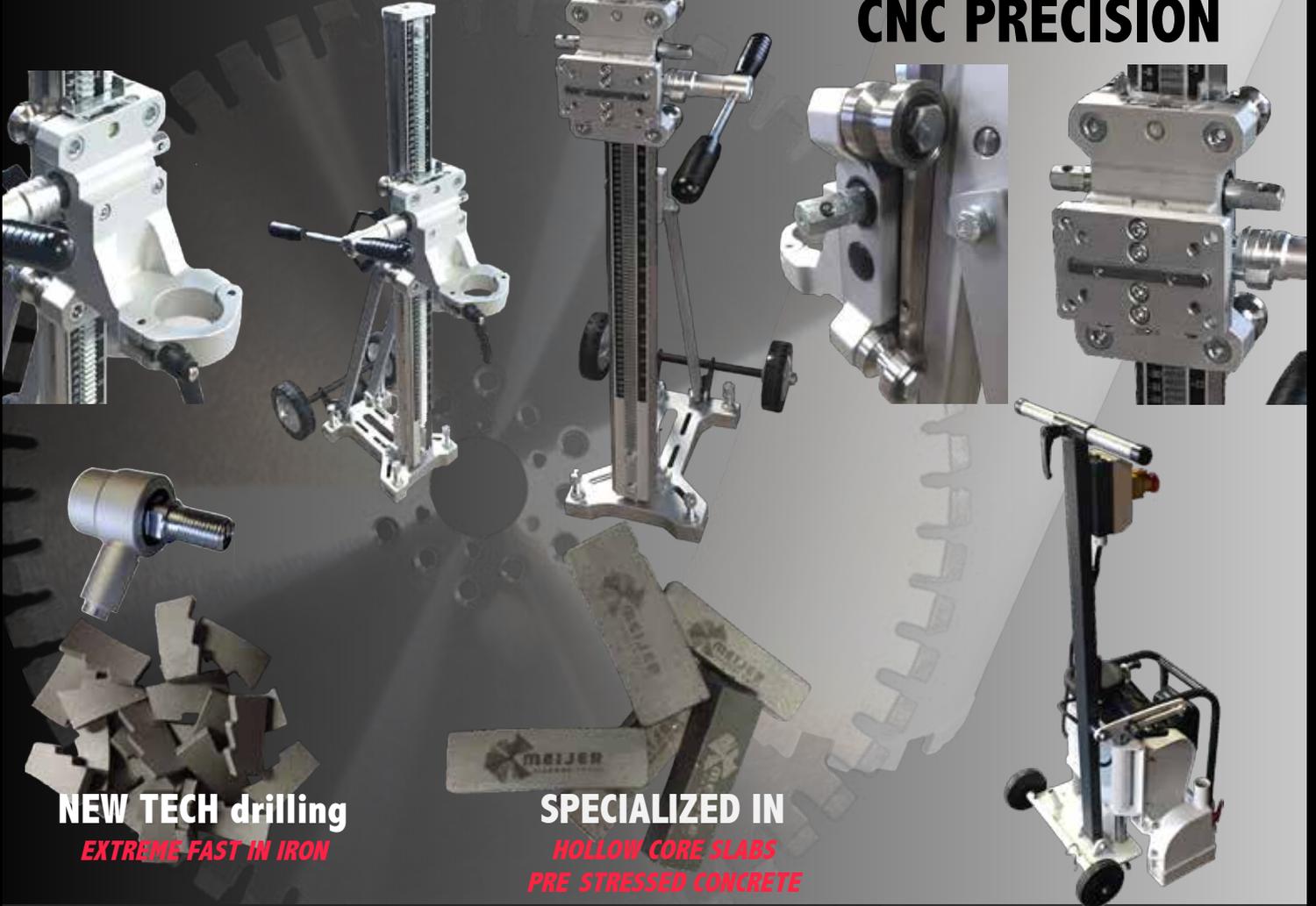


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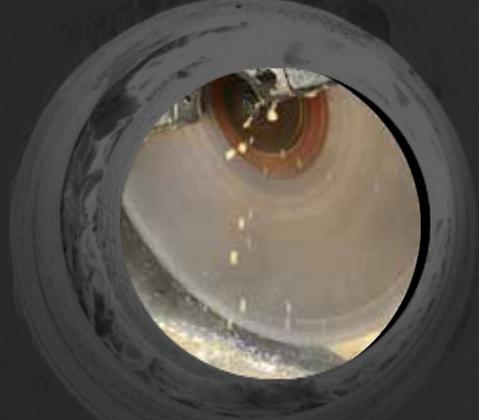
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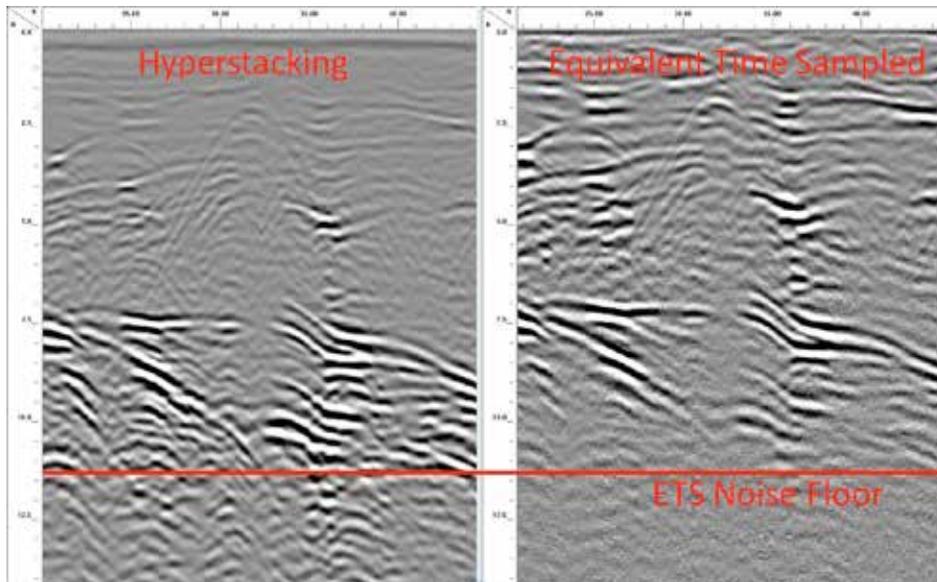
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GSSI Introduces New Features for GPR Work



GSSI, the world's leading manufacturer of ground penetrating radar (GPR) equipment, announces the availability of LineTrac™ XT, an accessory to the StructureScan Mini XT. The StructureScan Mini XT is GSSI's newest generation of the very popular all-in-one GPR systems. The StructureScan Mini XT offers a 2.7 GHz antenna for superior target resolution and can reach depths of 20 in (50cm). It's ideal for locating rebar, conduits, post-tension cables, and voids, as well as real-time determination of concrete slab thickness.

The combination of the StructureScan Mini XT and LineTrac XT helps concrete professionals locate specific power sources in concrete, including AC power and induced RF energy present in conduits. The new LineTrac XT accessory combines radar data with a magnetometer, delivering accurate, dependable, and repeatable performance.

LineTrac XT includes easy integration with StructureScan Mini XT, seamless data fusion with GPR data, a 50/60 Hz electro-magnetic sensor used to locate powered conduits, and a rugged, IP-65 rated enclosure. LineTrac XT detects extremely low amplitude AC signals associated with difficult to locate conduits.

The LineTrac XT accessory complies with all applicable FCC, RSS, RoHS, and CE requirements. It can operate in temperatures ranging from 14°F to 122°F (20°C to 40°C).

New HyperStacking GPR technology

GSSI is also launching new HyperStacking GPR technology that allows users to see deeper targets and operate in noisy conditions. The new technology, known as "HyperStacking," is patented by GSSI, and greatly improves the receive performance of a GPR system while maintaining measurement speed and radiated emission limits. It uses high-speed interpolated sampling to reduce such commonly encountered issues as dynamic range limitations, regulatory compliance

issues, sampler core offset error, and timing errors. The benefits of the new HyperStacking technology are pronounced in lower frequency applications (GPR applications requiring an antenna below 1.6 GHz), such as dirt, clay, and sand. In these conditions, the ground media is sufficiently lossy to make the benefits of HyperStacking clear.

GSSI is developing its HyperStacking technology in a range of antenna frequencies to meet the specific needs of a variety of applications.

The 350 MHz antenna, for instance, is ideal for utility detection in soil conditions in the 0-15 ft (0-4.5m) range. Lower-frequency antennas, in the 100-200 MHz range, are well-suited for geotechnical applications, such as water table analysis, characterization of shallow stratigraphy, bedrock depth analysis, and analysis of deep geological structures. In these applications, traditional techniques such as ETS cannot achieve the same level of precision as HyperStacking.

With the commonly used ETS technique, hundreds or even thousands of pulses are transmitted to obtain a full measurement set over the desired time range. However, most of the received energy is discarded and the resultant measurement is inefficient, in terms of noise, relative to the amount of energy transmitted.

By contrast, the new technology uses high-speed interpolated sampling, which recovers all or most of the reflected radar

The HyperStacking system can see significantly more clearly and deeper than the conventional ETS system.

information, greatly improving the measurement signal energy with respect to noise.

This more efficient signal detection directly translates to improved system performance in certain applications. Measurement results produced by the technique resolve targets at least 5% deeper and 5% smaller than conventional ETS GPR. The system can also produce individual measurement results at least 1000 times that of a conventional ETS system.

www.geophysical.com

GSSI Unveils StructureScan™ Pro – Premier GPR System for Concrete Inspection and Analysis

GSSI announces the launch of the StructureScan™ Pro, a premier concrete scanning system that can accurately inspect concrete, measure slab thickness, and locate voids. StructureScan Pro is the ideal system for locating rebar, post-tension cables, and conduits; conduct real tie surveys for core clearance or post process data for reports. It reaches depths up to 18 in (457mm) The system includes the newly updated SIR® 4000 control unit and a choice of the popular 1.6 GHz or high-resolution 2.6 GHz antenna. With a basic antenna upgrade, the SIR-4000 controller can also be used for utility detection and deep void detection applications.

The updated SIR 4000 controller used with the StructureScan Pro is designed to bridge the legacy of GSSI's traditional analog antennas with next-generation of digital offerings. The updates bring the StructureScan 2D collection module to the controller, simplifying its use for the concrete construction industry. The module includes high frequency antenna-specific set-ups to ensure survey efficiency, and enables the controller to automatically recognize smart antenna set-ups.

The updated SIR 4000 also enables the option of on-the-fly automatic gain to better enhance the data display, while still saving the file in the original raw

format for post processing. Fully integrated, the SIR 4000 provides a 10.4-in (264mm) high definition LED display, a simple user interface, and plug-and-play GPS integration.

www.geophysical.com





Teamwork Leads to Success in Chicago I-90 project

Currently a large stretch of I-90, from Chicago to Rockford, is undergoing a major renovation project entailing the removal of lanes to then be replaced by wider, concrete ones.

Chicago Cut Concrete Cutting, based in Schaumburg, Ill., is responsible for demolition slab sawing the old concrete lanes, then green-sawing the new con-

crete to control shrinkage cracking.

More than 15 miles (24km) of roadway, including five bridges, need to be demolished and green cut. With such a large project and tight deadlines. For the removal of the old concrete lanes, Chicago Cut chose Husqvarna's FS 8400 D, FS 6600 D and the new Tier 4-compliant FS 7000 D floor saws. These saws are known for high production rates and ergonomics that help keep operators doing what they do best – cutting 11 in (28cm) deep in rebar-loaded concrete.

To meet Illinois State Toll Highway Authority (ISTHA) deadlines, Chicago Cut worked around the clock, rain or shine. For green sawing, Husqvarna Soff-Cut 5000 Ultra Early Entry™

saws were used due to their ability to cut ultra-early, while the concrete is still very green. This enabled the teams to stay on or ahead of schedule.

The heavy-duty, high-horsepower floor saws and Soff-Cut saws could handle the

rough terrain. Chicago Cut's Lead Project Manager, Angelo Salatino, constantly made sure everything was ready for the crews to perform without issues. Having everything needed available, along with the reliable, high-performance Husqvarna saws and operator know-how, Chicago Cut stayed on time with deadlines. If it wasn't for the collaboration between operator and saw, Chicago Cut would not be in line with deadlines on this project.

"Without each person and machine working together, we wouldn't be as successful as we've become," says Angelo Salatino. "We've gone from a small company to a major force in our market with Husqvarna's equipment and help along the way and of course, thanks to our team."

www.husqvarnacp.com



Previously gold bars were stacked to the ceiling and bank notes were transported on pallets. The walls and ceiling of the two-story vault at the branch of this former State Central Bank in the Swabian town of Aalen, Germany, were therefore designed accordingly.

Naturally, cutting four windows into these nearly two metres thick vault walls as part of the alterations to the office complex is a difficult task. But this does not deter the contractor assigned for the job, Jan Eckert.

"They always call on us when it's really difficult, when nobody else can or wants to do the work," says the concrete drilling and sawing specialist.

The 43,065 ft² (4,000m²) building was built in 1998 with a vault on each floor, totalling 3,067 ft² (285m²). State Central Bank used the building during the introduction of the Euro to supply cash to banks within a radius of approximately 120 miles (200,m). To prepare the building for the Federal Police,

Turning a Bank Vault Into a Police Office

Eckert had to create openings for four large windows. And that is anything but easy, as each vault has double walls, 40 in (1,000mm) and 20 in (500mm) thick, with a distance of 20 in (500mm) in between. The concrete in thicker wall includes materials like ceramic and fibre steel, which makes the concrete extremely hard. There is also a layer of small steel balls. This makes for example drilling impossible, and cutting is very difficult. To tackle the job, Jan Eckert used Husqvarna W 1405 and W 1410 Diagrip™ saw blades with a diameter of 24-79 in (600-2,000 mm).

"Cutting conditions are really difficult here," Eckert says. "I tested blades of several brands to see if I could get better life time, but Husqvarna W 1410 was the only blade able to make the cut."

For R&D purposes, Husqvarna used this vault construction site to thoroughly test a brand new 31.5 in (800mm) blade design with the high-frequency electric WS 482 HF wall saw operated by the new PP 490 power pack.

"We have coordinated closely with the central office in Sweden to develop a special compound for the segments and also to change the geometry," says Lukas Rettenbacher, Husqvarna product specialist for diamond tools and as such responsible for the German and Austrian markets. "Our goal is to increase the stability of the tool, especially when used in extremely hard concrete, but without a loss in speed."

The test in the vault was a success. "We were able to significantly extend tool life by about a factor of three", says Lukas Rettenbacher, who had prepared the test in the vault."

The focus on productivity is also why the new PP 490 power pack has become a favorite for him – it is equipped with a wireless remote control unit, providing an impressive output of 20 kW, and can operate multiple devices such as power cutters or drill motors. "Modularity and flexibility are always an advantage," Eckert says.

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Whether you're age seven or seventy, there's something mesmerizing about watching good construction and demolition machines at work. And even if the equipment is sitting idle or "posed" on display at an exhibition such as Conexpo, it's easy to imagine being in the operator's chair, commanding mechanical energy to get work done—and maybe have a little fun along the way.

Come And D

And if you're in the market for a new machine like an excavator, whether to purchase or to rent, it's good to know that the market is filled with products that have been engineered to accommodate applications both routine and unique, delivering value to meet budgets both large and small. Many contractors are already getting in on products introduced over the past year. Jeff Jacobsmeier, Kubota's product manager for excavators, wheel loaders, and TLBs notes that the first three months of 2017, "has experienced industry growth in the compact excavator market and the popularity of these versatile machines will most likely continue to grow the rest of the year." In the U.S., he adds, "construction project numbers are up in many parts of the country and rental demands have exceeded expectations for early 2017." Even if a planned purchase is not imminent, one can still peruse the descriptions and specifications and think about the future. With this information in hand, you'll be ready to roll—and dig—when go time arrives.

Kubota's new KX033-4 compact excavator

Kubota Tractor Corporation announces the KX033-4 compact excavator, the newest member of the popular KX series. The KX033-4 is powered by an impressive 24.8 ghp (18.5kW) Kubota direct injection Tier 4 Final certified engine. Adjustable auxiliary hydraulics allow the operator to program up to five different oil flow rates, controlled from a new digital control panel. An impressive breakout force of 8,138 lb (3,691kg) and a digging depth of 10.5 ft (3.2m) enable the KX033-4 to handle the toughest excavating jobs with top-of-class speed and efficiency.

The KX033-4 introduces a new control panel with five adjustable presets for precise flow control for the attachment and task at hand. The auxiliary hydraulic circuit is capable of an impressive maximum oil flow of 15.8 gal/min (60 litres/min) to power a greater variety of auxiliary attachments. The standard third-line hydraulic return system



allows oil to return directly back to the tank without flowing through control valves resulting in less back-pressure, less heat, and greater efficiency. An accumulator clears residual pressure, allowing for easier attachment changes and helping lower front attachments even when the engine is turned off. A standard float function allows for efficient worksite clean-up and back dragging.

The KX033-4's low centre of gravity and double-flanged track rollers also contribute to safe and efficient operation, whether working to the side with hydraulic attachments or in challenging lifting conditions. The engine RPM may be set to automatically idle when KX033-4 control levers are in neutral for more than four seconds, resulting in increased fuel efficiency and lower noise and emissions. A swivel negative brake and travel negative brake automatically lock the swivel function and tracks, respectively, to prevent unexpected machine movement and keep the excavator secure.

The KX033-4 operator station is designed for unmatched comfort, featuring Kubota ergonomics that simplify routine excavating operations. The deluxe, reclining, high-back suspension seat provides maximum operator comfort, including weight compensation and firm, adjustable wrist supports. A wider, updated digital display panel with push button operation allows for easy monitoring of critical controls, including changing hydraulic oil flows.

Hyundai introduces new model in 9A series

Hyundai's new R30Z-9AK is a 3-ton-class model that features a zero-tail swing design for optimum manoeuvrability in confined work spaces. The R30Z-9AK excavator is powered by a Kubota engine delivering 23.2 hp (17.3kW). Its maximum digging depth is 8.1 ft (2,490mm), and its maximum digging reach is 15.2 ft (4,648 mm). Bucket breakout force is 4,520 lbf (20.1kN). Configured with a canopy, the R30Z-9AK has an operating weight of 6,380 lb (2,894 kg). When specified with an optional cab, the

machine's operating weight is 6,625 lb (3,005kg). Standard bucket capacity is .10 yd³ (.076 m³).

Innovative, precision-designed hydraulic system technologies make the 9A series compact excavators fast, smooth and easy to control. Each model includes boom swing capability, enabling the operator to offset the boom 75 degrees to the left and 50 degrees to the right, which allows for close work alongside foundations and other structures, especially in congested areas. The spacious, ergonomically designed cab reduces noise and increases comfort and visibility. A tilting left-side console makes it easier for the operator to enter and exit the cab, and the left and right control levers are located for convenient access. The optional lever-pattern-change valve, positioned for easy access, allows joystick control to be changed from SAE to ISO pattern, depending on operator preference. Button selections are provided for auto idle mode, max power mode and travel speed. An adjustable suspension seat and plenty of space help reduce operator stress and fatigue. The cabs on the Hyundai 9A series machines are all TOPS, ROPS and FOPS certified. Other safety features include optional boom and arm cylinder locks, and an optional overload alarm. Enhanced reliability features on the 9A series compact excavators include bushings designed for long-life lube intervals, wear-resistant and noise-reducing polymer shims, and integrated preheating systems which extend service intervals and reduce machine downtime. Serviceability enhancements include wide-opening engine hoods, centralized grease fittings and easy-change plastic air cleaners.

Meet the John Deere 30G

John Deere continues to upgrade its G-Series excavator lineup with the introduction of the 30G compact excavator, filling a portfolio gap for customers looking for a solution in the three to four metric ton class. This new model will offer numerous outstanding performance features, such as increased lift capacity and improved breakout forces. The 30G will also incorporate all current G-Series features, including the standard pattern changer and standard hand-controlled proportional auxiliary hydraulics.

The 30G provides an updated model to the 27D with similar, albeit improved operation specifications and features. Along with a 9.1 ft (2,774mm) dig depth, they include a 22% increase in bucket force, an 11% increase in arm force, a 17% increase in net engine horsepower (without the use of after-treatment). The 30G comes equipped with all the standard G-Series features customers have come to expect, including mechanical pattern chang-

ers, quick couplers and proportional auxiliary hydraulics plumbed to the end of the boom. The new compact model features a redesigned cab with heat and air-conditioning for ultimate operator comfort in any climate. Within the operator station, a new seat with adjustable wrist rests for daylong comfort was added, and a suspension seat is standard. The foldable travel pedals are positioned to provide efficient operation by maximizing foot room and providing low-effort pilot controls that deliver exceptionally smooth, combined-function performance. Like other G-Series models, the 30G has several features for



Dig 'Em!

increased uptime. John Deere included a third service door to provide improved access to the cooling core and other daily checkpoints. The side-by-side cores are positioned to permit easier access. Extended fluid and lubrication intervals and sight gauges help keep maintenance and expenses at a minimum. The absence of aftertreatment to meet emissions regulations provides continued operation without interruption.

Bobcat launches new E17Z ZTS excavator

Bobcat has launched the new 1.7t E17Z Zero Tail Swing (ZTS) canopy model, completing the company's 1t-2t range of compact excavators. In the new E17Z, the ZTS functionality is taken a level further using Bobcat's Zero House Swing (ZHS) design, in which the front upper structure is also fully protected by ensuring the front corners are kept within the swing circle when the tracks are in the fully expanded position. As a result, the ZHS functionality on the E17Z provides the peace-of-mind of 320° of free rotation when working close to walls and other obstructions, without sacrificing on operator comfort or performance.

The uncompromised operator environment on the E17Z in combination with excellent visibility, provides unmatched operator comfort and safety. In fact, the E17Z is built around the operator, providing optimal ergonomics for operators of all sizes with easy access to the pedals and controls. The large canopy and entry/exit space provide the driver with plenty of room to get into and out of the operator's seat and this is further helped by the left-hand control console lifting completely out of the way. In addition, when not in use, the pedals can be folded away to increase room for the operator's feet, leaving a large flat floor area that is easy to clean.

The E17Z has a standard operating weight of 3,856 lb (1,749kg), and a maximum digging depth of 7.4 ft (2,249mm). The hydraulic system makes the best possible use of the engine power. Fast cycle times, combined with smooth control of class-leading breakout forces, provide maximum productivity. Boom and arm cylinder cushioning - unique in this class - enhance the overall smoothness of the workgroup. The E17Z incorporates the architecture of the hydraulic system on the larger Bobcat E20 model with a combination of variable piston pumps and a gear pump. With its optimized stability and lifting capacity, the



E17Z also offers the highest versatility in operating a wide range of attachments. With a transport weight of less than 1.65t, the E17Z is towable on trailers for 4,850 lb (2,200kg) of total weight. Transportability is made even easier with the integrated upper-structure tie-down points. An automatic slew brake helps facilitate safe parking and transportation. The premium control panel ensures all the vital information for the machine is easily accessible by the operator. The E17Z also offers keyless ignition for optimal safety and a battery kill switch to help prevent battery drain when storing the machine as well providing an effective way to prevent theft. The impressive dump height on the E17Z allows it to load trucks easily, while the reach at ground level means the machine does not need to be repositioned as often when digging. When fully retracted, the undercarriage allows the excavator to go through narrow spaces; and when fully expanded, provides optimum stability for the excavator, especially when working over the side. Expansion/retraction is a simple process via an electric switch on the control panel. Optimum stability is achieved by fully expanding the retractable undercarriage and using the optional long dozer blade. As well as helping in dustpanning work, the long dozer blade significantly improves the front stability enabling the operator to use the full breakout forces the machine can deliver. As standard, the E17Z has easy-to-operate durable blade extensions.

CASE new range of mini excavators

CASE Construction Equipment's all-new C Series mini excavator line consists of six models ranging from 1.7t to 6.0t. The new range, which will be extended with additional models during 2017, are the first products resulting from the brand's strategic alliance with HHI. The C Series mini-excavators are designed for performance and reliability, with components sourced from the best, world-class Japanese suppliers. The proven engines and hydraulic system deliver more power, raising the machines' performance. Five of the six new models comply with Tier 4 Final emission standards.

The new 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. Safety 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 minimise the risk of detracking and improve stability. The outstanding all-around visibility and rearview camera further enhance safety on the jobsite. For customers looking for the best machines to work in confined spaces, the CX17C and CX18C offer the solution. Both feature hydraulically retractable tracks with inner routing of hydraulic hoses. When the tracks are retracted, the machines are less than one metre wide. The CX17C features a ZTS design, which ensures there is no risk of hitting an obstacle with the back of the machine when swinging. The CX17C and CX18C's powerful hydraulic flow delivers outstanding digging efficiency - 5% higher than the previous models - and fast cycles. The auto shift-down function on the CX17C, which optimizes traction and speed and the joystick controlled auxiliary hydraulics enable the operator to get the job done even faster. The operator station offers high comfort, with smooth pilot controls, ergonomically placed joysticks, adjustable wrist rests and a suspension seat as standard. The 2.6t CX26C and 3.7t CX37C are available with a choice of long and short arms, which deliver a maximum dig depth of 8.7 ft (2,645mm) and 7.9 ft (2,420mm) respectively for the CX26C, and 11.3 ft (3,440mm) and 10.3 ft (3,135mm) respectively for the CX37C. These two models come with a rich offering of features: 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 standard equipment includes an emergency stop switch, pilot system with accumulator, two-speed travel with auto shift-down system, a foldable boom swing pedal, standard ESL anti-theft system, centralised greasing inlet and waterproof digital instrument cluster. The first and second joystick-controlled auxiliary hydraulics make it possible to use a wide variety of attachments - a wide integrated range of attachments is available for these highly versatile models.

Doosan launches new DX10Z mini-excavator

Doosan's new DX10Z (ZTS) mini-excavator is ideal for construction, rental, demolition, landscaping and any other applications that need high performance, compactness, comfort and stability in one machine. The DX10Z is truly compact and easy to transport, offering a width of only 28 in (710mm) when the tracks and the front blade are fully retracted, allowing the machine to pass through most

doors. A foldable TOPS canopy meeting ISO 12117 requirements is standard on the model. The integral sliding blade extensions eliminate loose parts that require storage space and can be easily lost. The blade extensions can simply be slid into their inner position to reduce the overall width. Whilst the DX10Z is very compact, there is no compromise on performance. Thanks to the design of the undercarriage, the DX10Z provides excellent lifting capacities for this size of excavator, combined with a maximum digging depth of 6 ft (1.82m), and a machine weight of 2,593 lb (1,176kg).

The position of the joystick controls on the DX10Z can be adjusted to suit different operators. Both left and right consoles, which serve as comfortable armrests, need to be lowered and locked in order to operate the machine. Thanks to a standard second speed range, the DX10Z can move quickly around job sites, complete projects faster and work more efficiently. The hydraulically expandable undercarriage provides the DX10Z with one of the widest stances in the mini-excavator segment. When it is extended, the width of the square footprint becomes 3.6 ft (1,100mm), providing unsurpassed stability. The workgroup features a box structure design, providing strength while minimizing the overall weight of the workgroup. As a true ZTS mini-excavator, the offset tail swing of the DX10Z provides the operator with full confidence so that they can fully concentrate on the job at hand. The use of metal covers and a large cast counterweight provide excellent corner protection and extra durability. The workgroup of the DX10Z excavator features a cylinder-over-boom design, so that the cylinder cannot be damaged. The hoses for the auxiliary hydraulics are routed inside the boom to prevent any damage when working. These two features enhance the machine's durability. Particular attention has been made to ensure easy service access: with a single access point for the daily maintenance of the main components, for checking the fuel gauge and refuelling through the lockable cap. The DX10Z is powered by the Kubota D722 engine, one of the best known in the mini-excavator segment. This provides proven reliability, as well as low vibration and noise levels, which are a must when working in confined areas. The cooling system delivers best-in-class performance which is critical when working in restricted areas where air flow may be minimal. When the machine is frequently used with a hydraulic breaker, the 'demolition kit' provides extra cooling so the breaker can be used continuously, even in warm environments. This is unique in the market, and makes this model ideal for indoor demolition projects.

Also from Doosan, new DX17Z mini-excavator

The new 1.7t DX17Z mini-excavator from Doosan is ideal for rental and urban construction sites with limited space. The machine's Zero House Swing (ZHS) design offers easy transportability and more functionality than a ZTS mini-excavator, as 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 enhanced by a retractable undercarriage that allows the excavator to go through narrow spaces. When fully expanded, undercarriage provides optimum stability, especially when working over the side. Expansion and retraction are simple and easy via an electric switch on the control panel. An 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 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. Comparing favourably with larger excavators, the DX17Z provides superior operator comfort for working hours at a time with protection, cover and excellent visibility provided by a large and spacious canopy; easy entry and exit; convenient space for the operator's feet with ergonomic fold-away pedals; a flat floor for easy cleaning; smooth joysticks; access to all controls and cup holders.

CAT 300.9D VPS mini-excavator

Caterpillar has added the model 300.9D VPS (Versatile Power System) to the Cat® range of mini-hydraulic excavators. The versatile design of the 300.9D VPS allows the machine—in conjunction with its separate hydraulic power unit—to work either with its diesel engine or from a remote electrical power source, with no loss of performance. Having an electrical drive system remote from the machine enhances utilization and rental options. The 300.9D VPS can be used alone for regular applications, or with the hydraulic power unit when the job requires low noise and zero emission.

Wacker Neuson's newest excavators

Wacker Neuson's latest generation of excavators are a ground-up redesign offering cutting-edge performance in



a very compact package. The machines are significantly stronger and have gained some weight compared to the previous models while fitting in a smaller envelope. The ET65 and ET90 compact track excavators were designed with the users' daily challenges as the focus. The 6.5-ton ET65 offers an impressive breakout force of 11,398 lbf (50.7kN), and a

maximum digging depth of 13.75 ft (4.2m) with the long dipper stick. The ET65 is powered by a 48-hp (35.8kw) Tier 4 Final, turbo-charged Perkins engine. The 9-ton ET90 is powered by a 73.8-hp (55kW) Tier 4 Final, turbo-charged Deutz engine. It has a breakout force of 15,829 lbf (70.4kN), and a maximum digging depth of 15.1 ft (4.6m) with a long dipperstick. Both models' engines produce exceptional power and offer up to 20% fuel savings. The three-point bucket linkage along with the 200-degree expanded angle of rotation offers the best-in-class breakout force. With this unique kinematic linkage system and optimal angle of rotation, the ET65 and ET90 provides more power for digging in tough conditions and can rotate further to keep the load more secure in the bucket before dumping. With a lower centre of gravity and significantly reduced dimensions, the ET65 and ET90 can reach areas these size excavators couldn't reach before. The new design also has greatly improved visibility of the unit and the work site. A low-profile engine compartment and larger windows allow the operator to have a view of both sides of the machine. The boom has been shifted to the right so the operator can easily see the entire boom and attachment as well as the entire job. In addition, the compact size makes it easier and safer for the operator to enter and exit the machine.

New excavators from Gehl

The all-new Gehl M08, 0.8 metric ton excavator, provides a very compact solution for rental fleets, utility contractors, and municipalities. Narrow enough to fit into small spaces, the M08 is available with a full-line of attachments; augers, breakers, buckets and compaction plates for extra versatility on the jobsite. Also new is the Gehl M100, a 10-t unit with a dig depth of 14.9 ft (4.5m). The robust minimal-tail swing of the M100 will go 60 degrees in either direction allowing the machine to remain in place for more consistent digging. This new unit is also an excellent alternative for those application using a standard backhoe loader.



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Volvo CE Unveils 100% Electric Compact Excavator Prototype

Volvo Construction Equipment (Volvo CE) unveiled the EX2, its latest concept machine to industry specialists, policymakers, the media and academics at the Volvo Group Innovation Summit on Tuesday, May 16th. Believed to be the world's first fully electric compact excavator prototype, the EX2 delivers zero emissions, 10 times higher efficiency, 10 times lower noise levels and reduced total cost of ownership compared to its conventional counterparts.

The EX2 was presented at the Volvo Group Innovation Summit in London, UK, alongside innovations from across the Volvo Group, including an autonomous refuse truck from Volvo Trucks and an electric bus from Volvo Buses.

To make the EX2 prototype fully electric, the combustion engine has been replaced with two lithium ion batteries, totalling 38KWh, which store enough electric energy to operate the machine for eight hours in an intense application, such as digging compact ground. The hydraulic architecture has also been replaced with electric architecture which incorporates electromechanical linear actuators that help to optimize the transmission chain. Removing the hydraulic system and the combustion engine, as well as reducing the cooling needs, has led to significantly lower noise levels. At this stage, the EX2 is purely a research project and there are currently no plans for industrialization.

The EX2 stemmed from the company's earlier ELEXC



research project, which was partly financed by the French government as well as various funding bodies in France. Volvo CE worked with a team of six partner companies which all contributed towards the 7m project. The ELEXC work started in 2012 and concluded in 2015, Volvo CE has since been working on other research projects connected to the EX2, such as durability tests.

"The electrification of construction equipment will produce cleaner, quieter and more efficient machines – this represents the future of our industry," concludes Ahcène Nedjimi, Volvo's lead electric and electronics systems engineer and EX2 project leader. "The EX2 is a revolutionary

machine. With its zero emissions and ten times lower noise levels, it could easily be used in densely populated areas without disturbing people – even at night. Ten times higher machine efficiency and maintenance-free systems mean that operating costs and total cost of ownership would be significantly reduced.

The prototype machine delivers the same power and force as its conventional counterpart, as well as faster speeds in combined movements. And all of this has been achieved without compromising on machine performance, ensuring customer needs would be fulfilled."

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Brazil's Necessary Reconstruction

With three powers involved in corruption allegations growing deficit in public accounts, Brazil tries to correct its route with unpopular reforms. Strongly shaken and involved in corruption scandals, the construction industry is also a hope for resumption of growth.

Text: Luiz Carlos Beraldo

After a devastating “institutional demolition,” Brazil’s economy seems to be showing signs of a resumption - albeit timid - at the beginning of the second half of 2017. But it seems that it will take time for the country to make the necessary reforms, and to restore its growth rate. The construction sector has not escape the fallout from the country’s problems, but the fact that Brazil needs to invest as much as US\$42 billion annually in its infrastructure brings hope of that the turnaround will gain momentum.

Where did we go wrong?

All went well with Brazil until 2010. At the time, the economy was growing by 7.5%, and the country had gained global attention by being chosen to host the 2014 Football World Cup and the 2016 Olympics. Prestigious international publications such as The Economist dedicated special reports to the country, which stood out as the best success story in South America.

But this good performance concealed many contradictions, including taxes accounting for 36% of GDP, the highest proportion among emerging countries. Infrastructure expenses were around 1.5%, while the overall average was 3.8%. Historically poorly managed pensions and targets of corruption and robbery became a dangerous burden as the population has aged. Brazil was no longer a “young country,” as it was called in the last century, and the social security system is unfair and ineffective, privileging the public to the detriment of the private sector.

In its third government, the Workers’ Party failed to prevent the overflow of mismanagement, interfered negatively in the economy, lost popularity, and was taken out of power by President Dilma Rousseff’s impeachment. She was replaced in 2016 August 31st by her deputy, Michel Temer, who is more aligned to right-wing parties, although there is no real ideological scope in virtually any of the current Brazilian parties.

Unprecedented damage

Mario Humberto Marques, vice president of Sobratema – the Brazilian Association of Technology for Construction and Mining, considers as irrefutable the widely known theory in the country, that “when trying to perpetuate itself in power through a network of corruption never seen before, Government in recent years has caused a disaster of devastating proportions in the economy and in the country as a whole.”



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Mario Humberto Marques, vice president of Sobratema – the Brazilian Association of Technology for Construction and Mining

“Brazilian construction companies have been blamed and led to corrupt relationships, and today they are paying a heavy price for it,” adds Marques, who claims to have no political-partisan preference.

Marques also says the industry is suffering repercussions from the involvement of leading contractor Odebrecht and other large construction companies in corruption scandals with payment of bribes to members of the government.

“About 15% of the country’s 14 million unemployed are from the construction and heavy construction companies,” he says.

In addition to Odebrecht, other major contractors have had contracts cancelled or have had or are having to review contracts due to involvement in corruption practices. This causes a “cascade effect,” as these mega builders subcontract from dozens up to hundreds of other construction companies and service providers such as demolition, concrete sawing and drilling companies, etc.

The corruption scheme also has a cascade effect, so in many cases smaller companies needed to pay kickbacks to larger ones to “get in the game.” Not to mention the smaller companies were created especially so that the owners of power or their relatives and friends could participate in works or services contracted, with prices overpriced or not.

Thus, when they were hit by the investigations and scandals, the great corrupt companies took with them

thousands of other companies. Some were allegedly as corrupt as their larger counterparts, while others were more transparent about their business practices. In 2015, for example, approximately 1.8 million companies closed in all sectors of activities, increasing country's corporate mortality rate by more than 300%.

"The political crisis that has dominated Brazil's public life has somehow alienated large investors," Marques says. Although Direct Foreign Investment planned for 2017 is more than US\$ 80 billion, there are still fears that the political crisis will cause political instability and disrespect to contracts. "These two aspects have delayed the effective resumption of investments.

Population attentive

Another problem, Marques points out, is that "Brazilian society does not want to know the government party, but it is aware of what is being done by the government." That, he says, explains the rapid momentum for Rousseff's impeaching, and the current pressure on the country's congress and other powers. Indeed, even President Michel Temer is accused of involvement in corruption schemes, and one of his personal advisors was filmed carrying a suitcase of money illegally received from corruptors.

But Marques is anything but pessimistic. "Brazil is an incredible country," he says. "It is able to recover and grow again as it has done in several other crises, and as we are

seeing the economy give signs of resumption, albeit timidly." For example, vehicle sales are again on the rise, while several sectors are slowly showing signs of gaining traction.

As Venezuela does not

Marques says it's "unthinkable" that Brazil will reach the crisis currently being experienced in neighboring Venezuela. That's because "the population does not accept exotic ideologies," and benefits from having a larger, more diversified economy. Unlike petroleum-dependent Venezuela, Brazil is one of the largest agricultural producers in the world, and offers vast mineral resources as well. For Marques, the Brazilian economy tends to react, but the result will be more time consuming to be perceived. If 2017 ends without recession or small growth, it will be fine. Growth may begin in 2018, but remain slow for some time afterward.

"The construction sector was one of the most affected, without doubt," he says, "but it is also one of the few that can help to resume growth, since investments in infrastructure have immediate effects on other activities."

More than 150 formerly government-influenced companies have been privatized, a move Marques says will help attracting private investment from around the world, and reinvigorate the organizations' leadership. Many, Marques says, have suffered from lackluster

management of top-level executives, who owed their jobs to political-partisan connections.

The possible reconstruction

"To privatize what is possible," Marques says, paraphrasing former President Fernando Henrique Cardoso, in a recent talk for a group of Sobratema members. The privatization announced by the government is healthy and necessary, and may even be the only way out of the country's reconstruction, at the moment. Public service concessions present themselves with the only possible way out to resume the level of investments in infrastructure. Continuing the current pace, the country should spend at least US \$ 35.4 million in 2017, equivalent to 1.8 of the country's GDP. But Marques points out that Brazil would need to invest at least 3.0% of its GDP for the maintenance of existing assets (see figure 2). The table illustrates, in relative and absolute terms, how both transportation and electrical infrastructure systems are lacking in investment causing additional costs and increasing dissatisfaction in the population and users of these services.

"On the other hand, if the country could actually minimize the so-called 'Brazil costs,' it would be necessary to invest a minimum of 5.0% in new and modern infrastructure projects."

Figure 3 shows the amount of resources that would be required to be applied for at least 20 consecutive years. Among the investments in infrastructure, including the mentioned 5.0%, Marques highlights the National Plan of Basic Sanitation (PLANSAB), for which the entire population of the country should be served by treated water services and sewage collection and treatment. Created in 2014 and to be completed by 2033 the total volume of investment should be in the order of US\$ 94.5 billion, or an average of US\$5.6 billion a year. That would mean by 2023 the entire population would be served with treated water. By 2033, 93% of the population should be served with sewage collection and treatment.

"The only possible way to achieve PLANSAB's goals is to involve private capital in concessions from municipal or state sanitation companies," Marques says. "Therefore it is more than evident that only through private capital, Brazilian and foreign, can these issues be carried out."

Among the resources expected for the short term, he mentions the following: "With regard to railroads it is possible to concession a large stretch to private initiative until the first half of 2018. Investments from Grupo Rumo (Cosan, former Shell) are expected to be significant starting in 2017, surpassing Real\$ 5 billion. In turn, Petrobras announced investments of US \$ 74.1 billion in the period from 2017 to 2021 in the amount, being 82% of this amount in the exploration and production of oil". All this will help the economy grow back, he believes.

"Brazilian society is attentive, it is demanding that the government do its part, in public safety, in health, education, transportation and other public services," Marques says. "It wants more efficiency and wants the end of corruption, of the waste."

Marques believes that the damage done to the country is huge and that it will take at least five years for the country to return to where it was, and then resume growth and development. The current government will not be able to do much, Marques says, "but pension and labor reforms are on the way."

As for the political reform, he thinks that the current members of congress do not have the moral conditions to do it. "Better to leave to the next," Marques says, referring to the 2018 elections, in which the country will choose a new president, new governors, new federal deputies and will also renew a third of the Senate.

"I hope," Marques says, "the Brazilian population makes choices that are not foolish in these upcoming elections."

Figure 1.

Values Constant Base Year 2016 US \$ (Exercise)				
Year	Δ% (*)	Nominal Values-Base 2016 US \$ Trillion (IBGE / Folha SP)	Investmentos in Infrastructure US\$ Billions (**)	% PIB
2016		1,952	33,0	1,7%
2017	0,40%	1,960	35,4	1,8%
2018	2,30%	1,997	42,3	2,1%
2019	2,30%	1,997	42,3	2,1%
(*)	Jornal ADVFN			
(**)	Consultoria Inter. B.			

Figure 2.

	3,0%	Minimum Necessary Investments US\$ Billions	Actual Investments US\$ Billions	Δ%	US\$ Billions
2016	Asset Maintenance	58,6	33,0	43,6%	-25,6
2017		58,8	35,4	39,8%	-23,4
2018		59,9	42,3	29,4%	-17,6
2019		59,9	42,3	29,4%	-17,6

Figure 3.

	5,0%	Minimum Necessary Investments US\$ Billions	Actual Investments US\$ Billions	Δ%	US\$ Billions
2016	Maintenance + New Investments	97,6	33,0	66,2%	-64,6
2017		98,0	35,4	63,9%	-62,6
2018		99,8	42,3	57,6%	-57,5
2019		99,8	42,3	57,6%	-57,5

Brasil - A reconstrução necessária

Com os três poderes envolvidos em denúncias de corrupção déficit crescente nas contas públicas, o Brasil tenta corrigir rota com reformas impopulares. Fortemente abalado e envolvido nos escândalos de corrupção, o setor de construção também é a esperança para retomada do crescimento.

Texto: Luiz Carlos Beraldo

Após uma devastadora "demolição institucional", a economia do Brasil parece dar sinais de retomada - ainda que tímidos - no início do segundo semestre de 2017. Mas tudo indica que ainda vai demorar para o país fazer as reformas necessárias, e também para restabelecer o ritmo de crescimento desejável. O setor de construção é um dos mais afetados, mas também traz a esperança de retomada: só para manter a infraestrutura atual, o país precisa investir de US\$ 33 a US\$ 42 bilhões anuais.

Onde foi que erramos?

Tudo ia bem com o Brasil até 2010, quando a economia chegou a crescer 7,5% e o país ganhou notoriedade ainda maior ao ser escolhido para sediar a Copa do Mundo de Futebol em 2014 e as Olimpíadas de 2016. Publicações internacionais prestigiadas como The Economist dedicaram reportagens especiais ao país, que se destacava como a melhor história de sucesso da América do Sul. Mas esse bom desempenho escondia contradições como os impostos representando 36% do PIB, a maior proporção entre os emergentes. Já os gastos com infraestrutura eram da ordem de 1,5%, enquanto a média global é de 3,8%. A previdência, historicamente mal gerida e alvo de corrupção e roubo, tornou-se um fardo perigoso à medida que a população envelheceu: o Brasil já não é mais "um país jovem", como se dizia no século passado, e o sistema previdenciário é injusto e ineficaz, privilegiando o público em detrimento do setor privado. Em seu terceiro governo, o Partido dos Trabalhadores não conseguiu evitar o transbordamento da má gestão, interferiu negativamente na economia, perdeu popularidade e foi tirado do poder com o impeachment da presidente Dilma Rousseff, substituída em Agosto 31, 2016 por seu vice, Michel Temer, mais alinhado aos partidos de direita - apesar de não haver real escopo ideológico em praticamente nenhum dos atuais partidos brasileiros.

Estrago sem precedentes

A Sobratema - Associação Brasileira de Tecnologia para Construção e Mineração, reúne os principais representantes do mercado de equipamentos e da cadeia da construção e da mineração. Seu vice-presidente, Mário Humberto Marques, destaca que não tem preferência político-partidária, mas considera irrefutável a teoria amplamente conhecida, no país, segundo a qual "ao tentar se perpetuar no poder por meio de uma rede de corrupção jamais vista, o governo dos últimos anos provocou um estrago de proporções devastadoras na economia e no país como um todo". "As empresas de construção brasileiras foram achacadas e levadas a práticas de relacionamentos corruptos e hoje estão pagando um preço alto por isso", acrescenta, referindo-se aos reflexos do envolvimento de grandes empresas, como a construtora Odebrecht, em escândalos de corrupção com pagamento de propinas a membros do governo. Cerca de 15% dos 14 milhões de desempregados do país são das empresas de construção civil e pesada, destaca. Além de Odebrecht, outras grandes construtoras tiveram contratos cancelados ou tiveram ou estão tendo que rever contratos devido ao envolvimento em práticas de corrupção. Isto provoca um "efeito cascata", pois estas "mega construtoras" subcontratam dezenas, centenas de outras construtoras e prestadoras de serviços especializados como, demolidores, empresas de perfuração e corte de concreto, etc. O esquema de corrupção também tem um efeito cascata, de forma que em muitos casos as empresas menores precisavam pagar propina para as maiores para "entrar no jogo". Sem mencionar as empresas menores criadas especialmente para que os donos do poder ou seus parentes e amigos pudessem participar das obras ou serviços contratados, com preços superaturados ou não. Assim, ao serem atingidas pelas investigações e escândalos, as grandes empresas corruptas levam consigo ao naufrágio dezenas, centenas, milhares de outras, muitas igualmente corruptas e também muitas outras idôneas, que trabalhavam honestamente. Só em 2015 aproximadamente 1,8 milhão de empresas fecharam em todos os setores de atividades, aumentando em mais de 300% a mortalidade de empresas do país.

"A crise política que têm dominado a vida pública do Brasil tem de alguma forma afastado os grandes investidores. Apesar do Investimento Estrangeiro Direto previsto para o ano de 2017, ser superior a US\$80 bilhões de dólares, ainda existem receios de que a crise política venha a causar instabilidades políticas e desrespeito a contratos. Estes dois aspectos têm retardado a retomada efetiva dos investimentos", afirma Marques.

População atenta

Para o vice-presidente da Sobratema, "a sociedade brasileira não quer saber

qual é o partido do governo, mas está atenta ao que está sendo feito pelo governo. Por isso o impeachment, por isso a pressão atual sobre o congresso e demais poderes", resume, sobre a atual crise política do país, em que até o presidente Michel Temer é acusado de envolvimento em esquemas de corrupção, e um de seus assessores pessoais foi filmado carregando uma mala de dinheiro recebido ilegalmente de corruptores.

"Mas o Brasil é um país incrível. Consegue se recompor e voltar a crescer como já fez em diversas outras crises, e como estamos vendo a economia dar sinais de retomada, ainda que timidamente", resume. "As vendas de veículos estão voltando, diversos setores estão dando sinais de retomada, ainda que em ritmo bastante lento".

Como a Venezuela não

Indagado sobre se há algum risco de o país chegar ao ponto em que chegou a Venezuela, ele afirma que "isto é impensável", não só porque "a população não aceita ideologias exóticas", como também pelo fato de o país ter uma economia muito mais complexa, com um setor industrial bastante diversificado, além de ser um dos maiores produtores agrícolas do mundo, sem falar nas reservas minerais ricas não apenas em petróleo. Para ele, a economia brasileira tende a reagir, porém o resultado será mais demorado para ser percebido. Se 2017 terminar sem recessão ou com um pequeno crescimento, já estará bom. O crescimento talvez comece em 2018, ainda lento, e nos anos seguintes de forma mais consistente, porém em ritmo lento.

"O setor de construção foi um dos mais afetados, sem dúvida, mas também é um dos poucos que pode ajudar a retomar o crescimento, pois os investimentos em infraestrutura tem reflexos imediatos em outras atividades", observa.

A privatização de diversas empresas - são mais de 150 atualmente - hoje sob o controle do governo é apontada como uma das melhores soluções possíveis para o país, não apenas por atrair investimentos privados - locais ou internacionais - mas pela possibilidade de oxigenação e renovação da gestão de tais empresas, muitas deficitárias por absoluta ineficácia de executivos de primeiro escalão nomeados por critérios político-partidários, por influência do governo.

A reconstrução possível

"Que se privatize o que for possível", afirma, parafraseando o ex-presidente Fernando Henrique Cardoso, em recente palestra para um grupo de empresários da Sobratema. Para ele, a privatização anunciada pelo Governo é saudável e necessária, podendo ser até mesmo a única saída para a reconstrução do país, no atual momento.

As concessões de serviços públicos apresentam-se com a única saída possível para retomar o nível de investimentos na infraestrutura. Mantendo o ritmo atual, o país deverá gastar em 2017 pelo menos US\$ 35,4 milhões, o equivalente a 1,8 do PIB, Produto Interno Bruto.

Figure 1.

Valores Constantes Ano Base 2016_US\$_ (Exercício)				
Ano	Δ% (*)	US\$ Valores Nominais triilhões-Base 2016 (IBGE/Folha SP)	US\$ Investimentos em Infraestrutura em bilhões (**)	% PIB
2016		1,952	33,0	1,7%
2017	0,40%	1,960	35,4	1,8%
2018	2,30%	1,997	42,3	2,1%
2019	2,30%	1,997	42,3	2,1%
(*)	Jornal ADVFN			
(**)	Consultoria Inter. B.			

Mas ele destaca que o Brasil precisaria investir pelo menos 3,0% de seu PIB para a manutenção dos ativos existentes, como no quadro a seguir:

"Este quadro (acima) mostra em termos relativos e absolutos a razão pela qual as estradas, as ferrovias, os aeroportos ainda não concedidos, aos portos e terminais portuários além dos baixos investimentos em geração e transmissão de energia elétrica, estão carentes de investimento causando

Figure 2.

	3,0%	Invest. Min. Necessário bilhões US\$	Invest. Real bilhões de US\$	Δ%	bilhões US\$
2016		58,6	33,0	43,6%	-25,6
2017	Manutenção dos ativos	58,8	35,4	39,8%	-23,4
2018		59,9	42,3	29,4%	-17,6
2019		59,9	42,3	29,4%	-17,6

custos adicionais e uma insatisfação crescente na população e usuários destes serviços", observa.

"Por outro lado, para que o país pudesse de fato minimizar os chamados 'custos Brasil' seriam necessários investir minimamente 5,0%

em novos e modernos projetos de infraestrutura". O quadro abaixo mostra o montante de recursos que seriam necessários para serem aplicados pelo menos durante 20 anos consecutivos:

Entre os investimentos na infraestrutura, incluídos nos mencionados 5,0%, Marques destaca o Plano Nacional de Saneamento Básico - PLANSAB, pelo qual toda a população do país deverá ser atendida por serviços de água tratada e coleta e tratamento de esgotos. Criado em 2014 e para ser concluído até 2033 o volume total de investimento deverá ser da ordem

Figure 3.

	5,0%	Invest. Min. Necessário bilhões US\$	Invest. Real bilhões de US\$	Δ%	Bilhões US\$
2016		97,6	33,0	66,2%	-64,6
2017	Man. + Novos Investimentos	98,0	35,4	63,9%	-62,6
2018		99,8	42,3	57,6%	-57,5
2019		99,8	42,3	57,6%	-57,5

de US\$94,5 bilhões (cambio de 04/08/2016) sendo que até 2023 toda a população deverá ser atendida com água tratada e, até 2033, 93% da população deverá ser atendida com coleta e tratamento de esgotos. Isto significa uma média anual de US\$5,6 bilhões por ano.

"A única forma possível de atingir as metas do PLANSAB é a participação do capital privado em concessões das companhias de saneamento, sejam municipais ou estaduais. Portanto é mais do que evidente que somente através do capital privado, brasileiro e estrangeiro, é que estas questões poderão ser levadas a cabo" afirma o vice-presidente da Sobratema.

Entre os recursos esperados para curto prazo, ele menciona os seguintes: "Com relação às ferrovias é possível a concessão de trecho de Lucas do Rio Verde (MT) à Campinorte (GO) à iniciativa privada até a primeira metade de 2018. Os investimentos do Grupo Rumo (Cosan, ex-Shell) deverão ser expressivos a partir de 2017 superando os R\$5 bilhões. Por sua vez a PETROBRÁS anunciou investimentos de US\$74,1 bilhões no período de 2017 a 2021 no montante, sendo que 82% deste montante na exploração e produção de petróleo".

"Espero que a população brasileira faça escolhas que não sejam insensatas, nessas próximas eleições" Mário Humberto Marques, presidente da Sobratema.

Entretanto, até que isto ocorra, "a Indústria de Máquinas de Construção sente os reflexos destas instabilidades. O volume maior de máquinas da linha amarela vendida no Brasil ocorreu no ano de 2013 com 33.435 máquinas vendidas, contemplando caminhões fora de

estrada, retroescavadeiras, carregadeiras, escavadeiras e equipamentos de compactação. Este mesmo grupo de equipamentos deverá corresponder a uma venda de cerca de 6.000 unidades em 2017, ou uma queda de 82%, número que remete aos volumes de 20 anos atrás, 1997. Portanto trata-se de um retrocesso absurdo o qual frustra os investimentos realizados pelo parque industrial Brasileiro que foi ampliado com investimentos dos fabricantes tradicionais e também aos novos entrantes que aportaram no país", afirma.

"A sociedade brasileira está atenta, está cobrando que o governo faça sua parte, em segurança pública, em saúde, educação, transporte e demais serviços públicos. Ela quer mais eficiência e quer o fim da corrupção, do desperdício", avalia Mário Humberto Marques.

Ele acredita que "o estrago foi grande" e que levará pelo menos cinco anos para o país voltar ao ponto em que estava, para depois retomar o crescimento e desenvolvimento. O governo atual não conseguirá fazer muita coisa, "mas as reformas da previdência e trabalhista estão no caminho". Quanto à reforma política, acha que os atuais congressistas não têm condições morais de fazê-la: "melhor deixar para os próximos", referindo-se às eleições de 2018, em que o país escolherá um novo presidente, novos governadores, novos deputados federais e renoverá também um terço do senado. "Espero que a população brasileira faça escolhas que não sejam insensatas, nessas próximas eleições".

Tactical Takedown

St. Paul, one-half of Minnesota's Twin Cities, rose from the steep bluffs where the Mississippi and Minnesota Rivers collide. Once a quiet frontier trading post, the city was soon transformed into an industrial hub. The transition sprouted new enterprises, such as West Publishing Company, which today remains the nation's largest producer of academic and law books. The lawless also flocked to the city. Outlaws, such as Baby Face Nelson and Machine Gun Kelly notoriously used the natural caves tunneling under the city as hideouts.

A \$15 million demolition contract

The former West Publishing complex, built in 1886, and the Ramsey County Adult Detention Center, built in 1979, occupied three blocks in downtown St. Paul. Totalling 852,000 ft² (79,153m²), the now-abandoned property was identified as a prime location for urban houses. However, potential buyers balked the risks of developing such large structures.

Instead, the City Council voted to demolish the vacant 10-story, seven-building complex, market the site, and recoup the costs from future income from the new develop-

ment, projected at \$150 million. When the bidding process was complete, Rachel Contracting, based in St. Michael, Minn., was awarded the \$15 million demolition contract. Work began in November 2015. Before any exterior demolition could begin in earnest, bluff stabilization was required to shore up the back wall facing Kellogg Boulevard. Rachel completed this by drilling 18,000 ft (5,486m) of grouted rock bolt anchors into the face of the bluff. After demolition is completed, Rachel Contracting will build a 18-24 in (457-609 mm) thick retaining wall using 25,000 ft² (2,323m³) of cast-in-place concrete along Kellogg Boulevard.

"The site sits between a main downtown artery and is 30 ft (9m) from an active rail line on the Mississippi River-facing side," says Mark Kraemer, vice president of field operations for Rachel Contracting. "We knew going into the bid that we could not bring it down by explosives, so the only option was to use a high-reach demolition excavator. Rachel Contracting looked at competing brands, and opted to go with the EC700CHR for its reach and weight capacities. The high-reach machine has a maximum pin height

of 105 ft (32m) with boom extension and is fitted with a Genesis GDT Razer 7,000 lb (3,175kg) shear. The matched powertrain and hydraulics supply ample power for the shear to fracture concrete and snip rebar at height, and safely lower it to the ground.

The EC700CHR high-reach excavator's added value is its ability to convert to a standard excavator efficiently. The Volvo-patented modular joint design, located in front of the boom cylinders has a self-aligning, hydraulic push-pull pin system that makes changing the boom swift and simple. These features contribute to one less machine on site and keep the EC700CHR from becoming idle.

The high-reach boom is converted to a standard boom every two to three days and is paired with a Genesis DemoPro 900 for concrete cleanup. The conversion enables the machine to work with a 12,000 lb (5,443kg) attachment and use at work heights up to 65 ft (20m).

Rachel Contracting also uses a Genesis GDR 300 demolition recycler and LXP® 300 Logix Processor fitted on three 80,000-lb (39,000kg) excavators for sorting and processing. More than 85 percent of the compound is being recycled and left on site. All concrete is crushed for base or backfill. The steel and ferrous, and non-ferrous metals are recycled and the remainder sent to the landfill. The demolition work is scheduled to be complete in 2017.

www.volvo.com

Things are looking up for Minnesota-based Rachel Contracting, thanks to a Volvo EC700CHR high reach excavator that is hard at work on a giant downtown demolition project.

The Volvo EC700CHR optimizes safety and stability thanks to its long undercarriage, extra modular counterweight, and boom and arm holding valves.



The EC700CHR excavator uses 464-hp (346kW) of power, plus perfectly harmonized hydraulics to make light of the heavy-duty task.



The high-reach excavator takes down the concrete beams with ease.

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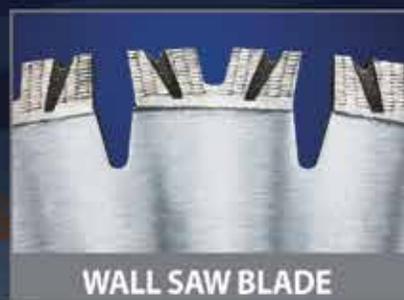
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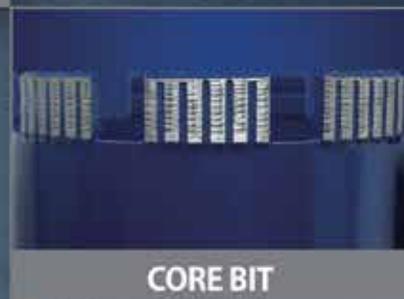


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With nearly half of all workers in the U.S. 55 and older, and strong construction job growth projections of 19 percent by 2018, it's time the construction industry found a new solution.

The aging workforce combined with the rising number of construction jobs drives a pressing need to recruit more young workers to fill the gaps. That's why contractors are increasingly choosing Brokk remote-controlled demolition machines that allow workers to operate them from a safe distance. One of those many contractors is Mike Iiams, Precision Cutting & Coring owner, who bought the first of his company's three Brokk machines six years ago. Since then, productivity increased by more than 50%, boosting profits as well. Pneumatic tool use dropped by nearly 70%. The company's ex-

perience modification rate dropped as well, lowering insurance premiums. Iiams says his new employees are drawn to the high-tech Brokk equipment, and are naturals at using it. What's more, the robotic equipment also helps extend the careers of his older workers, as they can limit the more physically demanding aspects of their work.



Legacy Tension Fabric Buildings Feature Structural Steel Frame

Combining rigid-frame engineering with the proven benefits of tension fabric membranes, Legacy Building Solutions offers superior quality fabric structures that are fully customizable. This design concept provides a high level of flexibility for facilities such as waste and recycling facilities, compost covers, waste-to-energy plants, and many others.

Legacy fabric buildings utilize a durable rigid frame in place of the hollow-tube, open web truss "hoop" framing traditionally used for fabric structures. The strength of the structural steel frame makes it easy to customize buildings to exact specifications. In addition to long clear spans, the buildings have straight sidewalls that maximize the useable square footage inside the structure.

The design allows for much more structural flexibility than traditional fabric structures, including the ability to add lean-tos, mezzanines, and sidewall doors. The structures are also engineered to provide desired overhangs or handle additional loads for items such as sprinklers and conveyors.

Legacy's solid structural steel I-beams

are not vulnerable to unseen corrosion originating inside a tube. Additionally, there are multiple coating options available for all steel components, including hot dip galvanizing, primer and powder coat paint. High-quality fabric roofs eliminate the corrosion concerns associated with metal-constructed facilities.

A wide variety of polyethylene and PVC fabrics are available. The durable fabric allows natural light to permeate the structure during daytime hours, while insulation and liners can be added to meet energy codes or satisfy customer specifications.

Installation is up to three times faster than with conventional buildings, and the design can be adjusted for stationary or portable applications. Sidewalls can be customized and built with any desired material (e.g., including steel, concrete or stone), then easily lined with fabric to prevent corrosion to the interior, or to create a seamless look for occupied buildings. Legacy steel components and fabric covers are backed by a comprehensive warranty.

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Wall and Wire Saw Puzzle

The wall and wire sawing machinery sector is well established with the same companies dominating for decades. Being technology-intensive, it has high start-up costs preventing new players from entering the competition. Very occasionally a novice emerges to challenge the established order.

Egun is on the roll

Egun System is a young Korean manufacturer whose innovative mobile systems for floor, wall and wire sawing jobs are getting increasingly recognized in the global market. The company was founded by Lee Sung Jun in 1990 originally as a concrete sawing and demolition contractor. Although a software engineer by training, he was always fascinated by heavy machinery. Korea's concrete sawing industry was only just beginning in the 90s, and Hansan Development, as Egun was initially named, quickly secured a leading position in the market. Twenty years later, having accumulated a wealth of practical experience, the company developed its own floor, wall, and wire



sawing equipment to Southeast Asia and other countries. Having rebranded the company as Egun System in November 2016, Lee's company launched a full onslaught on the global market. Its wire sawing range includes seven diesel and electric powered track mounted models, with the eighth now in the pipeline. On the wall sawing side, the company currently offers two basic models. Another product is the multi-purpose system, a track-mounted machine capable of switching between wall, ring and wire sawing, core drilling and concrete breaking jobs.

www.egunsystem.com



Hakken Consec extends wire sawing lineup

Hiroshima-based Hakken Consec has extended its wire sawing line with another compact hydraulic model. Powered by a 26.8-hp (20kW) pack, the new DSM-102A features a main motor, carriage and feed drive pulley mechanism, which is easy to dismantle for transportation. The mechanism is totally waterproof, which makes it easy to clean once the work is completed. An electric torque converter integrated into the feeding system continuously adjusts the load on the diamond wire to extend its service life. The stan-



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Standard wire storage of 35 ft (10.7m) can be expanded by adding another pole on the left side. A dry wire sawing kit is also available.

www.consec.co.jp

Hilti breaks new ground in wall sawing

Hilti has launched the DST 20-CA wall saw that does

Durability is a byword at Tractive

The Swedish manufacturer of HF sawing and drilling equipment has updated its Pentruder range with new features aimed at increasing longevity and durability.



not require a separate electric box. Having a maximum cutting depth of 28.25 in (720mm), the DST 20-CA boasts a 30% increase in cutting performance compared to the forerunning model DS TS20. Other features include ergonomic design, an integrated flush-cutting flange, a traction control system, and a compact trolley for moving the system around sites.

www.hilti.com

The slip clutch protecting the HF motor transmission has been strengthened with carbon-made friction discs. This solution reduces wear, extending service life of the slip clutch, which allows operators to continue working, even if the blade is jammed. All that is needed is to back out of the cut and continue sawing. The blade flange's center screw is now made of high-grade stainless steel to eliminate the risk of



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corrosion. All connectors are now sealed to protect the electronics. Thanks to the new design and manufacturing processes, the reliability of the saw's feed motors and the water fitting on the Pentpak has also been enhanced.

www.tractive.se

Husqvarna to launch new trolley for large-sized wall saws

Responding to customer requests, Husqvarna Construction Products is finalizing the serial production of a transport trolley for its WS 440 HF and WS 482 HF wall sawing systems. The new accessory is designed to carry the entire sawing system, including the new wall saw attachment WSC 40. The trolley for the WS440 HF can handle 410 lb (186kg), while the model for the WS 482 HF is rated at 432 lb (196kg).

www.husqvarna.com



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Demo Expo Now UK's Biggest Demolition Show



The third joint National Federation of Demolition Contractors and Institute of Demolition Engineers Demo Expo was held this past June at the Hertfordshire Showground near St. Albans, England. This bi-annual event attracted more than 5,000 visitors and more than 50 exhibitors showing the latest in demolition-specific equipment.

Gnat UK showed the Brokk 800 3-phase electric and diesel model, which weighs 24,361 lb (11,050kg) without attachment, and a total reach of 31 ft (9.4m). Gnat UK operates Europe's largest rental fleet of Brokk and Husqvarna equipment. Remoquip specifically featured Husqvarna's five basic demolition robots, from the 11-hp (15kW) DXR 140 with 360° rotating arm, to the 16-hp (22 kW) DXR 310 with telescopic arms. Weights range from 2,172 lb to 4,453 lb (985kg to 2,020kg). All machines are equipped with Bluetooth remote control, allowing the operator to control the machine from a safe distance.

Simex displayed the Socomec heavyweight hydraulic breaker range. The range consists of seven models suitable for excavators ranging from 15 tons to 65 tons. All feature tie rods with a new profile and an innovative tightening





system, which provides enhanced elasticity and resistance. The company's six-model DMS range was also on display. Products range from 132 lb to 882 lb (60kg to 400kg) for excavators up to 8.5 tons.

ECY Haulmark displayed what was said to be the full range of Furukawa hydraulic breakers for excavators in the 0.5-ton to 100-ton class. This included the latest innovations in the FX range of small breakers through to the FXJ range for heavy demolition and quarrying applications. Indeco Breakers offered an interesting cross-section of its range, with fuel-saving technology and an intelligent hydraulic system. An interesting array of Dehaco IBEX breakers was on display as well, with features such as a specially designed housing that makes them particularly suited to demolition applications.

Perhaps the largest range of breakers shown at Demo Expo was presented by Rammer's UK distributor, Murray Plant. The new 9033 hydraulic breaker is said to possess a 22% higher input power, significantly increasing impact rate and productivity compared to its predecessor. Weighing in at 15,432 lb (7,000kg), the 9033 is suitable for carriers in the 60-ton to 120-ton operating weight range and possesses an impact rate on the long stroke setting rising from 450 bpm to 520 bpm.

JCB's stand presented a variety of breakers, from



small handheld equipment to truly massive hydraulic hammers for the largest of excavators. These combine high levels of impact energy with compact construction to give class leading power to weight performance.

Demolition attachments

BPH Attachments launched its new range of dedicated demolition shears to suit 3t – 280t machines. Primal Equipment exhibited its specialized range of demolition attachments, which included buckets, grapples, pulverizers, rippers, and riddle buckets. ECY Haulmark displayed

the VTN Europe crushing and screening attachments, including the new VTN DSG series of screening buckets. Worsley Plant showcased what is claimed to be the largest crushing bucket in the UK, as well as the Rotar range of demolition attachments.

Rammer exhibited its relatively new range of attachments, including cutter-crushers, scrap shears, and pulverizers. The product lines include such features as full hydraulic rotation for faster and more precise positioning, rotation protection, and heat-treated pins and bushes, as well as weld free cylinder rods found on the Rammer cutter-crusher range.

Atlas Copco and Takeuchi jointly displayed elements





of the Atlas Copco comprehensive excavator attachment range. This included concrete busters and breakers, crusher buckets, and grapples, as well as hybrid power mini-excavators designed to use Atlas Copco breakers. Remoquip exhibited the LaBounty's range of MSD scrap shears and pulverizers, while International Marketers exhibited some of the MBI buckets and attachments

Mobile screening and crushing

Mobile crushing and screening manufacturers were out in force at Demo Expo, although some big names were missing. What made some of the exhibits particularly interesting was that they covered recent advances in equipment technology developed specifically for the requirements of the demolition industry. Again these ranged from the compact to the truly massive. Powerscreen's UK distributor, Blue Machinery, exhibited the Premiertrak 400X, purpose designed for medium-scale operators with hydraulic adjust and release. Following a developing trend in the UK industry, Blue Machinery also displayed two members of Powerscreen's new EvoQuip range of "mini" crushers—the Bison 120 jaw crusher and the Cobra 230 impact crusher. Doyle Equipment also exhibited a compact solution in the form of the ARJES Impaktor 250, which has also been developed for the requirements of medium-sized contractors. The tracked machine is said to be purpose designed to crush a variety of materials including

rubble, concrete, asphalt, and bricks.

Sandvik Mining and Rock Technology exhibited equipment its QE441 scalper/screen and the QJ341 tracked jaw crusher. The QJ341 features a Volvo engine providing low fuel consumption and quieter operation, enabling it to be used in urban locations.

Other exhibits and demonstrations

Along exciting displays encompassing the above equipment, there were also interesting developments shown

from a variety of manufacturers covering other ranges of equipment. Husqvarna exhibited and demonstrated its wall/wire saw, complete with chainsaw attachment as well as its PRIME high-frequency range. Kinshofer products included selector and clamshell brick grabs, earth drills, and augers, while Cabcare provided a cross-section of its vandal and demolition guards.

Among the many demonstrations at Demo Expo, ECY Haulmark showed a Kiesel KLS400 T.A.B. fitted with the OilQuick automatic quick coupler system, with attachment changeover completed in just 15 seconds. Worsley Plant demonstrated the Lehnhoff Variolock Quickcoupler System for hydraulic attachments. As well as the items displayed on the show ground and demonstration area, many solutions and services were also represented in the pavilion. The Drilling and Sawing Association was well represented promoting the work of professional drilling and sawing contractors by highlighting the main advantages of cutting concrete with diamond tools. Waste management company eSynergy highlighted its specialist services in the treatment and recycling of waste electrical and electronic equipment.

In sum, a niche show for a specialty market

Perhaps as a show Demo Expo is not as all-encompassing as the recently held Plantworx. The concentrated offering at the show is specifically targeted at the requirements of demolition companies. This allows Demo Expo visitors to check out all the exhibits, and see firsthand how technology is facilitating changes that are improving the industry overall.



Atlas Copco Expands Light Tower Range

Atlas Copco has extended its light tower range with the launch of the HiLight V4W, a new model that has been designed to offer superior performance at high altitudes and in extreme weather conditions. The energy-efficient and durable light tower is robust enough to operate with minimum maintenance and provides a reliable light source that supports safe and productive working conditions in construction and mining environments around the world. The HiLight V4W features a 10.7-hp (8kW) water-cooled engine with three cylinders, specifically chosen for reliable operation in hot, tough conditions. The need for regular refuelling is minimized due to the light tower's 42-gal (160 litre) fuel time, offering a run time of up 90 hours.

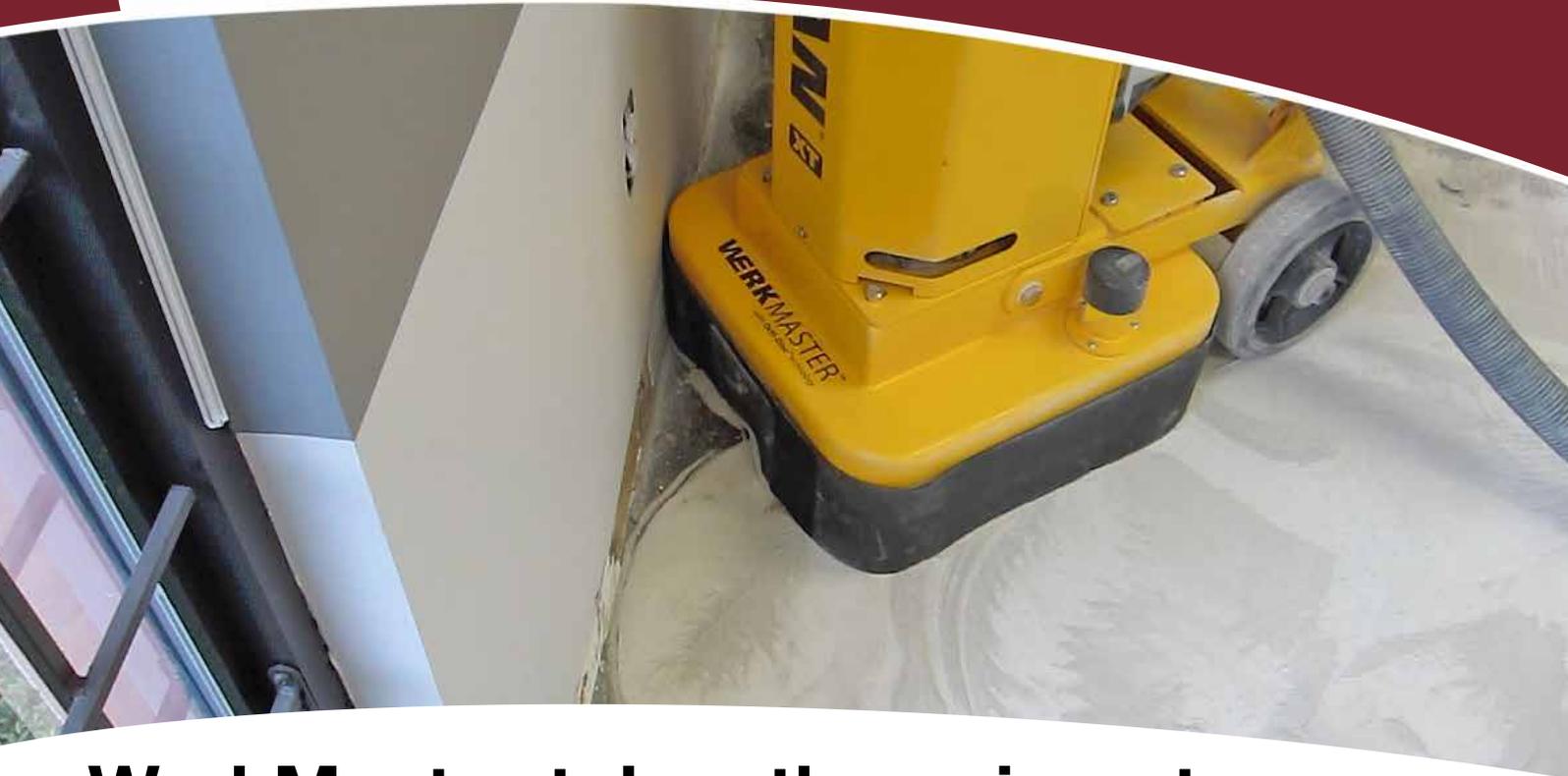
Atlas Copco's new light tower is equipped with 4x 1000 W metal halide lamps, which can illuminate an area of up to 4,000 m², with an average brightness of 20 lux. The HiLight V4W comprises a manually operated vertical mast, which rotates 360° and provides a maximum operating height of 25 ft (7.5m). To assist with the manual mast, Atlas Copco also provides an electric winch option. The HiLight V4W is housed on a unibody trailer with a four-point levelling system and includes a heavy-duty base frame and stabilisers to ensure safety. The light tower can be fitted with an optional photocell that measures the luminosity and can be activated by sunlight, while a weekly timer allows scheduling of different lighting events.



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