

CAPITAL EQUIPMENT¹ NEWS

For informed decision-making

NOVEMBER 2022



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CONDITION MONITORING: Condition monitoring saves maintenance costs

ATTACHMENTS: New attachments galore

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SANY





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EQUIPMENT FLEETS ARE GETTING MORE ROBUST AND MORE SUSTAINABLE

Whether it's a line-up of trucks or yellow equipment, there is something to be said for the rapid pace at which hydrogen and electric models are continually being introduced.

For CO₂ emissions regulations in Europe, it makes sense that these new machines are incorporated into fleets. In South Africa, there's the hope that once the machines land, they will assist businesses to cut fuel consumption (and save money on opera-

tional costs) while ensuring South Africa can start playing a role against climate change.

Suppose you follow the news on Eskom and the country's reliance on coal-fired power stations. In that case, these machines might seem like a drop in the ocean towards sustainability. Still, the owners of the machines are ensuring they contribute to a carbon offset and potentially also additional investment as a result of the individual company's investment in sustainable or 'green' equipment

In Africa, this kind of equipment is not readily available. Even in Europe and North America, hydrogen-fuelled and electric equipment is still novel and produced on a small scale—not every site is populated with machines powered by alternative fuel. This is why it remains sensible that lower fuel consumption continue to be considered in South Africa, at least until more alternatives become available and more equipment has the option of alternative fuel.

It is here that the capital equipment industry shines. Take note, paging through this edition of **Capital Equipment News**, how SANY, XCMG, CAT and Simex all offer newer models with lower fuel consumption. On the smaller side of available equipment, e-solutions are affording companies like Doosan and CAT the chance to explore new technologies within compact equipment. The result is customer-driven

solutions that are also environmentally friendly. These compact machines are loaded with features and offer operators and owners ease of mind when it comes to daily operations. They are slowly starting to cut costs associated with running equipment on the ground.

The same can be said within freight. Trucks and buses are steadily adopting e-solutions. As a result, bigger trucks that can carry heavier loads are no longer that reliant on octane or diesel.

Locally, JAC Motors South Africa shows that smaller and more versatile trucks are favourable on the country's roads. Its N75 EV 4-tonne truck is a zero-emission beast that allows company owners to start incorporating equipment that does not rely on traditional fuel sources into existing fleets. The flexibility of adding smaller trucks can help organic growth, in that, once bigger models of equipment become available with alternative fuel sources, the smaller models in a fleet are already seen as vital owing to their ease of use.

Embracing sustainable solutions was one of the major themes of Bauma 2022. Major companies and manufacturers are galvanizing their focus on offering functional equipment that is not damaging to the environment. Seeing these changes reflected on the pages of this magazine indicates what is to come, and what is happening at present.

Adriaan Roets - EDITOR



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SCANIA



The new 125-t SY1250H is SANY Southern Africa's biggest mining excavator to date.

READY FOR BIGGER CHALLENGES

Latest from SANY Southern Africa are two new mining excavators, the 100-t SY980H and the 125-t SY1250H. The two models – the largest in the company's range to date – are ideally suited for high production mining operations, allowing SANY to compete at the larger end of the mining equipment scale. *By Munesu Shoko.*



"With the large box-type double-support slewing platform, the SY1250H's carrying capacity has been increased by 35%. The shaft diameter on the undercarriage has been enlarged, while the load-bearing capacity has been increased by 30%."

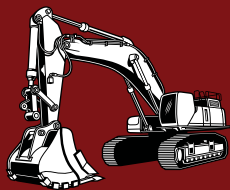
Samuel Zhang, GM SANY Southern Africa

At a time when the mining industry, especially the contract mining fraternity, is turning to 100-tonne (t) solutions to execute high production mining jobs, SANY Southern Africa has brought in its 100-t SY980H and the 125-t SY1250H. The new models come hard on the heels of the recent launch of the 70-t SKT105S wide-body dump truck, positioning SANY as a key player in the larger load and haul solutions market.

Available data shows that the 100-t



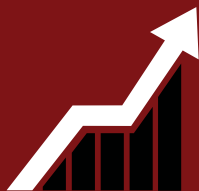
The new SY1250H has a distinctive design focus on increased productivity, efficiency, reliability and lower total cost of ownership.



SANY Southern Africa is introducing its largest mining excavators to date – the 100-t SY980H and the 125-t SY1250H



One of the key selling points of the new SY1250H is its fuel efficiency – customers can expect 5 – 13% fuel savings compared with competitive offerings in this size class



With the large box-type double-support slewing platform, the SY1250H's carrying capacity has been increased by 35%



The SY1250H is equipped with a standard 8 m³ bucket, which is 19,4% bigger than some of the competitor offerings in this class size

TAKE

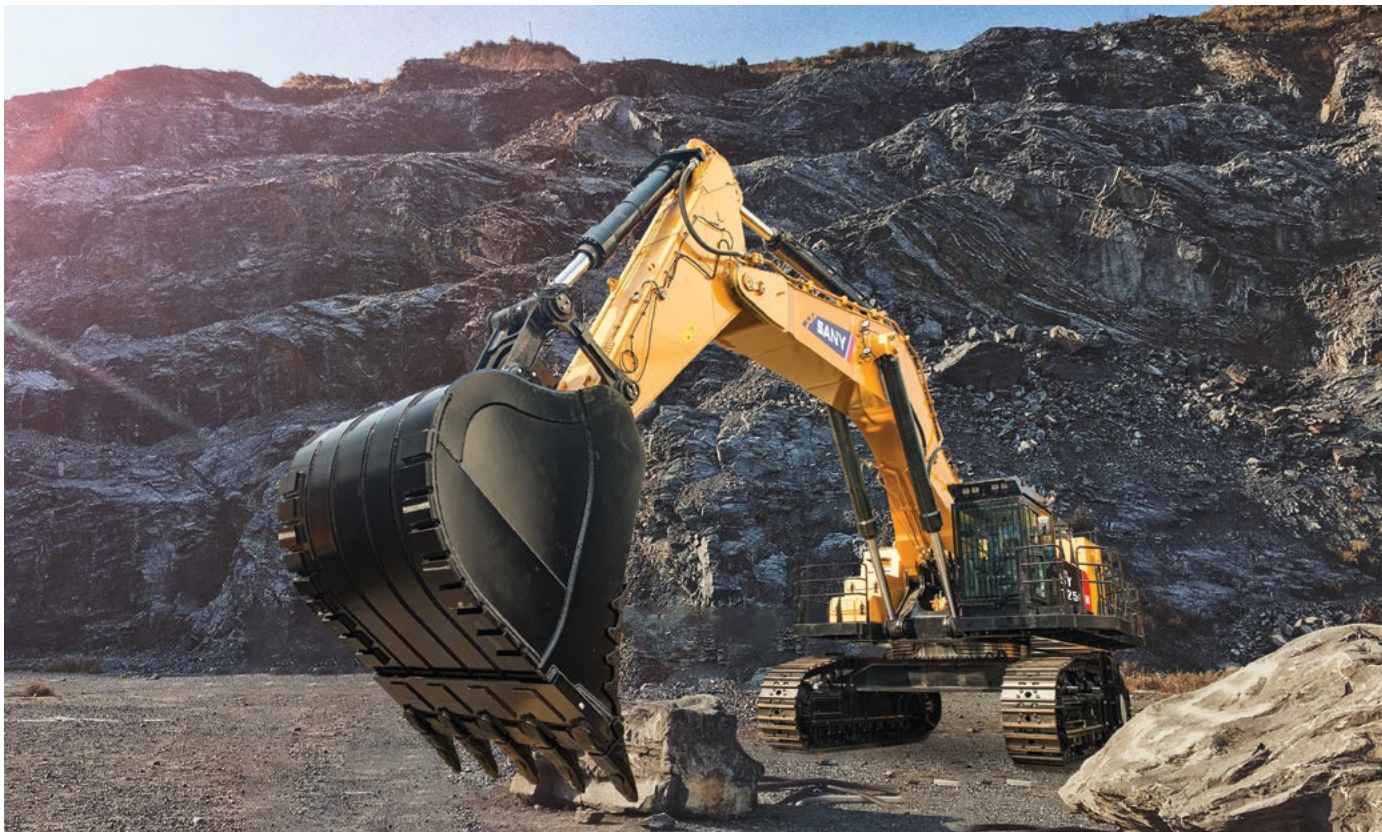
QUICK

With the large box-type double-support slewing platform, the SY1250H's carrying capacity has been increased by 35%. The shaft diameter on the undercarriage has been enlarged, while the load-bearing capacity has been increased by 30%.

excavator and dump truck market has been buoyant in the past few years, largely driven by mining contractors. Given the short nature of mining contracts in recent years, which are generally limited to three to five years, the 100-t offerings provide contract miners with the mobility they require to move from site to site.

The two new excavators can be ideally paired with SANY's mining haulers, the SKT105S wide-body dump truck and the 100-t SRT95 rigid dump truck.

Samuel Zhang, GM SANY Southern Africa, is particularly excited about the SY1250H,



The machine comes with a standard 8 m³ bucket.

which he says will further strengthen SANY's competitiveness in the large excavator segment. Testimony to the early interest in this model, a large mining customer has already placed an order of six machines.

The new SY1250H, says Zhang, has a special design focus on increased productivity, efficiency, reliability and lower total cost of ownership.

Efficiency matters

One of the key selling points of the new SY1250H is its fuel efficiency. "In an environment where diesel prices continue to soar, customers will be glad to know that, owing to a range of features, they can substantially reduce their fuel consumption. Based on our field tests, the SY1250H consumes an average of 97,07 litres per hour in continuous loading operations," says Zhang.

At the centre of the machine's fuel efficiency is the Cummins QSK23 heavy-duty engine providing 557 kW of power. Its inline, six-cylinder configuration, unusual for this high-power output, offers a narrower, shorter installation, easier access and the benefit of fewer parts, which makes it inherently more dependable and lengthens the expected life cycle to 20 000 hours before the first overhaul.

This is complemented by the electrically controlled main valve with a flow capacity 20% higher than that of same sized hydraulically controlled valves. The

electrically controlled main pump with own pressure cut-off function works in harmony with SANY's Integrated Control Technology (ICT) to match the engine, thus providing optimum fuel efficiency. Customers can expect 5 – 13% fuel savings compared with some competitive offerings in this size class.

According to Zhang, the machine's fuel efficiency speaks directly to the mining sector's quest to reduce operating costs and emissions. Mining companies have spent many years ruthlessly seeking ways to reduce their operating costs. One of the measures they have implemented is supply chain optimisation.

In a bid to control their costs, several mines have tightened their contractor service level agreements. For example, they have put a fuel cap on each and every contractor's machine. If a machine exceeds its fuel cap, the extra fuel consumption will be deducted from the mining contractor's certificate.

Previously, "wet contracts" had no limit on fuel and contractors were not so concerned about the fuel efficiency of their machines. In recent years, mining contractors have been forced to rank fuel consumption high up on their equipment procurement checklists. With a range of fuel-saving innovations, the SY1250H will definitely help contractors operate within their new realities.

Key features and benefits

Apart from fuel efficiency, the SY1250H

casts the spotlight on productivity. Protracted pressure on margins over many years, says Zhang, has put miners' focus squarely on productivity. One of the features that speaks to productivity is the larger 8 m³ standard bucket, which is 19,4% bigger than competitor offerings in this class size. SANY also offers 6 m³, 7 m³ and 10 m³ bucket options.

"In addition, the machine offers high excavation force. Through real-time power adjustment in the whole process of excavation and the curve analysis for excavation force under various operating conditions, the excavation force can be brought into full play, improving efficiency by 40% in the process," says Zhang. "This is complemented by the machine's swing speed, which is 5,8% faster than some competitor excavators in this size class."

Another key value proposition of the SY1250H is its stability and reliability. This is largely made possible by the 125-t operating weight of the machine, which is said to be the heaviest in its class. In addition, SANY's three-roller slew bearing provides a much stronger bearing capability. The machine adopts an undercarriage similar to that of larger excavators in the 150-t class, thus maximising stability.

"With the large box-type double-support slewing platform, the SY1250H's carrying capacity has been increased by 35%. The shaft diameter on the undercarriage has been enlarged, while the load-bearing



The new 100-t SY980H is ideally suited for the contract mining market.

capacity has been increased by 30%,” explains Zhang.

The machine also adopts intelligent features to ensure both efficiency and productivity. The operator can select from six operation modes and four working modes to achieve best operating and fuel efficiency. Fan speed can be automatically adjusted according to oil and water temperature to achieve the best heat balance and energy saving.

Based on its understanding that a comfortable operator is a productive one, SANY put a special focus on operator comfort during the design of the machine. The cab adopts brand-new dust-proof and noise-reduction technology, keeping noise levels as low as 73 dB.

Inventory and support

In an environment where customers have to endure long lead times due to the global supply chain constraints, SANY offers the benefit of having readily available stock.

“One of the main advantages of keeping high stock levels is that we can ensure orders are delivered within the shortest of timeframes. This is largely beneficial for the contract mining fraternity, where customers often need their machines immediately to execute urgent contractual obligations,” he says.

The high inventory levels are complemented by recent investments in

SANY Southern Africa’s operations to better support dealers across the region. In 2020, the company commissioned a 40 000 m² machine storage yard in Boksburg, South Africa. In addition, a huge parts stockholding of about R90-million’s worth of parts, which is set to be increased to R270-million next year, ensures high uptime levels for machines operating in the field.

Available for rental

SANY Southern Africa will also be introducing its large excavators, the SY980H and the SY1250H, in its rental fleet. Rental, says Zhang, gives customers the opportunity to evaluate the machine before they commit to outright purchasing. “Running a machine on rental gives customers a good testing platform, which informs sound procurement choices when it’s buying time,” says Zhang.

SANY’s rental facility, says Zhang, also makes sense for emerging mining contractors. Buying new equipment comes at a huge upfront cost, which most start-ups cannot afford. Given the growing local procurement strategy in mining, where local mining contractors are given preference as part of mining companies’ enterprise development efforts, rental makes sense for emerging contractors.

SANY’s rental fleet is serviced and maintained by the OEM, allowing contract miners to eliminate the need to service own equipment, keeping parts and

employing a service team on site.

“Our OEM service teams are professional and know the product very well. Customers can, therefore, focus on their core business, which is to mine, and leave the servicing and maintaining of equipment to us,” he says.

Efficient production is the goal for every company. All SANY rental machines are new, maximising efficiency, productivity and equipment availability. “All our machines in the rental fleet are brand new, so customers can have peace of mind knowing that they are guaranteed high machine uptime and efficient production. Operators are also at their productive best as they enjoy working with new machines,” adds Zhang.

More large machines

Apart from excavators, SANY Southern Africa has also added a larger wheel loader model to its offering. The company recently launched the 7-t SW978K1 front-end loader, a radical upgrade of its smaller SYL956H model. This, says Zhang, now allows SANY to offer a fitting wheel loader for high production mining operations.

“In future, the local mining sector can expect even bigger mining machines from SANY. In China, we have already launched a 200-t backhoe excavator and a 260-t front shovel, which we expect to arrive in the local market by 2024,” concludes Zhang. 🌟

Our OEM service teams are professional and know the product very well. Customers can, therefore, focus on their core business, which is to mine, and leave the servicing and maintaining of equipment to us.



Lab technicians in WearCheck Westville's lab.

CONDITION MONITORING SAVES MAINTENANCE COSTS

Customers of the condition monitoring specialist company, WearCheck, are aware of the benefits of a good condition monitoring programme, which saves both time and money by helping to avoid catastrophic, unplanned breakdowns and ensuring that machinery operates optimally.

Since 1976, WearCheck has specialised in tribology and the scientific analysis of used oil samples, expanding its service offering to include a host of additional predictive maintenance monitoring techniques to cover all the facets of asset care.

Today, WearCheck is proud of its reputation as the leading all-in-one reliability solutions hub, backed by ISO accreditation. The company provides condition monitoring services throughout Africa, the Middle East and India via a comprehensive network of 14 laboratories that spans the continent and beyond.

As the market leader in several arenas - including testing and analysis, asset reliability care and lubricant-enabled

reliability services - WearCheck ensures the health of key assets such as engines, turbines, and all industrial components.

WearCheck's team of scientists, technicians and diagnosticians is on a mission to assist customers in boosting productivity by avoiding major, unscheduled equipment failure. WearCheck scientifically analyses used oil from mechanical and electrical systems, transformer oil, water, fuel, greases and more, effectively processing over 800 000 samples per annum.

Additionally, WearCheck offers comprehensive monitoring programmes for transformers and wind turbines, using dissolved gas analysis, furan analysis and other spectrographic methods.



Serisha Naicker, WearCheck lab technician, pours TAN fluid.

WearCheck scientifically analyses used oil from mechanical and electrical systems, transformer oil, water, fuel, greases and more, effectively processing over 800 000 samples per annum.

Transformers should be regularly monitored

The transformer team provides analysis services to any operation that generates power or uses electricity. Some transformers monitored by WearCheck include those operated by municipalities, solar farms, wind farms, shopping malls and even casinos. The team can monitor any transformer - from the tiny transformers run by housing complexes right up to the massive transformers servicing cities and large industrial operations.

Power transformers are expensive and critical equipment in power systems and play a significant role in the transmission and distribution of electricity. Although transformers are generally reliable equipment, failures occur, and many degradation mechanisms are operating in components and sub-systems that will ultimately limit the useful operating life.

Transformer asset managers generally aim to achieve the required levels of safety and reliability from their fleet of transformers at a minimum cost. Knowledge of conditions is, therefore, essential for efficient transformer asset management decisions. Without this information, only the most basic activities are possible - such as time-based maintenance, replacement before the end of life, or repair after failure.

Lubricant-enabled reliability

Furthermore, the company's lubricant-enabled reliability (LER) technicians offer advice and products to enhance an operation's lubricant management systems and assist companies in developing and implementing customised LER programmes.

LER encompasses all lubrication-related activities that improve equipment reliability



The company provides condition monitoring services throughout Africa, the Middle East and India via a comprehensive network of 14 laboratories



WearCheck scientifically analyses used oil from mechanical and electrical systems, transformer oil, water, fuel, greases and more, effectively processing over 800 000 samples per annum



While transformers are reliable equipment, failures occur, and many degradation mechanisms are operating in components and sub-systems that will ultimately limit the useful operating life



WearCheck operates an extensive network of 14 laboratories in South Africa, Namibia, Zimbabwe, Zambia, Mozambique, Ghana, DRC, Dubai and India

TAKE

QUICK



WearCheck ARC technician Peet Peacock performs vibration analysis testing.



Louis Peacock, senior ARC technician at WearCheck, conducts motion video amplification testing on machinery at a water reticulation plant.

and asset optimisation, such as the design and construction of lube rooms, on-site lubrication surveys, lubricant storage, handling and dispensing, as well as filtration.

Asset reliability care (ARC) adds value

Some of WearCheck's ARC services include vibration monitoring, thermography, online remote monitoring diagnostics, alignment and balancing, and other specialised techniques such as motion amplification, ODS (operational deflection shape) and resonance tests using transient and impact analysis.

The company also provides advanced field services like rope testing, technical compliance (TC) and non-destructive testing (NDT).

The value-added ARC services have not only been widely adopted by long-term tribology customers of WearCheck's but have also brought in a whole new set of clients for the company.

The ARC programme, coupled with the oil analysis services, gives WearCheck customers a 360° view of their assets, allowing maintenance teams to make informed plant maintenance

decisions based on highly accurate, intelligent, advanced analysis and reliable data. WearCheck completely removes the guesswork in the maintenance game.

The company's experienced team of ARC technicians has amassed more than 100 years of experience in proactive maintenance on 10,000+ machines.

Water wisdom from WearCheck

WearCheck's newest service is water testing, during which laboratory technicians select the relevant tests for the water sample depending on the customer's needs, be they for determining drinking water purity, assessing the safety of borehole water for agricultural use, or checking the contamination levels of wastewater. Technicians identify what is wrong with the water and advise customers on the possible consequences of using/discarding such water.

Water analysis is conducted using various accredited techniques such as photometric, electrometric, colourimetric, gravimetric, ICP-OES, ICP MS and enzyme substrates. These techniques obtain the best possible results in the chemical and microbial analysis of effluent/wastewater, drinking water, processed water, surface water and groundwater.

WearCheck operates an extensive network of 14 laboratories in South Africa, Namibia, Zimbabwe, Zambia, Mozambique, Ghana, DRC, Dubai and India, supported by regional offices in several other African countries. 🌐



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Simex's new PL 2000 is said to be the widest asphalt cold planer attachment on the market.

NEW ATTACHMENTS GALORE

To help fleet owners increase their tool carriers' versatility and flexibility, which is key to maximising equipment utilisation and lowering operating costs, several manufacturers have recently launched new attachments. Capital Equipment News looks at some of the new arrivals and their value offering to the fleet owner. By Munesu Shoko.

To be competitive in today's challenging economic environment, equipment owners are moving beyond the basics. They are looking at how their fleets of excavators, skid steers, backhoe loaders, among other tool carriers, can squeeze more margins and volumes. Consequently, a strong attachment focus is gaining momentum. Attachments are key to equipment versatility and utilisation.

Attachments by their nature help transform tool carriers from one-dimensional pieces of equipment into multipurpose and adaptable machines. Based on this understanding, there is a strong global attachment focus as fleet owners seek to get the best out of their equipment.

To provide context, Fact.MR's Construction Equipment Attachment Market report notes that the size of the construction equipment attachment market is poised to double its value between 2020 to 2030.

To meet the growing demand, several manufacturers, including Caterpillar, Road Widener and Simex, have launched a range of new attachments that speak directly to the needs of the market.





Material placement

Road Widener used bauma 2022 to showcase its FH-R material placement attachment. The patented FH-R material placement attachment is said to reduce labour



Road Widener now offers a spray bar system on its patented offset vibratory roller, thus increasing the versatility of the attachment.

QUICK TAKE

	<p>Attachments by their nature help to transform tool carriers from one-dimensional pieces of equipment into multipurpose and adaptable machines</p>
	<p>Road Widener's patented FH-R material placement attachment reduces labour by 50%, while coming at a fifth of the cost of traditional self-propelled equipment</p>
	<p>Latest from Caterpillar is a five-model range of attachments for nursery and landscaping applications</p>
	<p>Simex used bauma 2022 to unveil its PL 2000, said to be the widest asphalt cold planer attachment on the market</p>

by 50%, while coming at a fifth of the cost of traditional self-propelled equipment.

The FH-R is a versatile solution for material placement, precisely dispensing topsoil, gravel, asphalt, limestone and more – all with an attachment compatible with common machines already on the jobsite.

“The FH-R allows contractors to get the job done more quickly and efficiently. Our two-step process eliminates the need for grading and sweeping by placing the material right where it needs to go the first time,” explains Lynn Marsh, president of Road Widener.

The remote-controlled design of the attachment allows the operator of the carrier to control the attachment via remote control – enhancing safety by eliminating the danger of additional workers standing along the jobsite.

The remote-controlled attachment easily connects to most skid-steers, compact track loaders, graders and wheel loaders, operating off the host machine's engine and hydraulics. It is available in left, right or dual dispensing configurations to take on any roadway around the world.

The attachment streamlines a variety of tasks including backfilling, road widening, road shoulder repairs, remediation and



Caterpillar's new Tilt Rotate Systems multiply the mini excavator's versatility and are available in various configurations to match the application.

aggregate placement. The material is poured into the hopper at the top of the FH-R and then precisely dispensed via remote control in adjustable lay-down widths from 3 – 1.8 m. The attachment dispenses up to 20 t of material in under 10 minutes.

"Our customers often tell us the swift capabilities of the FH-R have a tremendous effect on their business," says Marsh. "With the demand for infrastructure remediation rising, the FH-R helps to lay material efficiently and precisely with only one operator. Some of our customers can lay up to 8 km a day with our machine, making it truly a game-changer for any business, no matter the size."

The FH-R works with standard and high-flow hydraulics and has only five grease fittings to maintain. The attachment costs up to 80% less than a self-propelled material placement machine. Its low-maintenance, functional design greatly reduces the price tag.

That saving extends to transportation requirements too. The compact size of the FH-R attachment provides easy transport with a common trailer that is towable by a standard pickup truck. Additionally, the FH-R's small footprint decreases traffic disturbance and danger on busy highways and narrow backroads.

Offset vibratory roller

In addition, Road Widener now offers a spray bar system on its patented offset vibratory roller, thus increasing the versatility of the attachment.

"As a company that prides itself in providing innovative, profitable solutions, we are always looking for ways to improve

our products," says Marsh. "We are excited to now offer the spray bar system for the offset vibratory roller. We knew the attachment was capable of many forms of compaction, but it was not until the product reached our customers that we realised its full potential. We listened to their feedback and designed a spray bar system that heightens the capabilities of this already one-of-a-kind product."

The accessory fits on all offset vibratory roller attachments and aids in suppressing dust particles, compacting aggregates and preventing clumping when rolling hot mix asphalt. It can be easily attached to the offset vibratory roller, a compaction attachment that allows the host machine to drive safely on flat ground while compacting shoulders, ditches, trenches and other hard-to-reach areas alongside the road. The spray bar system will allow contractors to increase efficiency and versatility when compacting a variety of materials including asphalt, stone, gravel and topsoil.

The offset vibratory roller is said to offer construction contractors unparalleled safety over self-propelled compaction machines that have a greater risk of tipping. The attachment's offset, patented design allows the host machine to drive safely on flat ground while compacting sloping shoulders, ditches, trenches and other hard-to-reach areas alongside the road. These are tasks that have traditionally put road crews in danger of rollover accidents, increased workers' comp costs and led to poor safety ratings.

"We have worked in the road construction industry and know first-hand the challenges and dangers crew members are up

against each day. This led us to engineer a solution to heighten safety with an offset design. We believe that our offset vibratory roller will help achieve the goal of Zero Harm because it truly offers incomparable compaction safety," says Marsh.

The offset vibratory roller attaches to any loader, skid steer, compact track loader or grader by inserting the host machine's lift arm pads into the attachment's universal mounting pad. An adapter plate is also available for host machines such as compact backhoe loaders and telescopic loaders that may not be readily set up to accept standard attachments. It is compatible with standard and high-flow hydraulics. The attachment operates without an engine, powertrain, or any associated parts of its own, which makes for less maintenance than self-propelled machines while also reducing labour.

The Cat expansion

Latest from Caterpillar is a five-model range of attachments for nursery and landscaping applications. The new attachments are designed to work with skid steer loaders, compact track loaders and compact wheel loaders. The purpose-built attachments cover multiple tasks, including the handling and scooping of trees, shrubs and bushes, removing and carrying stumps, as well as loading mulch.

Ideal for handling ball and burlap trees as well as large potted plants, Cat nursery forks come in manual and hydraulic designs. Both offer a hydraulic pivoting fork that allows the left fork to swing open to fit around multiple root balls. The right fork adjusts either manually or hydraulically, depending on the version, allowing contractors to pick and place desired trees and plants and load/unload them quickly and efficiently.

With their 1 788-mm usable fork length, the new large-capacity nursery forks can hold up to three 711-mm root balls or one 1 372-mm root ball. The pivoting fork design delivers maximum opening for grasping large root balls, while the side shifting fork provides greater control and proper fit when handling different sized root balls.

Similar to nursery forks, the new Cat nursery grapple is well suited for handling ball and burlap trees and potted plants. Its paddle shape wraps around root balls ranging in size from 711 to 1 372 mm without damaging the root system or tree. Offering better control and placement, the grapple's pivoting design helps manipulate the load in numerous positions to reduce the need



The FH-R is a versatile solution for material placement, precisely dispensing topsoil, gravel, asphalt, limestone and more – all with an attachment compatible with common machines already on the jobsite.



Designed for land clearing and the removal of invasive trees, stumps and large shrubs, the stump bucket is purpose designed for removing and carrying tree stumps.

for manually handling heavy plants while placing them at the nursery or loading them for transport.

The new 0,76 m³ mulch bucket loads mulch into pickup trucks and tight spaces. With its narrow, 1 421-mm width, the mulch bucket comfortably loads material inside the bed of most pickup trucks without concern for contact or damage. Minimising waste, its smaller profile delivers the necessary clearance to load trucks without material spillage.

Designed for land clearing and the removal of invasive trees, stumps and large shrubs, the stump bucket is purpose designed for removing and carrying tree stumps. Long and narrow floors allow for easy digging around and below tree and

large shrub root balls.

The Cat tree scoop efficiently handles shrubs and small trees at nursery sites and in landscaping applications. Capable of digging and scooping up to a 901-mm diameter, the scoop easily transports or transplants trees and other materials. The spade profile easily digs into the ground, and a flattened tip cuts roots for easy tree removal. Welded gussets and thick plates lend to its rugged design and increased durability.

As part of the attachment expansion programme, Caterpillar Work Tools Division has also launched Tilt Rotate System (TRS) models for Cat 302.7 through 310 next generation mini excavators. The new TRS4 and TRS8 S45 plus the updated TRS6 models allow attached work tools to rotate

360 degrees and tilt 40 degrees side-to-side. This enables the machine to reach more work areas from a single position, while manoeuvring tools over, under and around obstructions when excavating, grading ditches, sorting recycle materials, or placing pipe. The new TRS models multiply the mini excavator's versatility and are available in various configurations to match the application.

System design includes a top interface that connects the TRS to the carrier machine and a bottom interface that connects various work tools to the TRS. Top interface connections for the TRS4, TRS6 and TRS8 include a choice between an S Type hydraulic-coupler or pin on, while bottom interface options include the Pin Grabber or S type coupler.

The compact design of the TRS4, TRS6 and TRS8 allows the mini excavator to maintain high digging forces. A reinforced TRS gearbox with a specially designed bearing ring distributes working forces to reduce stress on the TRS and the host machine. A no-maintenance lubrication system for the rotation system effectively distributes heat. The high-torque rotation system quickly positions work tools, and an integral self-locking mechanism enables digging at any angle required. Single/minimal grease points for TRS models delivers quick, efficient greasing of all joints requiring lubrication.

PL 2000 to the market

Simex used bauma 2022 to unveil its PL 2000, said to be the widest asphalt cold planer attachment on the market. After the introduction of the PL 1500 at the 2020 ConExpo exhibition in Las Vegas, Simex has gone further, creating a model that allows contractors to perform 2 m of milling in a single pass – the PL 2000, particularly designed for scarifying the road surface.

The PL 2000 is designed to work with skid-steer loaders. The self-levelling system – a Simex patent that guarantees a constant working depth in any condition – is a major talking point. In addition, the water spraying system, with a tank integrated into the side shift (another Simex patent), allows for correct dust abatement during the milling process, avoiding mounting a special system on the prime mover roof.

The Performer device, mounted in an ergonomic position, easy to view from the operator cabin, optimises attachment performance according to the forward speed of the operating machine. Made with different colours and a graphic scale, it is a Simex patent that allows the device to self-calibrate exactly to the maximum pressure of the prime mover on which the equipment is installed. 🌟

Featuring a 3,5-hour battery capacity, the Bobcat E19e comes with a super-fast charger, which allows for opportunity charging during work breaks, thus maximising uptime on site.



LEADING THE WAY

For e-solutions to be successful in construction equipment, the load cycles and tasks of the machines are a key factor. That is why compact excavators are leading the way in the electrification revolution, as demonstrated by an array of recent commercial and prototype introductions, writes *Munesu Shoko*.

A quiet revolution is taking place. Traditional original equipment manufacturers (OEMs) have laid out the field of new energy construction machinery – electric. As well as being better for the environment, electric construction gear is also opening up opportunities for

new ways of working, allowing environments beyond traditional construction sites to get the job done with less noise, fewer vibrations and no exhaust fumes.

However, the pace of the electric revolution remains apparent on the smaller end of the construction equipment scale. “I still see electric drives in rather

smaller power ranges of up to a maximum of 20 kW,” says Dr Marcus Geimer, head of the Mobile Machinery section of the Karlsruhe Institute of Technology. “For electric solutions to be successful, the load cycles and the tasks of the machines count.”

The energy requirement – battery size – for a full day’s shift is easier and more cost-effective to package on a smaller machine, which is why electrification is gaining pace in compact excavators.

Why compact excavators? More companies, especially utilities that

“Our prototype mini excavator is an example of Yanmar’s system integrator applications technology, integrating power and control systems with advanced applications management in a versatile and easy to use machine.”

Carlo Giudici, Yanmar sales director
EMEA





Wacker Neuson recently introduced its EZ17e as a series product.

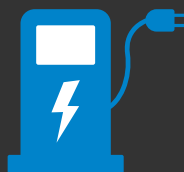


“The move towards a more sustainable construction industry is well underway with a clear roadmap ahead to deliver zero-emission equipment fit for the future. Battery electric products form a major part of this ambition, and we remain at the forefront of the global rollout.”

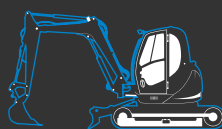
Scott Park, CEO of Doosan Bobcat

QUICK TAKE

The pace of electrification remains apparent on the smaller end of the construction equipment scale, with compact excavators particularly leading the way



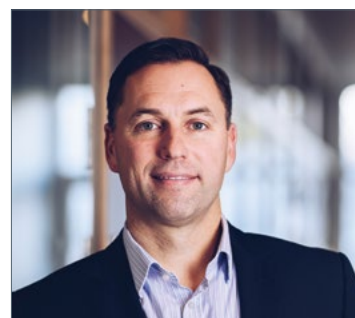
Volvo Construction Equipment has been accepting orders for its ECR25 Electric compact excavator since 2020



With its EZ17e mini excavator, Wacker Neuson has expanded its zero-emission series



At bauma 2022, Yanmar showcased an electrified demonstration mini excavator that showed the practical application of the company's system integrator technologies



“The ECR25 mini excavator is a revolutionary machine that demonstrates Volvo CE's commitment to future technology. As the machine is electric, no particulate matter, nitrogen oxide or carbon dioxide are released into the environment.”

Scott Young, director
Electromobility and
Automation

TALKING POINTS

use compact machines, are calling for environmentally friendly products. The market potential for this range of equipment is broad and includes indoor working (where the need for diesel fume extraction is avoided), quiet urban working, landscaping and farming, among others.

Commercial launches

Leading construction machinery companies have therefore successfully brought to market several e-solutions in the compact excavator space. Since February 2020, Volvo Construction



The ECR25 is fitted with lithium-ion batteries and one electric motor which powers the hydraulics in order to move the machine and the attachment.

Equipment (Volvo CE) has been accepting orders for its ECR25 Electric compact excavator. The first of the machines offered in 13 countries have already been delivered to end customers.

The ECR25 is fitted with lithium-ion batteries and one electric motor which powers the hydraulics in order to move the machine and the attachment. The machine's batteries store enough electric energy to power the ECR25 for eight hours in its most common applications, such as utility work.

"The ECR25 is a revolutionary machine that demonstrates Volvo CE's commitment to future technology," says Scott Young, director Electromobility and Automation. "As the machine is electric, no particulate matter, nitrogen oxide or carbon dioxide are released into the environment. This, together with the fact that it has extremely low noise levels, makes it ideal for use in cities and densely populated areas."

Last year, Wacker Neuson launched the EZ17e mini excavator as a series product. "In 2015, we put the first battery-powered rammer on the market and, from the start, designed a sustainable system for our customers' purposes. Today, the modular battery can be used in seven units," says Alexander Greschner, sales director of the Wacker Neuson Group.

"With the EZ17e mini excavator, we have expanded our zero-emission series. With more than 12 machines, an entire inner-city construction site can be operated completely free of exhaust emissions – without limitations in the sequence of operations or in performance, not least because of the consistently retained zero-

tail design," adds Greschner.

The first question when it comes to battery-powered equipment: how long can I work with the battery? Wacker Neuson's answer: a whole workday, even without intermittent charging. The EZ17e, with its integrated lithium-ion battery, can be used either without a power cable or also, during stationary activities, charged at power sources from 100 to 415 V in ongoing operation.

Expanding the range

Having first launched its E10e electric mini excavator, one of the industry's first commercially available fully electric, zero tail swing (ZTS) mini excavators in the 1-t class, Bobcat has expanded its electric range with the launch of its E19e.

Officially launched at the recently ended bauma 2022 show, the 2-t battery-electric machine features the same profile, external dimensions and offers comparable performance as the popular diesel powered E19 mini excavator, more than 10 000 units of which have been sold globally.

With a width of just 98 cm, the new E19e model is ideally suited for indoor applications where space is at a premium. "The E19e is a perfect fit for applications such as indoor and outdoor demolition, landscaping and infrastructure activities, as well as other tasks that necessitate night-time work or low noise levels. The machine, therefore, fits the bill for rental companies and contractors alike," says Miroslav Konas, mini excavator product manager at Doosan Bobcat EMEA.

Featuring a 3,5-hour battery capacity, the

The move toward a more sustainable construction industry is well underway with a clear roadmap ahead to deliver zero-emission equipment fit for the future.

E19e comes with a super-fast charger, which allows for opportunity charging during work breaks, thus maximising uptime on site.

Doosan Bobcat CEO Scott Park says the launch of the E19e confirms Bobcat's commitment to helping the industry meet its environmental, social and governance (ESG) targets. "The move toward a more sustainable construction industry is well underway with a clear roadmap ahead to deliver zero-emission equipment fit for the future. Battery electric products form a major part of this ambition, and we remain at the forefront of the global rollout," says Park.

Although the electric mini excavator constitutes only 2 – 3% of the 100 000-unit compact excavator market, it is projected to grow up to 30% in the next five years, notes Mike Vought, vice president at Doosan Bobcat EMEA.

Yanmar's roadmap

As part of its journey to a carbon neutral future, Yanmar used bauma 2022 to outline its electrification strategy for off-road vehicles and equipment.

Yanmar board member Shiori Nagata says the world of construction machinery and powertrains is evolving, with manufacturers and end users alike driving the transition from traditional combustion engines to battery power. However, she says, the new scenario brings with it fresh challenges for OEMs and power systems' suppliers.

Yanmar will therefore establish itself as the all-in-one systems integrator for smart electrified power solutions tailored to the application-specific needs of individual



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Caterpillar's 301.9 prototype mini excavator.

OEMs. In its capacity as a systems integrator, Yanmar will implement system engineering, design and manufacturing of e-powertrains, while providing control development, system evaluation, procurement, manufacturing and quality assurance.

"As Yanmar looks to meet the challenges of the coming century, our transformation will encompass new products with alternative fuel technologies. Our aim in this strategy, together with our dealers and OEM partners, is to build stronger relationships and create even greater customer value with new-energy technology. We will work hard to support our OEM partners and customers to achieve their environmental and performance goals," says Tomohisa Tao, president Yanmar Power Technology.

Carlo Giudici, Yanmar sales director EMEA, says the company will accelerate its e-powertrain strategy in the next few months.

"Furthermore, we are giving ourselves another challenge this year – the Yanmar Green Challenge 2050. It is a declaration and a challenge we impose on ourselves to become a company that achieves zero greenhouse gas emissions and a zero ecological footprint by recycling resources," says Giudici.

At bauma 2022, Yanmar showcased an electrified demonstration mini excavator that showed the practical application of the

company's system integrator technologies. Powered by an efficient electric drive and 48-V batteries with fast charging capability, the electric excavator is a quiet, zero-emission machine designed to meet the most demanding emissions restrictions.

"The machine is an example of Yanmar's system integrator applications technology, integrating power and control systems with advanced applications management in a versatile and easy to use machine," adds Giudici.

Prototypes abound

Testament to its commitment to an electric future, Caterpillar used bauma 2022 to showcase four electric prototypes. Caterpillar is focused on delivering purpose-built solutions to help customers achieve their sustainability goals by geography, by jobsite and specific customer needs.

One of many solutions, the battery electric machine prototypes include the 301.9 mini excavator, 320 medium excavator, 950 GC medium wheel loader and 906 compact wheel loader. The 301.9 and 906 are expected to be the first commercially available models. The machines are powered by Caterpillar battery prototypes and include an onboard AC charger. The company also plans to offer an offboard DC fast charging option.

"Caterpillar is well positioned to help customers reach their sustainability goals,

including lowering emissions on the jobsite," says Tony Fassino, Construction Industries group president. "It is important we meet customers on their sustainability journey today with a variety of solutions, including machines that run on renewable fuels or technology that increases fuel efficiency, as well as supporting them into the future as we power our next generation of machines."

The Caterpillar-designed batteries in these machines will also be available to power other industrial applications. Built on proven Caterpillar technology, the lithium-ion battery range features a modular design that offers flexible configurations across multiple applications. The batteries are engineered to be scalable to industry and customer performance needs and maximise sustainability throughout their lifecycle, including recycling and reuse at the end of life.

"Our electrified products leverage our deep system integration experience and are designed to meet the performance expectations that customers have come to expect from Caterpillar. We are focused on helping our customers achieve the optimal product and jobsite energy lifecycle, allowing them to maximise value and minimise their total cost of operation," concludes Joe Creed, Caterpillar's Energy & Transportation group president. 🌱



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SEW-EURODRIVE South Africa, a specialist in drive and control technologies, moved into its new state-of-the-art 26 000-m² headquarters complex in Aeroton, Johannesburg.

NEW HIGH-TECH AFRICAN FACILITY FOR SEW-EURODRIVE

SEW-EURODRIVE South Africa, a specialist in drive and control technologies, moved into its new state-of-the-art 26 000-m² headquarters complex in Aeroton, Johannesburg, earlier this year. The new complex more than triples the floor and factory space available at its previous premises.



“With the implementation of the African Continental Free Trade Area (AfCFTA) protocol, which came into effect in early 2021, and a push to grow manufacturing on the continent, we are expecting African markets to account for around 50% of our turnover within the next few years.”

Raymond Obermeyer, Managing Director of SEW-EURODRIVE South Africa

Built and equipped at a cost of R200 million and modelled on SEW-EURODRIVE's showcase factory in Graben-Neudorf in Germany, the facility – which accommodates approximately 150 employees – makes extensive use of the latest technologies to network people effectively, processes, services and data.

The investment reflects SEW-EURODRIVE's confidence in the future of both South Africa and the African continent. The company points out that Africa is



The new facility will play a pivotal role in allowing SEW-EURODRIVE to service the burgeoning Africa market efficiently.

the world's next growth market. Home to 17% of the global population in 2019, it is expected to account for 26% by 2050 and an estimated US\$16,2 trillion of combined consumer and business spending.

Continuing the investment, Raymond Obermeyer, Managing Director of SEW-EURODRIVE South Africa, says: "This is a bold step that demonstrates our commitment to solving South Africa's problems and

developing the economies of countries across Africa."

SEW-EURODRIVE currently services 23 countries throughout the African continent from South Africa. "With the implementation of the African Continental Free Trade Area (AfCFTA) protocol, which came into effect in early 2021, and a push to grow to manufacture on the continent, we are expecting African markets to account for

around 50% of our turnover within the next few years," says Obermeyer.

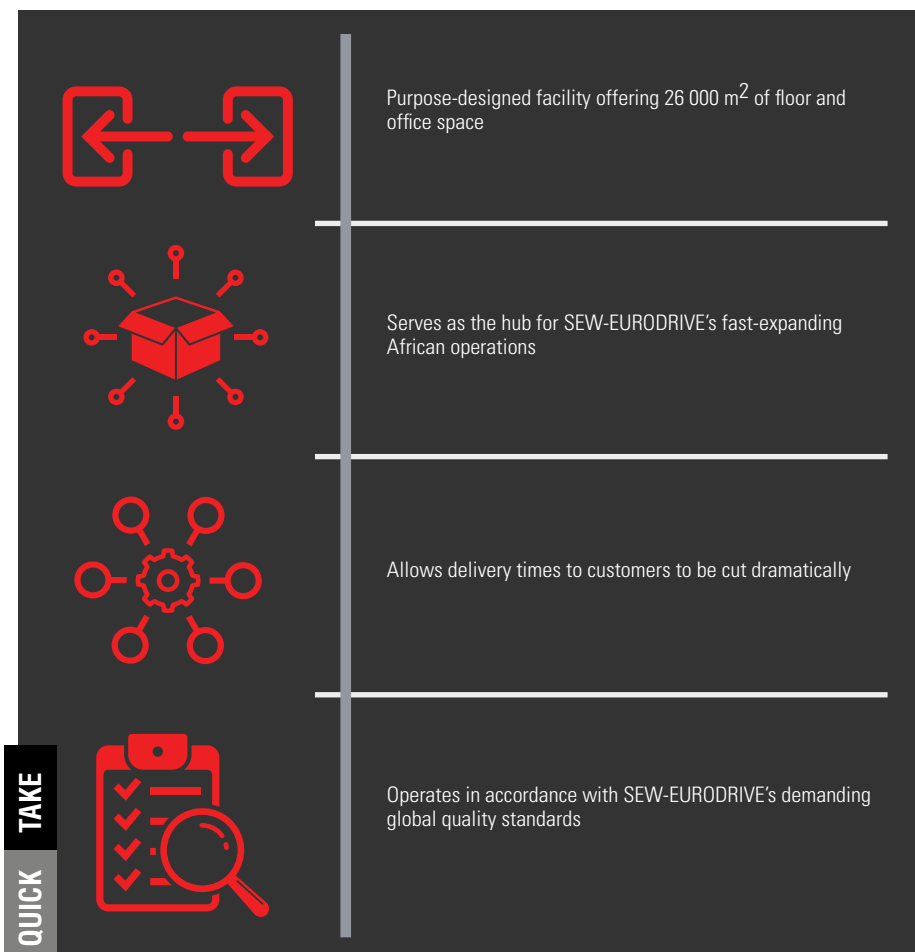
The new facility will play a pivotal role in allowing SEW-EURODRIVE to efficiently service the burgeoning Africa market. It houses the group's African head office, an industrial gears and electric drives assembly plant, and expanded central warehousing and repair facilities. It also encompasses the assembly and repair of all VSDs, AGV's and Servo motor technology. SEW-EURODRIVE also employs multiple mechanical, electrical and mechatronic engineers to support technical customer queries further.

In addition, it accommodates SEW-EURODRIVE's unrivalled Drive Academy, which delivers product awareness and maintenance training to customers. Online and virtual AR training and support is now also available in direct support of SEW-EURODRIVE's social development plans.

The expanded warehousing gives SEW-EURODRIVE the ability to increase stock levels, a huge benefit given the problems currently affecting the global supply chain. It means the company's customers in Africa can get orders – for new equipment or spares – fulfilled with minimal delay.

"The new facility allows us to service our customers more efficiently, reducing the high cost of unplanned downtime and allowing them to adhere to their scheduled maintenance programmes," Obermeyer states. "Ensuring our customers' continued productivity has been the key to developing our new premises."

Over three to five years, SEW-EURODRIVE will incorporate other 4IR technologies, including automated assembly machines and guided vehicles, into the





Built and equipped at a cost of R200 million, the new SEW-EURODRIVE facility makes extensive use of the latest technologies to effectively network people, processes, services and data.



SEW-EURODRIVE has used its own technology to automate operations at the Aeroton facility.

Aeroton factory at an additional R200 million cost.

"We are working hard to shape the factory of tomorrow with system solutions for Industry 4.0 and a focus on raising productivity and implementing smart maintenance while, at the same time, providing ergonomic support for the people working in these facilities," notes Obermeyer.

SEW-EURODRIVE has used its technology to automate operations at the Aeroton facility. The main production conveyor is based on the company's high-tech MOVI-C all-in-one modular drive solution, which is now being introduced to the African mar-

ket. MOVI-C had its official African launch at the recent Electra Mining Africa 2022 show in Johannesburg.

MOVI-C is a suite of products – including controllers (PLCs), variable speed drives, gear motors and servomotors – that automates drive applications, whether simple or complex.

The installation – which has resulted in a 40% productivity gain – includes the MOVIGEAR mechatronic drive system. The MOVIGEAR units – which combine an energy-efficient IE5 motor, gear unit and corresponding drive electronics in a single housing – control and drive the production

conveyor. The modular nature of the installation means it can easily be extended in the future should the need arise.

The assembly line for geared motors can accommodate 7 000 units per month, while the assembly of industrial gear (IG) units is currently ramped up to between 100 to 140 IG units per month, doubling the current capacity. New spray booths and automated oil filling stations have been installed to cater for these volumes.

All local assembly is conducted per SEW-EURODRIVE's global quality standards, with the assembly of VSDs, servo motors and other sensitive equipment being undertaken in an isolated clean area – with copper grounding and anti-static mats – of the facility. The assembly and logistics processes are also now incorporated into SEW-EURODRIVE's SAP system, which gives better traceability and visibility of all orders as they move through assembly processes.

Among the products to be produced at the new facility are SEW-EURODRIVE's modular air-cooled condenser (MACC) drives, which have already experienced excellent sales in South Africa, with two units installed recently in the Northern Cape and a further 24 units at a Limpopo site.

Forming part of SEW-EURODRIVE's M-Series modular IG range, the MACC is a purpose-designed gearbox solution for driving the modern fan-based air-cooled condenser systems used in steam-driven power generation units.

SEW-EURODRIVE will stock a single casing size with multiple components and specific ratios depending on which power station requires the drive. This modular approach will enable the new facility to custom assemble MACCs at a rate of approximately two to three units a week, drastically cutting the long lead times typically associated with equipment of this type.

Other notable products to be locally assembled include the New Generation X.e Series industrial gears; the P-series planetary industrial gears for high torque mining applications; short importation and commission lead times for mill drive solutions with power packs; electric motors; and the customised single-stage M1 range of speed reducers, which consists of 37 options for fine tuning a drive's output speed and torque.

Illustrating the benefits of the new Johannesburg facility, SEW-EURODRIVE anticipates being able to assemble and test customised M1 units within two to three weeks from an order being placed. Previously they had to be imported from overseas with lead times of between 16 and 20 weeks. 🌟

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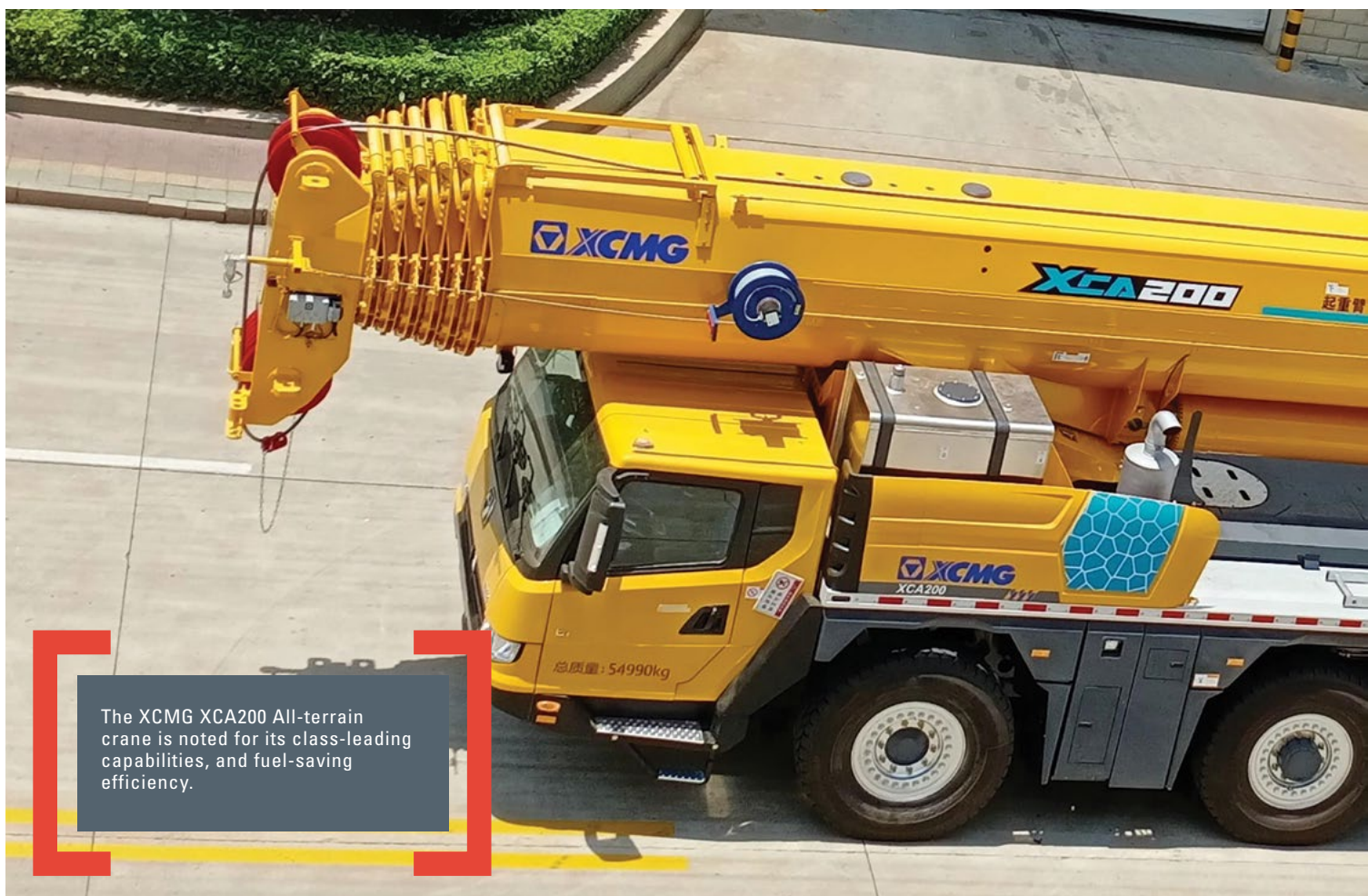
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XCMG MAKES ITS MARK IN SOUTH AFRICA

Chinese capital equipment manufacturer Xuzhou Construction Machinery Group (XCMG) is no stranger to the African continent. Still, with its new office and warehouse in Spartan, Johannesburg, the equipment displays are a testament that the XCMG yellow machines mean business, and their range of truck cranes is raising the stakes, writes Adriaan Roets.

Back in 2000 XCMG made its first entry into South Africa when 80 Wheel Loaders were made available to a client.

Since then, the juggernaut Chinese Group has risen to the occasion, offering South African buyers a wide range of equipment.

In terms of lifting, the XCMG range of truck and all-terrain cranes is well-received, and thanks to various options when purchasing a piece of equipment XCMG Truck Cranes offer a way to meet interdisciplinary needs.

According to Sun Zeyu, Manager of Products at XCMG, the XCMG cranes are widely used for lifting operations in general engineering projects, construction sites, urban renewal projects, ports, bridges, oilfields and mines and complex working environments.

As a result, there's a variety of cranes available. This is a departure from the sole QY25K5 model released in South Africa in 2007.

Zeyu gives specific insight into three of the group's truck

cranes, where versatility is part and parcel of the piece of equipment.

XCT30_Y Truck Crane

Featuring a 4-section boom of 34 m, a U-type profile is adopted in the XCT30_Y. The maximum lifting load is 30t in this robust but compact crane. The maximum lifting height is around 43.2 m, with the full working radius set at 30 m. All these capacities are class-leading, according to XCMG.

The XCT30_Y is especially suited for various weather conditions, and its applications shine in rainy, high-temperature and humid working environments. The truck crane can continuously work without downtime at an ambient temperature of 50°C.

XCT60_Y Truck Crane

With its 5-section boom of 44 m, the U-type profile is adopted. The maximum lifting load is 60t, with the maximum lifting height at 59.8 m when the XCT60_Y



The XCMG spare parts warehouse offers floorspace for parts totalling around USD 3 million at any given time, making it easier for local owners of XCMG equipment to have access to parts.

QUICK TAKE

XCMG has been in South Africa since 2000



XCMG is a Top 3 construction machinery company in the world.



XCMG Equipment has a 1 500 m² spare parts warehouse in South Africa



The company has a professional technician from China and a local after-sales team that ensure support for the local market



In South Africa, XCMG will provide robust after-sale support, high-quality products, reasonable prices and effective service for the client.

is on site. The performance of the crane takes the lead comprehensively, according to XCMG. The machine is designed to be high-temperature resistant, so it can continuously work without downtime in an ambient temperature of 45°C. The whole vehicle is also waterproof and corrosion-resistant. The reliability and service life of parts are greatly improved, according to XCMG, translating to a long work life.

XCA200 All-Terrain Crane

The truck crane is a five-axle, 200-tonne



The XCA200 is noted for its 72 tonne counterweight where auxiliary winch, hook, outriggers, outrigger floats, spare tire, and the like, can be carried on board.



Noted for its smaller size, the XCT30_Y doesn't skimp on operational capabilities, especially in various weather conditions.

all-terrain crane with a class-leading lifting performance, a long boom length and powerful performance. Its seven-section boom can be extended to 72 m with a fixed jib of 40m. In total, the boom and jib can reach 107.3 m. A single-engine drive line is adopted, and the lifting capacity is greatly improved. The maximum load moment is 6664KNm.

Thanks to its efficient job site transfer,

the XCA200 is convenient and economical. The travel speed is 80 km/h for long-distance transfer, while a low-speed large torque driveline is adopted, and the fuel consumption per 100 km is 70ℓ. Adding to its economy is the low cost of long-distance job site transfer. There is no need for an auxiliary crane for short-distance transfers. With 72t counterweight, auxiliary winch, hook, outriggers, outrigger floats, spare



The XCT60_Y offers a maximum lifting load of 60 tonnes with the maximum lifting height at 59.8 m.

tire, and the like, can be carried on board. Hundreds of elaborate, reliable, durable upgrades are also available, with enhanced product reliability and prolonged service life.

Parts aplenty

XCMG Equipment operates from Spartan in Johannesburg, where the company has a professional technician from China and an after-sales team that ensure support for the local market.

Over and above the added support, XCMG Equipment has a 1 500 m² spare parts warehouse with over 3 million USD in stock.

Zeyu believes that XCMG's global rankings make the cranes suitable for the South African market.

"XCMG is a Top 3 construction machinery company in the world. During its solid and stable development in the global market, XCMG has gradually established a marketing network made up of more than 2 000 service terminals, more than 6 000 technical experts, and more than 5 000 marketing and sales service staff, covering 183 countries and regions to constantly provide its worldwide customers with one-stop, integrated, highly efficient, and convenient pre-sales, sales and after-sales services."

Locally the promise is heartening.

"In South Africa, XCMG will provide robust after-sale support, high-quality products, reasonable prices and effective service for the client," says Zeyu. 🌟

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Since March 2022, John Deere Financial has announced that it has extended its portfolio offerings to include John Deere Construction and Mining. The John Deere Financial objective is to support clients and their businesses to benefit from tailor-made asset finance, which saves them money in the process. To deliver the best possible service and solution to its clients, John Deere Financial is built on four key pillars: Convenience, Commitment, Competitiveness and Insightfulness.

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it is even possible for the John Deere Financial representative to gather the documents from the accountant or auditor. This way, both parties can do what they enjoy, and the clients can focus on what they do best.

Commitment

Our clients invest in John Deere by purchasing new John Deere equipment. In return, John Deere Financial wants to contribute to the success of its clients and their businesses. Unpredictable circumstances can easily disrupt the plans of clients. During these times, John Deere Financial can provide support by presenting flexible solutions to their clients. John Deere Financial also recognises that business cycles may differ from year to year, so the payment dates can easily be extended by a month or two, working with the client's cash flow cycle.

Competitiveness

People first consider reasonable interest rates when it comes to financing solutions. The financial package structure and considerations of the term and deposit mean that John Deere clients can expect

rates as low as prime minus 9%. This low-interest rate means smaller instalments. Competitiveness does not end with interest rates. However, the speed of these services, the types of financial solutions available to clients, and their convenience all add weight. By positioning John Deere Financial as the market leader in financing John Deere equipment, the company challenges competitors to improve their service and price to benefit clients continuously.

Insightfulness

John Deere Financial continues to grow with the business of clients. Through this, the company ensures that its service and solutions remain relevant and sufficient to meet the growing needs of clients. John Deere provides custom-designed financial solutions and support with fast approvals in the construction environment. John Deere Financial invites customers based in the construction, mining, and quarrying businesses, and farmers interested in purchasing new equipment to contact their nearest John Deere Dealership or directly at africa@johndeere.com. 🌍

Determining which deck configuration will be the best fit is a question for the professionals, as each has pros and cons. Custom trailer manufacturers have the experience and knowledge to determine the best style.

TRAILER SIZING TIPS FOR EARTHMOVING EQUIPMENT

Earthmoving equipment comes in a variety of shapes and sizes. From bulldozers to excavators, scrapers to dump trucks, finding a trailer to haul the necessary equipment to and from the job site can seem daunting. But it's not impossible.



"Failing to pay attention to how the capacity rating is calculated can lead to overloading the trailer, which can result in stress fractures and ultimately trailer failure"

Troy Geisler, vice president of sales and marketing, Talbert Manufacturing

Researching, answering questions and working with knowledgeable dealers and manufacturers can help operators select the right trailer to move their earthmovers — one that will safely increase productivity for years to come.

This is according to Troy Geisler, vice president of sales and marketing for Talbert Manufacturing.

Talbert has been building world-class heavy-haul and specialised trailers to rigorous customer specifications since



Working with an experienced manufacturer will ensure a wealth of knowledge and expertise in ensuring trailers and loads are safe and compliant for each area of operation.

1938. The company offers complete lines of heavy-haul trailers and specialised transportation equipment for the commercial, industrial, military and government sectors. Its trailers and equipment are used in applications as diverse as renewable energy, aerospace, heavy construction, in-plant material handling, manufacturing and

processing systems. In short, Talbert staff are experts in selecting the right trailer for the right equipment. Here are essential tips to keep in mind when sizing a trailer for earthmoving equipment.

Equipment weight and dimensions

The first step in sizing a trailer for any

There are various boom lengths, and operators need to consider where the boom will sit on the trailer and how it will be cradled.



Working with a custom manufacturer offers the best safety, value and peace of mind results. A trusted manufacturer will work to understand the client, not just the load.



Some equipment will require special considerations. Some excavators, for example, have adjustable track widths for operation or transportation modes.



Three different trailer decks are used for hauling big pieces of equipment, and each configuration secures different types of equipment.



Trailers offer a variety of loading configurations. While tag-a-long trailers that unload off the back are an accepted option for smaller equipment in tight spaces, safety can be a concern.

QUICK TAKE

hauling job is determining the weight and dimensions of the load. Start by deciding the machine's length, height, width and weight. Remember that the spec sheet information might not include the dimensions and weight with added accessories.

When making initial calculations, ensure the availability of a truck that can handle hauling the equipment before moving onto the trailer. A 3-axle tractor and a 4-axle tractor will have different hauling capabilities.

Some equipment will also require special considerations. Certain excavators, for example, have adjustable track widths for operation or transportation modes. Be



Customisations such as a rear bridge design eliminate interference with boom placement and make transportation safer and more accessible.

sure to figure out which mode will be used during transport, as it may take time to make the necessary adjustments to convert between the two. For safety reasons, one-half of the track or tyre width of any machine must be on the deck, excluding the outriggers. While the standard trailer might work on paper for a particular excavator's transport mode, one must be clear about how trailers will be loaded from job to job. Be sure to keep this in mind.

Accessories, such as an excavator's boom, are another area where operators must be aware of special requirements. There are various boom lengths, and operators need to consider where the boom will sit on the trailer and how it will be cradled. A low-enough position of the boom is critical for keeping the load within height restrictions. Customisations, such as a rear bridge design, eliminate interference with boom placement and make transportation safer and more accessible.

After determining the weight and dimensions, it's time to look at trailer deck designs. Manufacturers usually offer three deck configurations: flat, raised centre and beam. Determining which one will be the best fit is a question for professionals, as each has pros and cons. Custom trailer manufacturers have the experience and knowledge to determine the best style. While the primary focus might be a bulldozer or scraper, a trailer often hauls various pieces of equipment. Backhaul equipment should also be included in calculations. An expert can determine the best trailer to meet all hauling needs.

Deck designs

Three different trailer decks are used for hauling big pieces of equipment, and each configuration secures different types of equipment.

Flat is the standard deck design. It offers the most versatility for moving a variety of equipment. However, it also has the highest deck height and might not be ideal for taller machines.

Raised Centre or "RC" decks offers a lower deck height than a flat deck. Not all equipment will fit nicely over the raised centre, though. Extra blocking might be required for some machines to ensure it sits safely on the trailer. This reduces efficiency when loading and unloading. For other mobiles, like specific models of bulldozers and scrapers, an RC deck might not provide the safest, most durable option.

Beam decks allow equipment to straddle a central beam with this deck design, meaning it has the lowest ground clearance of the three decks. The main drawback is the lack of deck for accessories or smaller components. This configuration might only be suitable for some earthmoving equipment.

Loading configurations

Today's trailers offer a variety of loading configurations. While tag-a-long trailers that unload off the back are an accepted option for smaller equipment in tight spaces, safety can be a concern. Driving over the back of the trailer is no easy feat and requires a careful and experienced driver to prevent damage and minimise the risk of tipping the machine. Removable goosenecks reduce the safety risk by eliminating the need to

drive up and over the trailer axles. This configuration saves time, hassle and expense while extending the trailer's life. However, remember that a removable gooseneck requires ample space for loading and unloading.

Trailer construction

Not all trailers are created equal. It's essential to consider the quality of a trailer, not just the price tag. Working with a custom manufacturer offers the best safety, value and peace of mind results. A trusted manufacturer will work to understand the client, not just the load. It will consider not just the earthmoving equipment but everything the client needs to haul, the territories of operation and the specific challenges they face. The manufacturer will use that information to design a trailer that offers maximum flexibility, versatility and strength.

Also, consider the construction materials. Look for materials like heavy-duty T-1, and 100,000-psi minimum yield steel for extreme durability and longevity. Apitong flooring is another good choice because it sands better than traditional oak and pine decking. Investing in higher-quality materials and components can double the trailer's life, significantly enhancing ROI.

Trailers from a respectable manufacturer may also include positive camber in the original design. The amount of camber can be customised based on the estimated usual load to ensure the flattest loaded deck possible. Providing the right trailer for the correct application is a job left to the pros, but with these tips, operators can get a jump start on the process. 🌟

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Accessible on multiple platforms

First fossil-free steel trucks roll down the line

Volvo has begun using fossil-free steel in its trucks. The trucks are also electric.

In September, Volvo Trucks started series production of heavy-duty electric, 44-tonne trucks. The line includes some of the world's first trucks bolted together with fossil-free steel.

"Our journey to net zero emissions includes both making our vehicles fossil free in operation and over time fully replacing the material in our trucks with fossil-free and recycled alternatives," says Jessica Sandström, Senior Vice President of Product Management at Volvo Trucks.

The steel used in production is sourced from the Swedish steel manufacturer SSAB and is made using a completely new technology with fossil-free electricity and hydrogen.

The steel, as a result, has a lower climate impact and another step forward in a net-zero emissions value chain.

The first bulk of steel produced with hydrogen is used in the electric truck's frame rails, the truck's backbone upon which all other main components are mounted.

Volvo is committed to using fossil-free steel in more parts as the availability of fossil-free steel increases.

Among the customers that will have fossil-free steel in some of their electric trucks are Amazon and DFDS and, through the



transport company Simon Loos, Unilever.

"At Amazon, we are on the way to make all of our operations net-zero carbon by 2040. We need partners like Volvo to make this transition happen," says Andreas Marschner, Vice President Transportation Services Europe at Amazon.

The truck manufacturer states that

around 30% of the materials in a new Volvo truck come from recycled materials and that end-of-life trucks are 90% recyclable.

Volvo Trucks is committed to the Paris agreement on climate change and to achieving net-zero greenhouse gas emissions in the entire value chain by 2040 at the latest. 🌱

Inaugural winners announced at South African Freight Awards

More than 40 leaders in the road freight industry received recognition on 15 November for their vigorous commitment to the industry.

The inaugural South African Freight Awards spotlight the quality improvement of established and emerging enterprises and suppliers in the road freight sector.

"Our vision is to enable small and medium enterprises (SMEs) in the road freight sector to build businesses that last and to foster collaboration in support of empowering black entrepreneurs," says event organiser Florence Musundwa, Founder of GrowSupplierZA. "Through the Awards, we have created a curated ecosystem platform that enables public and private stakeholders to exchange knowledge and best practice."

Awards were presented in four categories and special awards for individuals presented during the night.

Some of the winners are as follows:

Honorary Industry Advocacy Award

The award went to Mary Phadi, President

of the Truckers Association of South Africa (TASA). She was recognised for her contribution to the road freight industry.

- Excellent Achiever in Road Freight
- Beyers Mamakoko - Emcaf Engineering
- Christine Mackay - Macatlas Freight
- Donald Msimanga- Soliphetha Trading Enterprise
- Greg Richardson – Executive: Colt Logistics
- Jan Shongwe - Millira Transport
- Johannes Choeu - JR Choeu Africa
- Madoda Ngcobo - Ossebn cc
- Maxwell Mlangeni - Director: Today's Destiny Logistics
- Mpho Magano – Founder and Owner: Rambait Trading
- Nomvula Twala - Zibuse Transport
- Ntuthuko Mhlongo - CEO and Owner: Dinjoms Trading
- Palesa Nzimande - Tupapele Solutions
- Phaphama Jonas - Sanoj Project Solutions
- Roann Vetter – Manager Director: Roclin Transport

- Robby Mogoashoa - Mamonkwe Trading cc
- Samuel Maphosa – Managing Director: Njini Enterprise and Projects
- Shirley Kgalalelo Bidi - CMED Logistics
- Siphokhe Lukhele – Managing Director: Msika Business Enterprise

Supporters of the awards included the Department of Transport, the Department of Small Business Development, the Transport Sector Retirement Fund, the Transport Education and Training Authority (TETA), MLM Logistics, Sun International, JC Auditors, Mamoya Trading & Projects and the Truckers Association of South Africa. 🌱



Lubricants keep the wheels turning for fleet owners

Independent lubricants manufacturer FUCHS Lubricants South Africa is showcasing its premium quality products for commercial vehicle fleets.

"What differentiates us in the market is our product quality and OEM approvals," says Lesley Barnard, Automotive After-market.

"Because we are a multinational business following strict processes and procedures wherever we operate, our customers have peace of mind that our products are manufactured by the highest standards of the lubricants industry. There are no shortcuts taken," says Barnard.

Although lubricants constitute a small portion of the total running cost of a fleet, the benefits of standardising on premium products are considerable. "The payback from using a good lubricant is significant over the long term," notes Barnard. This extends to the potential of engine failures and increased fuel consumption due to using inferior products.

"Just in terms of fuel consumption alone, by choosing the right lubricant, fleet owners can save a significant amount of money over the lifespan of their vehicles by carefully



considering the products they use." Another impact is increased downtime due to trucks standing idle due to maintenance issues.

"This is a significant cost that fleet owner must consider. If their vehicles are not running, they lose money. So that is quite important."

Looking beyond lubricants themselves, Barnard says any good maintenance regime must consider fuel quality and the types of filters used. In the case of vehicle fleets based on multiple OEMs, FUCHS can cus-

tomise a lubricant plan for the entire fleet.

"We can also look at your workshop setup to see if you need any support in dispensing equipment, for example."

FUCHS even offers training ranging from the basics of lubricants to the different products available. It also works closely with its customers regarding oil analysis to extract the longest life from the lubricants and the fleet itself. "We are happy to assist with oil analysis programs and interpreting the results," adds Barnard. 🌱

New N75 EV 4-tonne truck added to JAC N-Series



With one eye on a zero-emission future and the other on cost-saving in South Africa, JAC Motors South Africa has announced the introduction of its new N75 EV.

The truck forms part of the local N-Series truck line-up. It could make for a sustainable fleet locally, not only thanks to the N75 EV's status as an electric vehicle but because of its versatility and durability.

Adding a battery-electric truck to its line-up illustrates that JAC Motors is confident these vehicles will perform locally and that alternative energy solutions are vital.

In terms of specs, the N75 EV features a 65 kW (130 kW peak power) synchronous

electric motor with 415/1 200 Nm of torque. It is powered by a 106.95 kWh LFP battery pack that allows for a reach of 200 km per charge.

Charging is streamlined with a DC Fast Charger with a standard European CCS2-Combo. Owing to its smaller size, the battery recharges in approximately two hours, which translates to a 200 km range. The clincher is that the truck saves around 50% on fuel and energy costs – strengthening EVs as a viable option when replacing vehicles. The N75 6-tonne truck with its reliable Euro 3, 3.8-litre Cummins ISF four-cylinder common-rail turbodiesel engine, is a popular choice with transport operators,

mainly because of its durability, low TCO (Total Cost of Ownership) and versatility.

Its average fuel consumption is 15.1 ℓ/100 km (combined cycle) and it features an exhaust brake system for maximum braking efficiency.

After the 2019 global launch of the N55 EV, JAC Motors South Africa introduced it locally in mid-2021. The company tested it in various transport fleets and collected sufficient data, which they believe will encourage more transport operators to switch to battery-electric trucks.

Market interest in the N55 EV 3.5-tonne truck has convinced the company to introduce the beefier N75 EV 4-tonne truck. 🌱

ASPASA serves smaller-scale surface mines

Aggregate and Sand Producers Association of Southern Africa (ASPASA) serves a unique role within mining. Custodianship of mines that produce sand and aggregates, key components of concrete, is critical to further developing South Africa's construction industry and securing sufficient supplies for years to come. Smaller-scale surface mines lacking some of the resources needed to ensure day-to-day compliance with legislation and other statutory conditions are turning towards ASPASA to fill the voids.

While ASPASA is strongly focused on the mining industry, its association with other professional bodies, such as The Concrete Institute (TCI) can add as much value and is why ASPASA is a long-time associate member of the institute.

The association's work in collaboration with all levels of Government, the private construction sector and labour over the past 30 years has earned the industry's respect. It has also led to a stampede of surface mines applying for membership and resulted in a change of its constitution to admit mines other than the sand and aggregate quarries it was founded to represent.

ASPASA's membership includes mines in the salt, dimension stone, diamond, clay and other sectors. The association also provides services aligned with affiliated onsite plants, such as ready-mix and processing plants. When necessary, the association protects and lobbies on behalf of the surface mining industry and provides appropriate training and literature to its members



through its various committees.

Some of the critical services that contribute to the ever-growing popularity of the association and that assist its members in providing the highest levels of service to the concrete industry include audits.

ASPASA requires mines to undergo two compulsory audits in health and safety, as well as the environment, to ensure compliance with legislation and statutory requirements.

Workshops are another vital service

between the association and its members to update and upskill the industry to respond to changing market requirements.

In terms of global competitiveness, ASPASA is a long-established member of the Global Aggregates Information Network (GAIN), which represents sharing surface mining industry associations across the globe from China to the USA, Australia and the United Kingdom. It provides a valuable platform for sharing information, emerging trends and best practices. 🌐

Cat 793 features best-in-class payload, increased fuel efficiency and faster cycle times

The latest Cat 793 Mining Truck's high-performance body design reduces empty machine weight to increase payload capacity in addition to its low fuel consumption.

With a top speed of 60 km/h, the Cat 793 offers up to 10% faster cycle times, and it travels at a class-leading speed of 12.9 km/h (8 mph) on 10% grades and can navigate a maximum 25% grade fully loaded. Enhanced automatic retarding control selects optimum speed based on grade, payload and brake oil temperature to increase speed up to 25% during retarding.

Equally impressive is the Cat C175-16 engine powering the 793. It has more than 21 million operating field hours and can achieve over 3.8 million litres (1 million gallons) of fuel burn before overhaul. Its new Cat-enhanced oil filtration system increases engine life, eliminates cartridge filter changes and allows for extended oil change intervals.



The Cat 793 delivers excellent connectivity with fully integrated Cat electronics to improve access to information. Trucks are shipped factory-equipped with Cat Product Link Elite with standard 4G/LTE cellular connectivity or optional dual-mode cellular/satellite or local Wi-Fi networks for reliable data transfer.

The integrated factory offers hauling features and an autonomous haulage system, Cat MineStar Command. It can increase truck productivity by 20%. More than 550 Cat autonomous trucks are in service and have safely hauled over 5 billion tonnes of material. These also have a fuel efficiency of around 11% more than staffed trucks. 🌐

Level 9 zero-harm at mines with new CAS solutions



A probe IMT Mining vehicle.

Collision Awareness Systems (CAS) aims to create safe and productive mines.

It then makes sense that South Africa is leading the way to implement the high-level collision awareness systems in the Earth Moving Equipment Safety Round Table (EMESRT) Vehicle Interaction Defensive Controls Model Level 9 (intervention controls).

Level 9 means an electronic system automatically slows down the machine and applies a controlled stop when a dangerous interaction is detected if an operator fails to act before Level 7 (operator awareness). Level 8 (Advisory Controls) alerts.

Proximity detection and Collision awareness are crucial to reduce fatalities, contributing to the levels of protection against the risks associated with vehicle interactions in a mine.

"With 30%-40% of mining industry deaths globally attributable to failures

of vehicle interaction controls, this is no surprise. Advances in collision awareness are arguably already showing results, with one TMM-related death reported this year in South Africa," says Gert Roselt, CEO of Probe Integrated Mining Technologies (Probe IMT).

"At Probe IMT, we have been working with carefully selected industry-leading solutions to help our clients ensure that they can meet the requirements of the Earth Moving Equipment Safety Round Table (EMESRT) Level 9 intervention controls using the mining industry developed ISO-21815 protocol," he adds.

The International Council on Mining & Minerals (ICMM) aims to eliminate all fatalities from vehicle interactions in mining by 2025. The race is on to ensure the implementation of systems in capital equipment

used at mines.

"Implementing reliable integrated systems that can comply with Level 9 requires long-term commitment and solid investment in sophisticated CAS systems that provide high integrity object detection, operator warning and automatic intervention, when necessary, to prevent an accident," says Roselt. Probe IMT is a value-added partner for Wabtec Corporation.

"Using advanced technology field hardware and communications software, with real-time system health monitoring and event reporting, the Wabtec Digital Mine's safety technology provides an industry-proven reduction in vehicle interaction risk. With the right reporting and analytics tools to monitor and manage operator behaviour, safety culture and compliance can rapidly be improved," says Roselt. 🌟

Mining Indaba gears up

Investing in African Mining Indaba, the world's largest gathering of the most influential stakeholders in the African mining industry, wants to deliver a record-breaking event in 2023.

"Mining Indaba has been a powerful platform for Africa's mining industry for almost three decades. It is the only place where the mining community comes together to share perspectives and learnings that can spark change and, ultimately, drive investment," says Simon Ford, Portfolio Director for Investing in African Mining Indaba.

Ford says the record-breaking Mining Indaba in May 2022 set the tone for the industry and post-pandemic events. As the world cautiously emerged from the global pandemic in 2022, the focus was on getting Africa's diverse economies back on track.

And while ESG as an investment imperative and the social licence to operate continue to underpin the values of Mining

Indaba, we are entering a new chapter in both pan-African and global economies, he says.

"Therefore, the theme for 2023's Mining Indaba is Unlocking African Mining Investment: Stability, Security, and Supply. This captures the genuine geopolitical shifts and economic disruptions we are experiencing, which are providing pressure points – and opportunities – within African mining as global economies seek the security of supply, especially for their energy transitions, as well as the raw materials and precious metals to bolster their economic power," says Ford.

This year's programme will delve into integral economic empowerment strategies, ways to support supply chain security for the energy transition and seizing opportunities to capitalise on the commodities super cycle.

Several new initiatives and programmes

will also be debuted at the Indaba.

"One programme we are excited about for 2023 is the Explorers Showcase. We want to showcase early-stage explorers through presentations and core samples to help stimulate those much-needed conversations with investors. In this way, we can help drive investment into every stage of the mining production cycle through explorers, to juniors and on to mid tiers and major mining companies," says Tom Quinn, Head of Content at the Investing in Mining Indaba.

Delegates will also benefit from main-stay content streams during Indaba week, including the Ministerial Symposium, Inter-governmental Summit, Green Metals Day, Sustainable Development Day, the Young Leaders Forum and the General Counsel Forum. Also making a return is the Innovation and Research Battlefield, which is a unique platform for academic institutions and start-ups to showcase their latest ideas. 🌟

Bobcat grows family of dealers in Africa

For compact equipment maker Bobcat, the African continent remains valuable to global business operations.

As Africa is starting to recover following the Covid-19 pandemic, the African business environment is showing signs of regrowth. For Bobcat, it can be seen through new companies appointed Bobcat dealers.

Nicolas Dumont, District Sales Manager - Africa for Bobcat, comments: "The compact industry is still rather marginal compared to heavy construction equipment in Africa. This is mostly because of the established mentality and the availability of labour. But the potential growth is enormous as Africa will continue to develop."

Some Bobcat equipment proved popular in the past few years, including the Bobcat backhoe loader, new mini-excavators and light compaction equipment.

"We will soon be introducing in Africa a new line of Ground Maintenance Equipment (Zero Turn mowers, Compact Tractors, Small Articulated Loaders). This will open doors to a new customer base in landscaping and agriculture. There is already existing demand for such equipment in hotel resorts and golf courses. Still, in a few decades, a landscaping industry will develop on the continent. By introducing these products in Africa now, we want to position ourselves as a leader in this segment."

Three of the newest dealers offering Bobcat equipment on the continent are in



Gabon, Zimbabwe and Sudan.

"The most significant growth is in the Mini-Excavator segment, which exceeded pre-Covid levels and showed a YTD growth of 32% in Africa. This is a sign of the start of a mindset change towards this product by companies that used to prefer the backhoe loader," adds Dumont.

"Today, the major construction projects are usually located around major cities, and the current compact industry is mostly concentrated in those areas. But in decades to come, the remote cities and villages inside the country will also have

their time. And everything must be done there, from water piping to houses to establishing fibre optic and wastewater drainage systems, to name a few. That means our dealers will also have to open new branches across the country to be able to provide service to these new locations. Today in most countries, our dealers have one main location in the capital city, so they will also have to grow together with the industry. This capacity to grow is an important criterion in our dealer scouting process as we aim at growing together." 🌟

Risks associated with increased value for the construction sector

The latest Afrimat Construction Index (ACI) showed South Africa managed to increase the value the construction sector added to the economy by 4.1%.

The Quarter 2 results are set to grow further after the announcement of support by President Ramaphosa in the economic recovery and rebuilding plan.

According to Koketso Shabalala, Underwriting Head of Construction and Single Projects at SHA Risk Specialists there are still some risks, even though the backdrop is positive.

Shabalala explains that a critical focus of the recovery and restructuring plan is around a massive infrastructure rollout through a robust pipeline of infrastructure projects, which is positive news for the construction industry.

"We have already witnessed a surge in optimism from construction companies based on this positive sentiment," he says.

"With this growth comes increased pressure and the expedition of projects.

Additionally, the shortening of timelines to deliver projects in a more time-effective manner may have an impact on the quality of work provided and an increase in human error."

In addition, he adds that the construction and engineering sector has also observed a shrinking workforce and the loss of skilled labour, which may put additional pressure on the existing workforce when delivering these pipeline projects timeously and at a high quality. "This means that there will be a greater need for contractors to share work and sub-contract some of the functions on their projects, which will provide smaller to medium contractors with the opportunity to grow and, more importantly, create employment opportunities within the sector.

"We've noted in the past that with some sub-contracted work, there is a chance that some of the controls at the main contractor level may not necessarily be present at the sub-contractor level. We may see an increase of defective workmanship claims,



Koketso Shabalala, Underwriting Head of Construction and Single Projects at SHA Risk Specialists.

injury or damage to third party property during the execution of these expedited projects," he concludes. 🌟

Safe material removal with Brokk Surface Grinder 530 (BSG 530) attachment

Brokk announced the Brokk Surface Grinder 530 (BSG 530) attachment that can be used for material removal like paint and asbestos as well as surface preparation and polishing from the floor to ceiling.

Compatible with the Brokk 170, Brokk 200 and Brokk 300, the BSG 530 allows what Brokk models can do, and as a result, contractors can tackle previously labour-intensive projects faster.

The other aspect of the Brokk Surface Grinder 530 (BSG 530) is that it can be paired with Brokk's remote-controlled operation.

"The Brokk Surface Grinder addresses a gap in the surface grinding market where there is a long history of using handheld tools for ceilings and walls," said Martin Krupicka, CEO of Brokk Group. "The Brokk Surface Grinder offers a faster, safer option than manual methods, especially when dealing with the hazardous material. We see huge potential for concrete renovation in buildings from the 1970s when asbestos was often used for insulation and fire resistance."

The BSG 530 is remote-controlled through the Brokk control box. The advantage of this is that it is an automated method of stripping plaster, handling contaminated material, strip tile adhesive and paint from walls, ceilings



and floors. The pairing removes material through constant contact and high pressure on the surface, resulting in consistent removal over large areas that are impossible with handheld grinding tools. The attachment can reach 2,300 newtons of grinding pressure for wall applications and 1,100 newtons for ceiling applications. The BSG 530 also has a feature that continually adjusts the grinding pressure to keep it constant.

The Brokk robot and the surface grinder attachment offer better safety and comfort than handheld tools.

With the attachment, operators can position themselves safely from a removal site, reduce the risk of injury from falling debris and missteps on scaffolding or other means to reach areas like ceilings.

Dust is also not something to worry about, especially in decontamination applications. Operators will also have no strain from the constant vibration of handheld tools. There's also an optional dust extraction system with an attachment to capture harmful particles.

The attachment is available in Europe, Asia, Africa, Oceania and Latin America. 🌐

Volvo shows the power of electric equipment at sites

Volvo Construction Equipment (Volvo CE) is showcasing that the journey towards emission-free job sites is underway – and there are significant benefits to using electric machines. The machines are yet to debut in Africa, but Volvo CE is committed to global sustainability.

The company's electric range incorporates the ECR18 Electric and EC18 Electric compact excavators and the L25 Electric and L20 Electric compact wheel loaders available in select Europe and North American markets, and the ECR25 Electric, available in some Europe, North America and Asia markets, together with the EC55 Electric excavator, currently available only in China. Volvo CE introduced the 23-ton EC230 Electric excavator for medium-sized equipment in selected markets. These solutions prove their potential for more efficient and sustainable operations with just as much power and performance as their diesel counterparts.

Elodie Guyot, Head of Electromobility Sales in Europe, says: "Environmental regulations are increasing worldwide. The ability to deliver the same high performance but in a more sustainable manner is no longer a niche requirement. It's a prerequisite for do-



ing business. We understand the demands on our customers and the challenges they face while also, like us, working towards their sustainability targets. We are proud to offer solutions, of which electric machines play a key role, that help them on their journey."

Moving from diesel to electric also requires partnership on a level not seen before. It is why, for example, Volvo CE has chosen to invest in Dutch firm Limach – one

of many partnerships to which Volvo CE has committed to take the lead in the industry's sustainability transformation.

All these battery-electric machines form part of the company's roadmap towards net zero value chain greenhouse gas emissions by 2040, with significant reductions to be made as early as 2030. This is a goal that cannot be achieved alone. It is by working together with customers that Volvo CE can create real change on a global scale. 🌐

ASSET MAINTENANCE, ENSURE YOU FIND A TRUSTED ADVISOR

By Suren Naidoo, Field Services VP Anglophone at Schneider Electric

Industrial equipment investments should combine after-sales maintenance, service, and repair. One can go as far as saying it's non-negotiable as no business can realistically afford downtime or, worse yet, complete and catastrophic equipment failure.

This brings us to choosing the right partner for the job. Your asset maintenance partner should be reputable and knowledgeable and understand your environment and the equipment that runs it.

Investing in the right partner, backed by a robust maintenance programme, must form part of business operations and resultant OPEX expenditure. These programmes run systems efficiently and maximise equipment expectancy, and they also play a fundamental role in mitigating downtime and system failure.

Let's start at the very beginning

The saying, "It's a simple task to make things complex, but a complex task to make things simple," couldn't be more apt when choosing an asset maintenance partner. In a nutshell, these are five attributes an organisation should look for choosing a partner:

- Expertise in maintenance personnel.
- Quality assurance.
- Onsite response time.
- Remote monitoring capability.
- Comprehensive onsite inspection.

Human error can often lead to operations issues, so ensuring the service personnel are *bona fide* experts is essential. Your asset maintenance partner should feature a pool of system specialists who receive ongoing training, including safety protocols, and are certified by regulatory bodies such as OSHA and EPA.

The service and maintenance team must have access to the necessary vendor tools and software for system diagnostics and the newest field service bulletins created by the system vendors that alert them to trending issues.

Also, access to international support that features technical experts from var-



ious regions and global case studies will provide valuable insight into particular challenges organisations might face.

Quality assurance and response time

An asset maintenance service provider should have well-documented and well-established processes and procedures. Here, standard operations procedures (SOPs), methods of procedures (MOPs), and change management processes are critical tick-box requirements.

Furthermore, a partner should document its training programmes and records of trained personnel. This will enable you to validate whether the support and service team is, in fact, qualified.

In case of a system error, ensure that the service partner can get on-site in time to meet the environment's requirements and downtime window (if any). Getting the system back up and running as quickly as possible will depend on the technician's effective diagnosis and the repair with the correct spare parts.

This reconfirms the importance of having a team of experts who can get the system up and running within the shortest timeframe backed by the OEM replace-

ment equipment and procedures.

Remote monitoring and onsite inspection

Both remote monitoring and onsite inspection play an all-important role in preventive maintenance. Remote connectivity for example, allows for quicker diagnostics of problems, which can be addressed without having to send a technician to visit the site.

However, onsite visits are essential and can provide the following benefits:

- A visual inspection will, in a non-invasive way, identify potential problems like dust or debris on a condenser, dirty condenser coils, bloated or leaky batteries, etc.
- An environmental inspection will allow the specialist to assess how a system can be impacted by humidity, air, and water quality. This all can have a direct impact on the function and life of the system.

Lastly, data analytics and AI now play a vital role in asset maintenance and repair. With more connected and smarter services, your service provider will become an invaluable and trusted advisor. 🌐

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