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# GLOBAL MIINING CORPORATE BROCHURE

HITACHI

Reliable Solutions









# ABOUT US

Our global reputation has been built over 100 years of technological and engineering innovation.

Combining the strengths of our worldwide network – from offices and manufacturing to sales and servicing – we continue to deliver world-class mining products and innovative solutions that generate new social, environmental and economic value for our customers around the world.



# **Our Vision** Ensure a prosperous land and society for the future. We contribute toward realizing a safe and sustainable society. Our Mission Meet expectations from customers, co-create innovative products, services, solutions and together, we continue to create new values.

#### **LANDCROS**

**LANDCROS** symbolizes our intention to be closer to our customers, openly co-creating new businesses and value with them and proposing innovative solutions to their problems, while helping ensure a prosperous land and society for the future.

LANDCROS is an initiative born from the desires of our employees to be a reliable partner that provides innovative solutions at every point of contact with our customers, dealers, suppliers and more. The first four letters, "LAND", directly symbolize our vision to "ensure a prosperous land and society for the future".

As a unified symbolic word, LANDCROS also reflects the Hitachi Construction Machinery Group's desire to deliver innovative solutions for all our customers and stakeholders, directly represented by the last four letters "CROS", which stand for:



#### Customercentric

approach to understand the key challenges to address

# Reliable partnerships

to design a long-term business engagement

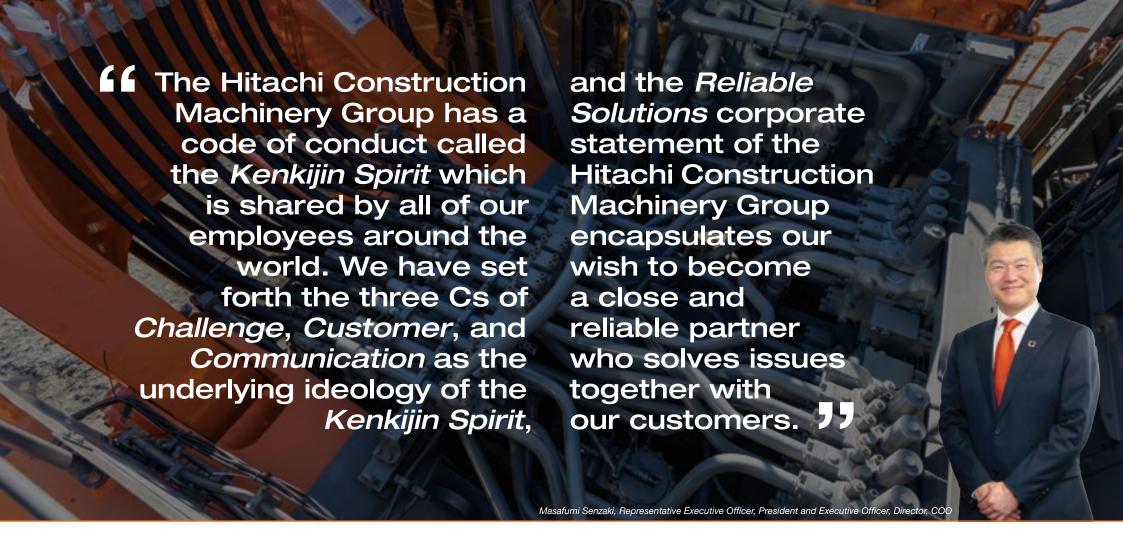
#### Open technology

approach to integrate fast-paced, innovative technologies, and

#### **S**olutions

to cover the entire customer journey.





# Sustainability and the Road to Zero

At Hitachi Construction Machinery, we prioritize environmentally friendly activities that support the planet and the sustainability of society.

We engage in a range of activities to help realize carbon neutrality by 2050, including:

developing energy-saving equipment

undertaking energy-saving & carbon dioxide-reduction activities around the globe

utilizing wind & solar energy

expanding our range of decarbonized products (e.g. our electric excavators)

providing ICT & IoT solutions to increase work efficiency & optimize digital management of machine information.





#### Our Customers Are at the Heart of Our Machines

We combine unique research and development, advanced manufacturing technology, and digital technology to create products and solutions that improve safety and productivity and reduce lifecycle costs, meeting the challenges our customers face now and into the future.

To ensure our customers are happy long after delivery, in addition to comprehensive aftersales support (see page 80), we pride ourselves on offering bespoke solutions that may be crucial to new emerging companies and mining giants alike.

At Hitachi Construction Machinery, we'll strive to understand you and your sites, identify your current and future needs, and tailor solutions to realize a safer, more productive future for you.

#### A Global Mining Business

Hitachi Construction Machinery's history dates back to 1950 when we developed and mass-produced Japan's first cable-operated shovel using entirely Japanese technology. That machine helped answer society's need to make construction more efficient through mechanization.

Today, we offer a comprehensive range of mining and construction machinery, designed to cater to the needs of our diverse customers. We are dedicated to the evolution of machinery and parts and committed to providing technological and sustainable innovations as solutions for our customers all around the globe.

#### Safety First, For Us and For You

We hold ourselves to strict safety standards and carry out extensive training with all employees. We encourage and support our employees to work together to create secure work environments with the goal of being incident free. We are constantly looking for ways to make our practices even safer.

#### Elimination of Live Work (ELW)

The safety of our customers and employees is our absolute top priority. To achieve this, our machines come with a range of innovative safety features as standard. Initiatives such as ELW remove people from live testing environments, improving safety for our employees with zero impact on our productivity.

#### Standard Work Procedures (SWPs)

As part of our commitment to improve safety and quality, our SWPs aim to capture best practice and ideal work processes – including directions on how work is to be carried out with safety as the utmost priority – in all our workplaces around the world. Tailored to each region, we have made SWPs available to assist common repair and maintenance tasks by highlighting the risks and clarifying what must be done to minimize these risks, for example by identifying the required tooling. Our SWPs are designed to enhance workplace safety by covering essential standard processes. However, due to varying global requirements, some workplaces may need to implement additional procedures to meet their regional safety standards.

Our business model, rather than prioritizing sales of new machinery, is a value chain model that considers the entire lifecycle of machinery, including:

new machinery
parts & servicing
product support

rental machinery & equipment

used machinery & equipment
remanufacturing of parts & machines
& more.

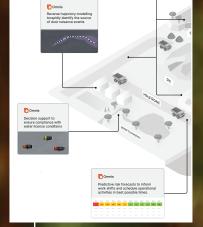
We're developing products and solutions to help our customers actively reduce their  $\mathrm{CO}_2$  emissions, including our trolley battery dump truck (read more on page 23). Plus, we have zero  $\mathrm{CO}_2$  emissions, battery-powered machines and alternative-fueled machines with ultralow emissions in development. The majority of our excavator models (all but the EX1200-7) are available as electric excavators, and – along with our trolley truck and other environmentally friendly options in the field – they're available for purchase today.

# ZERO EMISSIONS SOLUTIONS

# ROAD TO ZERO

By switching from fossil fuels to electrification, we're reducing the CO<sub>2</sub> emissions our machines produce.

See our zero emissions initiatives in action in our:



#### **ENVIROSUITE**

Via our partnership with Envirosuite, we're providing mining operations with real-time and predictive insights into environmental impacts onsite to help our customers meet their ESG targets and operate responsibly while maximizing their productivity (see page 61 for more).

Available now



# TROLLEY TRUCKS

By providing an electric option – via overhead cables – we've significantly reduced CO<sub>2</sub> emissions and fuel consumption (see page 22 for more).

Available now



#### ELECTRIC MOTOR MINING EXCAVATORS

These environmentally-friendly machines remove the need for consumables – from fuel and engine oils to disposable oil filters – and help reduce  $CO_2$  emissions (see page 29 for more).

Available now



# FUEL CELL DRIVES

We are working towards making hydrogen-powered fuel cell batteries a reality. This battery would replace the engine completely, eliminating CO<sub>2</sub> emissions and the need for fuel. Plus, water would be the only by-product of the fuel cell. This fuel cell system is proposed as part of the scalable platform design of our truck.

Under consideration

#### TROLLEY BATTERY DUMP TRUCKS

Our engineless,

trolley battery dump truck will utilize an onboard electrification system and dynamic charging options to simultaneously charge the onboard battery while providing energy to power the truck (see page 23 for more).



In development verification testing underway

# EH TUNING PACKAGES

Hitachi Construction Machinery can tune your machines to the actual conditions of your site to further lower your CO<sub>2</sub> emissions and fuel consumption (see page 23 for more).

Available now



# A Message from Our CEO

### KOTARO HIRANO

Representative Executive Officer, Chairman and **Executive Officer, Director, CEO** 

"We have achieved independent business development in the Americas and have changed our capital structure, providing new opportunities for further corporate growth. We aim to be a highlyrated business partner for our customers through the implementation of our Kenkijin\* Group Identity."

**Ensuring** a and Society for the Future as **Our Management Philosophy** 

The vision of the Hitachi Construction Machinery Group is "Ensure a prosperous land and society for the future; Contribute toward realizing a safe and sustainable society." Although this sounds simple, we need to implement a range of measures to help us achieve this vision. We are a customer-oriented organization, considering our dealers as our customers as well, rather than a companyoriented organization. We know that by observing

our customers' sites where our machines operate, we can identify ways to improve how we run our businesses and find new challenges to take on.

We strive to not only provide our customers with highperformance and high-quality machines but also to satisfy them as users of those machines. Our customers use our well-maintained machinery to build roads, sewage systems and other infrastructure that improves the quality of people's lives. They also use our machines to contribute to recovery efforts when a disaster occurs. By supporting our customers, we are thus also working to "ensure a prosperous land and society for the future".

The types of challenges faced by our customers, including those related to the environment, constantly evolve. We must be attentive and on the lookout for such changes and respond accordingly. Right now, this means seeking to increase the on-site efficiency of our machines, to extend their product life from 10 to 15 years while maintaining their performance level, and to recycle the components of machines that have come to the end of their 15-year life, in addition to making our machines even more environmentally friendly. In order to earn more trust from our customers, we must be more than just a mere manufacturer of machines.

The Hitachi Construction Machinery Group has achieved independent business development in the Americas and implemented the change in its capital structure, and these achievements are providing the Group with new opportunities for further global growth. To firmly grasp this opportunity, it is important that all our global



employees are familiar with our "Reliable Solutions" Corporate Statement: "We are a reliable solutions partner with/for our customers".

### What Needs to Change and What Needs to Remain

Throughout Hitachi Construction Machinery's history, there's been chairman and president positions, but this is the first time we have had a structure with CEO and COO. As a function of being CEO, I will work to make our Corporate Identity more widely known, formulate management plans, and enhance human resources development.

For the Hitachi Construction Machinery Group to become something more to its customers than just a manufacturer of machines based on the Group Identity, I think the Group has things that it needs to change and things that it should not change going forward. And President Senzaki takes charge of the practical aspects of the required changes.

As for what should be changed, firstly, we need to increase the speed at which management is carried out. Due to the change in our capital structure, we have become independent from Hitachi, Ltd. Group, giving us greater leeway to manage more aspects of our business. We can now make a range of management decisions with greater speed, although we do need to make adjustments with our new shareholders to accommodate this. Ever since Mr Senzaki became president of Hitachi Construction Machinery in FY2023, we have been working to promote reforms to make the company a provider of solutions needed by customers, and President Senzaki is now leading the reforms in his role as COO.

The second is responding to changes in customer awareness. In the traditional construction machinery and mining business, the mission of manufacturers like us was to simply supply products with excellent performance and quality. However, customer issues and needs are changing, and we are entering an era in which manufacturers cannot only just supply products with excellent performance and quality, but rather also meet customer issues such as on-site

safety, improved productivity, cost reductions – such as fuel costs, asset optimization, and environmental friendliness – to survive. Although our customers are steadfast in their commitment to increasing safety and productivity at their construction sites, there are other changes in their thinking that we must respond to also.

To do so, we redefined our value chain business (parts and services, rental, used equipment and remanufacturing) in FY2017. Since then, we have been enhancing the business under our medium-term management plans and over the last six to seven years have focused on changing the mindset of our employees from one that values a business model driven by the sale of new equipment to one that instead attributes importance to sales revenue from the value chain business.

This means providing reliable maintenance services for the roughly 300,000 working units that are currently in operation around the world to extend their product lives, thereby increasing their economic value. Also, to be highly rated by our customers, we need to help them meet their social obligations. Through independent business expansion in the Americas, we can now do this across the world, which I think is of great significance for us.

We hope all our employees take pride in the fact that our machines make such contributions to society, and we want them to provide their customers with products and a value chain that can help our customers meet their challenges. This is what we mean when we talk about "Reliable Solutions".

### New Mindset and the Enhancement of Human Resources

The Hitachi Construction Machinery Group has approximately 26,000 employees of whom roughly 10,000 are Japanese. This means that the majority of our employees are not Japanese, and I think it is now time for us to further enhance our in-house education system and other measures to make the Group Identity more widely known. In addition to the Americas, where we have recently embarked on independent business expansion, we are also entering new areas of Africa,

Central Asia and other regions. As both our employee and dealer numbers have increased in these regions, we will enhance our efforts to promote understanding of the Group's basic ideas and future business direction on a global basis, starting with the *Kenkijin* Spirit, which represents our values and contains our code of conduct.

# **Improving Our Governance and Increasing Our Corporate Value**

It has been my view that achieving sales revenue of above 1,000 billion yen would mean raising the level of our corporate governance. On the other hand, I believed we would be able to continue to manage our employees, internal education, rules and others at the current level if our revenue remained below the 1,000 billion yen mark. Now that our sales revenue has actually exceeded 1,000 billion yen to reach nearly 1,500 billion yen, we are facing an increase in our fixed expenses and a need to further sophisticate our operational level, which does indeed make it quite challenging to manage the organization. When sales revenue exceeds 1,500 billion yen, however, we will be able to stabilize management, and so we are now in a critical period.

I think higher corporate value and a higher governance level are interrelated. We will of course work for greater performance but we will also strive to promote co-creation with our stakeholders – including customers, employees and business partners – for the achievement of our vision. We introduced a restricted stock compensation system in 2023 by attributing importance to our stock price, but it is also important to increase our corporate value by contributing to the solution of social issues based on the concepts of safety, compliance and quality.

Hitachi Construction Machinery has taken a big step forward with its "second founding". But growing our business henceforth will not be easy. We will therefore seek the support of our stakeholders, including our customers and employees, as well as society at large, as we conduct the global operations of the Hitachi Construction Machinery Group. We hope you will join us on our journey.



# MASAFUMI SENZAKI

Representative Executive Officer, President and **Executive Officer, Director, COO** 

"Based on the four strategies set in the medium-term management plan, we will enhance our independent business expansion in the Americas and the value chain business while also evolving in new growth areas. The driving force for all of this is our commitment to meeting the challenge of becoming a true solutions provider."

#### COO's Roles and Contribution to the Vision

The strength of the Hitachi Construction Machinery Group's corporate culture lies in its Kenkijin Spirit. I joined Hitachi Construction Machinery back in 1991, and from then until now there is one thing that has not changed: the company is made up of people who genuinely enjoy contributing to customers and making them happy. We make these contributions through the performance of our distinctive orange machines and the provision of related services. Everyone at the

company thinks about how our machines can be used by customers and how they can contribute to our customers' safety and productivity.

This dedication is captured in the Kenkijin Spirit, which forms part of our code of conduct. The Kenkijin Spirit upholds the three Cs of "Challenge, Customer and Communication". Guided by our customer-first policy, each one of us is embracing and meeting challenges to fulfill the corporate mission, demonstrating our power through good communication. I believe this is possible because all of us Kenkijin, or employees, share the same set of values. This is one of the strengths of our corporate and organizational culture.

In order to achieve the Hitachi Construction Machinery vision, "Ensure a prosperous land and society for the future—we contribute toward realizing a safe and sustainable society—" all Kenkijin are expected to share the challenges faced by customers and commit themselves to helping our customers to meet these challenges. If each Kenkijin takes actions through a customer interest first (CIF) approach, it will help the Group build a robust corporate culture and become a true solutions provider as described in our Group Identity, which we formulated as the raison d'être of the Group to mark our second founding.



I have experience working with customers directly at the forefront of the Group's sales and service activities as well as at its manufacturing facilities around the world, which has given me an in-depth understanding of the challenges faced by our customers, dealers and our roughly 26,000 Kenkijin. I think this experience also helps me make management decisions and lead the company in a direction that is aligned with the Group's vision.

#### Measures for "Continuation and Evolution" set Under the Medium-term Management Plan

We were able to end the first year of our current medium-term management plan, "BUILDING THE FUTURE 2025," with favorable results propelled by the Americas business, mining business and value chain business. While boosting our overall performance in these three businesses, which we regard as our growth drivers, we also further enhanced our positions in the Asian, Indian and African markets to promote sales of products of the Construction Business Unit and the Compact Business Unit.

The current medium-term management plan focuses on "Continuation and Evolution" to promote the value chain business, which is continuing to grow, as well as the Americas business, for which we now have far more business opportunities. It also commits us to evolve by taking on the challenge of achieving new types of growth. The plan sets out our four core management strategies: "Delivering innovative solutions for customer needs," "Enhancing the value chain business," "Expanding business in the Americas" and "Strengthening human capital and corporate capabilities." By following these strategies, we expect to achieve growth to become a true solutions provider.

To this end, we need to evolve by taking on the challenge of achieving new types of growth. For example, in response to growing calls for carbon neutrality, the Hitachi Construction Machinery Group is starting to develop and sell electric excavators in Europe ahead of other regions. Our construction machinery are utilized to create "a prosperous land and society". They are driven by engines

that provide hydraulic pressure. The source of the power that drives the engine is shifting from fossil fuels to electricity, and will later shift to hydrogen, which has no CO<sub>2</sub> emissions. This is a competitive environment and, because we have never developed or manufactured engines ourselves, we will work with engine manufacturers and other partner companies to help our customers achieve maximum value.

The Americas represent a new market for us to pioneer on our own as well as a core market for our unique growth story. This fiscal year, we will implement measures to achieve growth in the Americas through the independent expansion of our business in the region to record sales revenue of 300 billion yen for FY2025.

When we resumed our own sales activities in the Americas, I received lots of pleasing comments from local customers, including, "You have finally come back to us after 20 years", which also made me feel a tremendous responsibility to get it right. Accordingly, I intend to lead the company to build even more ties and develop better relations for co-creation with local customers and dealers in the Americas.

# **Sustainability Activities and Stakeholder Engagement**

For sustainable development, it is necessary to make effective use of limited resources. Part of our raison d'être is to make contributions to such effective use and identify more business opportunities for doing so. We can also help our customers implement environmental measures, including those for carbon neutrality and the circular economy, through the provision of our construction machinery.

We have set a policy of helping our customers to extend the product life of the machines that they have already purchased from us by 1.5 times. This may seem disadvantageous to us in terms of our ability to make profits as the manufacturer of this machinery. However, I believe that this policy will be highly rated by customers as our strategy to provide them with solutions for environmental preservation and the circular economy.

In our sustainability activities, we attribute the greatest importance to our vision: "Ensure a prosperous land and society for the future —We contribute toward realizing a safe and sustainable society. —" Based on this recognition, we are working on our issues of materiality in consideration of the risks and opportunities posed to us due to changes in the external environment. For "Product and technology development contributing to climate change mitigation and adaptation", which is one of our issues of materiality, we are promoting the electrification of our construction machinery. For "Conversion to a recycling-oriented business model", we are expanding the value chain business including the remanufacturing business and working to extend the product life of our machines to contribute to the circular economy. For "Strengthening global governance", we are sharpening our global supply chain and making effective use of human resources to contribute to local communities. All these issues of materiality are deeply related to our vision and are aligned with the SDGs, which are goals shared by the international community. In order to achieve these, we need to foster co-creation with all our stakeholders. We are not in a hierarchical relationship with our customers. We aim to be an indispensable partner for them in solving their issues. We will also take a similar approach to our procurement partners.

### **Establishment of the New "LANDCROS" Concept**

In July 2024, Hitachi Construction Machinery set out its new "LANDCROS" business concept to signal our aspirations as a Group. When we held discussions on the Group Identity, which we announced in April 2023, we also asked employees to propose a word that would symbolize our future heading, with an eye to formulating a new corporate concept that would reflect our ideas. The word "LANDCROS" was chosen to embody our commitment to implementing our vision, "Ensure a prosperous land and society for the future". By upholding the "LANDCROS" concept, we will strive to become a true solutions provider.







# OUR PRODUCTS

Hitachi Construction Machinery offers a diverse range of mining and construction machinery designed to cater to the needs of our customers with many different sized sites and operations, from large-scale mines to small owner-operator businesses.

Our flagship excavator and dump truck duo deliver impressive load and haul fleet performance at a low cost. From the day Hitachi, Ltd.'s first electric motor repair shop opened in Japan in 1910 to the introduction of Hitachi Construction Machinery's recent EX-7 series mining excavators and our trolley battery dump truck, our commitment to efficiency, reliability and durability has remained strong.

#### **Leading the Way**

We are industry pioneers, combining more than 100 years of engineering experience with a dedication to quality to make a variety of machines, from mining excavators and rigid dump trucks to forestry machines and metal recycling equipment.

#### **High Performance**

Hitachi Construction Machinery manufactures highly efficient and reliable machines – designed with your safety as a priority – so you benefit from great performance, regardless of the machine you're operating.

#### **Constant Evolution**

We're committed to the evolution of machinery and parts, constantly developing new technological innovations to:

- increase efficiency & safety
- offer reliable performance, &
- reduce our impact on the planet.

We offer an extensive range of reliable, durable, efficient machines to improve productivity for our customers in a variety of industries, including:

mining and quarrying, infrastructure, construction, waste and recycling, demolition, forestry and more.

#### **ConSite Data Reporting**

The ConSite automated data report service - designed for Hitachi Construction Machinery's construction and mining machines - offers satellite system access and real-time alerts to notify operators when their machine requires maintenance.



#### **Wenco Mine Performance Suite**

**Mining Excavators** 

Hitachi Construction Machinery is a

mining excavators. We make tough,

meet the challenges of mining.

Wenco's Mine Performance Suite includes fleet management, highprecision machine guidance, predictive maintenance, fatigue management, collision avoidance and mining business intelligence systems.

Hitachi Construction Machinery's rigid dump trucks are designed with advanced technologies to make them tough and reliable in a variety of operations.

**Rigid Dump Trucks** 





#### Interoperability

Our machines are part of a developing interoperable platform that will offer simplified connectivity between systems, greater access to data analytics and operation-wide insights, including our Autonomous Haulage System.



#### **Metal Recycling Equipment**

Instead of disposing of the vast byproducts from construction activities, Hitachi Construction Machinery's material handling and recycling equipment allows byproducts to be recycled to be reused as valuable resources.





#### **Construction Excavators**

Just like our mining excavators, Hitachi Construction Machinery's construction excavators are famous for their reliability.



#### **Wheel Loaders**

Hitachi Construction Machinery's broad range of wheel loaders is designed to suit many different job sites and applications thanks to their dynamic design, advanced technological features and myriad of optional attachments.



#### **Compaction Equipment**

Just like our mining excavators, Hitachi Construction Machinery's construction excavators are famous for their reliability.



#### **Mini Excavators**

Our mini excavators are engineered to the same quality as our industry-leading hydraulic excavators, designed to operate comfortably and efficiently in confined and complex spaces.



#### **Forestry Machines**

Hitachi Construction Machinery's forestry machines are specially engineered to handle every step of the forestry process, cutting and processing trees efficiently.





#### **Demolition Equipment**

With more than 20 types of machines designed for heavy demolition work, we're at the forefront of the industry, offering the greatest variety of demolition machines.

our highly trained technicians at every dealership are there to support our customers to maximize the productivity of their machines.

[FIND OUT MORE ON p 72]



# OUR RIGID DUMP TRUCKS

Hitachi Construction Machinery rigid dump trucks set a new standard in the surface mining industry.

With refined engineering and a range of advanced and eco-friendly technologies, our AC-3 series can be relied on to achieve more for your site while lowering costs and reducing your environmental impact. Our new AC-5 truck offers these features as standard and an even greater boost to your productivity.

# Environmental Features

# Helping you achieve your zero emissions goals

Hitachi Construction Machinery's rigid dump trucks are designed with a range of environmental features to help you reduce your fuel costs and your CO<sub>2</sub> emissions, including:

#### **Trolley Truck Configuration**

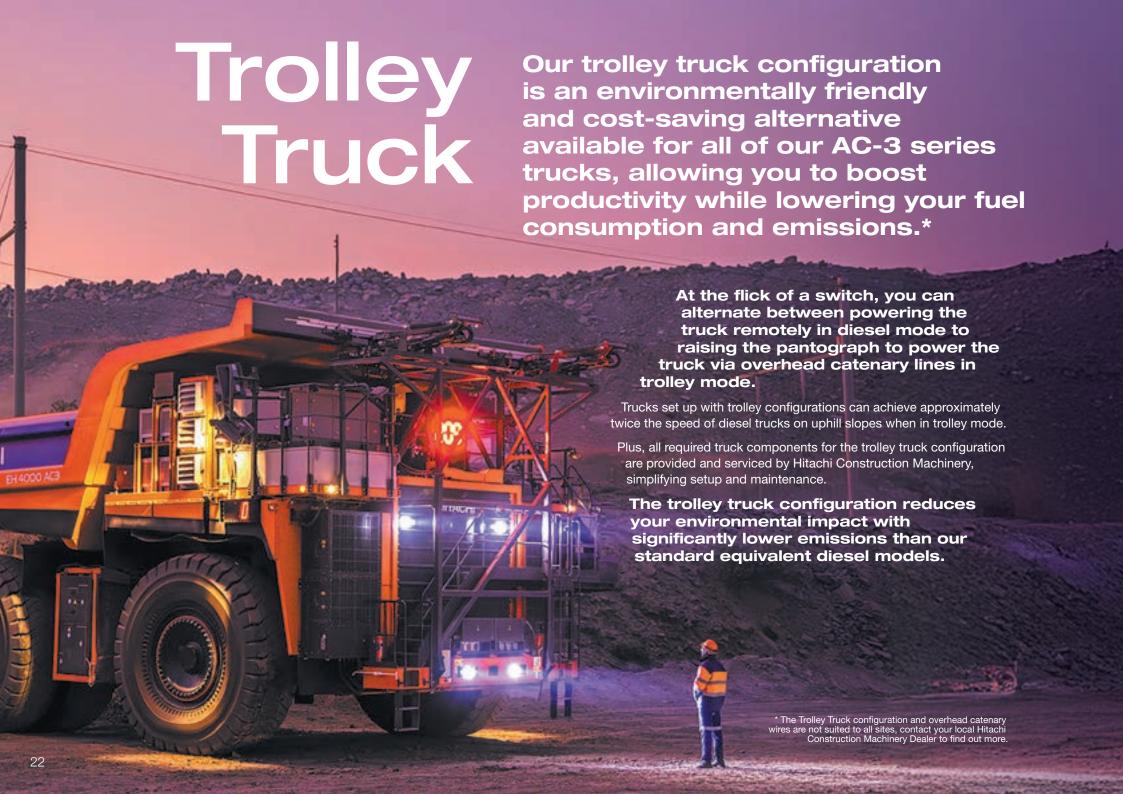
an eco-friendly option that can reduce your CO<sub>2</sub> emissions by switching from diesel power to an overhead electric power source (read more on page 22)

#### **Trolley Battery Configuration**

an onboard battery system and dynamic charging option that allows our rigid dump trucks to continuously operate – improving your productivity while reducing CO<sub>2</sub> emissions – by directly charging the battery via an overhead electric power source and the truck's own regenerative braking system (read more on page 23), and

#### **EH Tuning Package**

where we can customize your fleet's Hitachi IGBT AC Drive System to work more efficiently with the actual gradients, surfaces and other conditions at your mine site, reducing fuel consumption (read more on page 23).



# **Trolley Battery Dump Truck**

At Hitachi Construction Machinery, we're on the path to meeting the industry's growing demand for the electrification of mining machinery while helping our customers achieve their zero emissions goals too.

In 2021, we began collaborating with ABB Ltd. to develop an engineless trolley battery dump truck. And already, in June 2024, we commenced the world's first<sup>‡</sup> technological feasibility trial of an ultra-large full battery dump truck at an operating mine site: First Quantum Mineral's Kansanshi open-pit copper-gold mine in Zambia.

The trolley battery dump truck in testing offers continuous operation by utilizing an ABB-supplied onboard battery system and dynamic charging via pantograph and overhead trolley lines (similar to our current diesel trolley truck) as well as regenerative braking to simultaneously charge the battery and provide energy to power the truck.

To read the full story of the testing underway for this engineless, full-battery rigid dump truck and how it is progressing the electrification of the mining industry and helping pave the path to zero, head to page 42.

<sup>‡</sup>as of 27 June 2024, based on a survey conducted by Hitachi Construction Machinery of ultra large dump trucks with a load capacity of 136 tonnes (150 tons) or more by OEMs

# EH Tuning Package (EHTP)

EHTP is a software-based program designed to optimize your Hitachi Construction Machinery rigid dump trucks to consume less fuel – and lower your emissions too – by tailoring your operation to the actual conditions of your site.

#### How does it work?

- 1 To install EHTP, Hitachi
  Construction Machinery will first
  study your mine site to configure
  your trucks to work more
  efficiently in the actual conditions
  of your haul road (considering its
  gradients, surfaces and length).
- We conduct testing of EHTP on one truck at a mine site, ensuring minimal downtime of around 10 minutes per tuning cycle.
- **3** After a few weeks of testing, we will run through the results with you and together determine the best tuning pattern for your operation.
- 4 In just one day, Hitachi
  Construction Machinery will
  then install the optimized EHTP
  software on your entire truck fleet
  to let your fuel and emissions –
  savings begin.

#### Hitachi IGBT AC Drive Control

Our AC-3 series rigid dump trucks offer better performance, greater availability and significant savings on maintenance and operating costs – compared to the previous model series – thanks to our in-built Hitachi engineered IGBT AC Drive System.

Featuring Hitachi, Ltd. proprietary technology, Hitachi IGBT AC Drive Control offers:

#### Slip slide control

that utilizes speed sensors on front and rear wheels to determine speed differential and adjust torque accordingly, increasing safety and stability

#### Pitch control

that continuously monitors speed and suppresses pitching motions that can occur through braking and suspension changes to increase operator comfort, and

#### Side skid control

that utilizes speed sensors, steering angle sensors, lateral acceleration and dual brake sensors, to minimize understeering and oversteering by reducing traction as needed.

#### Aerial Angle with Object Detect Assist

Innovative Hitachi Construction Machinery ICT technology designed to improve safety and boost productivity, Aerial Angle provides mine sites with increased visibility, offering operators a continuous birdseye view around their machine.

Aerial Angle with Object Detect Assist for AC-3 trucks allows for automatic detection of moving objects surrounding the haul truck while the truck is stationary. When moving, it measures the relative speed of objects ahead – using millimeter-wave radar located on the front of the truck – to avoid collisions at an operating mine site.







# The new EH4000AC-5

delivers an even greater boost to your productivity while reducing your environmental impact and your costs across a variety of haul conditions.

A host of new technological and design innovations ensure these powerful and efficient rigid dump trucks maximize performance at even tough mine sites.

The EH4000AC-5 delivers greater productivity, reliability and durability, achieving an industry-leading velocity of 65 km/h.

In comparison with our previous model.
 \*\* Based on a survey conducted by Hitachi Construction Machinery of rigid dump trucks in the same class

Packed with all the refined engineering and advanced eco-friendly technologies our previous model - the EH4000AC-3 - is renowned for, the EH4000AC-5 also delivers:



#### **Higher reliability & productivity**

than our previous model, featuring maximum travel speeds of 65 km/h (40 mph) and a competitive payload among its class.



#### **Eco-friendly & efficient operation**

with a lower cost per tonne<sup>†</sup> built in along with a variety of environmentally-friendly, energy-efficient options.



#### **Robust & powerful performance**

delivering a higher rimpull than our previous model – featuring a reinforced frame that's stronger than ever before.



#### Optimization for various haul conditions

thanks to innovative Hitachi IGBT AC Drive System technology plus excellent operational stability, performance and maneuverability even at high speeds. This machine is built with the potential for a variety of specification choices, including Trolley Diesel and Trolley Battery Truck systems.



#### Ergonomic & intuitive operator experience

thanks to a redesigned cab that is more comfortable and user friendly, featuring an upgraded center console that offers new switches and levers.



#### Safer operation than ever before

with wet brakes on front and rear wheels plus new technologies that deliver more stable braking even during long downhill operation, higher electric braking performance, and a new brake pedal offering both hydraulic and electric braking.



Hitachi Construction Machinery implemented a full-model change of the EH4000AC-3 rigid dump truck to develop the EH4000AC-5.

By applying metal fabrication technologies accumulated through the manufacturing of hydraulic excavators, the company increased the durability and achieved the industry's highest<sup>‡</sup> payload of 242 tonnes (266 tons). After completing field tests at mining sites, the company aims to start sales of the new rigid dump truck in 2025.

#### Masafumi Senzaki



Representative Executive Officer President and Executive Officer, Director. COO

<sup>‡</sup> As of September 19, 2024, includes rigid dump trucks with a gross machine operating weight in the 363 tonne class (400 ton class). According to a survey by Hitachi Construction Machinery.



<sup>&</sup>lt;sup>†</sup> In comparison with our previous model.

By curbing maintenance costs and CO<sub>2</sub> emissions through reduced engine load, Hitachi Construction Machinery's rigid dump trucks





#### EH4000AC-5

The EH4000AC-5 delivers a boost to your productivity while reducing your environmental impact and costs.

Pairs with EX3600-7, EX5600-7 and

EX8000-7 excavators

Target GMOW 422 000 kg

(930 350 lb)

Gross Power 1 864 kW

ISO 14396:2002 (2 534 PS, 2 500 HP)

Nominal Payload 242 tonnes

(266 tons)

Drive System Hitachi Advanced IGBT

AC Drive

Service

Brake System Hydraulically applied brake

Rear:

Front:

Hydraulically applied brake

and electric brake

Front/Rear:

Oil-cooled Wet disc/ Oil-cooled Wet disc



#### EH3500AC-3

The EH3500AC-3 has low operating and maintenance costs and delivers exceptional efficiency to sites.

Pairs with EX2600-7, EX3600-7 and

EX5600-7 excavators

Target GMOW 322 000 kg

(709 888 lb)

Gross Power 1 491 kW

ISO 14396:2002 (2 027 PS, 2 000 HP)

Nominal Payload 181 tonnes (200 tons)

Drive System Hitachi Advanced IGBT

AC Drive

Service Front: Brake System Hydra

Hydraulically applied brake

Rear:

Hydraulically applied brake and electric brake

Front/Rear: Dry disc/ Dry disc



#### EH4000AC-3

The EH4000AC-3 is a versatile and efficient machine with powerful production, suitable for a range of operations.

Pairs with EX3600-7, EX5600-7 and

EX8000-7 excavators

Target GMOW 384 000 kg

(846 575 lb)

Gross Power 1 864 kW

ISO 14396:2002 (2 534 PS, 2 500 HP)

Nominal Payload 221 tonnes (243 tons)

Drive System Hitachi Advanced IGBT

AC Drive

Service Front:

Brake System Hydraulically applied brake

Rear:

Hydraulically applied brake and electric brake

Front/Rear: Dry disc/

Oil-cooled Wet disc



#### EH5000AC-3

The EH5000AC-3 is our largest dump truck and brings even more productivity to sites.

Pairs with EX5600-7 and

EX8000-7 excavators

Target GMOW 500 000 kg

(1 102 311 lb)

Gross Power 2 125 kW

ISO 14396:2002 (2 890 PS, 2 850 HP)

Nominal Payload 296 tonnes (326 tons)

(326 tons)

Drive System Hitachi Advanced IGBT

AC Drive Front:

Brake System

Hydraulically applied brake

Rear:

Hydraulically applied brake

and electric brake

Front/Rear: Dry disc/

Oil-cooled Wet disc



# **OUR MINING EXCAVATORS**

Hitachi Construction
Machinery hydraulic mining
excavators have evolved over

decades of engineering and technological advancement.

Today, our innovative EX-7 series excavators are packed with features that empower you to dig more than before while helping you achieve your sustainability goals too.

#### **Aerial Angle**

Innovative Hitachi Construction Machinery ICT technology designed to improve safety and boost productivity, Aerial Angle provides mine sites with increased visibility, offering operators a continuous birdseye view around their machine.

Aerial Angle can boost the safety of your operation by giving the operator a 360° view around their machine in real time. Cameras mounted around the excavator allow operators in the comfort of the cab to see both a wide-range and close-range view of their surroundings, even during nighttime operations.

### **Environmental Features**

# Helping you achieve your zero emissions goals

Our EX-7 series excavators have been designed with environmental features to help you significantly reduce your fuel costs and your CO<sub>2</sub> emissions, including:

#### **Electric Motor Option**

By switching to electric excavators, exhaust emissions and CO<sub>2</sub> emissions in operation are reduced along with lower running costs over the life of the machine, and

#### **Improved Fuel Consumption**

All EX-7 model excavators feature improved fuel consumption – consuming less fuel than the EX-6 series – and offer a selection of engine models, from Tier 4 Final to Fuel Consumption Optimization (FCO) engines.





#### EX1200-7

The EX1200-7 is engineered for precise mining tasks with its powerful and efficient design Operating Weight (Backhoe) (257 951 lb)
Operating Weight 120 000 kg

(Loading Shovel) (264 600 lb)

(Loading Shovel)

Engine Rated ISO 14396:2002,

Power 567 kW (770 PS, 760 HP)

5.9-6.5 m<sup>3</sup> (7.7-8.5 cu. yd.)

Bucket Capacity ISO 7451:2007: 5.2 m³ (Backhoe) (6.8 cu. yd.)

Bucket Capacity ISO 7546:1983 Heaped 2:1:

#### EX2000-7 / EX2000-7E

The EX2000-7
brings impressive
productivity and
savings on fuel
consumption
to smaller
operations

Operating Weight 195 000 kg / 191 000 kg (Backhoe) (429 901 lb / 421 083 lb)

Operating Weight 194 000 kg / 190 000 kg (Loading Shovel) (427 697 lb / 418 878 lb)

Engine Rated ISO 14396:2002, 746 kW (1 014 PS, 1 000 HP) /

Power 610 kW (829 PS, 818 HP)

Bucket Capacity ISO 7451:2007: 12.0–14.0 m<sup>3</sup> / 12.0–14.0 m<sup>3</sup>

(Backhoe) (15.7–18.3 cu. yd. / 15.7–18.3 cu. yd.)

Bucket Capacity ISO 7546:1983 Heaped 2:1: (Loading Shovel) 12.0–13.5 m³ / 12.0–13.5 m³

(15.7-17.7 cu. yd. / 15.7-17.7 cu. yd.)

# EX2600-7 / EX2600-7E

The EX2600-7 boosts productivity on your site while offering improved operability Operating Weight 257 000 kg / 250 000 kg (Backhoe) (566 588 lb / 551 155 lb)

Operating Weight 259 000 kg / 248 000 kg (Loading Shovel) (570 997 lb / 546 746 lb)

Engine Rated ISO 14396:2002, 1 119 kW (1 520 PS, 1 500 HP) /

Power 860 kW (1 169 PS, 1 153 HP)

Bucket Capacity ISO 7451:2007: 17.0-19.5 m<sup>3</sup> / 17.0-19.5 m<sup>3</sup>

(Backhoe) 22.2–25.5 cu. yd / 22.2–25.5 cu. yd

Bucket Capacity ISO 7546:1983 Heaped 2:1: 15.0–16.5 m<sup>3</sup> /

(Loading Shovel) 15.0–16.5 m³ (19.6–21.6 cu. yd. / 19.6–21.6 cu. yd.)





**Operating Weight** 370 000 kg / 350 000 kg (815 710 lb / 771 617 lb) (Backhoe) **Operating Weight** 369 000 kg / 353 000 kg

(Loading Shovel) (813 506 lb / 778 231 lb)

**Engine Rated** ISO 14396:2002.

> 1 450 kW (1 971 PS, 1 944 HP) / Power 1 200 kW (1 632 PS, 1 609 HP)

ISO 7451:2007: 22.0-24.0 m3 / 22.0-24.0 m3 **Bucket Capacity** 

(28.8-31.4 cu. yd. / 28.8-31.4 cu. yd.) (Backhoe)

**Bucket Capacity** ISO 7546:1983 Heaped 2:1: 22.0-24.0 m<sup>3</sup>/ (Loading Shovel)

22.0-24.0 m<sup>3</sup> (28.8-31.4 cu. yd. / 28.8-31.4 cu. yd.)

#### EX3600-7 / **EX3600-7E**

The EX3600-7 is our most popular mining excavator, striking the delicate balance between precision and power

**Operating Weight** (Backhoe)

Operating Weight (Loading Shovel)

> **Engine Rated** Power

**Bucket Capacity** (Backhoe)

**Bucket Capacity** (Loading Shovel)

**Bucket Capacity** 

549 000 kg / 531 000 kg (1 210 338 lb / 1 219 156 lb)

544 000 kg / 527 000 kg (1 199 315 lb / 1 161 836 lb)

ISO 14396:2002,

2 x 1 119 kW (1 520 PS, 1 500 HP) / 2 x 860 kW (1 169 PS, 1 153 HP)

ISO 7451:2007: 34.0-38.5 m<sup>3</sup>

(44.5-50.4 cu. yd.)

ISO 7546:1983 Heaped 2:1: 27.0-31.0 m<sup>3</sup>/

27.0-31.0 m<sup>3</sup> (35.3-40.5 cu. yd. / 35.3-40.5 cu. yd.)

#### EX5600-7 / **EX5600-7E**

The EX5600-7 will tackle large scale mining operations with significant productivity and efficiency

Operating Weight 851 000 kg / 820 000 kg (Backhoe) (1 876 134 lb / 1 807 790 lb)

**Operating Weight** 849 000 kg / 808 000 kg (Loading Shovel) (1 871 725 lb / 1 781 335 lb)

**Engine Rated** ISO 14396:2002, Power

2 x 1 450 kW (1 971 PS, 1 944 HP) / 2 x 1 200 kW (1 632 PS, 1 609 HP)

**Bucket Capacity** ISO 7451:2007: 43.0-52.0 m<sup>3</sup> / 43.0-52.0 m<sup>3</sup> (Backhoe)

(56.2–68.0 cu. yd. / 56.2–68.0 cu. yd.) ISO 7546:1983 Heaped 2:1: 43.0-45.0 m<sup>3</sup>/

(Loading Shovel) 43.0-45.0 m<sup>3</sup> (56.2-58.9 cu. yd. / 56.2-58.9 cu. yd.)

#### EX8000-7 / **EX8000-7E**

The EX8000-7, our largest excavator, delivers reliable output for tough bulk mining jobs



# GLOBAL COVERAGE

Hitachi Construction Machinery's worldwide coverage comprises more than 9,000 dealer locations across the globe.



What's vital for a subcontractor in Singapore might be different for a fleet owner-miner in Zambia, and that's why Hitachi Construction Machinery offers tailored support via a vast network of local dealers all around the globe.

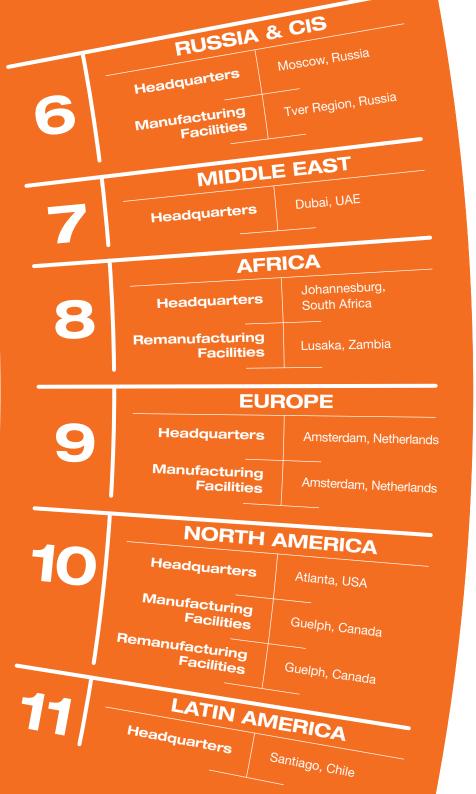
With Hitachi Construction Machinery's worldwide network, you'll be supported by experts who talk your language. From the demands of remote locations with extreme temperatures to those of precise work in tight spaces in a busy city location, our machines are designed to get the job done efficiently and with an emphasis on safety, no matter how testing the conditions.





**Hitachi Construction Machinery Locations** 







# SPOTLIGHT ON A REGION: AFRICA

Africa is the secondlargest continent, covering approximately one-fifth of Earth's total land area. Africa's cultural diversity is reflected in its over 1,500 distinct languages spoken across 54 countries by its 1.3 billion inhabitants.

Africa plays a significant role in the mining industry, boasting approximately 30% of the world's untapped mineral resources – including 40% of gold reserves and 90% of platinum reserves – as well as significant oil and natural gas reserves. The region exports many metals and minerals essential for modern technologies and a sustainable future, including diamond, nickel, cobalt, uranium and copper.

#### **Economic Activities**

Agriculture, mining, and tourism dominate Africa's economy, correlating with the continent's riches: fertile land, vast and varied mineral deposits, and abundant wildlife.

#### **Climate and Terrain**

Divided almost perfectly by the equator, Africa is the most tropical and hottest of the continents. Featuring diverse climatic patterns – from Mediterranean in the north to tropical, semi-arid, and desert climates – temperatures remain high across Africa, with climate variations primarily driven by rainfall. Africa's varied landscapes include lush rainforests, arid deserts, expansive savannas and shrublands, highlands with towering mountain ranges, low-lying sandy coasts and icy glaciers.

#### **Biodiversity**

Renowned for its biodiversity, Africa's wildlife tourism draws visitors to its abundant national parks and reserves, along with coral reefs teeming with life. Home to some of the greatest concentrations of wildlife on Earth, Africa offers spectacular encounters with iconic animals from lions and elephants to giraffes, zebras, and hyenas.



# HITACHI CONSTRUCTION MACHINERY IN

# **AFRICA**

#### **SOUTHERN AFRICA**

#### Hitachi Construction Machinery Africa (Pty) Ltd

Regional Location:
Headquarters: Johannesburg,
South Africa

## Supported by three subsidiaries

Established: 1998 **Hitachi Construction** Machinery Southern Africa Location: Johannesburg, Co., (Pty) Ltd South Africa Established: 2010 **Hitachi Construction** Machinery (Mozambique) Location: Tete, Limited Mozambique Established: 2010 **Hitachi Construction** Machinery Zambia Co., Ltd Location: Lusaka, Zambia

### Remanufacturing facility

Lusaka, Zambia

## Independent dealers:

Parts Sales	Botswana
MXG	Zimbabwe
Choice Diesel	Mozambique
Barex	Namibia

We supply robust, reliable equipment and technological solutions to boost productivity and efficiency at our customers' mine sites across Africa. We support our clients via three regional headquarters, several subsidiaries, and a network of local independent dealers.

Our parts remanufacturing and engine rebuild facilities in Zambia lower maintenance costs and reduce downtime for our customers, and they also help us minimize industrial waste and greenhouse gas emissions. These facilities have been well-received: from FY2022 to FY2023, our remanufacturing facilities worldwide saw a 7.4% increase in sales of remanufactured parts. To meet growing demand, we're expanding our engine rebuild facility by an additional 20,000 m² (215,278 ft²).

"One of the key requirements of our customers in Africa is support. We tailor make our solutions for each of our customers from their site support agreements and parts agreements, repair contracts and more, to suit the unique needs of their fleet and their site throughout the entire lifecycle of their equipment. Our customers tell us they're very happy with the support and site visits they receive from Hitachi Construction Machinery."

Scott Johnston - General Manager of Mining Sales and Support, Hitachi Construction Machinery Europe

#### **CENTRAL & WEST AFRICA**

# Hitachi Construction Machinery (Europe) NV

Regional Location:
Headquarters: Amsterdam,
The Netherlands

# Independent dealers:

SMT	Morocco, Mauritania, Mali, Niger, Chad, Senegal, Gambia, Guinea- Bissau, Guinea, Sierra Leone, Liberia, Ivory Coast, Burkina Faso, Ghana, Togo, Benin, Cameroon, Central African Republic, Equatorial Guinea, Republic of Congo	
Movicortes	Angola	
HMD	Nigeria	
DM Equipment	Algeria	

# **NORTH EAST AFRICA**

# **Hitachi Construction Machinery Middle East Corporation FZE**

CENTRAL

& WEST

**AFRICA** 

Regional Location: Dubai, Headquarters: United Arab Emirates

# Independent dealers:

Orascom	Egypt
Tara	North Sudan
Ammars	South Sudan
Hagbes	Ethiopia
Rock Plant	Uganda, Kenya, Tanzania



# AFRICA FUN FACTS



• Africa is known as the birthplace of mathematics, with mathematical artifacts discovered that date back over 25,000 years

> Hippos are responsible for more attacks on humans than any other animal in Africa



Agriculture employs 65% of Africa's working population

Mount Kilimanjaro –

tallest mountain, standing

a dormant volcano - is Africa's

5,895 meters (19,340 feet) tall



♦ Though Africa is nearly four times the size of Europe, its straighter coastlines are less than half the length of Europe's

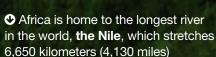


♠ More than 25% of the world's

G The African **Elephant** is the largest land animal, growing up to four meters (13 feet) high and weighing over 5.4 tonnes (six tons)

The Sahara **Desert** is the largest and hottest desert in the world, covering 9,200,000 km<sup>2</sup> (3,600,000 mi<sup>2</sup>)







Africa was connected to Asia via the Sinai Peninsula until the Suez Canal was built in 1869



bird species are found in Africa

# AFRICA'S TOUGH TERRAIN:

# A PROVING GROUND FOR NEW MINING TECHNOLOGIES

Our equipment - from excavators and wheel loaders to mining shovels and rigid dump trucks - is engineered to meet the reliability, performance and efficiency demands of Africa's mining environments and their testing climates and terrains. In fact, the site conditions in Africa can be so tough that we've chosen to trial some of our equipment and technologies in development there as it's the perfect testing ground to challenge and refine our innovations, ensuring they meet tough standards of durability and effectiveness.

# OUR FULL BATTERY DUMP TRUCK

IN DEVELOPMENT

As part of our strategy to realize a sustainable future for mining, we've been running a proof-of-concept trial for the world's first ultra-large full battery dump truck with our strategic partner First Quantum Minerals (First Quantum) at their Kansanshi copper-gold mine in Zambia.

"We're proud to be doing our battery-powered truck trial in Zambia with First Quantum. Once we ensure a battery with dynamic charging can work in our trucks in the tough conditions in Africa, we know we can make it work anywhere else around the world."

To find out more about our full battery dump truck trial with First Quantum, head to our customer feature on page 42.



Carstens
Sales and
Marketing
Director,
Hitachi

Hitachi Construction Machinery Africa (Pty) Ltd

Riaan

# INTRODUCING LANDCROS CONNECT INSIGHT

**AVAILABLE 2025** 

In order to maximize production while reducing both costs and greenhouse gas emissions, it's vital our customers are able to extend the life and minimize the downtime of their machines. LANDCROS Connect Insight builds on our 24/7 ConSite Mine remote machine monitoring solution (see page 44 for more information) to help our mining customers achieve these goals.

We've been undertaking a trial of LANDCROS Connect Insight at First Quantum's Kansanshi mine in Zambia. A large portion of the First Quantum fleet of EH3500 and EH4000 trucks has been equipped with IoT devices and remotely monitored by asset health analysts using LANDCROS Connect Insight to provide even more valuable, actionable insights. The results are impressive: one example of success is early detection of engine and brake issues that enabled preventative maintenance to be undertaken, boosting the reliability and safety of the machines while reducing total ownership costs for our customer. LANDCROS Connect Insight is also successfully analyzing idle times, haul road conditions, and electric trolley line usage, allowing our customer to optimize their operations and further reduce fuel consumption.

LANDCROS Connect Insight delivers even more actionable insights to enhance the reliability, performance, and efficiency of your Hitachi Construction Machinery fleet.



# SOME OF OUR AFRICA REGION MILESTONES

#### **RIGID DUMP TRUCKS**

2001	World's first EH4500AC Trolley delivery to customer site at Limpopo, South Africa
2005	Africa's first EH3500AC-II delivery to custome site at Mpumalanga, South Africa
2011	World's first EH3500AC-II Trolley delivery to customer site at Kansanshi, near Solwezi, Zambia
2013	Africa's first EH5000AC-3 delivery to custome site at Tete, Mozambique

World's first EH3500AC-3 Trolley delivery to customer site at Limpopo, South Africa

Africa's first EH4000AC-3 delivery to customer site at Limpopo, South Africa

2016 Morocco's first EH3500AC-3 delivery to customer site at Chaouen

2014

World's first EH4000AC-3 Trolley delivery to customer site at Limpopo, South Africa

2023 EH1700-3 (premium used machine) delivery to customer site at Makoro, Tanzania

Mauritania's first EH4000AC-3 delivery to customer site at Nouakchott

World's first Proof of Concept trial of our full battery rigid dump truck (in development) at First Quantum's Kansanshi Copper and Gold Mine, near Solwezi, Zambia (read more on pages 42 and 43)

#### **EXCAVATORS**

2001	Africa's first EX1200-5 delivery to customer site at Gauteng, South Africa
2007	Africa's first EX1900-6 delivery to customer site at Mpumalanga, South Africa
2007	Africa's first EX3600-6 delivery to customer site at Mpumalanga, South Africa
	Africa's first EX1200-6 delivery to customer site at Gauteng, South Africa
2008	Africa's first EX2500-6 delivery to customer site at Gauteng, South Africa

Africa's first EX5500E-6 delivery to customer

site near Solwezi, Zambia

Africa's first EX2600-6 delivery to customer site in South Africa

2012
Africa's first EX8000-6 delivery to customer site in Mozambique

2013 Africa's first EX3600E-6 delivery to customer site in South Africa

Africa's first EX5600-6 delivery to customer site at Tete, Mozambique

2018 EX1900-6 delivery to customer site at Mombasa, Kenya

EX1200-6 delivery to customer site at Edfu, Egypt

2019 Africa's first EX1200-7 delivery to customer site at Bloemfotein, South Africa

2020 Africa's first EX2600-7 delivery to customer site in South Africa

EX1900-6 delivery to customer site at Mombasa, Kenya

EX1900-6 delivery to customer site at Makoro, Tanzania

2021 Africa's first EX3600-7 delivery to customer site at Gauteng, South Africa

Africa's first EX5600-7 delivery to customer site at Tete, Mozambique

World's first EX5600-7E delivery to customer site at Kansanshi, near Solwezi, Zambia

2023
Mali's first EX1200-7 delivery to customer site in southwest Mali

Africa's first EX2000-7 delivery to customer site at Gabarone, Botswana

EX2000-7 delivery to customer site at Makoro, Tanzania

"Our mining excavators are tried, true and tested. Across Africa, the legacy of our excavators sells themselves."



**Scott Johnston** 

General Manager Mining Sales and Support, Hitachi Construction Machinery (Europe) NV

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HITACHI CONSTRUCTION MACHINERY AND FIRST QUANTUM MINERALS

# PIONEERING THE FUTURE OF SUSTAINABLE MINING

Taking a huge stride on the road to net zero, First Quantum Minerals Ltd. (First Quantum) and Hitachi Construction Machinery are collaborating on a proof-of-concept trial for the world's first ultra-large full battery dump truck at the Kansanshi copper-gold mine in Zambia.

# **Introducing Our Strategic Partner:** First Quantum

Founded in 1983, First Quantum owns mines all around the globe – from Panama to Australia, Turkiye to Mauritania – and is one of the world's leading copper producers. Employing over 26,000 people (employees and contractors) worldwide, First Quantum prioritizes innovation, responsibility, and a deep commitment to sustainability and community in all its operations.

At the Kansanshi copper-gold mine in Zambia – their flagship operation – First Quantum produces more copper than any other mine in Africa. Operational since 2005, the Kansanshi mine features two open pits and a copper smelter powered largely by renewable energy from the Zambian national grid. Of the over 13,000 people the mine employs, more than 95% are Zambians, furthermore, approximately 85% of supplier spend is with Zambian-registered companies, exemplifying significant local engagement.

#### **A Long-Standing Partnership**

First Quantum and Hitachi Construction Machinery share a decades-long strategic partnership built on mutual innovation and a shared vision for sustainable mining.

John Gregory, Director of Mining at First Quantum recalls, "First Quantum has partnered successfully with Hitachi Construction Machinery for many years across a range of projects. Their approach has always been collaborative and responsive to on-the-ground operational challenges. Together, we have been able to leverage technology to improve our productivity and sustainability."

Riaan Carstens, Sales and Marketing Director, Hitachi Construction Machinery Africa (Pty) Ltd, states, "We are delighted to collaborate with our long-term partners, First Quantum, on this project. Their sustainable aspirations and desire to contribute to society perfectly aligns with our philosophy and values."

Back in 2011, Hitachi Construction Machinery delivered the world's first EH3500ACII trolley trucks to Kansanshi. These advanced vehicles – designed to reduce environmental impact – remain integral to the mine's operations. First Quantum are industry leaders in trolley-assist systems: their trademarked trolley assist solution – Quantum Electra-Haul – also had its beginnings at Kansanshi in 2011 and is in use at the mine to this day.

Our strategic partnership with First Quantum continues to evolve, with the development and testing of new technologies: Kansanshi also serves as the proof-of-verification site for our LANDCROS Connect Insight solution, further showcasing the collaborative drive of our partnership to pioneer technologies and responsible mining solutions.

# A New, Sustainable Mining Solution: Our Trolley Battery Dump Truck

In a world moving towards sustainable practices, our customers are increasingly interested in the electrification of mining machinery to assist them in their efforts to reduce greenhouse gas emissions at their sites.

In collaboration with ABB, we've developed an innovative ultra-large full battery trolley truck. Our trolley battery dump truck utilizes on-board energy storage and trolley systems, drawing power from overhead lines via a pantograph while simultaneously charging its battery. The battery is then further charged by regenerated power from a retarder braking system.

This new trolley battery dump truck offers benefits to our customers\* to help maximize their productivity, from faster cycle times and increased load capacity to reduced maintenance and operational costs. The system also supports our customers in achieving their sustainability goals by reducing emissions and being retrofittable for existing diesel trolley trucks.

#### Kansanshi Copper-Gold Mine: The Ideal Testing Ground

By testing our trolley battery dump truck at First Quantum's operational Kansanshi mine, we're able to obtain accurate, real-world data to expedite development of a truck that meets our mining customers' needs.

a word to work and the same

in comparison to our diesel trolley truck.

"First Quantum have been very accommodating putting a proof-of-concept truck among their production trucks. And we appreciate that not only is First Quantum a world leader in pit electrification, they are also supporting us in the development of this new, more sustainable machine," says Carstens.

As a long-standing customer of Hitachi Construction Machinery, First Quantum operates 41 EH4000AC-3 and 38 EH3500ACII diesel trolley trucks at Kansanshi, making the site ideal for testing our new full-battery truck, Existing trollev-assist infrastructure featuring kilometers of overhead lines, a variety of haul roads and proven dynamic charging solutions – provides the conditions required to evaluate our new truck's performance under real operational conditions. The Kansanshi site allows us to comprehensively test the practical performance of our new truck with operational loads in open-pit mines with elevation differences as well as verifying the truck's dynamic battery charging and discharging cycles.

First Quantum's mastery of trolley-assist technology, such as their trademarked Quantum Electra-Haul solution, complements the new trial. This system efficiently supports multiple trucks on the overhead line, ensuring payload and production goals are met while reducing emissions. "Transitioning to a battery-powered electrified mining fleet with little to no impact on payload, production and fleet size is only achievable in conjunction with Trolley Assist. First Quantum has mastered this technology by working with Hitachi Construction Machinery to provide stable platforms with multiple trucks on the overhead line at the same time. This system is operational, practical and represents an economically feasible solution that will reduce emissions in

global mining as other companies follow our lead," states Gregory.

Many of our customers with Hitachi Construction Machinery trolley truck fleets have expressed interest in visiting the Kansanshi mine to view the trolley battery dump truck in action, and First Quantum has been very supportive of this interest.

# Helping Realize a Zero-Emissions Future

Thanks to our ongoing and productive partnership with First Quantum, we're expediting the development of our trolley battery dump truck: just one of many Hitachi Construction Machinery solutions in development helping realize a safe and sustainable society by addressing carbon emissions reduction in the mining industry.

The trolley battery dump truck trial at Kansanshi integrates First Quantum's proven trolley-assist technology with Hitachi Construction Machinery's innovative battery-powered truck systems. In summary, Gregory states: "The trial holds global significance as it demonstrates that an electrified fleet can maintain payload, production, and fleet size while drastically reducing emissions".

### KEY FEATURES THAT SET HITACHI CONSTRUCTION MACHINERY APART

by John Gregory – Director, Mining, First Quantum Minerals Ltd.

## Industry-Leading\*\* Drive System

Hitachi Construction Machinery's AC drive system remains ahead of its time." The in-house system delivers seamless integration, unmatched performance, longevity, cost efficiency and complete maintenance control. Advanced features like the Hitachi Drive Control System assist with oversteer, slippery conditions, and pitch control, improving operator safety and efficiency.

### **Lower Operating Costs**

The fully in-house drive system eliminates third-party component dependency, reducing operating and repair costs. Repairs are conducted entirely within Hitachi Construction Machinery's ecosystem, making it a true one-stop shop for fleet maintenance.

## **Continuous Product Improvement**

Hitachi Construction Machinery is committed to ongoing product upgrades via their Failure Information Report (FIR) system: defects logged in the system lead to real-time enhancements across both new and existing models, ensuring continuous machine reliability.

## **Onsite & Global Support**

Local support is reinforced by global expertise via ConSite Mine Support in Japan, which continuously monitors trucks and offers proactive recommendations to prevent failures.

## **Efficient Component Supply**

Hitachi Construction Machinery ensures remanufactured components are returned promptly despite logistical challenges in certain regions, minimizing downtime and maximizing machine availability.





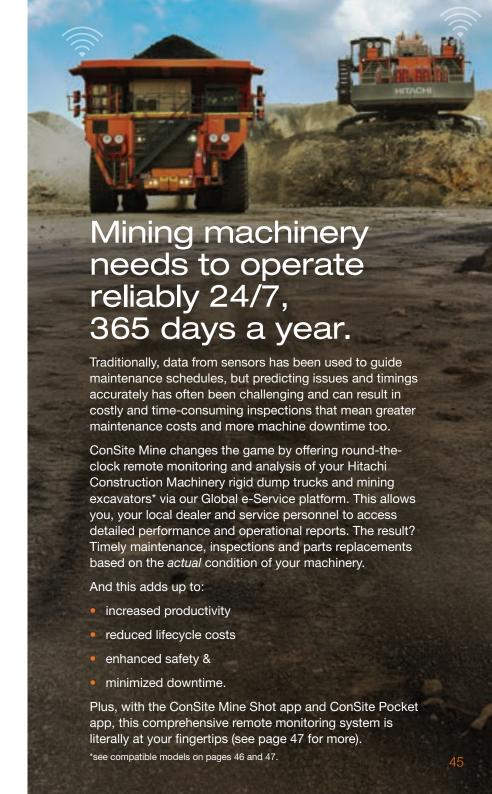


SPOTLIGHT ON OUR TECHNOLOGY:

# CONSITE MINE

At Hitachi Construction Machinery, we've been at the forefront of innovation in the mining industry for over 70 years, solving our customer's challenges and supporting their operations.

Now, we've optimized our ConSite Mine solution to be tailored to the needs of the mining industry, helping our customers all around the world to boost productivity while reducing machine downtime and lowering their maintenance costs as well.



# Monitor your machines closely with ConSite Mine

You'll enjoy more information and support, more stable operation and greater productivity with our groundbreaking, 24/7 remote monitoring system at your fingertips.

The ConSite Mine suite of user-friendly apps and email reports keep you informed with push notifications, emergency alarms, simplified inspections and more.

ConSite Mine's suite of features:

Lower your machine maintenance costs

Reduce machine downtime

Improve machine performance

Predict & prevent damage & failures

Allow more precise lifecycle planning

Extend the life of your parts & machinery, and

Increase your productivity.

Here are just 4 of the ways ConSite Mine supports your operation:



# You can Boost Your Maintenance & Operational Efficiencies

ConSite Mine empowers you to perform maintenance, inspections, and parts replacements precisely when needed based on the actual condition of your mining machinery rather than using the rough measure of operational time.



## Load Index Allows You to Predict & Prevent Cracks in Excavator Boom & Arm

Utilizing Al and Hitachi Construction Machinery's proprietary stress analysis technology, ConSite Mine analyzes the cumulative load on the welded structures of the boom and arm during excavation. This enables you to predict and prevent cracks before they occur, avoiding sudden machine downtime.

#### **AVAILABLE FOR**

Backhoe EX2000-7 | EX2600-7 | EX3600-7

EX5600-7 | EX8000-7

Loading Shovel EX2600-7 | EX5600-7



# You will Benefit From Data Reports at Your Fingertips

ConSite Mine sends two types of status reports via email or the ConSite Pocket app:

**Monthly Reports** – updates on the machine's operational data each month, and

**Alarm Reports –** immediate notifications when abnormalities are detected that may require urgent attention.

By keeping you, your machines and your dealer connected 24/7, ConSite Mine helps you anticipate issues before they occur and receive more tailored and timely maintenance support.



## ConSite Oil Means you Benefit from Preventative Maintenance Automation

Traditional periodic oil analyses can miss abnormalities between intervals. Hitachi Construction Machinery's continuous oil-monitoring hydraulic sensors with our proprietary algorithm provide 24/7 online monitoring of oil conditions. This ensures preventative maintenance is precisely matched to your machine's real-time needs.

#### **AVAILABLE FOR**

EX2000-7 | EX2600-7 | EX3600-7 EX5600-7 | EX8000-7



# ConSite Pocket App

The ConSite Pocket app works with ConSite Mine and our Global e-Service machine condition management system, putting our remote monitoring system at your fingertips in a user-friendly interface that helps your operation boost productivity and reduce machine downtime.

The ConSite Pocket app allows you to:

monitor your machine data (data from previous day)

receive alerts and emergency notifications

receive manufacturer recommendations and step-by-step guides (where appropriate) to remedy urgent issues

simultaneously receive reports and notifications as they're sent to your dealer to help reduce machine downtime and increase support

download reports (including monthly operating hours, fuel consumption, technical data and more)

identify the precise locations of your rigid dump trucks and/or mining excavators (via GPS) in real time, and

ensure your machinery is working at peak performance under safer conditions.





# ConSite Mine Shot App

With the ConSite Mine Shot app, you can complete faster, more thorough daily inspections and reports and precisely locate machines in your fleet, greatly reducing your inspection workload and saving you time, helping reduce both your running costs and unexpected machine downtime.

The ConSite Mine Shot app allows you to:

perform faster, more thorough daily inspections

take photographs to attach to inspection reports

select the condition of the relevant parts, add comments, and drag and drop pointers to identify issues

access reports in real time using Global e-Service

identify a machine by scanning its QR code located on machine PIN plate or choosing from a list of nearby machines identified by the app, and

check the load condition of a chosen machine.





# OUR CORPORATE SOCIAL RESPONSIBILITY

Our core values guide everything we do as we work to make a positive difference to communities and environments all over the world.

Hitachi Construction Machinery has fostered and grown diverse strengths during our more than 70-year history. These strengths help us meet the expectations of stakeholders and fuel the Hitachi Construction Machinery Group's ability to sustainably create social, environmental, and economic value.

# Social Contribution Policy

The Hitachi Construction Machinery Group considers our business activities to be possible only in the context of a healthy global environment and sustainable social development. We believe that in order to develop and grow in a region, a company must understand the various characteristics of each local community and help these communities to grow together with us.

The Hitachi Construction Machinery Group acts as a good corporate citizen, lending our business strengths to social and environmental causes, solving problems in society.

To ensure we never forget the importance of social contributions, we formulated the *Hitachi Construction Machinery Social Contribution Policy* in 2022. Under this policy, we genuinely recognize our role as a member of society and engage in activities that address social issues.

All employees of the Hitachi Construction Machinery Group will continue to collaborate locally and globally to deliver social and environmental value to society, sharing the common value of *Kenkijin Spirit*.

# To achieve this, our priority areas are:

combating climate change

transforming to a regenerative economy

delivering innovative solutions to support community, and

4

strengthening global governance.

# **MATERIALITY**

In-house we refer to the crucial issues that we as a company – together with our internal and external stakeholders – have analyzed and chosen to prioritize as our "materiality".

Our materiality themes have a significant impact on our company, how we do business and the impact we can make to society and the planet.

277
MILLION YEN:
Hitachi Construction
Machinery's total social
contribution in 2023

**72%** charitable donations

11% community investment

17% commercial initiatives.

# Hitachi Construction Machinery's four materiality themes are:

**DEVELOPMENT** 

Product and technology
development contributing
to climate change
mitigation and adaptation
(find out more on page 56)

**CONVERSION** 

2 Conversion to a recyclingoriented business

**CREATING** 

Creating innovative solutions for challenges faced by customers supporting social infrastructure, and

**STRENGTHENING** 

Strengthening global governance.







Hitachi Construction Machinery UK supports a range of charities and organizations all around the United Kingdom each year, from Multiple Sclerosis (MS), cancer and dementia research and support charities to hospitals, animal-care trusts and more.

Since 2020, Hitachi Construction Machinery UK
has donated £80,000 each year, contributing
a share of £20,000 to nine national charities
and organizations selected by their staff. By
mid-2024, they had donated £2,500 to the
MS Research & Relief Fund – to help purchase
new equipment – and supported If U Care
Share – contributing to The Sam Johnson Memorial
Tournament. They will continue to donate to their
other chosen charities throughout the year, which include
Lighthouse Construction Charity, Dogs Trust, Cancer Research UK,
Dementia UK, Spaniel Aid, Tiny Lives and Great Ormond Street Hospital.

Donations
to Multiple
Causes in
the UK

Hitachi Construction Machinery UK believes charity embodies their organization's core values of "integrity" and "people" and reflects their belief in supporting communities and enabling their team to make a positive impact in the lives of others. And that's why their commitment to giving back extends beyond direct charitable donations: along with supporting their employees who undertake their own personal fundraising activities. This year, ten of their team members are taking part in the Great North Run (GNR) for charity, with each proudly sponsored by Hitachi Construction Machinery UK. Additionally, in December, Hitachi Construction Machinery UK plans – for the second year in a row – to make ad-hoc donations of £100 to food banks near each of their 14 depots to support Christmas parcel initiatives, ensuring that they spread a little festive cheer.

Hitachi Construction Machinery UK are immensely proud of the impact they've made together and look forward to continuing this tradition of giving in the years to come.





**CAUSE** 

Making

**Healthcare More** 

Accessible

to Rural

**Communities** 

in India



**Tata Hitachi Construction Machinery are** helping local rural communities with a range of healthcare initiatives from free health checkups to donating medical equipment, arranging blood-donation drives, donating glasses and more.

Supporting community health is a cause Tata Hitachi Construction Machinery have dedicated themselves to over the years, and in 2024 they've supported their local communities with practical healthcare initiatives that are making a real impact on the health of rural people in India.

At Dharwad, Tata Hitachi Construction Machinery recently supported community health via several initiatives, including:

- donating blood-bank equipment to the Government Civil Hospital
- donating five retrofitted scooters to improve the lives of people living with mobility limitations
  - holding a free Eye Checkup Camp at Mangalgatti village in cooperation with MM Joshi Eye Hospital, and

donating eyeglasses frames and lenses to more than 100 local residents.

Additionally, Tata Hitachi Construction Machinery sponsored a free Physical Health Checkup Camp at Belur Village for approximately women for cervical cancer, supporting a program by the Family Planning Association of India and the Women's Doctor's Club Association of Dharwad.

> Tata Hitachi Construction Machinery also distributed water purifiers to ensure safe drinking water at the Primary Health Centers in several rural areas, including at Kotur and Jharagram.

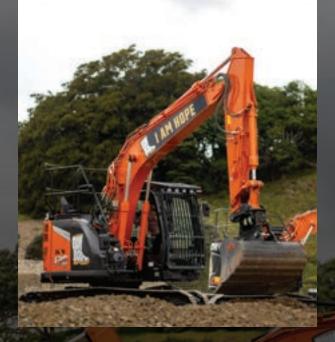
They organized Blood Donation Camps at their Kharagpur Plant and at the Blood Donation Centre in Jamshedpur, where 782 volunteers donated blood. Tata Hitachi Construction Machinery also installed energy efficient LED High Mast Lights at the SD Hospital Kharagpur to help support the safety and security of nurses and staff.

**Tata Hitachi Construction Machinery will continue to express** the values of our company's Social Contribution Policy, by offering real and practical support to their local rural communities into the future.

200 school children and 100 local women - including screening

52







CablePrice New Zealand are giving back to their local community by raising awareness and sourcing donations to support the I Am Hope Foundation – a youth mental health charity – and Gumboot Friday, a charity that offers free youth counseling.

Having branded two of their Hitachi Construction
Machinery ZX135US-7 excavators with colorful signage
promoting the I Am Hope Foundation and Gumboot
Friday, CablePrice New Zealand are digging deep for
mental health.

I Am Hope is a charity that aims to raise awareness about mental health issues among New Zealand's youth and provides education to school children in language they can understand and relate to, helping kids have hope and feel less alone. Gumboot Friday – supported by the I Am Hope Foundation – provides free counseling to youth under the age of 25 through their support services across the country. Since 2019, Gumboot Friday has provided more than 100,000 free therapy sessions to young New Zealanders.

**CAUSE** 

3

Raising
Mental Health
Awareness
in New
Zealand

By branding two of their popular rental excavators, CablePrice New Zealand is helping raise awareness for these charities that provide vital mental health support. The two excavators travel all over the country, spreading the word as they are hired out across a wide variety of projects and locations. These two excavators have also gained great exposure for the charities by participating in the Civil Contractors New Zealand National Excavator Operator Competition. CablePrice New Zealand also call for donations to I Am Hope via their website.

CablePrice New Zealand are proud to help make a tangible difference in the lives of those who need it the most by helping these organizations in their remarkable dedication to youth mental health support, a cause that is close to their employees' hearts:

"Mental health is a big issue within our industry and not something that is openly talked about. Our aim is to help break down the stigma commonly associated with mental health, to get people talking about it and to let people know it's okay to have open conversations about mental health and how it can affect anyone at any time."



# OUR ENVIRONMENTAL INITIATIVES

At Hitachi Construction Machinery, we prioritize environmentally friendly activities that support the planet and the sustainability of society.

We are committed to environmental leadership in all of our business activities across the globe, incorporating long-term environmental initiatives into our management strategy across our entire value chain.

# The Global Context Social expectations of companies and industries are increasing in relation to: **ESG** (Environment, Society, Governance) $oldsymbol{ol}}}}}}}}}}$ with the adoption of the proposition of the prop United Nations' 2030 Agenda for Sustainable Development, and **Climate Change with** the Paris Agreement adopted at the 21st Conference of the Parties (COP21).

# The impacts of climate change are being felt across the world.

Many industries and corporations are committing to a zero emissions future and working towards eliminating greenhouse gas emissions from their operations. Now and into the future, Hitachi Construction Machinery is fully committed to decarbonizing our internal processes, products and services to help achieve a zero emissions society.

Hitachi Construction Machinery's 2030 Goal:

We will reduce our CO<sub>2</sub> emissions by 33%\*

\*as of March 2019, compared to FY2010.

# To achieve this goal, we plan to:

#### REDUCE

emissions & prevent pollution by:

reducing water usage in all business activities, and

managing chemical substances to reduce water contamination risks

# **DEVELOP**

clean technologies & environmentally conscious technologies:

including developing hybrid and electric construction machinery

# **UTILIZE**

renewable energy by:

installing solar panels where possible

# **REUSE**

& recycle products by:

increasing remanufacturing of parts and components

offering quality second-hand parts, and

giving customers the option to rent machinery

#### **REDUCE**

the environmental impact of manufacturing processes by:

introducing an electric power monitoring system that visualizes electricity consumption details and recovers unused energy

# **ADDRESS**

the risks of climate change by:

introducing solar power generation

introducing internal carbon pricing, and

conserving water resources where possible.



At Hitachi Construction Machinery, we are working to reduce CO<sub>2</sub> emissions in all our activities across the mining value chain, including:

## THE USE STAGE -

which accounts for more than 90% of greenhouse gas emissions in the value chain – meaning our machines are more efficient onsite,

the Science Based Targets Initiative (SBTi)

approved the long-term targets for greenhouse gas emission reduction established by Hitachi Construction Machinery as targets based on science.

&

OUR OWN PRODUCTION STAGE, TOO.

Hitachi
Construction
Machinery
established a set of
long-term targets
for greenhouse gas
emission reduction:

Indicator	Reduction in greenhouse gas emissions	
indicator	Scope 1 & 2	Scope 3
Target for absolute	By FY2030 (Compared to FY2010)	
emissions reduction	45% reduction	33% reduction

#### Scope 1:

Direct emissions of greenhouse gases from emission sources owned or managed by companies or households.

#### Scope 2:

Indirect emission of greenhouse gases associated with the use of electricity, steam and heat.

#### Scope 3:

Other indirect emissions excluding Scope 2.



We care for the environment as we try to solve crucial environmental issues from global warming to the cyclical use of resources.

Decarbonization continues to be a key priority in all our activities as we contribute to realizing a zero emissions society (see more on page 8). We're continuing with our policies to reduce CO<sub>2</sub> emissions in many of our offices and facilities around the globe, including educating our employees on ways to reduce emissions and support the environment in their personal and professional lives (see more on pages 59 and 60).

We're developing environmentally friendly equipment such as hybrid machines (low-carbon types), trolley battery rigid dump trucks (see page 23), electric excavators (see page 29) and battery powered excavators, electric motors, low-noise construction machinery and more. Plus, we're further enhancing environmental value by optimizing onsite operations

with ICT (Internet and Communication Technology) and IoT (Internet of Things) solutions and working to minimize waste and maximize energy efficiency. Via our recent Envirosuite partnership, we're also helping our customers to monitor and address environmental impacts on their sites while increasing productivity and efficiency (read more on page 61).

We're also working to make positive impacts on the environment, not just reducing the negative impacts caused by our business activities. We're planting trees, cleaning drains and learning about environmental conservation. Our employees volunteer in a range of initiatives around the world to raise environmental awareness and help realize a zero emissions society (find out more on pages 59 and 60).

Raising **Environmental** INITIATIVE **Awareness** and Donating Clothing and Toys in China 健机(中国)有限 hi Consumption Machin

# Recycling Clothes & Toys

In June 2024, Hitachi Construction
Machinery China held a recycling
program where employees were invited to
donate items to the *Anhui Boai Public Welfare*Foundation (the Foundation) that provides gift bags
of clothing and other items to people in need, including
orphaned children. 281 employees donated an impressive
1,323kg (2,917 lb) of clothes, shoes, hats, bags and stuffed
toys, indirectly reducing CO<sub>2</sub> emissions by 4,763 kg (10,500 lb)
and water consumption by 7,938 tonnes (8,750 tons). Hitachi
Construction Machinery China received a commemorative certificate
from the Foundation as thanks.

# Raising Safety & Environmental Knowledge

The theme of *World Environment Day* in China on June 5th 2024 was "Build a beautiful China across the nation". Throughout the month of June, Hitachi Construction Machinery China raised a banner to inform employees of this theme and carried out various activities to support their employees in learning practical ways to personally and professionally support the environment, including:

an environment conservation lecture by a professor of biology and environmental engineering from Hefei University where 60 employees – including executives and managers from each department – learned about carbon emission reduction, carbon neutrality, pollutant emissions, environmental protection facility management, and environmental compliance;

an online convention to raise safety and environmental-protection awareness – jointly held by Hitachi Construction Machinery China and Hefei Rijian Shearing – attended by all employees of both organizations, a total of 2,331 attendees; and

training and practice in responding to environmental accidents – for example, chemical spills – in accordance with the company's "Environmental Emergency Response Plan" to verify the effectiveness of the plan and improve staff skills.



#### INITIATIVE

3

#### Omnis

Advanced operational guid reduce expenditure on emissions mitigation and target control strategies

#### Omnis

Decision support to ensure compliance with water licence conditions



### Omnis

Reverse trajectory modelling to rapidly identify the source of dust nuisance events

### Omnis

Smart alerting and early warning to support dynamic TARPs across the entire site

Helping Our
Customers Around
the World to
Reduce Their
Environmental
Impact

## Our Partnership with Envirosuite

To help our customers increase productivity while meeting compliance and ESG (Environmental, Social, and Governance) priorities, we recently partnered with Envirosuite: a leader in real-time environmental remote monitoring and predictive technology solutions.

# **Empowering Our Customers with Real-Time Insights**

Thanks to the combination of Envirosuite technology and Hitachi Construction Machinery innovation, our customers can now visualize key environmental variables and impacts at their mine sites – including those caused by dust, noise, vibration, odor, and water. These insights allow mine operators to predict environmental impacts in real time and up to 72 hours in advance, enabling them to manage compliance and safety risks before they occur. This real-time monitoring and predictive modeling enhances operational flexibility for our customers, supporting them to increase productivity without compromising their environmental responsibilities.

# A Sustainable Future for Mining

This collaboration with Envirosuite is a cornerstone of Hitachi Construction Machinery's strategy to realize a sustainable future for mining:

it addresses the global demand for digital solutions that drive both mining productivity and compliance. Through this partnership, we empower our customers with cutting-edge technology to:

- optimize their mining processes,
- reduce the costs associated with emissions controls and meeting compliance thresholds, and
- support responsible and efficient operations across their sites.





# OUR INTEROPERABLE TECHNOLOGY

# Technology of the future today: driverless trucks

Hitachi Construction Machinery's
Autonomous Haulage System (AHS)
combines our advanced technologies and
Wenco's Fleet Management System (FMS)
to make unmanned operation at open-cut
mines a reality, simultaneously optimizing
the efficiency and safety of mine sites.

The innovative technologies in Hitachi AHS enable:

automated navigation & route optimization

negotiation of traffic conditions

optimized acceleration & braking

optimized steering control

collision avoidance, &

an FMS (Wenco) for overall supervisory control.

# Autonomous Haulage System



Hitachi AHS enables unmanned operation of mining trucks at open-cut mining pits, helping mines around the world reach their potential.

AHS delivers the insights required to boost efficiency, increase safety and improve productivity.

When combined with Wenco's FMS and Hitachi's Traffic Control System, our AHS provides strong support for surface mining operations.

Hitachi Construction Machinery's AC-3 series dump trucks are equipped with smart technologies, making the truck itself part of the AHS solution. Plus – as AHS is retrofittable – our trucks can be purchased for use today with minimal operational impact in the future when converting to AHS.

#### **Features**

AHS is expected to improve safety and minimize human variability while bringing a range of economic benefits that include:



hours of operation



human exposure to safety hazards



lifecycle costs



# Technological Centre of Excellence (TCoE)

# Smarter Machines





Our Technological Centre of Excellence is a remote support center that uses a range of innovative technologies to monitor mining dump trucks at actual mines to help increase our customers' operational efficiency. At our TCoE, experts are available 24/7, 365 days a year, ready to respond to our customers' needs at any severity level while upholding our safety promise.

Our team ensures the fastest resolution times without the need for escalation delays, meaning our customers benefit from maximized productivity, minimized downtime and improved life cycle costs.

Located in Brisbane, Australia, our state-ofthe-art TCoE command center provides AHS customers with numerous benefits, including:

- 24/7 site monitoring & operations support
- an agile operational focus
- scalability of business practices, and
- increased site safety.

At the TCoE, we use advanced digital technologies to accumulate, analyze, and deconstruct all data acquired in real time from multiple mining sites. We then use this data to continue to develop innovative digital applications to solve the issues faced by our customers and help streamline and optimize the mining process, including:

- boosting Hitachi AHS functionality
- facilitating smart asset management, and
- optimizing AHS operation (via data analytics, operational data monitoring and troubleshooting).

We're bringing to life our vision of smarter mining excavators to help sites improve productivity and lower costs.

Our smarter excavators will be designed to connect with other elements of a mine site to create a seamless operating experience.



# Interoperability

As the world changes and industries become more connected, Hitachi Construction Machinery is pioneering smarter, safer and more sustainable mine sites.

We're leading the industry in developing an open and interoperable autonomous mining platform. Interoperability is about creating a base platform that connects and integrates all of the technologies, processes and people in an operation.

Interoperability describes a simplified connectivity between systems that increases the sharing of information across sectors and the visibility and control across the entire mining process. This open approach provides customers with flexibility and control for integrating new autonomous solutions into their existing operations, reducing the associated risks and costs of alternative approaches.

their operation-wide insight.

Interoperability gives mines a better systems-level understanding of their operation and access to more robust data analytics. With this connected approach, interoperability allows mine management to make superior decisions thanks to

# Our Interoperable Vision



## Interoperability

We're developing our platform to be interoperable, meaning we will allow other vendors to connect to it so customers have an integrated solution.



## **Open Innovation**

We're encouraging vendors to "open" their systems so they can be integrated with other vendor systems to reduce customer costs and set an industry benchmark for safety, quality and reliability in autonomous mining technologies.



# Partner Ecosystem

We're collaborating with other autonomous mining technologies and services to build an integrated ecosystem where everything is interconnected, which allows data across an operation to be combined and analyzed to give valuable insights, reducing associated risks and costs.







# Wenco International Mining Systems Advancing the Digital Future of Mining





Wenco extracts unrealized value for the mining industry through open interoperability, autonomous technologies, and the Industrial Internet of Things (IIoT). By leveraging our suite of solutions, Wenco customers worldwide transform their end-to-end operational performance shift by shift, hour by hour – even second by second.

Grounded in our open systems philosophy, this line of Wenco solutions empowers customers with the freedom and flexibility to interoperate with any preferred solution for their unique data requirements and business processes.

A Hitachi Construction Machinery Group company since 2009, Wenco regularly works with the group's global leadership on systems research, data sciences, and IIoT initiatives.

The leading-edge solutions that come from this research help mines uncover even more value as they approach a future of increased digitization, data intelligence and autonomous processes.

Fleet management

Machine guidance

Asset health

Business intelligence

Safety

Autonomous haulage



# Explore the Wenco solutions below to learn how you can extract more unrealized value from your mine.



11% more tonnage each shift. 164 extra running hours per truck. Double-digit jumps in utilization. Wenco has a full set of solutions to drive these gains and more throughout the mining process.



#### Decrease Operating Costs

Fleet management and machine guidance solutions streamline production for smooth, efficient operations that cost less to run.



# **Extend Equipment Life**

Asset health and predictive maintenance solutions track equipment performance to predict failures, prevent unplanned downtime and extend the lifespan of equipment.





# **Enhance Mine Safety**

With advanced equipment awareness and industry leading precision in proactive fatigue management, Wenco implements practical solutions to improve safety across sites.





# Gain Actionable Insights

Discover opportunities for improvement by accessing all your mine's data at your fingertips.





## SPOTLIGHT ON A MINERAL: DIAMOND

Diamond is a mineral composed of pure carbon with an isometric crystal structure and strong covalent bonds, making it the hardest naturally occurring substance on Earth.

Diamonds are relatively rare, making up only 1 to 2 percent of the Earth's oldest mantle rocks. And while diamonds are popular as a gemstone known for their brilliance, lustre and beauty, about 80% of the world's diamonds are put to industrial use.

Diamonds come in many colors, from colorless to black, blue, yellow, red green, violet, pink and more. Diamonds can be transparent, translucent or opaque. And, unlike gemstones for jewelry where clarity and lack of color is prized, most industrial diamonds are gray, brown or black.

### Diamonds in the mining industry

Raw diamonds play a vital role in mineral exploration for diamond drilling, with diamond grains embedded on the metal tips of drill bits enabling them to cut cleanly through hard materials to extract rock cores from deep underground. Diamonds are also used to harden the diamond drill's reaming shells (the coupling between the exploration drill core bit and outer barrel). Diamonds are also used in tunneling for underground mining and for oil and gas drilling as they increase the cutting power and longevity of saw blades and drills.

Element symbol: C Atomic number: 6 Atomic weight: 12.01 U

State at 20°C / 68°F: Solid Melting point: 4,027°C (7,280°F) Mohs Hardness Scale: 10

Industrial Uses for Diamonds

Prized for their abrasive properties, diamonds are used to cut, grind and polish many materials.

And while industrial diamonds are expensive, they are also cost-effective as they last longer and cut more quickly than other abrasive materials.

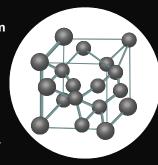
Diamonds have excellent chemical stability, are efficient thermal conductors and electrical insulators, and have unique optical characteristics.

Thanks to these qualities, industrial diamonds play an important role in many advanced and sustainable technologies from lenses, lasers and electronic circuitry to quantum computers, pollution detection and clean energy generation.



### Did you know?

Diamonds are not made from coal: diamonds are 100% carbon while coal is formed from carbon combined with many impurities – including plant and animal remains – which makes coal impossible to be turned into diamonds.



**Diamonds can change color** when exposed to heat or intense radiation.

Diamonds are formed approximately 200 kilometers (124 miles) below the Earth's surface, but we find them closer to the surface due to volcanic eruptions.

In 1477, Archduke Maximilian of Austria commissioned the first diamond engagement ring, sparking a trend among European aristocracy and nobility.



In 2024, scientists in the UK developed the world's first Carbon-14 diamond battery that could continuously power devices for thousands of years, potentially revolutionizing power for spacecraft, medical implants

and even nuclear reactors.

It can take up to 3 billion years for a diamond to be formed, and all the naturally occurring diamonds on earth are at least 1 billion years old.



Diamond and graphite
are both made from
100% carbon, but the
arrangement of their
carbon atoms means
one is the hardest natural
substance and the other
is soft enough to be the
"lead" in a pencil.

The melting point of diamonds is 2.5 times higher than the melting point of steel.





## SERVICE & SUPPORT

With our expert service and superior quality parts, we extend support to you long beyond the delivery of your machines.

Our comprehensive global network gives you access to personalized local support – backed by a worldwide training, parts and service system – to help you get the most out of your equipment.

#### **Our Service**

Hitachi Construction Machinery's reliable solutions extend far beyond the delivery of your machine. Each dealership has highly trained technicians who provide exceptional support and reliable solutions for our customers so you can maximize the reliability of your machines.

Our dealerships are underpinned by knowledge and support from Hitachi Construction Machinery, all the way back to our Technical Training Center.

#### **Genuine Parts**

Our genuine parts are your assurance of guaranteed reliable performance and longevity with high quality manufacturing and strict quality control.

Hitachi Construction Machinery genuine parts include:

- premium hydraulic oils
- hydraulic components including pumps, cylinders and motors
- undercarriage components
- hydraulic, air and fuel filters
- high-pressure hoses, and
- ground engaging tools (GET), including bucket lips, teeth, shrouds and rippers.

## **Extended Warranty**

All new Hitachi Construction Machinery equipment comes with our comprehensive manufacturer's warranty.

But for those who want extra assurance against severe working conditions or unpredictable equipment downtime, we offer a unique Extended Warranty.

When you sign up for our Extended Warranty with the delivery of new equipment, you can choose from the following selection of benefits:

#### **Full Coverage**

Everything covered in standard warranty is also covered in Full Coverage, but the customer has the flexibility to extend this warranty on a matrix of operating hours and months since purchase.

#### **Power Train Warranty**

This program extends the warranty of a large range of travel components, from hydraulic cylinders to certain transmissions and motors.

#### **Structural Warranty**

Structural Warranty covers other major structural components, which are determined by the local dealer depending on the performance priorities of their local operations.

To learn more about our Extended Warranty, please contact your local Hitachi Construction Machinery dealer who best understands your market and region and can recommend what will best suit your operation's needs.



#### Modularization

At Hitachi Construction Machinery Australia, we've introduced the 'Modularization Program' for our mining excavators. This program not only supplies remanufactured parts – saving 362 tonnes (399 tons) of steel per month – but also offers a safer alternative for major overhauls. Instead of replacing small parts onsite, we now use pre-assembled modules – such as a hydraulic module or an engine module – that are assembled offsite in our workshops and replaced as a total unit on site. Our Modularization approach significantly reduces machine downtime by approximately one week to 10 days.

#### Interactive Product Viewer (IPV)

We've designed an innovative, virtual solution for you to learn about our mining machinery that brings our products to life right before your eyes.

With our IPVs, you can take a virtual walking tour of our mining machines and experience a detailed, live-action view of their working components, while comparing features across different models.

Our IPV enables you to take a look at our machines up close when you can't visit a mine site or factory in person.

#### The IPV is available for:







EX1200-7

EX2000-7

EX2600-7







EX3600-7

EX5600-7/ EX5600-7E

EX8000-7





EH5000AC-3 EH4000AC-5

Hitachi Construction Machinery Genuine Bucket Lineup

Hitachi Construction
Machinery has expanded
its excavator bucket
range to include three
bucket options
to enhance your
mining operations.

The Hitachi Construction Machinery Genuine Bucket Lineup has been engineered to offer optimized bucket capacity and increased performance capability across our range of hydraulic mining excavators.

Achieve even greater levels of productivity by simply choosing the right bucket option and GET to suit your digging application.

#### **Genuine Bucket Lineup:**

- Light Duty (LT) bucket
- General Purpose (GP) bucket
- Heavy Duty (HD) bucket.

Hitachi Construction Machinery also offers two types of wear packages to protect and prolong the life of your bucket.

Now, with the right tools on hand, you'll achieve the best possible performance, efficiency and reliability on site, even in tough mining conditions.



#### **ConSite Mine**

Consite Mine is Hitachi
Construction Machinery's
service solution that
provides machine
analytics through IoT and
Al technology to remotely
monitor and analyze the
operational condition of
mining machinery while
connecting the customer,
site and dealer. Find out
more on page 44.

Intelligently monitoring your machine 24/7, ConSite Mine sends automated, periodic operational data – as well as emergency service and maintenance alerts – to your computer or smartphone, keeping your machines and your business running smoothly.

If an abnormality is detected that requires immediate attention, ConSite Mine will notify essential personnel via an alarm report. Additional functionality such as Load Index helps predict stress-related issues in booms and arms of excavators through a combination of Al and proprietary stress-analysis technology, helping to prevent major damage from occurring, improving safety and minimizing machine downtime.

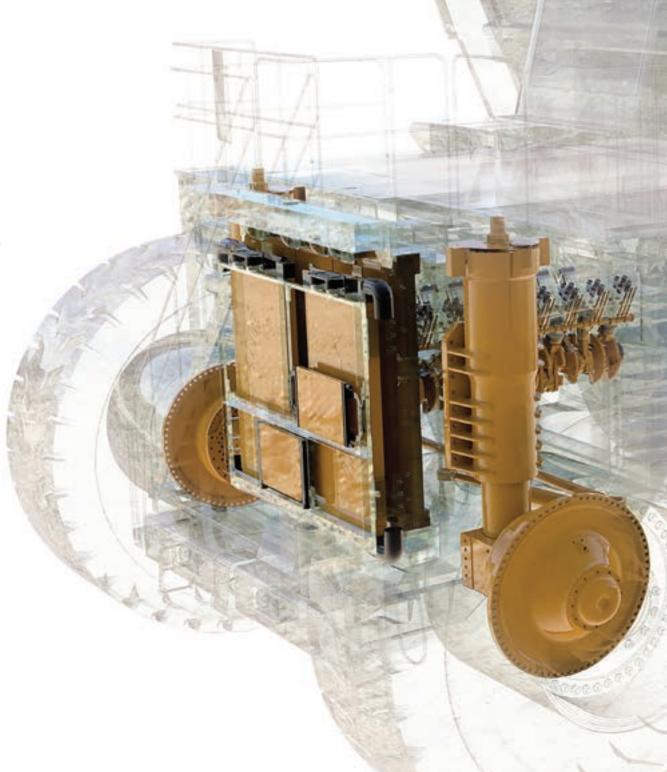
#### ConSite Mine:

improves machine availability
decreases maintenance costs
improves machine performance, and
helps extend machine life.



H-E Parts
International (HEPI)
provides aftermarket
parts, components,
and solutions for the
mining industry.

H-E Parts specializes in high-quality aftermarket components and rebuilds designed to extend equipment life, improve performance, and reduce total cost of ownership. Our focus is on delivering quality, innovative solutions and customer-driven service to meet your unique needs.





#### Mining Solutions: Elevating Your Drivetrain Performance

With decades of expertise in heavy equipment components, service, and support, H-E Parts delivers leading solutions for your drivetrain needs. From wheel groups and engines to cooling solutions, we offer complete drivetrain solutions and service, ensuring reliability, simplified maintenance, and superior performance. Our innovative products are engineered to lower your total cost of ownership while enhancing equipment reliability and efficiency.

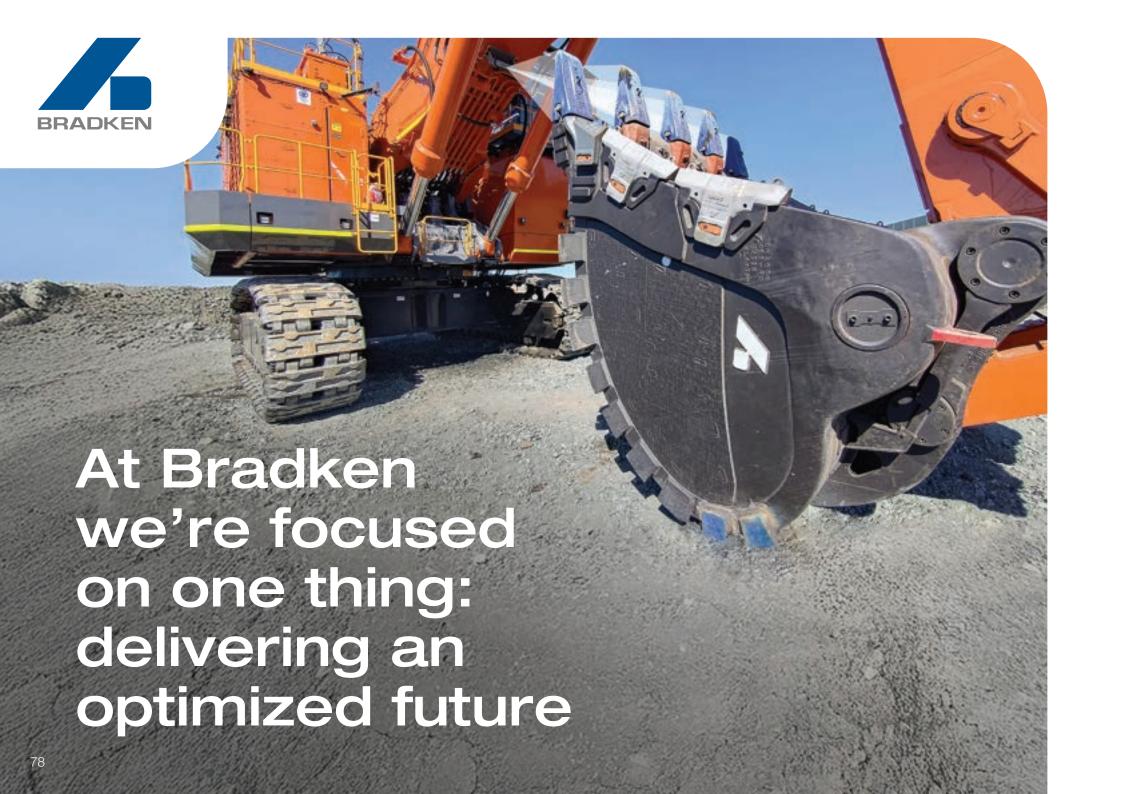
#### Crushing Solutions: Maximizing Mineral Processing Efficiency

For fixed plant mineral processing, H-E Parts provides a comprehensive range of wear solutions, components, and dedicated support. Our site-specific crusher liners are tailored to your operation, with a proven track record of extending wear life and improving performance. By focusing on sustainable solutions and operational excellence, we help your crushing operation run smoother, last longer, and deliver results.

#### Dom-Ex: Your Global Source for Heavy Equipment Parts and Components

H-E Parts is proud to introduce Dom-Ex as a global offering. Leveraging an extensive international network, Dom-Ex sources components, equipment, and parts to keep your heavy equipment running efficiently. With Dom-Ex, industry challenges are turned into opportunities through responsible mining solutions and comprehensive support, no matter where you operate.

For more information, visit h-eparts.com



Our purpose is to equip mining operations with the precise application knowledge of our wear solutions, enabling them to effectively achieve their goals.

We have successfully cultivated a strong partnership with the Hitachi Construction Machinery authorized dealer network, allowing us to prioritize the supply of Bradken buckets, GET, and digital solutions to new machine deliveries.

Our expertise extends to delivering comprehensive wear solutions for all OEM excavators and rope shovels, ensuring that our customers' needs for lifecycle cost efficiency and machine availability are met.

We are committed to safety, collaboration, innovation, and sustainability in every aspect of our business, providing reliability and confidence to our partners and stakeholders.



Our products, services, and digital solutions are designed and manufactured to withstand the demands of various types of mining environments, resulting in optimized machinery, operational performance, productivity and safety.

With over 100 years of design and manufacturing experience, we understand our customers' needs, challenges, and success metrics, as well as the technical and performance demands of their equipment and operations.

Bradken delivers results through the following core product ranges in mobile plant and mineral processing solutions:

- crawler system components
- GET
- excavator buckets
- mill liners
- fixed plant & bulk handling wear
- equipment monitoring & reporting via digital solutions.

Bradken Insite offers customers asset management, condition and performance monitoring data across our product range, reducing unplanned downtime and improving sustainability through fewer unnecessary changeouts and reduced waste.

On the ground, our regional engineering offices, highly trained sales representatives, and dealer network provide technical support, ensuring efficient and effective on-site inspections and meetings that capture precise information.

For more information or to find your local representative visit bradken.com

## Product Support

With Hitachi Construction Machinery, the delivery of your equipment is just the beginning.

#### Our customers are at the heart of our machines

Our product support is built on relationships. We work with our customers to understand their unique operational needs and offer a range of field support options and other services to:

- · maximize productivity and
- · minimize machine downtime.

#### We support you, your machine and your operation

We work to maximize your machine availability and minimize your operating costs where possible, assisting you by:

- visualizing the status of your machinery using ICT and IoT technologies
- improving the quality of parts
- establishing an efficient supply chain, and more.

Our dealers around the world have the tools, knowledge and resources they need to support your operation. We can offer you:

- extended warranty options and service contracts
- preventative maintenance advice
- fast, efficient supply and assistance for parts and components, all tailored to your operation.

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We have a saying at Hitachi Construction Machinery:

### sales sells the first piece of equipment,

## service & support sells every product after that.

And that is very much how Africa operates.

One thing that is unique about Hitachi Construction Machinery is the high level of tailored aftersales and product support we offer our customers across Africa. Our customers tell us that they so appreciate how we support their unique needs long after delivery and that we'll even, in some cases, embed our people directly onsite for years – as factory representatives or other technicians – to support their operations.

Along with the reliability of our machines and how they stand up to the tough conditions across the continent, our aftersales support is clearly a major reason for why we have so much repeat business in Africa."



#### **Scott Johnston**

General Manager of Mining Sales and Support, Hitachi Construction Machinery Europe

# Along with supplying reliable machines built to last

we help our customers maximize productivity and minimize downtime by providing a variety of aftersales support services, including:



#### Support

At Hitachi Construction Machinery, we are with you for the life of your machine.

Our experienced, factory-trained technicians and product support representatives are available to help your machinery continue to operate at a high standard.

We also offer on-the-ground support – from specialists and factory representatives to managers and more – to help you with most aspects of your operation.

#### **Tailored Service**

Our contracts and premium service agreements are tailored to fit your business and its specific needs.

We aim to solve the unique challenges of your site or operation, even customizing our machines in the field.

#### **Maintenance & Repair**

To help you minimize operating costs and maximize your fuel efficiency, our dealers are equipped with dedicated field service and workshop teams that can assist you with your next scheduled service.

We offer a comprehensive list of services, including:

- routine machine servicing
- repairs
- major component change & rebuild
- maintenance & repair contracts
- oil analysis
- fixed priced servicing.

#### **Parts**

Parts availability is crucial to minimizing your machine downtime.

Through a custom parts list, we aim to ensure you'll have the parts you need when you need them. This service is supported by your local dealer and backed by our global parts supply chain.

We continually work to improve the quality of parts, and by maintaining lineups of genuine parts, selected parts and remanufactured parts, we allow you to select the parts that are right for your business and contribute to your lifecycle cost reductions.

#### **Technology**

Direct, remote communication with our machines can solve many customer challenges and help ensure correct maintenance procedures onsite. We offer our customers a suite of technology products covering:

- equipment tracking
- maintenance
- daily operating information
- equipment health conditions.

We can monitor the condition of your equipment online using our remote monitoring applications (ConSite Mine and the Wenco Fleet Management System).

Find out more on pages 44 to 47 and 66 to 67.

#### **Training**

We know that learning the technical and functional components of a new or existing machine can be difficult as technology evolves at a rapid pace. We partner with you to share knowledge of our machines, their operation and crucial aspects of machine ownership – from operating costs to maintenance schedules and more.

We offer tailored training on:

basic machine familiarization

service manuals

- troubleshooting
- · maintenance procedures
- operator training
- and more.







## The meaning behind the design

Our design for this year's brochure revolves around a key theme at Hitachi Construction Machinery: the road to zero. For us, the "road to zero" isn't just symbolic: it's a commitment we've made to take practical steps towards achieving carbon neutrality by 2050 in all our activities around the world.

This brochure's design features sweeping circular paths as visually compelling representations of both roads and the shape of the numeral zero. These dynamic arcs, filled with hero shots of our people and our machinery, highlight the path we are on towards zero emissions.

By putting our machines in use, operated by our customers, at the heart of the circles on many introductory spreads, we are also reminding our readers that our customers are at the heart of everything we do. This is a key part of our new LANDCROS philosophy that we're proud to express in this design (read more on page 5).

The dynamic sweep of the overlapping paths and the images that then radiate out from the main circle on each title spread also represent the work we do at Hitachi Construction Machinery to radiate out support to societies all around the world. Additionally, placing these circles within natural landscapes serves as a constant reminder of our mission to protect and nurture the planet.

At Hitachi Construction Machinery, we are actively integrating long-term environmental initiatives into every aspect of our management strategy. You can find out more about the strides we're taking on the road to zero on page 56, from developing clean and environmentally conscious technologies and equipment to conserving water and switching to solar power wherever possible.

As you'll discover reading this brochure and taking in its striking design features, at Hitachi Construction Machinery, "the road to zero" is more than an aspiration for us: it's a tangible goal.

