

Even before Network Rail introduced the new standards, the popularity of GRP enclosures was quickly gaining momentum. Metal had always been the traditional, go-to solution because of its inherently robust nature, but as competition within the industry increased, many newcomers to the market were noticing that the incumbent favourite had several disadvantages that they could improve upon.

While metal enclosures are undoubtedly strong, an essential quality in a trackside enclosure, they are prone to denting when subjected to forceful impact. Once the metal is dented its protective coating will be damaged, which will allow for corrosion to occur, quickly compromising the integrity of the connection within. Of course, if the connection becomes compromised, then the conductivity of the metal makes the enclosure itself a health and safety risk.

A good quality GRP enclosure, by contrast, will have

a tensile strength that, while not equal to, is still comparable to its metal counterpart, yet it will not dent and is not at risk of corrosion should the paintwork on the surface get damaged.

In addition, the material does not conduct electricity, meaning there is no risk of electrocution should anyone come into accidental contact with the enclosure.

When most engineers are asked to specify the toughest enclosure possible they naturally turn to metals like stainless steel. This is a force of habit brought on by traditional misconceptions, and usually answered without the real-world considerations of cost and practicality.

While metal enclosures may offer the highest strength, when it comes to all round toughness, it's easy to make a case for GRP.

• [Spelsberg UK](#)

Competence in Gravel Extraction

Modern duty cycle crawler cranes from Liebherr are being used by Kiesabbau Wiedemann for various tasks in the sand and gravel extraction industry.

The south German company has strengthened its position with four further machines, namely three HS 8070 HD and one HS 895 HD. Two of the duty cycle crawler cranes in Kiesabbau Wiedemann's fleet proved their efficiency during the last year as part of an infrastructure project in Hungary.

The task of the duty cycle crawler cranes was the extraction of gravel material for the development of the Hungarian motorways. Despite the relatively large volume of the extraction, Kiesabbau Wiedemann decided against a larger machine and opted for two HS 8070 HD instead, thus considering the difficult soil conditions.

Thanks to the performance of the two 70-tonne Liebherr duty cycle crawler cranes, the ground pressure could be kept as low as possible while lifting the dragline bucket.

Approximately 16,000 Tonnes of Gravel per Day

For about one year, the duty cycle crawler crane worked twenty-four hours, seven days a week in order to meet the requirements for gravel.

Each machine was equipped with a 23 m long boom as well as a dragline bucket with a filling capacity of 3



m³. Every day about 16,000 tonnes of sand and gravel were extracted from depths of down to 12 metres. That means a turnover of approximately 330 tonnes per hour and machine.

Thus, in the course of the year, it was possible to meet the customer's expectations and achieve approximately 5.5 million tonnes of material as required.

Kiesabbau Wiedemann provided a well-experienced team of six operators for the task. They worked in shifts and achieved low cycle times of under one minute.

• [Liebherr-Werk Nenzing GmbH](#)

Hinowa Makes Push with New Products

The Italian company, Hinowa S.p.A. for over 30 years has been establishing itself as a market leader with a range of innovative, compact machines that are outside of the mainstream construction equipment sectors.

Today the Hinowa range includes tracked access platforms, crawler-mounted dumpers, mini-dumpers and multi-utility tracked forklifts.

The company has a worldwide customer base selling through an increasing number of dealers.

New LightLift MK2 platforms

Greater safety and performance with the new LightLift 17.75 and 20.10 versions, both in the Performance IIIS configuration bring new options to the Hinowa range of platforms.

Hinowa's compact, powerful and versatile tracked aerial platforms have always been synonymous with safety and reliability. The new versions of the LightLift models, which are available in various operating capacities, have reaffirmed the brand's leadership in this field.

Some of the most salient new features include a simplified starter system with a unique key, and a newly designed basket with an original remote control unit housing in composite material.

The remote control unit on the Performance IIIS version allows the operators to quickly and easily perform the self-stabilization arm movement, and shifting operations. The display provides the operator with useful information via a simple and intuitive icon system.

Practical controls, with facilitated movement and management: the basket is even equipped with wheels in order to ensure ease of movement when disassembled.

The options available on the new version include the anti-entrapment system: an additional operator protection device that guarantees maximum safety under any conditions.

The wheel-mounted basket and the anti-entrapment device are also available on the LightLift 15.70 and



What's New in Plant & Equipment

With regard to the power units, in addition to the endothermic engines, the new LightLift models are also available with a zero-emission 110-220 volt electrical system (4.8 kW/h for the LL17.75 version, and 7.2 kW/h for the LL20.10 version), powered by a lithium-ion battery pack, which guarantees unparalleled performance in terms of noise, environmental impact, and autonomy. Hinowa has been pioneering the use of battery packs with lithium-ion technology on aerial platforms since 2008, and was proposing these types solutions long before the technology became so widely available on the market.

In a side note during the presentation of the company's sales network, Hinowa's president, Dante Fracca, stated:

"The new LightLift models have completely redefined Hinowa's range of aerial platforms, even among the higher product categories."



The product development work has focused upon performance and the optimization of product management for rental companies and end users.

We are confident that the new MK2 models will be highly acclaimed by both the public and critics alike"

New HS701 Minidumper

The range of the Hinowa super-compact dumpers has now been extended with a new model. Having made its debut at the Bauma 2016, the HS701 tracked Minidumper with

What's New in Plant & Equipment



a Honda petrol engine is now finally available on the market.

Building on the success of its predecessors with diesel engines, Hinowa has decided to develop two new petrol versions of the HS701 model.

Ever since its introduction, the HS701, powered by a Kubote diesel engine, has proven itself among other tracked models by its compactness and load-bearing capacity, which have rendered it extremely practical and reliable under all operating conditions.

The new petrol power units have completed the HS701 range, which have traditionally been equipped with diesel engines. There are two versions available:

- The 8.4 HP version with a pull starter, which is designed for rental customers. This is available with either a standard or self-loading dumper bed, which allows the material to be rapidly unloaded.
- The 11.7 HP version with electric ignition, available with a self-loading dumper bed; this series comes equipped with a hydraulic oil heat exchanger in order to prevent overheating, and is particularly suitable for heavy duty and continuous use.

Advanced technology and performance

Just because a machine is small and compact does not mean that it lacks the durability and reliability demanded by customers. The Minidumper HS701 line has always distinguished itself by its performance and safety.

A width of just 758 mm makes it a suitable tracked model for working in confined areas and enclosed spaces of just a few square metres. The highly manoeuvrable unit is capable of quickly and easily moving through narrow passages, including gates, doors and entryways.

It also has a perfect weight distribution. In fact, the three rollers present on each side of the tracked undercarriage enables the HS701 to easily handle various types of terrain and slopes with exceptional stability: the tracks also reduce the pressure exerted upon the terrain, thus reducing the load at the base and preventing damage to the underlying surfaces, even during the most critical operations.

An addition feature with this model is that it is fitted with a hydraulic expansion system that increases the distance between the tracks from 758 mm up to 1058 mm: a solution that improves the unit's stability and traction on all types of terrain, even under the most

adverse conditions.

With a load capacity of 700 kg, it can quickly and easily handle any kind of material transport and debris removal operation. The dumper bed on the petrol model is available in both the self-loading and standard versions, while the diesel model can even mount the hi-tip dumper bed, with a load capacity of 550 kg.

Being an entirely hydraulic system with simple and intuitive controls, this tracked model offers exceptional precision and manoeuvrability.

In order to render its use even more practical, the operator can choose the speed based on the type of terrain: slower for uneven surfaces, and faster for level surfaces, including gradients up to 15°.

The models with diesel engines have maximum speeds ranging from 2.2 km/h to 3.3 km/h, while the models equipped with the new Honda petrol engine are capable of reaching 4 km/h. Operating weights are up to 735 kg depending on the configuration. Typical dumper body volume is rated at 0.34 m³.



TX2500 Transporter with a 3-way dumper body

Hinowa, an industry-leading manufacturer of tracked vehicles, has now launched the new TX2500 Transporter model with a 3-way dumper bed.

The previous version, with a swivel dumper bed, has already proven itself by its speed, stability and transport capacity.

Today, the new version with a 3-way dumper bed offers an additional function that allows for tipping to be performed on three sides, with the automatic opening

LightLift 26.14 Performance IIS models.

The new AGM battery features a charge maintainer with start-&-stop technology, which only powers the motor when a movement is actually being performed, thus resulting in considerable energy savings.

The MK2 version includes a new configuration option for the LightLift 17.75 Performance IIS model: the Honda iGX390 petrol engine with a 3.15 cc pump guarantees maximum efficiency and reliability.

There is also a new and even more powerful battery charger, as well as LED stabilization lights for reduced energy consumption.

With regard to the articulated structures, the new LightLift models also guarantee the same level of technical quality that all Hinowa customers have come to expect from this Italian manufacturer.

The high-strength steel parts guarantee exceptional stability during use, while the pantograph and hydraulic control systems (the latter of which features components of the latest generation) ensure a faster and more precise handling of the aerial parts, thus allowing the operators to work with a degree of smoothness and precision that was never before possible.

	LightLift 17.75	LightLift 20.10
Capacity platform	230 kg	
Max. Working height	17.06 m	20.15m
Max. Horizontal working outreach	7.50 m	9.70m
Transport length	4.53 m	5.01m
Standard basket dimensions	1335 x 690 x h.1,100 mm	
Basket rotation	124°(+/-62°)	
Maximum stabilisation angle	12°	15°
Max slope in travel mode	16°/28,7%	
Total weight (max)	2,300 kg	2,950 kg
Petrol engine	Honda iGX390	Honda iGX440
Diesel engine	Hatz 1B40	Perkins 402.05
Electric motor	2.2 kw-230 V-50 Hz / 2.2 kw-11 0V-5 0Hz	
Engine max. Travel speed	2.5 Km/h	
Lithium-ion powered	7.2 kW/h	
Undercarriage width open/close	798 mm / 1,086 mm	795 mm / 1095 mm
<i>Specifications are for guidance only and vary according to machine power option and other configurations.</i>		

What's New in Plant & Equipment

Roll-over protection and comfortable operation's station on the new Hinowa TX2500 allows operators to work safely and productively

and closing of the sides.

The company is known for its tracked undercarriages, as well as the various lines of powerful and highly-maneuvrable products from which the TX2500 transporter benefits.

TX2500, performance and comfort for heavy duty work activities

The new transporter is the ideal tracked vehicle for loading and unloading materials in a quick and safe manner. Thanks to its nearly 50 HP engine and operating weight of , the TX2500 model is capable of handling the most difficult and uneven terrain.

The latest model has a maximum capacity of 2,500 kg, six rollers on each side (two fixed and four floating), a comfortable seat capable of rotating 180°, and FOPS structure for the operator's protection.

A large 40 litre diesel tank and a hydraulic oil cooling system guarantee maximum performance and allow for an intensive work pace. The special rubber tracks with mobile rollers allow the tracked transporter to reach a surprisingly high speed for its category: up to 11 km/h.

In addition to these advanced performance levels, this new version also offers the possibility of 3-way dumper bed tipping for even faster unloading operations.

A load capacity of 1.36 m³, two speeds (0-6 km/h and 0-11 km/h), and a weight of 2,700 kg allows this machine to deliver optimal performance under a wide range of operating conditions.

Despite its power, with a length of 3.3 metres, a lowered dumper bed height of 1.4 m, and a width of



just 1.7 m the TX2500 is a super-compact tracked vehicle that is exceptionally easy to manoeuvre, even in confined spaces.

The tipping of the dumper bed is controlled by a telescopic cylinder, which is connected by articulated joints that allow for movements on three sides with an angle of 55°.

The new model is even equipped with an intelligent unloading system that automatically opens and closes the sides.

Each side of the dumper bed is closed by two pivots; in order to prevent errors during the operations, when one side is opened, a specially designed safety system ensures that the others remain closed.

Safety is one of the main principles upon which Hinowa was founded, and the design features and high quality components of each model guarantee exceptional reliability.

The driver's position has even been made safe and comfortable thanks to an anatomic seat, a covered structure, safety belts, and a frontal support.

• [Hinowa SpA](#)

New GEDA SBL 2000 Hoist at Bauma 2016

New concepts for new markets is the banner under which GEDA-Dechentreiter GmbH & Co. KG presented, at Bauma, a new personnel and material hoist, especially for markets outside Europe - the GEDA SBL 2000.

The new GEDA SBL 2000 is for customers not requiring advanced features and versatility. It has a fixed platform size of 3.20 x 1.45 x 2.10 metres, a standard load capacity of 2,000 kg and 23 people, as well as a hoist speed of 55 m/min and a discharge head of 250 m.



Although a more basic machine, it still retains all the safety, durability and reliability that have been part of the Geda philosophy for many years.

And of course, the GEDA SBL 2000 in no way lags behind other hoist solutions from the extensive GEDA range in terms of quality and safety.

In future, the GEDA SBL 2000 will be available both as a single and a twin cabin.

• [Geda Hoists](#)

What's New in Plant & Equipment

The Future for Excavators

Bauma always kicks-off with the issuing of several awards for innovation and 2016 was no exception.

Among finalists representing hydraulics technology were the STEAM Hybrid Excavator built by **RWTH Aachen University** in the research sector, pipe-laying equipment from **Harald Gollwitzer Spezialtiefbau GmbH** in the construction process/work category and a wheeled excavator from **Mecalac** in the design category.

University and industry groups give engineers the opportunity to look outside the box when it comes to engineering design. This freedom to explore new ways of doing things lays behind all innovations that have taken place over the years.

For industry, supporting University driven research and development is a cost effective way to find solutions for the future - solutions that are then available to all manufacturers to further enhance products and to facilitate production..

In the last issue of **Contractors World International** we featured the 'Concept Cab' - a universal cab for the



future. This time we look at developments in hybrid technology as manufacturers face ever increasing demands to produce equipment with minimal emissions.

The impetus behind the STEAM excavator, according to Aachen officials, is that fluctuating fuel prices, more stringent emissions regulations and increasing environmental awareness is spurring interest in highly efficient mobile machines, especially in the premium segment.

However, most of today's machines have a total efficiency of less than 10%, meaning that only a fraction of the energy in fuel is actually converted into mechanical power. Low efficiency is mainly caused by inefficient operation of the engine and throttling losses across hydraulic valves.