



Benchmark on 7 Axles.

The new Demag AC 450-7 is in a class of its own: With a carrier length of 15.99 m and an outrigger base of 8.45 m, it is as compact as a six-axle crane, and yet is as powerful as some eight-axle cranes. In fact, the Demag AC 450-7 can reach lifting capacities of up to 23.7 tonnes when its 80 m main boom is fully extended, and that is without even using the SSL system. Bring in SSL, and the lifting capacity goes up to an unbeatable 37.3 tonnes.

In addition, Demag is using a new Sideways Superlift design for the first time ever in the AC 450-7 – one that makes handling and setup easier. The system can be extended with an 81 m luffing jib, and the sections of this jib can also be used to assemble fixed extensions.

DEMAG.

On the cover:

A technician tops up and checks the battery pack on Haulotte's new Pulseo all electric Rough Terrain scissor lift.



Caacontents

When the time comes for a company owner

to step down thoughts turn to either selling or

passing it on to a new generation. If a family

can be relatively easy. All too often however

this is not the case and the process becomes far more daunting. We look at an alternative -

member is eager and able to take charge, that

Selling a

business 49

Employee Ownership Trusts.

Comment 5

News 6

All new Haulotte boom lift, new 80t Tadano, Potain adds to MCT line, insulated booms from Terex Utilities, Almac/Multitel tracked boom, eight from Skviack, Valla launches V110R,

Falcon small spider range, new

mounts 17

Barring slight disruptions

caused by Covid-19, the sale

and production of van mounts

reached all time highs in 2020.

completely overhaul their models.

tower cranes 25

niche jobs, but perhaps the time

has come for them to be treated

as an emerging class of more

Batteries 37

take an in depth look at how

suddenly becoming interested

the mobile crane market is

in electrification with many

manufacturers spending an

increasing amount of their

battery power.

development budgets and time on

general purpose cranes.

The small truck mounted lift

MK for Liebherr, hybrid Goman scissor, new Effer, Tadano unveils 700t AT, new Broderson, Comansa adds to 21LC series - plus a roundup of the latest financials, acquisitions and news highlights.

market was also busy, with manufacturers taking advantage of new chassis to tweak, upgrade or

Self-erecting mobile

In most countries tower cranes mounted on a

Given that past battery features have focused on aerial work platforms, this feature will

mobile crane carrier are seen as a specialist tool for

Vertikal Days 52 Vertikal Days has been obliged to shift from Van and truck

May to September this year to comply with the UK government's 'road map' out of Lockdown. It will be back with a bang at the



East of England Showground in Peterborough for what is likely to be Europe's first and



largest live crane, access and telehandler event of 2021.

Time and Ruthmann come together 55

With Time and Ruthmann developing an increasingly close relationship over the past 10 years, it was perhaps only a matter of time before one took advantage of the complimentary product line and potential growth opportunities and acquired the other. The deal has now been completed and the two parties are beginning to talk.

regulars CPA focus 57

PASMA focus 59

IPAF focus 61 ALLMI focus 63

Training 65

Books & models 67

Letters and obituaries 71

What's on 73

Online directory 78

In the next C&A

The next issue of Cranes & Access, scheduled for mid-May, will include features on the cranes and access platforms used in the rail industry as well as the low level access and trailer lift developments. It will also take a look at a number of impressive heavy lift applications and include our annual lifting product source guide, listing details for every manufacturer operating within our industry by product type. If you have any contributions or suggestions to make, or are interested in advertising in this issue, please contact us today.

Van and truck mounts



Self-erecting mobile cranes 25



Batteries



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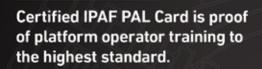
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For users & buyers of lifting equipment

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Since the last edition of Cranes & Access, many of the lifting industry events that were planned for this year have been cancelled. They include APEX, in the Netherlands, as well as the UK's Executive Hire Show and APF forestry show. While France's JDL is hanging on for June, in the face of a new lockdown sweeping the country. Vertikal Days has moved to September, while the ARA in the US was rescheduled to October.

A survey carried out by Vertikal Days in late January and early February, found mixed feelings among both visitors and exhibitors. Some were concerned about the safety and the practicality of holding the event in

May, worried that visitors might not feel confident enough to attend. The majority did say that there was a pressing need to get-together to talk business, see the latest products, and have the chance to catch up on what has been an unprecedented 12 months. Some of the respondents even felt that the event ought to go ahead regardless, as long as it was legally possible to do so!

The UK government took the difficult decision out of the organisers' hands, and thus Vertikal Days moved to September. That may well have been the right decision anyway? Vertikal Days now looks set to be the first live lifting event in Europe for 18 months. And barring new disasters, those attending will almost certainly feel safer and more confident than they would have done in May, resulting in a much happier and more successful event.

Although most live meetings were wiped off the calendar, there have been plenty of 'virtual events' which have been interesting. Without naming names, some companies virtual press conferences were actually better than their live efforts. Virtual events, if they work, are a more efficient use of time as well as being more environmentally friendly. Virtual attendees miss out though on one on one contact, and opportunity to ask a discreet question or to take your own exclusive photos.

Virtual interviews can also work really well and are almost certain to become a permanent fixture. However, visits to a company premises provides the opportunity to learn more. A plant visit and tour is one of the best ways to get a real feel for a business and how well run it is and is irreplaceable. Visiting a remote corporate office is not the same although it can still speak volumes about a company and its senior management- but virtual is as good.

This pandemic has highlighted so many things we have taken for granted, which might have seemed unimportant. It has also exposed the myth that technology is the solution. The importance of face to face human contact and interaction has never been so appreciated outside of a solitary confinement

Let's hope that September 22/23 will be a celebration of our industry's return to normality.

Leigh Sparrow

Comment and feedback is most welcome via post, email, fax or phone stating if we may publish them or not: editor@vertikal.net



Csa



All new Haulotte boom

Haulotte has unveiled the all new 46ft 'Sigma 16' and 'Sigma 16 Pro' all electric articulated boom lifts which the company says is the result of a totally new 'white paper' design.

The new lift employs a dual arm sigma type over-centre riser, topped by a two section telescopic boom and jib with 130 degrees of articulation. The jib on the Pro model also offers 110 degrees of horizontal rotation - 55 degrees either side of centre. It has a working height of 16.1 metres and an unrestricted platform capacity of 230kg. The standard platform is 800mm deep by 1.2 metres, with the option of a 1.5 metre wide alternative. Dual side and front entrances are also available.

Maximum outreach is 8.35 metres – or 8.05 metres on the Pro due to the different configuration of its rotating jib – at an up & over height of 7.6 metres, all with zero tailswing or forward projection beyond the machine's 1.75 metre overall width, once the risers are fully raised. It also offers a perfectly vertical lift, from two to 7.6 metres. Overall stowed length is 6.6 metres, with an overall height of two metres.

Drive is provided by four AC electric wheel motors powered by a 48 volt system with eight 435Ah six volt lead acid batteries. Haulotte's Activ Screen with remote diagnostics is standard, while its Activ Energy Management, manual or automatic battery top up system and new Sherpal telematics suite are optional. The control console is similar to the company's RTJ range with Activ Shield secondary guarding. Other features include the Activ Lighting System for safer work at night, especially when loading or unloading.



New 80t from Tadano



Tadano Demag has launched a four axle 80 tonne AC 80-4 All Terrain crane fitting between the 60 tonne AC 60.3 and two 100 tonne AC 100s. The new crane has a seven section 60 metre main boom which can handle 5.4 tonnes at a 30 metre radius. A 6.5 metre heavy duty swingaway extension, which offsets at 25 to 50 degrees, can handle loads up to 23.8 tonnes, while a 1.5 metre 'runner' extension has a 26.6 tonne capacity. Single line pull on the main hoist is 6.8 tonnes, the maximum counterweight is 17.7 tonnes.

The company claims the crane is the most compact in it class, with an overall length of 12.15 metres, a carrier length of 10.6 metres, an overall width of 2.55 metres and an overall height of 3.85 metres. Front boom overhang is 1.49 metres. The crane can travel within 12 tonne axle loads with up to 9.3 tonnes of counterweight, the 6.5 metre extension and a three sheave hook block. It can also meet 10 axles loads with 3.3 tonnes of counterweight.

Power comes from a Stage V Mercedes diesel matched to a Mercedes-Benz G230-12 transmission with 12 forward and two reverse speeds. All wheel steer and two axle drive is standard, while a third driven axle is available. The new Flex Base variable outrigger system and Demag IC-1 Plus control systems, which come as standard, automatically calculate the capacity for the actual boom, outrigger set up and installed counterweight. An expanded graphic display provides the operator with a clear overview of the information and capabilities.

The company's new Surround View system with four cameras displays a diagram of the possible outrigger configurations and counterweight tailswing radius for the set up selected. When driving it also provides the driver with views along the sides of the crane as soon as the turn indicator is activated, allowing the operator to detect cyclists, pedestrians, or other obstacles. Demag's new electrohydraulic E-Pack option is available for working in enclosed or sensitive areas.





Potain adds to Chinese MCT line

Potain has added to its Chinese built MCT flat top tower crane range with the introduction of the eight tonne MCT 185 Topless. The new model shares the same features, transport, assembly and energy efficiencies as the other models in the MCT range, which are all built at the Manitowoc plant in Zhangjiagang and aimed principally at the regional Asian market.

The MCT 185 offers a 65 metre jib with a tip capacity of 1.5 tonnes. It has a 13.5 metre counter jib for use with the 30 to 45 metre jib lengths or a 16 metre counter jib for the 50 to 65 metre configurations. The crane can be installed on Potain's existing 1.6 metre L46 or two metre L68 towers and can also be used with the new 7.5 metre high S46JR reinforced tower base for freestanding heights up to 59.2 metres.

A choice of three Optima winches are available with up to 553 metres of rope storage. All three offer continuously variable speed control. The S110 Smartview cab comes as standard, while the V140S Vision cab is optional. Four trolley options are available with speeds of up to 80 metres a minute.

New Terex Utilities

units

US based vehicle mounted aerial lift manufacturer Terex Utilities has announced two new lifts. The first is the Genie based 45ft Z-45 Substation



Utility Boom (SUB), a heavily modified version of the Genie Z-45 XC self-propelled boom. Intended for substation and other insulated applications, it features a fibreglass articulating jib and levelling rods as well as a heavy duty fibreglass platform. It offers a maximum working height of 15.8 metres, an outreach of 7.6 metres at an up and over height of seven metres with a 300kg unrestricted platform capacity. The maximum capacity of 453kg is available at just over six metres.

The company also unveiled a new 16.2 metre Hi-Ranger TL48 articulated telescopic aerial device suitable for new super duty chassis such as the Ford F600, International CV and Chevy 6500. The unit offers almost 10 metres of outreach with a 227kg platform capacity.

Terex Utilities' Z-45 SUB is a heavily modified version of the Genie Z-45 XC



Almac Multitel tracked boom

Italian tracked aerial lift manufacturer Almac has teamed up with Multitel Pagliero to develop the 43ft AlmaCrawler Jibbi U-1570 tracked boom lift. The first in a new 'Ultralight' range, the Jibbi U-1570 combines a Multitel aluminium boom with AlmaCrawler Bi-Levelling undercarriage with an overall weight of less than 2,900kg. It features a three section telescopic boom topped by an articulating jib to offer a 15 metre working height and up to 8.4 metres of outreach with an 80kg platform capacity. Maximum capacity of 250kg is available at an outreach of up to 5.8 metres, while the machine offers 220 degrees of slew – 110 degrees either side of centre.

It is able to drive at heights of up to 9.5 metres on uneven ground or slopes of up to 22 degrees and can fully level on slopes of up to 15 degrees in both axis. The variable track widths include 1.35, 1.9, 2.15 or 2.45 metres with the working envelope automatically adjusted. Power comes from a three cylinder Yanmar diesel, while an AC electric drive motor is available as an option.



CEO change at Tadano

Tadano has announced that chief executive Koichi Tadano, 66, will move to a new role as chairman from the start of April. Toshiaki Ujiie, 59, will take over as chief executive, having served as chief operating officer since joining the company in April 2019, after 30 years with Marubeni.







A virtual launch

In February Skyjack unveiled a slew of new products over four days of virtual product launches, they are:

20ft mast

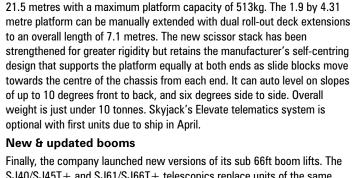
The 20ft SJ20 mast type lift joins the existing SJ12 and SJ16, but offers a working height of 7.95 metres, from its five section rearm mounted mast, with 159kg platform capacity. Features include direct electric wheel motor drive, 400mm traversing deck and optional outdoor rating for one person up to just under four metres. Initially only available in North America it has an overall weight of 1,170kg.

Micro scissors

Next up two micro scissor lifts in the form of the 13ft indoor/outdoor SJ3013 for North America and the 14ft indoor only SJ3014 for Europe and other CE markets. The difference is purely the controlled lift height – although the SJ3014 stows slightly higher than the SJ3013. The new models are built for Skyjack by Chinese manufacturer Mantall and feature rear wheel DC brushless electric wheel motor drive, twin 12 volt maintenance free AGM batteries and a 760mm by 1.28 metre platform with a 510mm roll out deck extension. Platform capacity is 240kg, rated for two people indoors, while the SJ3013 has a one person outdoor rating.

64ft RT scissor

Staying with the scissor lifts, the company also unveiled the 64ft SJ9664 RT full size Rough Terrain scissor lift, which joins the SJ92 range but is slightly wider, due to a slightly extended outrigger width, in order to maintain



stability without compromising performance. It offers a working height of

The new SJ45AJ+

SJ40/SJ45T+ and SJ61/SJ66T+ telescopics replace units of the same name. The articulated SJ45AJ+ replaces both the SJ46AJ and SJ46AJ+, while the new SJ60AJ+ replaces the SJ51/SJ63 and SJ63AJ+. Key changes on the new booms is the adoption of the new SmarTorque axle type drive train and high efficiency hydraulic system which harnesses the engine output more effectively, allowing the use of a smaller diesel without the need for particulate filters or DEF.

We will publish more information on these new models in the coming months, with further details found on: www.Vertikal.net



The Skyjack S.120



The SJ3014 micro scissor





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All new **MK** from Liebherr

Liebherr is to launch a brand new three axle mobile self-erecting tower crane - the MK 73-3.1 - at the end of the month. No details have been released, but an early photograph indicates that it has a two section lattice telescopic tower and a three section lattice luffing jib with trolley that can operate with the jib luffed to 30 degrees or more. Maximum lift height will be approximately 30



metres and it will likely feature Liebherr's Variobase variable outrigger system as well as its AC plug in power system when a sufficient source is available.

See: Towering advantage on p25 for more on mobile erecting tower cranes.

Valla launches V110R

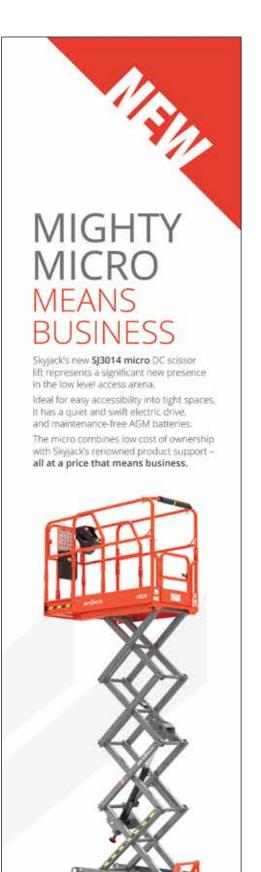
Valla has added a second model to its new range of battery powered pick & carry cranes, with the 11 tonne V110R joining the eight tonne V80R launched last year. It features a 10.4 metre three section boom plus short hydraulic swing away extension. The chassis telescopes by up to 700mm to increase the effect of the rear counterweight, while a front

cross bar stabiliser can boost capacity by up to 40 percent.

The V110R can lift 11 tonnes at just under a metre from the front bumper, and take 1.9 tonne to 6.3 metres and four tonnes to a hook height of 10 metres. Power comes from an 80 volt/640Ah battery with an onboard charger, features include remote controls, non-marking tyres, front wheel drive, 180 degree rear steer and removable counterweights.







New loader crane from Effer

Effer has launched the 80 to 90 tonne/metre Effer 1000, its first all new crane since it was acquired by Hiab in 2018. The 1000 offers a maximum capacity of 25.8 tonnes at three metres and can be supplied with either an eight or nine section boom plus a six section jib.

The nine section boom offers a maximum radius of 22 metres at which it can handle 2.7 tonnes. When fitted with the heavy duty six section jib it has a maximum radius of 34.08 metres with 600kg capacity. Two additional manual sections takes this to 39 metres with a capacity of 420kg. Maximum tip height is just under 39 metres. Weighing 9,500kg it can be mounted on a 32 tonne chassis with six to 7.8 tonnes of spare



Hybrid Goman scissors

Chinese manufacturer Goman has launched a four model range of dual power slab scissor lifts with working heights from eight to 16 metres. The 26ft S08D, 33ft S10D, 39ft S12D and 46ft S14D all have a 2.44 by 1.27 metre platform with 900mm deck extension taking the platform length to 3.7 metres. Platform capacities are 450kg and 350kg on the two smaller units and 230kg on the two larger ones. They are all 1.35 metres wide and 2.77 metres long, and weigh from 3,000kg to 3,750k.

Features include traditional hydraulic wheel motors, large solid wheels/tyres

and automatic pothole protection, while four wheel drive and outrigger options are available. Drivable at full height, power comes from both a classic 24 volt 225Ah battery pack and a small engine with a choice of a Yanmar L70V diesel or a Vanguard 200 petrol/gas unit.







Tadano unveils 700t AT

Tadano Japan has unveiled a 700 tonne seven axle AR-7000N-1 All Terrain crane built specifically for the local market. Based on the 550 tonne AR-5500M launched in 1998, the AR-7000N features the same triple lift cylinder arrangement and heavy duty boom construction, but with a longer four section 42.5 metre pinned boom. Capacities are 35 percent better than the AR-5000M, and it can be equipped with up to 90 metres of luffing jib plus 25 metres of inserts for a maximum tip height of 146 metres. A six section 63.3 metre boom is also available which can be equipped with the regular jib or a four section 35 metre telescopic luffing jib. The maximum counterweight on both versions is 208 tonnes.

The crane has an overall length of 19 metres with the short boom and 18.8 metres with the long boom. Overall height is 4.3 metres however it has been designed to travel without superstructure in Japan. Features include the latest carrier cab from Germany with full camera system and new driver's seat as well as Tadano's Hello Net telematics.

New Broderson carry deck

US crane manufacturer Broderson has launched a new 18 tonne IC-280-A industrial carry deck crane with 19.6 metre four section full power boom, a compact boom nose and a six metre extension to offer a maximum tip height of 27 metres. The 280 has three outrigger positions, removable pads and is the first Broderson with telematics as standard. Power comes from either a Cummins Tier 4F diesel or a GM 5.7L V8 propane engine, while maximum travel speeds are 18mph.



Comansa adds to 21LC series

Spanish tower crane manufacturer Comansa has added the 21LC600 and 21LC650 flat top cranes to its 21LC range. Based on the 21LC550, the new cranes are available in 20 or 25 tonne versions and offer jib lengths from 30 to 85 metres. They also have a shorter, modular counter jibs ranging from 16.4 to 24.4 metres.

Capacities on the new cranes are on average 16 and 23 percent higher than the 21LC550, both offer a standard double trolley system with automatic changeover. The cranes can be built to a height of 85.8 metres on the built-in base with 2.5 metre square towers. The 20 tonne versions have a

standard 50kW hoist motor. while the 25 tonne versions come with a 65kW motor. Comansa's Effi-Plus technology is standard, increasing the lifting and lowering speeds for light loads, without increasing power or consumption. The cranes are also equipped with Comansa's latest L Cube cab.







SMARTORQUE™ technology provides an optimised balance of horse power, torque and hydraulic efficiency, maintains on-site performance, and keeps maintenance costs down.







Financials round-up

Palfinger has reported full year 2020 revenues 12.5% below 2019 at €1.53 billion. Pre-tax profits were 36.1% lower at €85.1 million, while net debt was cut by 25% to €377.1 million. The company is forecasting revenues of €1.7 billion in 2021, almost the same as in 2019 which was a record year. The company has also sold its Norwegian lifeboat manufacturing operation in Ølve via an MBO, and is acquiring its Barcelona based distributor Equipdraulic.

Tower crane manufacturer Woffkran has acquired Czech crane rental company Konstruktiva Lokus, which operates a fleet

of around 120 tower cranes. It employs 60, selling and renting cranes in Czech Republic, Slovakia, Germany and Poland.



Japan's Sumitomo Corporation has acquired Singapore based aerial lift sales and rental company Aver Asia in an all share purchase deal.

JLG has posted its first quarter revenues of \$563.7million -21.5% down on 2019. Access sales were 9% lower at \$278 million, telehandler sales fell



39% to \$122.9 million and 'Other' revenues slipped 22.5% to \$162.8 million. Operating profit declined 64% to \$24.9 million. Parent company Oshkosh has also made a \$25 million investment in specialist battery manufacturer Microvast.

Australia's Boom Logistics reported first half revenues of \$84.2 million, down 11%. Pre-tax profit for the period was \$435,000 compared to a loss in the first half of 2019 of \$5.8 million. Net debt was slashed from \$27.3 to \$14.2 million.

Forsyth of Denny has acquired Rodger's crane hire business located in Earlston in the Scottish Borders.

Manitowoc ended 2020 with revenues of \$1.44 billion, down 21.5% on 2019. The decline

led to a pre-tax loss of \$2 million, compared to a profit of \$59 million in 2019. Fourth quarter order intake increased 8% to \$508.6 million, leaving the backlog 14% higher at \$543.2 million.



Full year revenues at **Haulotte** declined 28% to €489.6 million, creating a pre-tax loss of €15.6

million compared to a €26.7 million profit in 2019. Net debt increased over the year by €11.6 million due to "strategic investments".



Genie sales fell 35% in 2020 to \$1.78 billion, with an operating profit of \$500,000, compared to \$196.2 million in 2019. Fourth quarter sales were \$412.3 million, down 18%, with an operating loss of \$1.9 million compared to a profit in 2019 of \$4.4 million. Order intake was \$753 million, the same as 2019, leaving the backlog up 10 percent at \$826 million, the highest it has been since the first quarter of 2019.

France Elévateur has acquired Spanish vehicle mounted lift manufacturer Talleres Velilla - which trades as Movex.



United Rentals' revenues for 2020 dipped 9% to \$8.53 billion, while pre-tax profits slumped 36.5% to \$249 million. Capital expenditure was cut from \$2.13

billion in 2019 to just \$961 million last year but will rise between \$2.21 and \$2.3 billion in 2021.

US' based rental software developer **Point** of Rental has acquired web design/hosting company Rental Hosting.

China's **Zoomlion** says that 2020 international sales increased 20% to around 4.3 billion Yuan (\$660 million) and expects a net profit of 7.5 billion Yuan (\$1.1 billion), 60 to 70% on 2019.

US H&E Equipment Services saw full year

revenues slip 13% to \$1.17 billion. It had a pre-tax loss of \$41.4 million, although it would have made a small profit if it had not been for non-cash write offs.



2020 revenues at US based Herc dropped 11% to \$1.78 billion, however pre-tax profits jumped 50% to \$94.1 million thanks to lower costs and interest charges and no impairments.

UK rental company Falcon Tower Cranes has completed a new MBO.



UK rental group **Speedy** has sold the assets of its operation

in Abu Dhabi to its primary customer ADNOC Logistics and Services for \$18 million in cash.

US based Crosby has made a significant investment in Verton

Technologies, the Australian inventor of a remote controlled load orientation system that uses gyroscopes to eliminate the need for tag lines.



Ashtead / Sunbelt reported nine month revenues 2% lower at £3.76 billion, while pre-tax profits dropped 17% to £716 million. Revenues in the US declined 6% to \$4.03 billion while operating profits were 18% lower at \$1.1 billion. In Canada revenues improved 11% to \$356.6 million due to acquisitions, while profits also increased 11% to \$63.9 million. In the UK.

Sunbelt posted revenues of £444.1 million, an increase of 21%, due to a surge in sales to the UK's Department of Health. Operating profit was 3% higher at £38.8 million.



Hiab's revenues for 2020 slipped 19% to €1.1 billion, but the backlog at year end was 24% higher at €503 million. Operating income was 39% lower at €97.3 million. Sales at sister company Kalmar were 11% lower at €1.53 billion. Operating income was €61.8 billion, down 60% on the year. Owner Cargotec saw sales drop 11% to €3.3 billion, with a pre-tax profit of €34.5 million – down 76% percent on 2019.

Tadano saw nine month revenues decline 119 to ¥132.5 billion (\$1.26 billion), with a pre-tax loss of ¥7.29 billion (\$69.3 million), compared to a profit last vear of ¥9.4 billion (\$89.8 million).

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Electric crawler from PVE

Dutch crane sales and rental company PVE Cranes & Services is working with Dutch contractor VolkerWessels Materieel & Logistiek to develop a range of battery powered crawler cranes. The first model, scheduled for delivery by the end of the year, is the 160 tonne EC160 lattice boom crane which features a 42 metre boom and 43 metres of luffing jib. Power comes from a lithium ion phosphate battery pack with electric motors driving the hydraulic pumps. The company claims the battery pack, which comes with a five year warranty, can manage a typical eight hour shift and be charged when in use, while a high power charger can top up during breaks.

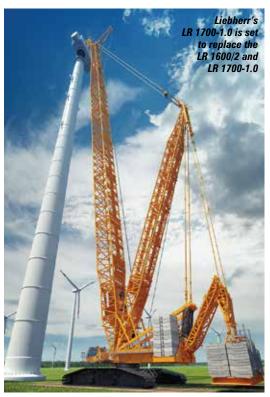
PVE is also planning further lattice models with 80, 90 100, 135 tonne capacities and three telescopic crawlers with capacities of 65, 80 and 120 tonnes. Prices are expected to be around 10 percent higher than a regular diesel crane. See: Green shoots on p38 for more on battery powered cranes.

New 700t Liebherr crawler

Liebherr has unveiled a new 700 tonne LR 1700-1.0 lattice boom crawler crane which is set to replace its 600 tonne LR 1600/2 and 750 tonne LR 1750-1.0 crawler cranes. Sharing similar boom and ballast components as the LR 1600/2, the base machine has been redesigned to deliver between 10 and 15 percent more lifting capacity through the chart. The tracks are now slightly wider and more robust, with larger rollers to minimise wear when moving, while a four motor drive train is standard.

The crane features a 30 to 165 metre main boom, while its maximum under hook height of 196 metres is achieved with 102 metres of main boom and 96 metres of luffing jib. It can handle its maximum capacity at a radius of 8.5 metres, while maximum radius is 160 metres. Its derrick boom can be extended from 36 to 42 metres and features the company's V-frame, VarioTray and new 'M-Wagon' ballast trailer - which can also be used with the LR 1800-1.0 and LR 11000. Maximum derrick ballast is 375 tonnes.

In some configurations the LR 1700-1.0 can outperform the 750 tonne LR 1750/2. For example, with 84 metres of main boom and 84 metres of luffing jib, it can handle 50 tonnes at a radius of 84 metres, whereas the LR 1750/2 only manages 37 tonnes. When configured with a 102 metre main boom and a 12 metre luffing jib - often required on wind farm projects - it can handle 144 tonnes at a minimum radius of 18 metres, whereas the LR 1750 only manages 123 tonnes at a minimum radius of 20 metres.







THE WHOLE SERIES OF DINGLI HAS BEEN ELECTRIFIED



Boom Lifts: 16m - 30.3m



Scissor Lifts: 5.9m - 22m



Vertical Lifts: 4.7m - 14m

teven King

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Ann Wickens

Dan Kaplan

Antonio Pirretti

Derek Murdoch

Fabio

Quattrosoldi

UK based Hird has taken two 20m Oil&Steel truck mounted platforms

Scotland's J & D Pierce has taken six **Grove** cranes

Lifting Projects UK has taken two Galizia

pick & carry cranes UK's **Aspire** has added 520 **JLG/Power**

Tower lifts to its fleet GGR has appointed Steven King as sales & commercial director

City Lifting has taken the first 120t Liebherr LTM 1120-4.1 in the UK

Skyjack is hosting a vaccination centre at its plant in Canada

Swiss crane veteran Leo Clausen-Gerold has died

Peinemann has taken six 52ft JLG EC520AJ electric boom lifts

Elavation has taken the first Hinowa TC13N spider lift in the UK

Germany's Ulferts & Wittrock has ordered 31 **Liebherr** cranes

Drogheda Hire & Sales has taken the first 13ft Sinoboom 1330SE micro scissors in Ireland

Crowland Cranes has taken a 60t Liebherr LTM 1060-3.1 and the first 150t LTM 1150-5.3 in the UK

UK's **Bennie Equipment** has taken a **Faresin** 6.26 Electric telehandler

Access industry veteran Denis Ashworth has died

Italy's **CMC** has issued a safety bulletin for its 25m 83HD+ spider lift

UK's Upward Powered Access has opened in Billericay, Essex

Sicilian rental company F.A.C has taken a 220t Demag AC 220-5

Anne Wickens/Anne James retired from Lavendon/Loxam after 25 years

UK's Nationwide Platforms has ordered 20 Bravi Leonardo HD lifts

Germany's **AKM Autokranvermietung** has taken a 700t **Liebherr** LTM 1650-8.1 and a 120t LTM 1120-4.1

Haulotte has appointed Sopadep as distributor for Tahiti Scotland's MacLeod Construction has taken a 50t Liebherr LTM 1050-3.1

Rental industry veteran Dan Kaplan has died

Bigge Crane and Rigging has opened a crane repair centre in Houston, Texas

UK's **Joseph Merritt Group** has taken a 58t **JMG** MC 580

Oil&Steel has appointed Fabio Quattrosoldi and Antonio Pirretti to its technical/logistic team

A Paris court has ruled on a patent case between JCB and Manitou

Canada's Armstrong Crane & Rigging has taken a 200t Tadano ATF 200G-5 AT

Greece's **Chrysanthopoulos Cranes** has taken a 90m **Bronto** S90HLA truck mounted platform

UK's Speedy has opened a specialist hoist division with

Versalift UK has appointed Derek Murdoch as service manager

UK's MV Commercial has ordered 100 Hiab loader cranes

Italy's **Moritsch** has delivered its first new 16t RTL 195 luffing jib tower crane

Dutch company **Peinemann** has taken two 55t **Demag** AC 55-3 AT cranes Goldhofer has appointed Specialist Trailer Hire as a

APEX and the IRE exhibitions have been cancelled

Mammoet has added eight cranes to its Middle East operations

Spain's Elevaciones Archipiélago has taken seven Snorkel booms and scissors

Klubb has appointed CDP Access as distributor for

Brazil's **Darcy Pacheco Soluções de Peso** has taken a 500t **Liebherr** LTM 1500-8.1

GGR has appointed Sat Dhaiwal as non-executive chairman

Spain's **Grúas y Transportes Bony** has taken a 90m **Palfinger** P900 truck mounted platform

Premier Platforms has taken the first 66ft Dingli BA22ERT electric boom lift in the UK

Genie has launched the new 17m/4.5t GTH-1056 N.American telehandler

UK's Ardent has ordered 525 JCB telehandlers in a £26m deal

Spain's **Grúas Valladolid** has taken a 45t **Demag** AC 45 City

Italy's Airo has appointed Stefan Weber as sales manager

Finland's Jalo & Jalo and Janneniska are stepping up their co-operation

Tadano's Koichi Tadano is moving to chairman in April, Toshiaki Ujiie takes over as CEO

Sunbelt Rentals UK has taken two Faresin 6.26 Electric telehandlers

Palfinger suffered a serious cyber-attack in February

UK's AMC has expanded its sales team

UK's Tyne & Wear Access has taken 10 Snorkel booms and scissors

Germany's **Jaromin** has taken the first 80t **Tadano** GTC-800EX telescopic crawler crane

Germany's **Wasel** has taken a 700t **Liebherr** LTM 1650-8.1 AT and ordered a 700t LR 1700 crawler

ALL Erection & Crane Rental co-founder Jerome 'Jake' Liptak has died US' ALL has ordered 21 new Liebherr

cranes topped by a 700t LTM 1650-8.1 UK's Dewsbury & Proud has purchased three Liebherr ATs

Sweden's Kranpunkten has ordered 200 electric/ hybrid aerial lifts

Italy's Tecno Gru has ordered 66 Terex RT cranes Johnson Arabia has ordered 112 platforms for a new location in Oman

Spain's Alcamar has taken 11 Haulotte scissor lifts

Germany's **MSG Krandienst** has taken a 40t **Tadano** HK 40 truck crane

Australia's **Boom Logistics** has appointed **Kieran Pryke** as a non-exec

Italy's Mandalà Noleggi has taken three Palazanni spider lifts

Spain's **Grúas Pol** has taken a 125t/m **Palfinger** PK 165.002 TEC 7

UK's M O'Brien Plant Hire has ordered more Faresin 6.26 Electric telehandlers

Schwientek has taken the first **Liebherr** LTM 1120-4.1 AT in Germany

Comet has appointed Alessio Mazzari sales manager for N.Italy/Switzerland Software specialist **Point of Rental** has opened a German office

Switzerland's **Hebebühne Biderbost** has taken five new **Airo** work platforms UK **Falcon Tower Cranes** operator **Stephen Gray** has died

France's MCM Groupe Autaa has taken a 650t Demag CC 3800-1 crawler crane

Nooteboom has appointed Hodel Betriebe as its Swiss service partner Spain's **S00S Maquinaria** has taken 10 **Snorkel** S3219E scissor lifts

Canada's **Concrane Equipment** has taken an **Eng** EDKH 185 hydraulic luffing tower crane Germany's **HO** has taken a 200t **Tadano** ATF 200-5.1 AT

Alimak has named Thomas Hendel as CFO

UK's **Speedy Powered Access** has taken 50 **Niftylift** hybrid boom lifts

MGA Crane Hire has taken a 60t Liebherr LTM 1060-3.1 AT for Guinea



Sạt Dhaiwal

Stefan Weber

To<u>shiaki</u>

Ujiie

Liptak

Kieran Pryke

Alessio Mazzari

Stephen Gray

Thomas Hendel



distribute Raimondi in Korea Magni America Inc and Magni

America LLC will merge

Brazil's Locar Cranes and Intermodal Transport has taken five Grove ATs Germany's Schmidbauer has acquired Mottinger Kran und Transport

JLG has appointed Rob Messina as senior VP product development Germany's Sälzer Autokrane & Transporte has taken a 250t Demag AC 250-5

Multitel Pagliero has appointed Inreka Plošiny Servis as distributor for Czech / Slovakia

Haulotte has launched a new telematics based fleet management system - Sherpal

Hong Kong based Gammon Construction has taken first Spierings cranes in the region Tadano is holding discussions with the US EPA

regarding environmental reporting issues

Mammoet's JV with Giant Heavy Machinery Services has added a third location in Taiwan

MEC Aerial Work Platforms has adapted its 'Xtra-Deck' for its boom lifts

UK's A P Hollingworth has taken a PM 57.526 SP loader crane

US **F.A Wilhelm** has taken two 51t **Grove** GRT655L RTs

Hyva has appointed Alex Tan as CEO, Marco Mazzù becomes chairman

Cork Crane Hire has taken its first Böcker crane a 12t AK 52

Denmark's **GSV** has taken 46 **JLG/Power Towers** Nano SP

US based **Alta Equipment** is to sell **Tadano**, **Mantis** and **Demag** cranes

UK's **Horizon Platforms** will transition to an Employee Ownership Trust

Terex Cranes has appointed Andreas Ernst as GM for the Americas

Austria's **Prangl** has ordered two 156t **Tadano** GTC-1800EX telescopic crawler cranes

Paramount Platforms has taken the UK's first 37m Palazzani XTJ 37+ spider lift Dutch company Doornbos has taken four 46ft electric Aichi SP14DJE boom lifts

Spain's **Maxim Doménech** has taken an 86ft **Dinolift** 280RXT boom lift

Viktor Baumann and Riwal Deutschland

have formed a partnership William 'Bill' McKenna, of US based F&M

Mafco, has died Poland's **Lotos Serwis** has taken a 180t **Grove** GMK5180-1 AT

Ahern Ireland has appointed Sean Hopkins as a sales rep

Sinoboom has partnered with Pinnacle Platforms/Tim White and Wayne Lawson in the UK

Austria's **Taurus Kran & Transport** has taken a 220t **Tadano** ATF 220-5.1

UK's Neon Hire Services has taken 10 Snorkel TM12 mast lifts

Versalift has built its 1,000th VTL van mounted lift

China's **LGMG** has appointed **Nacelexpert** as its distributor for France

Germany's **Wiesbauer** has taken a 150t **Grove** GMK5150L

UK's Marsden Crane Hire has taken its first Böcker aluminium truck crane

Germany's **Steil Kranarbeiten** has taken the first **Tadano** GTC-1800EX telescopic crawler crane

UK's **Independent Hire** has taken four 2.6t/5.79m **Snorkel** SR626 telehandlers

Oil&Steel has appointed Roberto Veronesi as export sales manager

Xtra Materieel has taken the first 52ft JLG EC520AJ electric boom lift in the Netherlands Finland's HRK has taken two 60ft Nagano 20ATuj tracked articulated boom lifts

Bronto Skylift has appointed Tri-Lift as a distributor in Canada

Spain's Gruas Eiriz owner and CEO José Antonio Eiriz has died













Ernst







Roberto Veronesi

Antonio Eiriz

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KLUBB, the vehicles mounted lift manufacturer market leader in Europe, offers a full range of conversions designed for users down to the smallest technical detail:

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What downtur

Despite the countless challenges and complications caused by the Covid-19 pandemic European sales of van mounted platforms remained extremely buoyant. In fact, barring slight disruptions during the initial outbreak/ lockdown, the sale and production of van mounts reached all time highs for the major manufacturers. This was largely driven by increased demand for projects, such as the full fibre broadband and 5G roll outs, with the utility and telecommunications sectors taking full advantage of the lockdowns to carry out vital infrastructure repairs and upgrades.

High fibre

The pandemic and subsequent lockdowns have highlighted the importance of a reliable, high speed broadband network for both personal use as well as for maintaining business operations and allowing for remote working. So much so, the European Union has dedicated a fifth - €750 billion - of its recovery fund to improving digital capabilities, with the continued implementation of optical fibre and 5G likely to receive the lion's share.

A study from the FTTH Council Europe in December suggested that approximately 202 million homes will have access to high speed fibre broadband by 2026, up from 88.1 million in 2019. This will see a number of European countries experience exponential growth over the next five years with leading countries - Germany, the UK, Italy, the Netherlands and France - all forecasted to increase their connectivity by a massive

730, 548, 218, 133 and 79 percent respectively.

While the larger truck mounted platforms are being used for the installation of 5G antennas, the fibre roll out - which 5G also requires - is having a positive impact on the demand for van mounted lifts, which is largely centred around France, the UK, Germany and perhaps to a slightly lesser extent the Nordic and Benelux regions. This has resulted in manufacturers ramping up production capacities in order to keep pace with the rapidly growing demand.

New market leader?

Having gone out on its own just five years ago, Klubb is still relatively 'new' to the international scene, although owner Julien Bourrellis is a veteran of the industry having joined Versalift's French distributor JF Degrémont in the 1990s. After a slight depart from the industry he was reappointed to run the company after it was acquired by Time International in 2000. He went on to buy the business in 2002 through an

Julien Bourrellis has led Klubb to being one of the leading van mount manufacturers

MBO and established Time France as the clear market leader over the 12 years or so, sprinting past several domestic manufacturers. He then surprised everyone in 2016 when he decided that Time France would go it alone and the Klubb brand was born, moving to a brand new factory and launching an all new product range.

Klubb is now claiming to be the European market leader having produced more than 2,000 van mounted lifts in 2020. This is 300 percent more than the 500 Versalift van mounts it mounted and sold in its final year as Versalift's French distributor and installation partner back in 2015. Versalift may well dispute Klubb's claim but the fact is that in a few short years Klubb has become one of the two leading players.

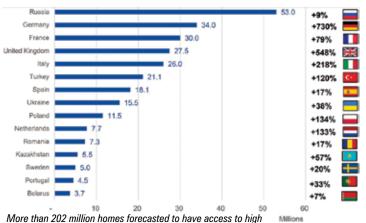
A contributing factor to Klubb's success, other than the ability to sell outside of its home market, was a number of acquisitions along the way. These included the key assets of French manufacturers Comilev in 2017 and EGI in 2018,

while it also took on a majority stake in its UK dealer Cumberland Platforms (CPL) in 2018. Prior to its appointment - and subsequent acquisition - CPL predominantly focused on small truck and pick up mounted platforms. Its total van mount sales for the first few years were less than 100 units, with the company spending much of its time introducing the product to the market and carrying out customer demonstration and trials.

van and trucks

Its efforts have paid dividends however, with CPL's marketing manager, Anna Ramsden, explaining: "2020 was a period of real traction and reward from the efforts in the two years prior, taking orders for and building in excess of 240 van mounts and moving CPL to be recognised as having a tried and tested product in the UK market."

Gaining 'real traction' is perhaps an understatement with van sales between 2019 and 2020 increasing a massive 724 percent. And with January sales up 1,700 percent from the same time last year, it shows little sign of letting up with the company on track to build three times as many van mounted platforms this year. Not only was CPL able to remain fully operational and avoid any major disruptions in production during Covid-19, it also added a further 25 staff to cope with the steep rise in orders. This was in addition to agreeing a service partnership with Rivus Fleet Solutions which will now provide servicing, maintenance, repair and testing for CPL from 55 locations throughout the UK.



More than 202 million homes forecasted to have access to high speed fibre broadband by 2026





Versalift recently celebrated the production of its 1,000th VTL van mounted platform

Let's get legless

With van and light truck chassis becoming increasingly heavier as they accommodate the latest emission standards, CPL and Klubb have focused their efforts on reducing overall weight of the lifts in order to offer increased spare payload. To this effect, the company was the first in the UK to obtain full European whole vehicle type approval on the Renault Master chassis, which is one of the lighter models on the market.

Working with parent company Klubb it also introduced the stabiliser free 'Legless' range which is proving particularly successful with the removal of stabilisers instantly saving 135kg in weight as well as offering reduced set up times. The most compact model in the seven model line-up is the 10 metre K20 on a cutaway pure electric Nissan eNV200 which offers a travel range of up to 125 miles. Other models include the 11.2 metre KL21B, 11.8 metre K26 and 12.3 metre K32, which are available on the type approved Renault Master chasiss or a range of standard or cutaway 3.5 and 4.5 tonne chassis.

Murphy says: "It's taken a lot of pushing to get the market to come round to using van mounts without stabilisers, but it is finally taking hold with the telecoms and rental sectors because ultimately its quicker. They are able to send a single guy out for the day going up and down with minimal messing around. When we asked one of our customers they said that it is now able to carry out a least two more call outs a day as a result."

The final and largest model in the Legless range is the K32 on a 4.5 tonne Renault Master cutaway chassis. Built specifically for UK telecommunication company Openreach, after it placed an order for 100 units, it offers a 12.3 metre working height, 6.9 metres of outreach and 120kg platform capacity. The company also opted for the company's hybrid 'Green Pack' conversion, which allows for platform functions to be operated without the engine being on. Not only does this provide substantial fuel savings, as well as reduced wear and tear on the engine, but it also allows for work to be carried out inside, in noise sensitive areas and in residential areas at night.

Murphy, adds: "A lot of local authorities and companies are now asking how businesses are helping to reduce their carbon footprint. By having a platform that is run using its own battery helps tick a box in becoming a 'green' thinking organisation. We've estimated an idling engine uses between half to one litre of fuel every hour, and by eliminating this unnecessary cost customers will be saving hundreds, if not thousands, of pounds every year."

Last year Klubb redesigned its van mount booms using high Elastic Limit Steel (HLE) to introduce a new 'light' KL range with weight savings up to 160kg. It also launched its KT range for the French market which will be available for the rest of Europe later this year. Available on a 3.5 tonne lveco chassis the KT17, KT18 and KT20 offers working heights of 16.8, 17.6 and 20.6 metres respectively as well as platform capacities up to 300kg.

Strong year for Versalift

Looking to retain its position as market leader, Versalift also had a record year in terms of production numbers and sales in 2020, while getting off to a strong start in 2021. The company is also now benefiting from a strong investment surge from the owners that took over the business in 2017, the most significant being the acquisition of Germany truck mounted market leader Ruthmann (see: p55 for more details).

Its UK operation also encountered the busiest year in its history, receiving its

largest ever intake of new orders, which has kicked its order book/backlog up 150 percent compared with 2019, in spite of the higher production levels it achieved. The company says that 2021 has already surpassed 2020 levels in terms of orders, with the

Versalift Telescopic Light (VTL) range - which combines the boom design of the VT series with the low weight of the existing ETL series - playing a major part. Since its launch during 2018, the company has produced more than 1,000 units.

Following the success of the 13.5 metre VTL135-F on a 3.5 tonne Ford Transit, the company is now offering it on lveco Daily 35S chassis. It has also developed a new legless EVO range which will eventually replace its existing ETL range.

The first model is the VTL135 EVO which is available on either a Renault Master or Opel Movano chassis. It features a two section telescopic boom with a fixed jib to offer a working height of 13.3 metres and outreach of 7.6 metres with a platform capacity of 120kg. Features include zero tail swing, simplified EVO platform controls, and a spare payload of up to 425kg including the driver, passenger and a full tank of fuel.

The company also launched the 15.1 metre VDTL-150-F cutaway van mounted lift last year in order to target the inner city street lighting maintenance applications. Mounted on a 3.5 tonne cutaway Renault Master van chassis, it features a three section telescopic boom topped by an articulating jib to offer





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7.7 metres of outreach with a 120kg platform capacity. It also offers up to six metres outreach with the maximum platform capacity of 230kg.

With an overall length of 5.9 metres and a stowed height of 3.3 metres, it offers 350kg of spare payload in addition to a driver, passenger and a full tank of fuel — which the company says is enough to include a bespoke racking system as well as carry additional tools and spare parts. The narrow stabiliser footprint also falls within the overall width of van's the extended wing mirrors. This, combined with zero tailswing, allows it to work comfortably from a single lane of the street without creating a traffic hazard.

In addition to the increased demand from utilities and telecom contractors, Versalift booked a substantial number of major orders from rental companies, particularly in the UK, Sweden, Finland and the Netherlands.

France Elévateur expands

France Elévateur is slightly unusual in that it manages to combine highly specialised custom designed and built work vehicle mounted platforms with standard high volume products. Last year it benefited from the recent surge in telecom work which resulted in the company adding a second production line for its 12 metre van mounted lifts. It will now be able to produce a further 20 platforms a month to help cope with the increased demand, partly driven by longer lead times elsewhere, but also by the growing popularity of the product.

Mounted on a 3.5 tonne van chassis, the 121 FT features a one person fibreglass basket with an unrestricted capacity of 120kg and



up to seven metres outreach. It can be used with or without stabilisers while a hybrid version is also available.

The company also hired an additional 30 to 40 production electrical technicians, mechanics, hydraulic engineers and fitters staff to both man the new line and help reduce lead times. Company director Charles Goffin said: "The market is buoyant, driven as a whole by telecoms and fibre. To overcome this, we opened the new production assembly line over the lockdown period. The additional employees is part of a bigger plan for the Flavigny site, with the aim to recruit nearly 40 new people on fixed term contracts, including electrical technicians, mechanics, hydraulics and fitter finishers that will allow us to cope with a strong increase in activity while reducing delivery times."

Aldercote goes hybrid

UK vehicle mounted lift manufacturer Aldercote has been benefiting from the increasing popularity of its E-drive self-charging hybrid platform which it launched last year.

Unlike conventional systems which use a fixed output PTO mounted hydraulic pump, it is now using a permanent magnet electric motor to drive a helical gear pump to only provide the necessary oil required for the function speed selected. As a result, it claims to be able to use smaller batteries which hold up to 20 full cycles. A rapid recharge while driving to the next location is said to restore the battery pack for the next stop.

Having experienced the benefits of the E-drive on the 13.8 metre VZ138, UK based Leeds Commercial Vehicle Hire ordered a further three units, as well as the larger 16 metre VZ160, all with the E-drive technology.





NEW 2021

Telescopic Platform

TC**13**S

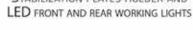


TeleCrawler135

- UNRESTRICTED CAPACITY 230Kg
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LITHIUM-ION BATTERY ELECTRIC DRIVE TRACKS

SYSTEM 52V / 80AH WORKING HEIGHT 13M HORIZONTAL OUTREACH 6,4M UNDERCARRIAGE WIDTH OPEN/CLOSE 75 / 110 см



LITHIUM-ION

Small truck mounted developments

With the latest emissions standards leading to increasingly heavier chassis, many small truck mounted platform manufacturers have taken the opportunity to tweak, upgrade or completely overhaul their models. The following is an overview of the latest models introduced over the past 12 months.

Major milestone for CTE

Perhaps the busiest in the small truck mount sector was Italian truck and spider manufacturer CTE which is celebrating its 40th anniversary. Having started out as a sales and rental company and Italian distributor for Genie, the company built its first truck mounted platform in 1993 with the launch of the 16 metre articulated Z 166D - the predecessor to the 20 metre Z 20 which arrived in 1996. 25 years on and the company has unveiled the latest generation Zed 20 - the Zed 20.4.

Mounted on an Isuzu M21 chassis. the Zed 20.4 features the same dual sigma type riser and two section telescopic boom as previous incarnations to offer up to 8.2 metres of outreach at an up & over height of nine metres with an unrestricted platform capacity of 200kg. It can also be mounted on the longer wheelbase Iveco Daily chassis which offers the same working envelope but an improved 250kg unrestricted platform capacity.

The latest changes include the use of high strength Strenx SSAB steel which the company claims maximises performance and stability at height. Both versions feature the company's NH narrow, straight down inboard outrigger jacks, fully proportional electrohydraulic controls, 130 degrees of platform rotation and a start/stop function for the truck engine.

The company has also introduced narrow jacking 'HN' versions on its 23 metre Zed 23.3 and 25 metre Zed models. Both are mounted on a six tonne Iveco Daily chassis, which offer an overall width of just 2.36 metres with the outriggers fully deployed.

B-Lift updates

CTE also launched a new version of its 27 metre B-Lift 27 and 23 metre B-Lift 23 HV telescopic models. The B-Lift 27.2 has a five section boom with up to 15.5 metres of outreach with 80kg capacity, while the maximum platform capacity of 250kg is available at



up to 11 metres. It also features the company's new S3 EVO Smart Stability System outrigger set up which manages the platform's key working parameters, providing a full readout of the working range and configuration on the platform control panel, including actual working height, outreach and platform load along with possible load and outreach depending on the stepless position of the outriggers.

Based on the company's B-Lift 230 PRO, the B-Lift 23 features a four section boom with a maximum outreach of 13 metres. an unrestricted platform capacity of 100kg and a maximum platform capacity is 300kg at up to 9.5 metres outreach. Mounted on a 3.5 tonne chassis, it features the standard S3 Smart Stability System.

GSR updates

Fellow Italian manufacturer GSR has updated its 3.5 tonne truck mounted platforms which include the 22 metre B220TJ and 23 metre B230T4 telescopics. The B220TJ features a four section boom with a 2.75 metre articulated iib to offer up to 14 metres of outreach with 80kg, or 10.6 metres with the

maximum 250kg platform capacity. The B230T4 has a slightly longer four section boom, but without a jib, for a working height of 22.8 metres and up to 14.4 metres outreach with 80kg, or 10 metres with 250kg. Both machines are mounted on the latest Mercedes Sprinter chassis, with four beam and jack outriggers with automatic monitoring and working envelope adjustment.

The two machines join the new 20 metre B200T4 which was updated earlier in the year after the production of the Nissan Cabstar chassis came to an end. Mounted on slightly shorter lveco chassis, the B200T4 offers up to 10.85 metres of outreach with 80kg or 7.5 metres with two people/250kg. The Mercedes Sprinter chassis is slightly longer at just over seven metres but offers an outreach of up to 14 metres with one person, or 9.5 metres with 250kg.

Multi Multitels

At the beginning of the year Multitel Pagliero launched the first model in its new MJ range with its 25 metre MJE 250 truck mounted lift. Available on either an Iveco Daily 35S14H, Mercedes Sprinter 311-





314 or Isuzu M21 chassis - all with Euro 6 D low emission engines - it features a five section telescopic aluminium boom, topped by an articulating jib. Maximum platform capacity is 250kg, while maximum outreach is 14 metres over the side and 17 metres over the rear, both with 100kg in the platform.

The automatic set up and levelling system comprises four equal beam and jack outriggers, with completely variable set up and monitoring in the form of the updated MUSA (Multitel-Self-Adapting outreach) X system which monitors the actual outrigger position, weight in the platform, boom configuration and chassis inclination up to three degrees to set the working envelope.

The boom is made from high resistance aluminium alloys in a single extrusion without welds, with an all aluminium alloy sub-frame. Single button automatic outrigger set up and automatic return to transport position are standard. A full telematics suite is also available.

The company also introduced the 23 metre MTE 230 straight telescopic truck mount on the same chassis. Its new four section aluminium boom offers up to 16 metres of outreach over the rear, or nine metres over the side, with a platform capacity of 100kg in straight down outrigger set up. Its side outreach is increased to almost 14 metres with fully deployed outriggers, while maximum capacity



is also increased to 300kg. Features include hydraulic controls, one touch outrigger levelling and automatic return home functions.

Update for Topy 11

France Elévateur launched an updated version of its 11 metre Topy 11 straight telescopic truck mounted platform, having sold more than 2,000 units since it was launched in 1998. The latest version of the Topy 11 features a two section telescopic boom to offer six metres of outreach and an unrestricted platform capacity of 120kg and the ability to operate on side slopes of up to five degrees without the need for outriggers or stabilisers.

Other changes include improved

access to the fibreglass bucket, the addition of a storage box on the chassis and redesigned upper and lower controls. Mounted on a Ford Transit Trend 130, it offers an overall length of 5.9 metres and an overall height of 2.7 metres as well as 650kg of available payload and a towing capacity of two tonnes. Options include an insulated boom and platform, electric emergency pump, auxiliary battery, drop down sides and additional toolboxes on the truck bed.

Smart Plus from Palfinger

Palfinger has updated its Smart line of 3.5 tonne Italian built articulated and telescopic truck mounted platforms to Smart Plus. The new



van and trucks



five model line up includes the articulated 20 metre P 200 AXE-E Smart Plus, the 22 metre P 220 AXE-E Smart Plus, the 24 metre P 240 AXE-E Smart Plus models, along with the 17 metre P 170 TXE-E Smart Plus and the 20 metre P 200 TXE-E Smart Plus telescopic models.

The Plus package includes multifunctional electric controls, improved platform entry, home and anti-collision functions and variable outrigger set up - fully extended, extended on one side and inboard/ straight down - all with automatic monitoring and working envelope selection. The articulated models

have also been mounted on a shorter 3.45 metre wheelbase lveco chassis, while all structural fabrications have a cathodic electrodeposition coating with Palfinger's patented KTL system. The P 200 A-R Smart and the P 240 AE Smart are also included in the new line up however they only feature some of the upgrades.

VTX240 truck mount

Versalift introduced the third generation 24.2 metre VTX240 truck mounted platform - the VTX240 G3 - which offers the same performance as its predecessor. Its twin three section telescopic booms offer a maximum outreach of 12.5 metres at an up & over height of 11.5 metres and a maximum platform capacity of 220kg. New features on the G3 include a digital display in the cab to assist with set-up, longer outrigger jacks allowing it to level on slopes of up to six degrees, and changes to the control valves to aid the emergency descent operation.

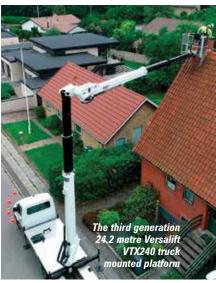
New platform from Ascendant

UK based Ascendant Access is back in business with the new 20 metre A20-15TJ truck mounted platform



on a 3.5 tonne lveco chassis. The new model features a three section telescopic boom, topped by a 2.2 metre articulating jib. Maximum outreach is 15.1 metres with a platform capacity of 120kg, while it offers a maximum platform capacity of 230kg at an outreach of 13 metres.

All four outriggers are beam and jack, with the rear being regular out and down, while the front ones extend out, forwards and down. The unit can work with outriggers retracted, partly extended or fully extended on one or both sides. Overall length is just under 7.9 metres, with an overall height of 3.1 metres.





Towering advantage

In many countries tower cranes mounted on a mobile crane carrier are seen as a specialist tool for niche jobs, such as lifting HVAC units onto rooftops. But perhaps they should really be seen as an emerging class of more general purpose cranes, Will North reports. If we look back over the history of the modern crane rental industry, there are several examples of new crane concepts that started out as niche products, but which went on to become mainstream, or even leading market sectors.

The roots of the European crane rental sector, and of many of its largest businesses, can be traced back to post war entrepreneurs who mounted homemade cranes on decommissioned military trucks. They were replaced in the 1950s by purpose built lattice truck cranes, and then in the 60s by telescopic truck cranes. In the USA and the Middle East, Rough Terrain cranes also became a popular lattice mobile alternative. Then as we headed into the 1980s, All Terrains

began to emerge, eventually replacing truck cranes. Rental rates for all of these cranes has tended to be based on their nominal capacity, rather than their overall load chart capability.

The idea of mounting an up and out folding tower crane on a roadgoing mobile carrier is not new. Indeed, Liebherr traces the concept to efforts to make its original cranes - developed in 1949 by its founder Hans Liebherr - more mobile. This included the KA Series in 1961, followed by the very unusual AUK models of the 1960s and early 1970s, mounted on Kaeble 6x4 chassis with trailing tower. Some major rental companies took them on due to the overwhelming appeal of the concept - but it was no runaway success.







Ca mobile self-erecting cranes





The AUK 120 was different beast altogether

At the same time Dutch manufacturer Munsters introduced its first mobile tower crane with 500kg capacity and later mounted self-erecting tower cranes onto truck type chassis. And then in the USA we had the Grove/GCI tower with lattice or telescopic jib mounted built into a semi-trailer type chassis.

They were all trying to combine the benefits of a tower crane's up & over reach, with the rapid travel and set up time of a truck crane, in order to bring this type of crane to the short term rental market.

The concept gained some traction, particularly in the Netherlands. It was there that Leo Spierings 'picked up the baton' in the late 1980s and went on to do more than anyone to develop and promote the concept and take it more mainstream. His idea was to design a high capacity purpose built self-erecting tower crane mounted on a modern crane

mobile self-erecting cranes



carrier. Liebherr followed soon after when it launched its MK series of 'mobile construction cranes. What made these new models stand out is that they were designed as a highly optimised, roadable unit, able to arrive on site, set up quickly, entirely on their own, and get to work immediately. They needed no special permits for travel and no additional components or ballast to be installed, so one man operation was entirely practical.

While these cranes may indeed have been seen as a niche product, as with other crane types before them, they are becoming more mainstream, and in an increasing number of countries an important element of many crane fleets, able to take on a growing variety of routine work with improved efficiency. The challenge now is not finding jobs they can do but selling and explaining their benefits to end users and establishing pricing that is based on the job, or capacities at height and reach, rather than the nominal capacity rating used by their telescopic rivals. This move away from a focus on nominal capacity also applies to aluminium boomed truck cranes where capacities at height and reach can match substantially larger, heavier cranes, or spider cranes which can often get much closer to the lift, and therefore do not need to be so big.

Two principle players

As discussed in the box story, I think it best to think of these cranes as 'Tower-type All Terrains'. Whatever you call them, there are only two major manufacturers building these cranes for developed crane markets: Netherlands based Spierings, and Germany's Liebherr. I spoke to both companies for this piece, talking with Spierings chief executive Koos Spierings (Leo's nephew) and his sales engineer

Maarten van Brink, and Liebherr's product director for the mobile construction crane business, Wolfgang Schlaucher.

While Munsters was a pioneer of the concept, it has not played a major role in the market for some time and has passed through a number of hands and name changes since 1976 when it became De Jong-Munsters. Belgium's

Arcomet acquired the business in the early 2000s and developed the AF38, a self-erector mounted on a three axle Faun carrier. The business was then sold to Max Holding in 2017 and rebranded as MTC mobile tower cranes. The company still makes the AF 38, with the latest model, the MTC AF38 2.0, featuring a Euro 6 diesel now on the drawing board. Perhaps, when Cranes & Access next surveys this market, we will be talking of three competitors? Or maybe one of the other major mobile crane manufacturers will have joined the

Spierings Vs Liebherr

Both of the main 'players' in this market focus on ease of set up and use of their cranes, in comparison to telescopics with similar long reach capacities. Spierings says: "We have always had the concept that one operator should be able to do the job and no additional ballast should be required. On our six axle crane, you can lift 1.7 tonnes at a radius of 60 metres. With any other mobile crane, you would need two or three trucks for ballast to achieve this sort of capacity."



Just as Liebherr's MK range compares with that of Spierings for lifting capacity, so both ranges are designed for rapid set up, with the crane ready to go in under 30 minutes: 10 to 15 minutes to set up the crane on outriggers, and then a similar length of time to fully erect the tower and jib. Set up is not only fast, but fully automated - no assist cranes or helpers.

Schlaucher says: "One operator can bring the crane to the job site, erect it and operate it afterwards." This ease of use, and the lower operating costs, comes at a price though. Schlaucher adds: "The initial price is a little bit higher as there is more technology inside for the automatic setup, where you need sensors and so on."

There are a few key differences between the two manufacturer's ranges. One, which we'll look at in more detail elsewhere in this issue, is their approach to electrification. Both of Liebherr's cranes, and Spierings' two latest models - the four axle SK597-AT4 eLift and six-axle SK1265-AT6 eLift - can operate using plug in mains electric power. Spierings, however, also offers a compact three axle crane, the SK487-AT3 eDrive or 'City Boy', which can travel up to 20 miles on battery power alone, allowing it to access city centres with restrictive emission or noise regulations.



It's all in a name

One way to help promote a new concept is to have a clear widely used name. All Terrains for example combined a Rough Terrain and truck crane, suitable to both unprepared sites and fast smooth road travel. Today they have very little in common with RTs.

Spierings calls its cranes 'mobile tower cranes'. Liebherr prefers 'mobile construction crane' a direct translation of the German term Mobilebaukrane - Baukrane, directly translates as 'construction crane', but in English that covers any crane used on construction work. Cranes & Access and Vertikal.net has always called them 'selferecting mobile tower cranes'.

I would suggest however that none of these names quite captures the difference between these cranes and other mobiles, while being confused with regular self-erecting tower cranes designed for longer term building jobs. These cranes are not merely mobile, in the way that some self-erectors can be towed to site or moved around site on rails or tracked chassis, they are both fully roadable and optimised for maximum capacity at long reach and height. They are in every sense an All Terrain, albeit with a different lifting mechanism to the telescopic All Terrain cranes.

Associating them with regular self-erecting towers avoids the key benefit, in that once they arrive on site they can be ready to make their first lift in as little as 10 minutes without a great deal of physical effort required by the operator. They can get straight to work and then be ready to leave again just as quickly. They are very much versatile taxi cranes, capable of working on two or three jobs in a city on the same day.

So, I propose calling and thinking of them, as 'Tower-type All Terrains'. This both captures the nature of the carrier, and that of the crane. It differentiates them clearly from telescopic All Terrains, or lattice truck cranes, without risking confusion with normal tower cranes.

Will North





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mobile self-erecting cranes



Hydraulic or electric controls

The two manufacturers approach also differs mechanically. The Spierings cranes are mostly hydraulic, while majority of functions on the Liebherr models are electric, the exception being a couple of hydraulic actuations required during set up. As with other cranes and aerial lifts, the choice here largely comes down to operator familiarity and preference, and is probably not a factor most buyers consider, although Koos Spierings says that many operators of his company's cranes value the way the hydraulic controls 'listen' to them. But equally, other operators are quite happy working with electric controls and value the range of functionality they offer.

Another big difference between the two ranges is the cab, which on all of these cranes can travel up the tower mast to provide a better view of the load, especially important when lifting a chilling unit into the centre of the roof of a multi storey building from a narrow street. On the Spierings models, the elevated cab height has to be selected from a choice of fixed positions. Changing cab height requires reconfiguring the crane which takes time. On the Liebherrs the cab can be located at any height, with the operator even changing it while working.

While most mobile self-erectors can only work at fixed luffing positions of up to 45 degrees, Liebherr's MK 140 can also be set up for stepless luffing up to an angle of 70 degrees. To achieve this, the crane must be re-configured from trolley hoisting, standard for cranes of this type, to jib tip hoisting, as used on

luffing jib tower cranes. Doing this will take some steps and checks but will take an operator only 10 minutes. The ability to make this change in so short a time is even more impressive, when compared to the time and cost it would take otherwise to bring in a telescopic crane able to lift the same load to the same radius and lift heights.

Owners will, of course, need to assess whether this will significantly add to their ability to take on jobs in their area, or whether they are better served by having a fleet mix of telescopic cranes with luffing jib options, and straightforward up and out Spierings models, or Liebherr's other MK. Price, finance, and relationships will of course also play a significant role in the selection.

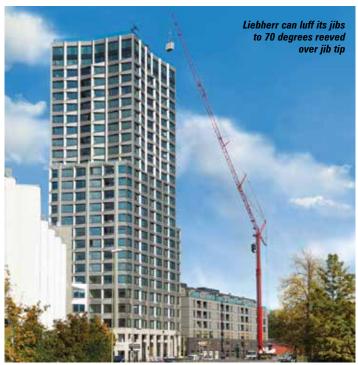
Reach and vision

The birthplace of the modern 'Tower-type All Terrain' was the Netherlands. Even before Leo Spierings' innovations, similar cranes with a tower on a roadable carrier were well established, often used for short term concrete pours etc... which remains a core market for the product.

Bob Bruijsten is director of Kuiphuis Kraanverhuur, a company that can trace its history back more than 100 years. It bought its first Spierings crane in 1994. He says: "We first bought a three axle crane, then a four axle, and another three axle, and then we took the first five axle unit in Eastern Holland. We have owned the whole range. Of all the newly bought cranes from Spierings, we have only ever sold five of them. All the others are still being used."







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Bruijsten, and Koos Spierings, both estimate that mobile tower cranes make up around a third of the country's roadgoing mobile crane rental fleet - around 500 units out of a total of approximately 1,500 cranes in all.

Bruijsten explains that much of the country's construction sector is now built around the use of these cranes. "We have the landscape for mobile towers. In Amsterdam or Rotterdam, there may be more telescopic mobile cranes because of the very high buildings. Outside of big cities, or big industrial sites, you still see mobile towers everywhere. In general construction, everything

in Holland is prefab concrete, and rarely over three or four tonnes. We have some customers - small construction companies - that build just a few houses a year. We'll come in, place the flooring panels, and be gone in a few hours, and then go back again later when they are ready to do the next phase of the building. While on steel construction, the crane can be employed for several weeks at a time."

Bruijsten says that lifting into the centre of large roofs is no longer a core job for its mobile towers, as the range of applications they are used for has widened. But



he cites a contrasting type of job that is becoming popular: lifting down below ground level, on jobs such as the widening of the A9/A10 motorways, or working on waterway locks, customers appreciate that the crane's raised cabs allow operators to see down to the load.

On the lock jobs, Kuiphuis recently used two of its crawler mounted Spierings. These feature the same tower type superstructure but on a compact tracked chassis or carrier. They have the added benefit of being able to travel with the tower erected. The Spierings were not used for the 70 tonne lock gate itself – obviously – but for placing iron around the site. "On these projects," says Bruijsten, "It was more

important to have a hook available across the site, than to be able to lift a great deal of weight."

The fact that the raised cab gives operators a clear view of the load is a definite advantage. Koos Spierings points out that his company's cranes have LED lights running along the jib, which provide a daylight view below for night time operations. The basic geometry of the cranes, compared to their telescopic rivals, makes this possible: a line of lights at a fixed height on a horizontal jib has obvious utility, a line of lights on a luffing telescopic jib, less so. In fact, one of his cranes provided the lighting for the Vertikal Days 10th anniversary evening networking party.





Reaching out

While lifting single loads onto rooftops may have been eclipsed by a host of new applications, their ability to handle relatively modest loads over extended distances, without interference from the building's edge, makes them a compelling alternative to telescopics of much higher nominal capacity on many city centre jobs. For example, placing a 3.5 tonne HVAC unit onto the roof of a 35 metre building say 30 metres in, from the street below is a breeze for a six axle Spierings. And if the unit is ready when the crane arrives, the entire job can be completed in a couple of hours, with the AC unit placed exactly where it is required, and the operator having a perfect view of the load placement without leaving his crane.

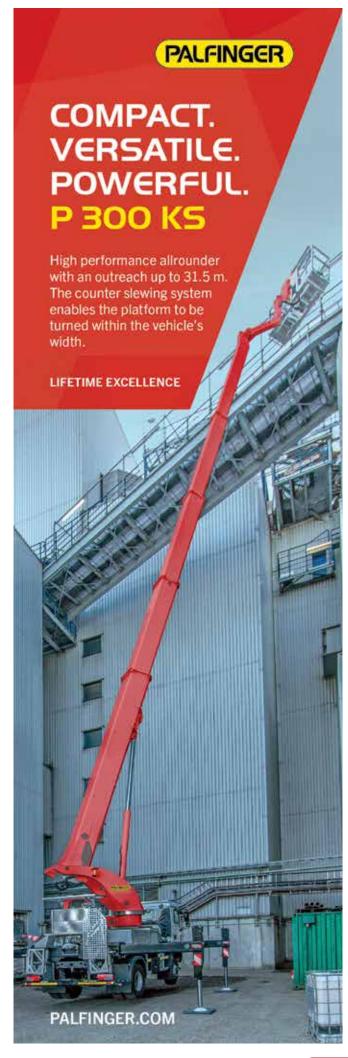
The alternative is to bring in a big All Terrain, close the road, truck in counterweight and jib, set up, do the short lift and then strip it all out. The whole process can take an entire weekend and involve huge amounts of transport and labour, not to mention require a good deal

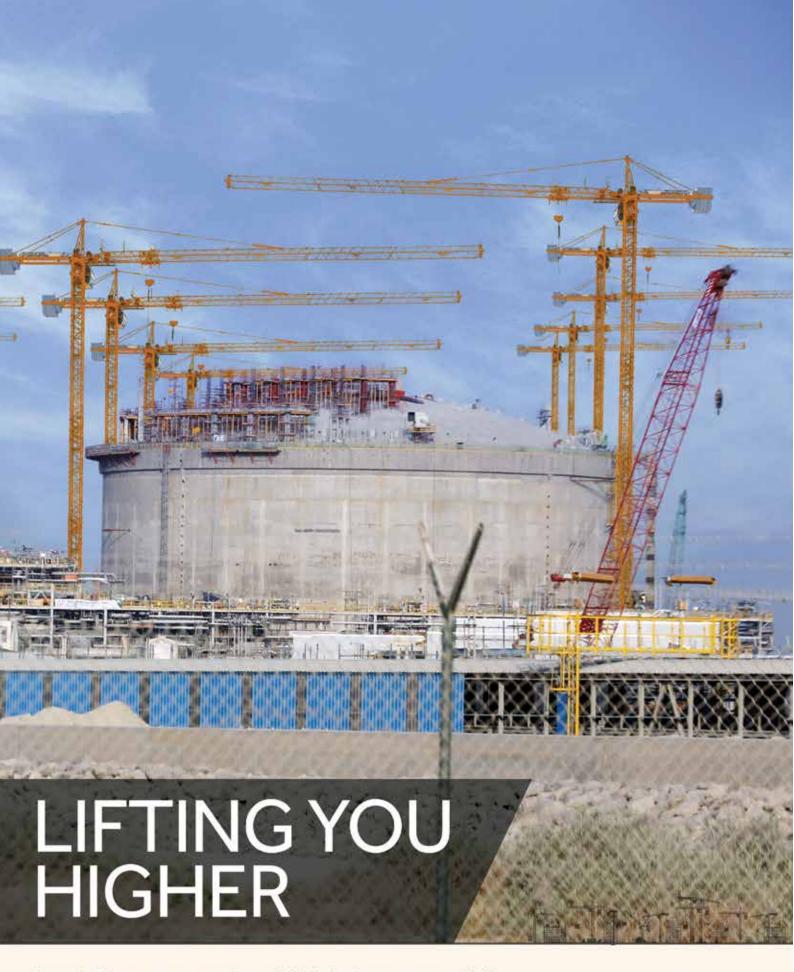
of space at street level - so no contest, and yet this method is still relatively common. It is almost akin to transport companies using a horse and cart to transport freight in the 1930s.

Wolfgang Schlaucher at Liebherr says: "We are seeing big demand in Scandinavia at the moment, driven by the high cost of labour and the possibility to run the crane on electrics. As soon as labour becomes expensive, the quick setup time and ability for one man to set up and operate the crane on his own the more the concept appeals."

"We also see demand in France, and Spain is now coming along too. In Austria and Switzerland, there has always been a market. Of course, they are not the biggest countries. But for the size of the country, there is now a good population of these cranes."

Beyond Europe, Schlaucher says Liebherr is seeing increasing demand from further flung international markets, for example South Korea. "At first some contractors imported mobile





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construction cranes more or less to use them for their own work, but then they saw the possibilities for this crane type in a taxi crane concept, coming from one job site to another.'

"we have to convince the customer of our customer"

Before becoming chief executive of the family company, Koos Spierings was responsible for sales in the UK, and witnessed the concept really take off, almost from a standing start, especially erecting large commercial buildings placing large sheets of metal cladding. "If you look at the huge warehouses that have been built in the UK over recent years, you can see there has been a big move to mobile tower cranes. All the roofing and sheeting is done with our cranes, because once a customer has seen how quickly it goes, he realises that it's a huge benefit compared to telescopic mobile cranes. It took 30 years in Holland to show the concept to all the end users. It's a process where we have to convince not only our own customer, but also the

customer of our customer."

In the UK and the Netherlands, these large commercial buildings are an important part of selling the concept. In the UK, Tim Ambridge is one of three brothers, along with Nick and Mark, whose initials are referenced in the name of family business, NMT Crane Hire. The company started out in vehicle recovery in the 1970s, but after a couple of scary, and life threatening, incidents on the motorway, the brothers decided to move into crane hire.

As a well established business, they moved into tower type mobile cranes in the early 2000s, initially with a six axle Spierings in late 2005, then a seven axle and two more six axles. The company's focus has been on the larger models, with longer reach. That brings in a lot of city centre crane jobs, but also longer hires on those warehouse projects.

Ambridge says: "We are doing a lot more contract lifts now. We've got a particular customer we work with, who builds big, million square foot, buildings all over the country. Generally, on those projects, the

Ca mobile self-erecting cranes

crane does 120 lifts a day. They are really fast pieces of equipment."

"It's not just that the cranes are fast to set up, and to perform each lift. It's that you can cover the entire structure from a single point," adds Ambridge. "You have 50 to 60 metres of reach on the six axle cranes. So, on a 100 metre building, you only have to reposition the crane once or twice."

On these jobs, reach is far more important than capacity, says Ambridge: "We are using a big roof sheeting beam now with which we can handle 15 to 20 metre long panels. So, the beam is heavier than the load a lot of the time. The total load is no more than one to two tonnes."

Germany is another market where mobile tower cranes are beginning to carve out a significant market share. Jörg Hegestweiler is chief executive officer of BKL, or BauKran Logistik. The company's roots were in regular tower crane rental, but it added mobile cranes initially for tower crane erection and dismantle, and then as part of its rental fleet. Today, the company runs around 100 wheeled mobile cranes, including Liebherr MK mobile self-erectors. Hegestweiler notes that this is a high proportion for the country, estimating that overall these cranes only make up around three or four percent of the national fleet.

As in the UK, the reach, especially at height, is key to winning new jobs and convincing end users that this is a better solution. While in the Netherlands, he notes, jobs will be

planned around the use of mobile tower type cranes, in Germany, their use has to be pitched to customers further along in the process, but it is an argument that is increasingly succeeding.

BKL supplied an MK88 to lift components for a new roof on the Lower Saxony State Museum in Hanover. The crane needed to be positioned in an area with limited space, and to reach over an interfering edge. Working close to the building highlighted another advantage over telescopics: the crane could plug in to site power, working without emissions and limiting noise.

On some jobs, Hegestweiler sees advantages to the high height under hook made possible by the MK cranes' luffing jibs. But more routinely, it is reach that matters. "On 30 or 35 metre high buildings, we can go very far into the job site, they are used for everything, even scaffolding. As well as staircases, in complete pieces or sections. You still have the maximum lift of eight tonnes, which is not so small, but also not so heavy in comparison to telescopic mobiles."

Routinely in Germany, as in other markets, these cranes are being used to reach into the centre or far edge of large warehouses or factories, such as the Tesla 'Gigafactory' currently being built near Berlin, or across smaller scale housing projects. But Hegestweiler has seen another application taking off in the country, carrying out lifts in the petrochemical sector.

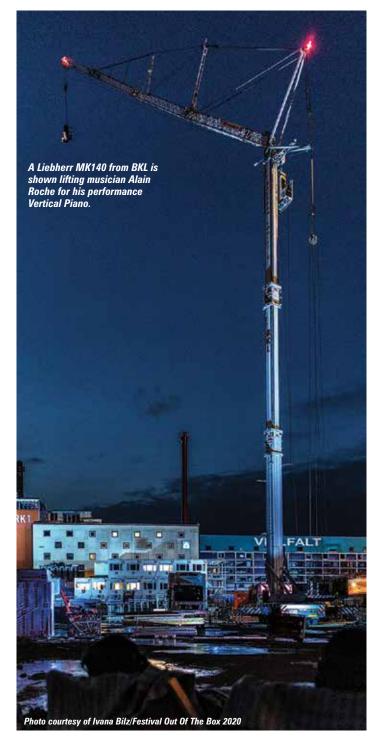
He points out that such sites will occasionally have no alternative but to shut down in order to perform maintenance work, lifting in pipe racks and similar modules. On these shut down projects, where every second of lost production carries a substantial cost, being able to quickly deploy a crane and lift a load into place over obstacles and crowded space where other works is going on is vital.

"These jobs are pushing demand, not just in Germany, but around the world, you have a very limited time, maybe a couple of days for the shutdown, where you need to go in, do the lifts and get out. And the loads are usually extremely small, often relatively small parts, but you have to take them far into the site," says Hegestweiler.



mobile self-erecting cranes





Best supporting actors

One new role for these cranes is in the entertainment sector, and one in which both BKL in Germany and NMT in the UK have already had a starring role.

In Munich, BKL supplied a Liebherr MK140 for musician Alain Roche's performance 'Vertical Piano', which saw him and his piano carried over two 33 metre and 54 metre buildings, before being swung in front of the audience. For this job, the crane was configured with nine tonnes of additional ballast; with the crane's luffing jib positioned at 45 degrees and working at a hook

height of 75.5 metres to a radius of 40 metres.

On any job like this, safety is key. The job needs to be carefully planned, eliminating risks. In Germany, and most other well regulated markets, the crane itself must be set up to a much higher safety factor than for normal lifts. And multiple layers of redundancy must also be in place.

For Hegestweiler, this was another compelling reason to use the MK140. The crane, he explains, is especially equipped with a completely redundant additional control system, alongside the

standard cab and remote controls. This optional extra control for the transportation of passengers duplicates all elements, including PLC and frequency converters, meaning that if anything goes wrong with the in cab or remote controls, the operator is still able to operate the crane. Adding this extra layer of redundancy, ensuring the safe recovery of lifted personnel in the event of a failure elsewhere, can speed up the approval process for personnel lifts in Germany; it would likely be looked on favourably in other regulatory regimes as well.

NMT's stage career is much more well established. While there is no Oscar for stage rigging, if there were, the company would likely be a regular nominee. As many baristas and delivery drivers in Hollywood or London will tell you, getting that first role can be an insurmountable challenge. For Tim Ambridge, one introduction, and a reputation built up over time, has led to a regular flow of work for his fleet.

NMT Film and TV Crane Hire has deployed a wide range of equipment, on films such as Gravity, the Fast and Furious franchise, World War Z, and Mission Impossible. Beyond the film industry, they have been used in live performances, such as those in London's Hyde Park, and for personnel lifts, such as the singer Pink, who has used the cranes to support her during an acrobatic entrance to her shows. It says a lot about the company's attention to detail that the famously meticulous Tom Cruise has worked hanging from

one of the company's cranes, as have others such as Brad Pitt and Angelina Jolie.

When rigging an outside stage, whether for a film set or a live performance, speed is vital. Ambridge says that with its reach and pace of lifting, a tower type crane can rig a stage in under a week, often in two or three days, compared to two weeks for a telescopic mobile.

The up and out geometry of a tower type crane has another advantage over telescopics on these roles, it is much easier to set up without casting a shadow.

Pitching the job

One potential drawback of these cranes is that they do not fit within the mindset of much of the crane rental industry, which regards them as niche or specialist machines, and most customers will not know to ask for them. So the response to a manufacturer's salesman is that old chestnut - "we never get asked for them". For some crane owners, and more importantly, most customers, crane hire is all about selecting the cheapest crane of the right nominal capacity for the best possible price.

On the nominal capacity front an eight tonne mobile tower crane can appear impossible to compete. How can you compare a crane that lifts no more than 10 tonnes, with one that supposedly lifts 200 tonnes?

The answer, as we have pointed out, is that this type of crane lifts its full capacity to a much greater height and radius than a larger



mobile self-erecting cranes

telescopic. A 200 tonne load, for example, is a totally impractical and impossible lift for a 200 tonner at any radius. While the mobile tower's time and cost savings of setting up without the need for additional support vehicles, or the space to lay down and set up jibs etc... is massive.

In countries or market sectors where these cranes are still an emerging alternative, it takes a great deal of explaining to the customer that the job will be completed faster and cheaper, than with a telescopic crane of the nominal capacity they are used to asking for. But Ambridge is clear that making this pitch is worth it.

"They're a good earner. If it were possible, I would get rid of all of our telescopic mobiles, and just run a fleet of mobile towers as they are a one man operation."





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Battery power move up a gear require regular maintenance

Every year we take a look at the latest developments in battery power for equipment such as aerial lifts, telehandlers and cranes. This has usually focused on aerial work platforms, but in the past year telehandler and crane manufacturers have started spending an increasing amount of their development budgets and time on battery power.

Batteries have powered the majority of self-propelled aerial work platforms since the industry's earliest days, mostly slab electric scissors, small trailer lifts and industrial boom lifts. For most of that time battery developments in the sector have been limited. In fact, in this feature a few years back the manager of a major battery manufacturer was adamant that there was zero chance of lithium or any other new battery technology replacing lead acid batteries on boom or scissor lifts in our lifetime. The traditional lead acid battery is highly efficient, relatively cheap and 98 percent recyclable without much effort. All of which remains true, however that ignores the fact that they require regular care and maintenance, emit flammable gasses when recharging and can spill etc... Lithium power did arrive and is increasingly gaining traction, it began 12 years ago with the launch of Hinowa's first lithium powered spider lift. Most spider lift manufacturers now offer a lithium option, and they are becoming increasingly popular as end users discover the benefits of quiet fume free operation, without sacrificing run times.

Lithium and AGM growth

More recently lithium batteries have become available that can replace the standard six volt lead acid batteries found on most aerial lifts, and are seeing increased take up, mostly by those who wish to avoid the cost of maintaining traditional batteries as well as faster recharge times. However, the latest generation of AGM sealed batteries are proving even more popular, with some manufacturers installing them as original equipment. They offer the maintenance free and improved density advantages of lithium, but at a more attractive price.







supplier - U.S. Battery - launched an improved line of AGM Deep Cycle batteries earlier this month, which it claims offer improved cycling performance and longevity. The benefits derive from the use of thicker positive alloy grids, high density positive active material, and advanced glass mat separators, all of which helps maintain the battery cell structure during deep cycling, while limiting acid stratification, and inhibiting internal shorts. The new batteries also feature a carbon enhanced negative active material that improves charge acceptance and cycling performance, while being more resistant to vibration in tough applications.

At the end of last year Discover Battery entered the European aerial lift market with a range of sealed deep cycle Dry Cell, Gel and AES Lithium batteries. It cites significantly reduced maintenance, higher operating voltages, longer runtimes, and the ability to withstand deep discharges as the key advantages of these new batteries, all of which is appealing to a growing number of fleet owners and end users.

However perhaps the most significant indication that the pace of change is ramping up is the number of new larger all electric products coming onto the market. In the last issue we covered all electric Rough Terrain scissors and before

that the strong growth in electric boom lifts up to 70ft. This year has also seen increased interest in all electric telehandlers, led by Faresin and Merlo, with JCB ready to join the fray along with Manitou. And now the final lifting equipment bastion looks set to fall, as crane manufacturers begin to seriously consider the practicalities of electric power. The leading manufacturers will surely be aware at how the shift towards battery powered cars is completely changing the market dynamics, with Tesla having built more than half a million cars last year and set to ship a million in 2021, barely 10 years after it shipped its first car! The company never even existed until 2003.

batteries

Some Chinese manufacturers probably see an opportunity to do something similar in the crane market, and steal a march on the three largest western crane manufacturers? They have the support of a government that is investing heavily to help manufacturers develop emission free vehicles or equipment, to reduce pollution as much as meet its target of becoming carbon neutral before 2060.

So, for the first time in the history of this feature we are taking an in depth look at battery developments in the mobile crane market.

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Green shoots

While the cost of batteries, as well as real world challenges, currently precludes their wider use for most heavy road transport, a range of mobile crane manufacturers are offering electric power for working on city centre job sites or even local or site travel. Will North reports.

Earlier this year Liebherr Nenzing made an announcement that promises to reshape the crawler crane industry: two of its crawler crane models will be offered with battery packs allowing them to operate on site under electric power. The new 'Unplugged' machines can operate on battery power and even travel short distances on site. Once in a lift position they can also be connected to an AC mains outlet.

A month later, an arguably bigger announcement came from an unexpected source: PVE, which had previously focused on the manufacture of foundation rigs before selling this business, said it will now introduce a line of fully battery powered cranes able to work a full shift without needing to be recharged.

While all electric mobile cranes are still relatively rare, these new cranes are not the first non-industrial mobile cranes to offer clean, quiet power. Spierings finally began shipping its three axle tower-type All Terrain, the City Boy, last March with its hybrid powertrain. The battery pack is big enough for up to 20 miles of road travel, allowing owners to travel and

work within city centre Ultra-Low Emission Zones. They can simply travel to the edge of the zone under diesel power - charging the battery as they go - and then switch over to electric power as they enter the restricted area.

The company has also introduced the e-Lift option on its four and six axle cranes. While this does not allow them to be fully battery powered, it does enable the cranes to be plugged into a normal AC outlet, with the battery boosting the mains power when high draw functions are operated.

Demag has also been looking at the growing demand for electric powered machines, with its modular E-Pack which can be mounted on its AC45 City crane, to allow plug in crane operation on site. While it largely targets industrial movers and riggers that use this type of crane indoors, it has also announced that it will offer the E-Pack on its new AC 80-4 All Terrain.

Liebherr Biberach has for many years offered plug in electric power for crane operations on its MK range of mobile tower cranes. Initially, this required a 63 Amp power outlet, while this is normal for larger







Pure electric truck crane

Last May, Chinese manufacturer Zoomlion launched what it claimed was the world's first pure electric powered truck crane with its 25 tonne ZTC250N-EV. The three axle crane, by far the most popular type of crane type in the country, was based on the manufacturer's standard diesel model, but the engine is replaced with a high density lithium iron phosphate battery pack and electric motors. It has now released a new version with no superstructure cab, with the space used to house a massive battery pack that is said to offer a travel range of 140

miles/230kmat a top speed of 90kph/

56mph with 50 percent gradeability. Once on site it must be plugged in and can apparently be recharged to 80 percent in an hour while also working. The crane is also equipped with self-drive on roads that are suitably equipped, and unmanned operation, with an app style remote controller. The load can be laser guided with the ability to lock on to the placement position, while a built in anti-sway device helps stop the load from swinging erratically.

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construction sites in many parts of Europe, it can be a problem on smaller sites or when working on existing buildings. More recently, it has optimised the crane to allow it to work from 32 Amp outlets.

Loader crane manufacturer Hiab offers the ePTO (electric Power Take Off). As with Demag's E-Pack, the module sits between the truck's diesel power source and the crane's hydraulics, allowing the crane to work on battery electric power when on site, while often mounted on a chassis that uses the cleanest fuels currently available.

Why go electric?

In 1966, after building a following as an acoustic folk singer, Bob Dylan walked onto stage for the second half of his show at the Manchester Free Trade Hall, carrying an electric guitar. As he and his band started playing, the audience erupted: one enraged folkie even shouted "Judas!" at him. The moment must have felt like it carried considerable cost for Dylan, and his band. But it opened a new direction in Dylan's career, and arguably changed the music scene forever, melding the lyrical complexity of folk singer songwriters with the emotional power and sheer heft of amplified

electric rock and blues.

Those making the move to electric cranes may also, like Dylan, face naysayers. The equipment will cost more and add weight to the set up.

Ultimately, Dylan's move was based on his own tastes, and perhaps a sense of the commercial opportunity.

No one, other than perhaps a few crazed and joyless puritans, was looking to ban the acoustic guitar.

That is not the case for the crane industry. Bans on the use of diesel equipment already exist. In a few streets in the City of London the 'Square Mile' that forms the financial district - two experimental 'Zero Emissions Zones' or ZEZs have been implemented. The Mayor of London, Sadiq Khan, has plans to implement these zones throughout the wider city by 2025. He is not alone. Some 25 cities across Europe, have announced similar restrictions, including some of the most competitive markets for the rental industry. And they are all a sign of things to come.

There is a pressing need here. We are all aware of the fact that human action is changing our climate for the worse. As well as threatening the survival of future generations, pollution is already killing people. Late last year a London coroner ruled that nine year old Ella Kissi-Debrah's death, and the suffering she endured when repeatedly hospitalised by asthma attacks, had been caused, in part, by nitrogen





dioxide and particulate emissions from the road near her home. Studies from King's College London show that up to 36,000 deaths a year in the UK may be caused by emissions. Quite simply, owners of an all diesel fleet may will find themselves having to increasingly focus on work outside of city centres. Eventually there will be no option but to go fully emissions free.

When Dylan made his move to electric, noise was a key benefit. Folk gigs would typically take place in the backroom of pubs and bars, with a couple of hundred fans listening in near silent reverence to his acoustic guitar. With amplification, he could bring his playing to much larger audiences.

When it comes to lifting equipment however, the reverse is the case, with electrification reducing noise opening up work in areas where noise is an issue. As we will see, it's a particular benefit with loader cranes, allowing for early morning or late night deliveries or collections in urban areas, where it might otherwise be banned. At the same time operators and rigging crews are better able to communicate when all is quiet.

Current state

As we have seen, the current offerings split into two main types: those that can both travel emissions free and operate on site without plugging in, and cranes like the Demag with E-Pack, Liebherr MK,









or Spierings eLift that can work emission free when plugged in, but still need diesel power to get to site.

Perfectly balanced?

Liebherr has a reputation for using cutting edge technology to optimise its cranes to suit customer requirements. Arguably this is what has made it one of the world's most successful crane manufacturers. It was this balancing of technical possibilities with user needs that lead to the concept behind the Unplugged cranes. The batteries serve two purposes. They allow the cranes to travel up to 600 metres or so on site without trailing a large cable, but perhaps more importantly, they act as a buffer, supporting the available AC power supply for the heavier lifts or maximum speeds. This also allows the crane to operate without compromise on 32, 63 or 125 Amp power supplies or for up to four hours of typical use on the battery pack. Recharging drained batteries takes between 2.25 and 4.5 hours depending on the supply, but when operating plugged in the batteries are continually being topped up.

Dietmar Hämmerle, product manager, crawler cranes, explains: "Our analyses show that the travel function plays a subordinate role for crawler cranes working in urban areas, the hoist and slew functions are the most used. This means that the crane usually works plugged in. Typical unplugged jobs are those where the crane changes its position and moves, for example, to the opposite side of the building or from the erection site to its assigned work site."

Batteries currently have a lower energy density than diesel and as such add weight to the machine. This can actually have some counterweight advantages. Hämmerle confirms that the Unplugged versions do have a slightly improved the lifting capacity load curve.

The two new cranes are just the start for Liebherr Nenzing, which builds lattice crawlers up to 300 tonnes. Hämmerle says: "When it came to the question of which size of crane to be our first with a zero emission option, we decided on the mid-range of our programme: the



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200 tonne LR 1200.1 and 250 tonne LR 1250.1. This is a suitable size for many of our customers, but not for all. So, we were automatically confronted with the question of which models we would do next. We are focusing on the 130 and 160 tonne range, with which we will come onto the market starting at the end of the year. The technology concept used is also suitable for larger cranes." The conversions are relative straightforward, in that around 90 percent of the Unplugged models remain unchanged from the diesel versions. Taking a simplistic approach, the diesel is replaced with a battery pack and a big electric motor to drive the same hydraulic set up - so not the most efficient power train. Ideally the hydraulic hoist, slew and track drive motors would all be replaced with the latest AC electric motors, thus eliminating the vast majority of the hydraulics and substantially boosting efficiency.

Going all-in

PVE took a different approach on the cranes its new company, PV-E Crane BV are building. They will be fully battery powered and include a quick change battery pack rather than relying on the whole crane having to remain plugged in. This means that the crane can work a full shift with a completely self-contained electric power source.

The lead customer is VolkerWessels Materieel en Logistiek, the inhouse equipment supplier for the VolkerWessels construction group, which also rents its equipment out to third parties. Managing director Dick van de Laar says: "The biggest crawler crane we have today is 120 tonnes. We see a bigger demand coming up for the 160 to 180 tonne capacity. So, we looked into the Tier V diesel cranes and then we had a meeting with PVE chief executive Joost Bömer who pointed out that they were working on an electric version. That gave us the opportunity to skip Tier V, the most efficient diesel version, and go directly to electric cranes, so we made a deal."

A key driver for the Dutch contractor are the requirements of Natura 2000 sites which are scattered across Europe, with a noticeable density in the Netherlands. The EU encourages landowners on the sites to protect local wildlife and migrating birds.

Owning electric cranes will help VolkerWessels to obtain work on these sites.

PVE has historically built crawler foundation type crawler cranes, but sold the business to a private equity investor, while keeping its rental operation. Bömer says: "Starting in 2020, some contractors were asking, 'Is there a way we can get an electric crane?' And of course, there was nothing in the market at that time. We knew everything about crawler cranes, but nothing about electrification. So, we teamed up with a local Dutch company that specialises in automotive electrification. We are adapting their technology for our cranes, in order to put an electric crane on the market.

"Our philosophy is you need to be able to work at least eight hours on a charge. The batteries are designed in such a way that if you want to work a double shift, you can easily take out the batteries and replace them with a full battery pack."

Bömer notes that the most popular crawler crane sizes do not require a great deal of power. "If you look in the range from 80 to 250 tonnes, in any manufacturer's range, all those engines are around 210 kilowatts: so not a lot of power and theoretically easy to electrify."

The first cranes in the range have the battery pack and electric motor powering a hydraulic pump, which powers the crane. But, Bömer says, for the next step, perhaps in the next two to three years, he will build





a fully electric crane. As well as the hydraulics used in lifting and travel, cranes need power for a range of other functions. PVE has focussed on minimising the requirements here as much as possible. So, the hydraulics are cooled with up to four fans, but each only works when needed. The cab heating has also been redesigned, in order to minimise power consumption. PVE rates the battery packs for the

cranes at 260kW, but in fact, the batteries hold 300kW of power, giving an additional headroom to ensure the crane can work all day. This is particularly important in winter, when low temperatures reduce battery capacity.

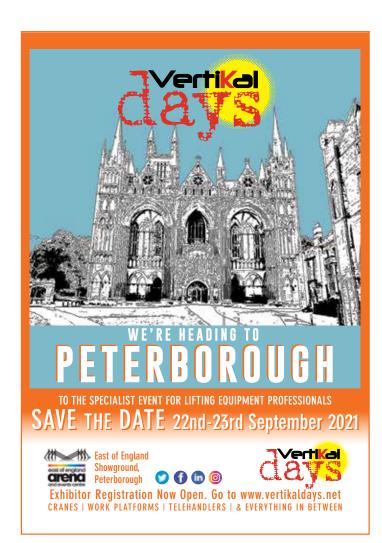
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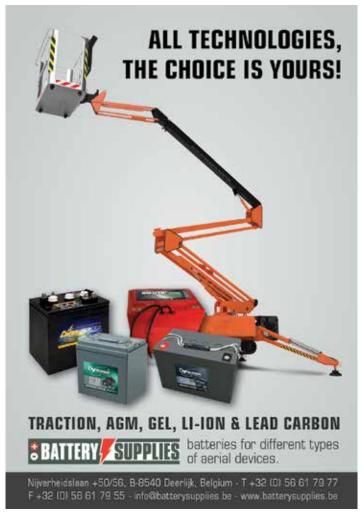
Potential customers will, of course, be swayed by brand familiarity and confidence when making their











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batteries

purchases. Some will have an existing relationship with Liebherr, or just be more comfortable testing new technology from one of the best known names in the business. Others will value the ability to work on sites without being tethered to a cable. Some, perhaps, will be inspired by the ambition of PVE's plans.

Eliminating the need to manage diesel supplies brings its own efficiencies. But Volker Stevins' van de Laar sees the presence of a high power line running across the job site as a downside to Liebherr's approach. Also, both he and Bömer are sceptical about having to transfer power from the chassis to superstructure via the swivel's slip ring connections. On the PVE, the battery pack is mounted on the superstructure with only a hydraulic connection down to the tracks.

Hämmerle dismisses these concerns. Acknowledging that a cable connection to the superstructure would make slewing the crane impractical, he sees no issue with the technology Liebherr uses. "The slip ring body technology is fully developed, and we have been using it in many of our products for decades. From our point of view, as well as that of our customers, a slip ring collector is an absolute must."

Green towers

The technology differences seen with the new electric crawler cranes are mirrored in the mobile tower crane market, where Liebherr faces another Dutch rival: Spierings.

The Spierings City Boy can top up its substantial battery pack while driving under diesel power. Once on site it can operate on battery power, but ideally will be plugged in



to a local power source. The battery pack still acts as a buffer, ensuring that there is always enough power available to lift at full speed and capacity, even with a 32 Amp domestic connection. Spierings uses a similar solution for its larger new cranes, the SK597-AT4 eLift and SK1265-AT6 eLift, which both allow for electric powered lifting, but not electric travel.

Liebherr has so far not attempted electric travel due to the constraints of battery technology. Its MK cranes are built at Liebherr's Biberach factory, with the chassis coming from the group's mobile crane plant at Ehingen.

Product manager Wolfgang Schlaucher says: "Our four and five axle cranes are equipped with the latest engines and so we fulfil, or sometimes exceed, the local emission requirements. We decided not to offer electric crane travel as we do not think that it is economically or functionally practical yet on four and five axle cranes."

Liebherr's all electric lifting systems allows the cranes to operate directly on lower power outlets without the need to use a battery booster. As Schlaucher says: "We go directly with one energy, all the way to the hook." On many, if not most, sites in European countries like Germany, a 63 Amp power is available early in the construction process he says. But some sites only offer a 32 Amp outlet. That could mean drop offs in performance, or, worse, overloading the site's power supply. However, in these situations, Liebherr's system avoids this by directing power to each crane function at a time, rather than for multiple functions simultaneously.

Liebherr has also optimised the energy further by installing LED work lights in place of halogen. But the hoist motors draw the most power, which can, according to Schlaucher, result in slower speeds and acceleration on a 32 Amp outlet. Where no sensible power outlet is available the crane can be powered by a PTO generator on the carrier engine. However, the manufacturer has instead added a small 55kw diesel generator which is a lot more efficient.

Green as you need

Small city type All Terrains, as their name suggests, were initially designed for work around congested urban areas, but another key application is installing/ removing industrial machinery. It was this work, says Demag R&D director Ascan Klein, that led to the development of the E-Pack for the AC 45 City. "We wanted a zero emissions option as they are often used for indoor applications and nobody wants to work among exhaust emissions, while sophisticated cleaning systems, or long hoses to take the exhaust outside are not ideal."

The system is designed around typical in-plant power supplies.







While the crane's engine may deliver 400 horsepower, it is not required for lifting work. The 400 volt/63 Amp power typically available in factories is enough to supply the 35Kw/45hp required to operate the crane superstructure. The E-Pack can be mounted on the back of the crane. Initially it was transported separately and installed on site, but Demag's latest iteration can be fitted at the depot and travel on board. Once the crane is in position and ready to work, it is plugged into the electric power source. Electric power passes through frequency inverters to an electric motor, driving a hydraulic pump, with hydraulic connectors tapping into the crane's circuits. For operators using the latest version of the E-Pack, switching between diesel and electric on site is just a question of plugging in and tapping the touch screen.

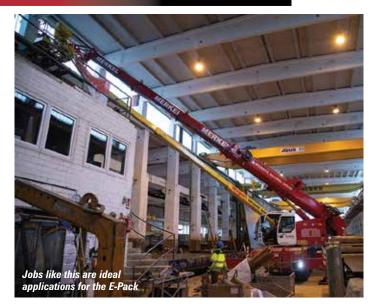
For most operations, the crane offers the same performance as running on diesel, with only a slight decline in performance when hoisting at maximum capacity but

lifting heavy loads in confined spaces does not require maximum speed. In fact, millimetre precision is far more important on these jobs than speed. The system will also work from a 32 Amp power outlet but with a sharper speed drop on the heaviest lifts.

While the AC45 City E-Pack is focussed on such applications, the recently launched four axle AC80-4 is more construction orientated. The E-Pack is intended to allow it to work on city centre sites, where emission restrictions are in place. An increasing number of locations in the Netherlands and Switzerland already rule against diesel idling when in stand-by mode. More specific restrictions can apply when working near a hospital, say, or in a residential area, and do not just apply to emissions, but also noise. A crane like the AC80-4 often operates intermittently throughout the day. The E-Pack means it is ready to lift when needed, without the constant need to start up and stop the diesel engine.







Noting the continual evolution of propulsion technology and the importance of residual value to crane buyers, Klein says that a modular approach like E-Pack allows customers to upgrade their machine with new technology, without needing any major modifications of the crane.

Tailor made power

For loader crane manufacturers like Hiab, it is increasingly important to provide customers with flexible ways of working. "The ePTO provides customers with a wider range of opportunities," says Hans Ohlsson, Hiab's director of global product management. "Customers in Paris, London, and Stockholm are already using ePTO cranes on standard diesel trucks for overnight deliveries, as while they aren't restricted from driving at night, they do face noise restrictions when it

comes to working at these times. With the ePTO, you can work silently this is currently the biggest advantage."

The power requirements for lifting are not that high. Hiab offers the system in two versions, 20 and 40kW. On the latter the crane can work for around four hours between recharges. For a delivery or waste collection company, topping up the battery while driving between stops ensures that there is always plenty of power. Builders' merchants for example find that even the 20kW version is sufficient for a full dav's work.

Hiab is also working on a new version, which will allow it to recharge while working plugged in. As knuckleboom cranes become more widely used for mobile crane work, this will open up yet more potential. The biggest cost on the

system are the batteries which also add weight and soak up available payload. So, another development on the drawing board, is an even smaller 13kW version. At the same time rapidly developing battery technology is also reducing weight and cost.

When it comes to the

chassis the technology is still not ready for wider use. Hiab's director for key accounts, John Bailey sees the decisions customers are making. He says that a fully electric truck can be triple the price of a standard diesel. This is clearly a financial impossibility for builders' merchants, most of whom do not charge for deliveries. While vehicle manufacturers are pushing hard to deliver cost effective, alternatives for their vehicles, it seems unlikely that there will be an easy answer to this problem any time soon: certainly, London's 2025 deadline for green commercial vehicles seems like a very tight deadline.

But Hiab's customers have found ways around this problem. One early adopter of ePTO was UK timber merchant Lawsons. It needed a clean, quiet solution for night time deliveries while meeting London's increasingly restrictive emissions rules. It is combining the ePTO with a compressed natural gas (CNG) chassis. With a CNG fuelling station within handy reach in South London, this was a relatively easy choice. But elsewhere the move to CNG is often more of a challenge. Bailey also points out the other advantage



to the ePTO cranes - noise. While obviously a concern to those living near a delivery site, it also has an impact for those working with the crane. Extensive studies, going back well into the 1980s, demonstrate a strong link between noise and stress, making them more likely to be distracted and to miss verbal communications from others on site, making accidents more likely.

Bailey says: "The feedback we're getting from operators is that they feel more relaxed and more confident. If there isn't as much noise around them, they can hear something coming up behind them, they can hear a bike or a car. So, there's an advantage from a health and safety point of view. And every driver I have spoken to that has used it, says it's less stressful."

Wider responsibilities

Across the mobile crane sector, manufacturers are making progress towards adopting cleaner technologies. Crane owners are increasingly exploring greener, quieter ways to work, while respecting the environment, their employees, and the people living and working around the sites where they operate.

The crane industry is, however, a relative niche sector: even loader cranes, are only used on around a third of delivery vehicles. Politicians are right to set deadlines for ending emissions. But their role can't end there. Banning diesel engines without cost effective widely available alternatives might cut emissions, but it will also cause the whole economy to seize up. Delivering a green construction industry without causing major disruption will need public sector investment in innovation, a willingness to pay the going rate and a careful balancing of taxation and subsidisation of vehicle purchases. When that happens, the crane industry will be more than ready to play its part.





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Who will take over voi company? A large number of companies operating in the market

sectors that C&A covers are family owned, often by those individuals who founded the business many years earlier. When the time comes to step down, from the full on day to day hustle and bustle, for whatever reason, an owner's thoughts turn to selling or handing on the business in order to realise some, or all, of the value built up by the many years of hard work and/or free up increasingly precious time for retirement and other pursuits. In cases where the business is financially strong and a highly competent second generation is ready and eager to take over, it can be relatively easy to organise a steady hand over and transition. All too often that it is not the case however, and the process becomes far more daunting.

It is hard to say what sort of percentage of companies at this stage in their development do not have a willing or able family connection, or even a management layer that can take over, so alternatives have to be explored. That usually means either speaking with the owners of other companies you know, or responding to one of the many brokers, agents, consultants and intermediaries that are always scouting for small to medium companies whose owners are interested in selling up. This usually involves a 'trade sale' where the brokers can earn a commission. Then there is the MBO or MBI - management buyout or buy in, funded by a bank or private equity firm.

Trade buyers

If you are a founder/owner manager who is passionate about the business and your employees, finding a trade buyer that is good enough to take over your 'baby' is never easy. There are some really good examples that have worked out well, but against this are a much longer list of less than successful take overs, at least in terms of preserving and building on the founders' principles, while looking after the employees who are often

as close as family. And as to private equity firms ...well! Once again there are a few good examples, but they are the exception. And it is not made any easier if the owners stay on board for an extended transition period, in fact it can be a whole lot worse and end up spoiling the closing chapter of a thoroughly enjoyable career.

Trade sale Acquisition Auction Private Equity Brokers

Private equity pitfalls

All too often a private equity owner will want to load up the business with as much debt as it can bear, sometimes getting a large percentage of their money back on day one. Then they add exorbitant 'management fees' for doing nothing much at all. The 'owner' can find themselves managing a heavily



indebted company, while having to report to their new masters on a regular basis, with decisions being cross examined and questioned by 'upstarts' with little understanding or experience of running a 'proper business'. Companies are all too often used as cash cows for as long as possible, and then passed on to another private equity firm. Or if a downturn or economic challenge comes along, the business collapses under the weight of its debt mountain and cost cutting measures that purely generated more cash during the good times. A slightly jaundiced view perhaps, in order to make the point, but not entirely an exaggeration.

So, what are the alternatives?

The founders of UK based Horizon Platforms faced this dilemma last year, although the owners are nowhere near the usual retirement age, and do not seem the types to take up full time travel or gardening. They were though keen to benefit from some of the value they had built up before becoming too decrepit to enjoy it. So, having looked at all of the options already

mentioned they took the decision to transfer the 14 year old business to an employee owned trust, which caught our attention. While we reported on the move in our online news section when it completed in February, we thought we would find out more. Leigh Sparrow of C&A therefore spoke online with co-founder Ben Hirst and Martin Cooper from the tax and accountancy company that advised them - RSM.

selling your business

To provide a little perspective. before setting up Horizon majority owners Ben Hirst and Ruairi Duggan had been involved with an earlier start up in the shape of UpLift which they sold to AFI back in 2006. Duggan founded that business with Nick Higgins in 2001, while Hirst joined in 2003 as operations director. He left UpLift shortly after the merger with AFI got underway and just over a year later set up Horizon. Duggan joined the business in 2009, once his non-compete period came to an end. Their experience and long term observations of how the trade sale to AFI worked out was, they admit, one of the factors behind their

selling your business

ultimate decision not to follow that route again.

When it came to the private equity route observations of what can happen didn't help, but keeping an open mind they began talking to potential suitors. However, a meeting with one of the more promising candidates highlighted the massive gulf in cultural approach and aspirations, quickly eliminating that as an option. "It was a real eye opener", said Hirst. "At the same time, we were hearing more and more about the potential benefits of an Employee Ownership Trust (EOT)." In the UK this method of selling or transferring a business came into law in 2014 but has really begun to take off over the past two to three years.



If you are looking to take the money and head for the beach....

At first glance the concept appears to be a highly tax efficient alternative, being zero rated for the sellers, while employees can receive dividend type bonuses of up to £3,600 a year tax tree. So, the two began talking with a number of advisors who specialise in this form of 'sale'. In their first meeting with Martin Cooper his manner and straight talking style hit a chord and was exactly what they were looking for. He made it clear from the very start that the potential tax benefits should not be the main factor in their decision.

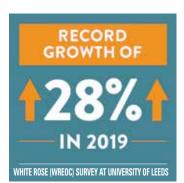


"Anyone using this as the justification to go with an EOT will almost certainly be disappointed," he says. "If you are looking to take all of your money out on day one and head for the beach this is not for you!" He went on to add that it can be a good solution for companies

that might have a high intrinsic value, but which are difficult to sell to a third party, perhaps being too reliant on a few people and therefore potentially seen as 'fragile' by potential buyers, even when those in the business know that it is a solid and profitable company. Other reasons his clients have given for an EOT have included "wanting to be able to look my employees in the eye once it is all done" and wishing to remain active and involved with the external pressures of private equity investors.

Cooper's clear no nonsense advice and manner was exactly what the pair felt they needed, and they hired him and his company to steer them through the process and make it happen.

Cooper points out that size is not a critical factor with EOTs but most fall into the five to £150 million range. He also said that only 25 percent of those companies that set out to organise an EOT actually end up going ahead. "All too often it simply isn't the right solution". He highlights electronics retailer Richer Sounds as a good example of a successful EOT, thanks to its strong culture and clear business values. "The process has added to these values and even enhanced customer service, making it a great place to work."



As with other forms of ownership transfer, a good independent valuation is essential and effectively starts the whole process off. All manner of variations are possible, but the key is not to load the business up with too much external debt. Depending on the financial situation an ideal scenario is for the owners to take out a reasonable sum in cash to realise the desire to extract some of the equity but convert the rest of their 'value' into loans to the EOT, which are paid back as and when it is possible from the after tax profits. In Horizon's



case the owners focused much less on what they could take out on day one and have an eight year pay-out in mind.

Hirst points out that they had stopped expanding the business in 2017, choosing instead to pay down debt. In hindsight this looks like a master stroke. It has of course not only left the business in good shape to steer a passage through the current crisis, but also provided more flexibility in structuring the EOT process. It enabled the company to choose not to add any new external credit lines. "We did look at raising some debt, but the cash flow allowed for an adequate day one payment and we didn't want too much third party influence or covenants that might come back and bite us," said Hirst.

How long does it take?

As to how long it takes, according to Cooper everything can be wrapped up in 12 weeks, but he advises companies to take their time and ensure the process is well thought through, with a good succession plan and timetable, while also leaving plenty of opportunity to communicate the process to every employee. In Horizon's case the process began with a free assessment in August 2020 and was completed in February.

Owners must transfer at least 51 percent of the shares to the trust and set up a Trustee board. The Horizon one has five members including a non-executive, two 'employers', one management team representative and another member to represent the other employees' interests. These appointments are made through an election process. Hirst points out that the board is proving to be invaluable for internal communication, adding: "If you skip making the most of the Trustee board you will really miss out. Not doing this well sends out the message that the management/ owners are not truly committed to

the process." The two also add that the Trustee board does not turn the management of the company into a democracy. The trustee board is there to oversee the wider company issues and performance, giving members the chance to hold the company directors to account. In Horizon's case the board meets quarterly with three members standing down or seeking reelection every two years.

Finally, Hirst adds: "Choosing the right adviser is really important. Some clearly did not appreciate what we were looking to achieve and in some cases were too aggressive from a funding perspective, it's worth taking your time to find an advisor who guickly understands you and the business. I am really excited about remaining invested in the business and this is the proudest moment of my career. Transferring ownership into the hands of our employees offers this organisation the opportunity to live on, and truly become what we have always strived to achieve, a business built for our grandchildren."

If you are interested in finding out more on this subject, the Employee Ownership Association the EOA - that provides a wealth of information on the process and a visit to its website www.employeeownership.co.uk is a good starting point.







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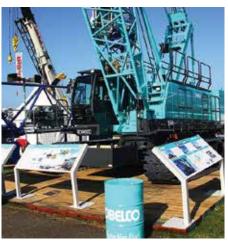


East of England Showground, Peterborough

www.vertikaldays.net



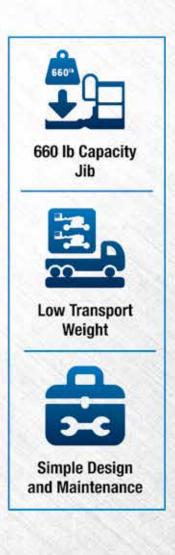




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Get ready for Vertikal Days this September

Vertikal Days, the UK crane, aerial lift and telehandler event has been obliged to change the dates for this year's show, moving from May to September. The show will now take place at the East of England Showground, Peterborough on the 22nd and 23rd of September, well after everyone in the UK is due to have been vaccinated and long after the promised 'one way' route out of Lockdowns and the "ending of all restrictions". It now looks as if Vertikal Days is set to become Europe's first live lifting equipment event of 2021.

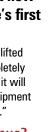
The change follows the postponement in 2020 from May to September and then on to May 2021. This year everything looked set for the May date until the second wave of the pandemic gathered pace in December and January. The organisers polled exhibitors and regular visitors and maintained a watching brief. Opinion was sharply divided between those who strongly believed that the industry really needed a live event this spring, and others who, while agreeing with the need, were understandably concerned over safety and visitor confidence. In February the UK government pre-empted any decision, with its four step plan for England which keeps a lid on events and travel until at least May 17th. So 'Plan B' promptly kicked in and the event was moved to September.

Show manager Pam Penny said: "I am sure I am not alone in hoping that by the end of June all restrictions will have been lifted and that, barring any completely unforeseen developments, it will become the first lifting equipment event in almost 18 months."

Why the new venue?

The first Vertikal Days was held at Haydock Park in 2007, moving to Silverstone in 2015 and Donington Park in 2016. Each year it has grown in terms of size, exhibitors and the number of visitors attending, attracting industry professionals from the UK, Ireland, mainland Europe and even further afield.

The move from Donington was necessitated by the venue's inability to confirm dates for non-mega track and concert events in a timely manner, while also addressing some exhibitor's concerns over the height restrictions imposed by its proximity to East Midlands Airport. Rules governing height restrictions near airport are also changing at the end of May this year which may have imposed further restrictions.





Safety above all else

It has become increasingly clear that buyers, end users and suppliers are all really looking forward to a live event and real networking. after months of SAFETY virtualism – if that FIRST is a word. However, it was essential when looking for alternatives to find a venue that is not only attractive and convenient, but most importantly in these Covid-19 times, safe and secure so that visitors and exhibitors felt relaxed networking and sharing a coffee or a beer etc... The East of England Showground

has been at the forefront of working

within the Covid-19 restrictions as a partner with Public Health England, having been used as a Covid-19 test and then vaccination centre. It also held several large events during the open summer period of 2020. The organisers are working with the venue to ensure best practices are maintained at all times.

The attractions of Peterborough

Peterborough is a historic and busy city with bars, restaurants and interesting sights, including the medieval cathedral, bronze age settlements, museums and Elizabethan grandeur. It is also the gateway to the 'Fens'. Hotel rooms within a 10 mile radius are plentiful





Vertikal Days

with good quick access to the venue. The showground can also be reached from London in 45 minutes, with direct fast trains to the north of the country. The showground is located alongside the A1(M) highway and easily accessible from most parts of the UK. For those flying in, London Stansted, London Luton, East Midlands and Birmingham airports are all within 40 to 90 minutes drive.

The skyline returns

The classic Vertikal Days skyline of crane, aerial work platform and telehandler booms will return in the absence of height restrictions. And with the vast majority of the major manufacturers attending along with a myriad of component and service suppliers, the 2021 event is likely to feature more new 'live' product launches than ever before.

While it is a new venue, the layout will be similar, with the marketplace centrally located and home to a wide range of suppliers, such as Point of Rental, TVH, Trackunit, Durham Lifting, Lifting Gear UK, Modulift, Ainscough Training, Insphire, MCS and many others.

'Crane alley' is likely to include brand new products from Liebherr, Tadano - Demag, Manitowoc, Kato, Böcker, Maeda, Unic and Kobelco to name a few. Along with companies like Falcon Tower Cranes, Crowland Cranes, City Lifting, Kranlyft and GGR.

Access companies have also been busy during the lockdown, developing new products, including Skyjack, Hinowa, JLG, Genie, Niftylift, CMC, Platform Basket, Airo, Leguan, Alimak, Almac, Versalift, Ruthmann, Bronto, Dingli, Snorkel, Haulotte and others. This will also be the first chance to see the new electric telehandlers from Faresin and JCB.

Although the format for catering might have to change a little, the key facts for visitors of complimentary lunch and refreshments will still be on tap, and as usual, parking is all both free and convenient.

Mark the dates

So, mark the dates in your calendar: September 22/23rd and lets all hope that it will also serve as a celebration of the return to normal life.



Where? East of England Showground, Peterborough.

When? 22nd and 23rd of September.

How to register:

Online: Register online at www.vertikaldays.net/visit/ visitor-registration and print out your badge for fast easy entry to the show.

At the entrance: This will be perfectly possible and welcomebut not as swift and convenient as online pre-registration.









































It was only a matter of time

Time Manufacturing's acquisition of German truck mount and spider lift manufacturer Ruthmann last month may have raised a few eyebrows - that Ruthmann didn't acquire Time/Versalift International if nothing else - but perhaps more surprising was that it took as long as it did. Both companies have been developing a distribution partnership for the past 10 years or so, helped along by the fact that they have minimal product line overlap. In hindsight, the increasingly close working relationship and future growth potential made their coming together an obvious one.

Time on the acquisition trail

Time/Versalift's long term owners, Ireland's O'Flaherty Holdings, sold the business to private equity firm the Sterling group in 2017, and many wondered why Ruthmann had not been given 'first refusal' perhaps it was? Since the Sterling group took over, Time has been on the acquisition trail, adding eight companies within the US. This included underbridge platform manufacturer Aspen Aerials and fiberglass truck body manufacturer BrandFX as well as a number of distributors covering the South East and Midwest regions. Ruthmann is not only the group's first acquisition outside of the US but it is also the largest. With annual revenues of €170 million the combined businesses will likely generate revenues in the region of €375 million.

Ruthmann was established in 1901 when founder, Anton Ruthmann, formed a bicycle and sewing machine shop. It wasn't until the second generation took over in the 1940s that the company pivoted to making carts, trolleys and what would become the first Cargoloader hydraulic truck bed in 1949. The company went on to build its first Steiger truck mounted platform in 1954, adding a telescopic boom in 1956, with many of those early units mounted on Volkswagen Kombi chassis.

The company continued to expand its range and working heights, before in 2001 it introduced the world's largest truck mounted platform in the form of the 100 metre TTS1000. The cost of designing and building such a large machine, at the same time as an economic slowdown exasperated by fierce Italian competition in the volume market for smaller models,







caused serious financial difficulties and in 2003 the business was acquired by Heinrich Winkelmann and Heinz-Jürgen Buss.

The pair wasted no time in implementing a number of leaner construction and production procedures to help turn the company around and between 2008 and 2010 lifted revenues to €50 million, in spite of the global economic crisis. Following this period of growth and success, the management of the company was handed over to then general service manager, Rolf Kulawik. The following year - 2011 - Ruthmann acquired Versalift's German sales operation, Time Deutschland Versalift, along with the German distribution rights for Versalift platforms. This move kick started a partnership that has continued to grow slowly and steadily ever since.

A fruitful relationship

This relationship has seen Versalift distribute Ruthmann products in a number of countries, including North America, Spain, Portugal as well as the Nordic and Benelux regions. Ruthmann on the other hand distributes Versalift in Germany, Austria and Switzerland, while both companies also share a number of dealerships. A large contributing factor behind the success of this arrangement has been the minimal conflict between the two product ranges.

The acquisition of Ruthmann will provide Time with its highly respected, highly engineered range of truck mounted lifts with working heights from 17 to 90 metres, along with its more competitively priced Italian built Ecoline range mounted on 3.5 tonne chassis. Its Ecoline range is a result of Ruthmann's

Time/Ruthmann

acquisition of Bluelift in 2016, which also gave it a line of high quality spider lifts and some talented engineers.

In Europe, the only conflict between the two companies' product lines are, perhaps, a handful of models mounted on 3.5 and 7.5 tonne chassis with working heights up to 25 metres. In general, Versalift models are geared towards the utility and telecommunications markets, while the Ruthmann models are more targeted at the general and rental market. On paper, there is marginally more overlap in the US although around 70 percent

of Time's truck mounts in the US are fully insulated and designed for working near live powerlines, a sector that Ruthmann has only recently flirted with.

Versalift offers a handful of 'spider lifts' but these have mostly involved mounting its truck mounted superstructures on heavy duty tracked chassis. Ruthmann's range of Bluelift spider lifts, which offer working heights of 10.8 to 31 metres, will likely appeal to a wider audience. It will be interesting to see whether the extra sales and support from Time in the US will help Ruthmann, and its wholly



owned distributor ReachMaster. grab a share of the rapidly growing spider lift market, currently dominated by Platform Basket and CMC, and also contested by Teupen and JLG/Hinowa.

Time also gains Ruthmann's facilities in Germany and Italy, joining its Versalift plants in the USA, Denmark, the UK and France. It also gains Ruthmann's 11 service locations in Germany, Austria, Italy and Switzerland, plus ReachMaster in Texas.

A perfect match?

If Time's past acquisitions are anything to go by, Ruthmann and its management team will continue to operate as a standalone business under the 'A Time Manufacturing Company' banner. The combination of the two vehicle mounted product

lines presents an impressive range of truck and van mounted lifts with working heights from 8.9 to 90 metres. Traditionally, Time has focused its product development efforts on products for the utility, telecommunications, infrastructure, and forestry sectors with great success, but the addition of Ruthmann means that the group almost has something for everyone. Either way, it will be interesting to see how the post-acquisition period pans out, and how the two teams communicate and integrate with each other. It has great potential to for both brands, but time will tell.









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Hot tub safe lifting guidance

Following a number of high profile incidents involving the lifting and placing of hot tubs, the CPA was approached by the British & Irish Spa and Hot Tub Association (BISHTA) to codevelop guidance for the safe lifting of hot tubs, exercise spas and one piece pools.

The need for guidance follows an incident in North Wales where a hot tub, being lifting over a house, was dropped after a tag line became snared on the building. In this case there were no injuries, but lifting incidents involving hot tubs are not uncommon and usually involve a dropped load or crane overturn. As many incidents involve loader cranes, ALLMI is also participating in the project. The three associations - CPA, BISHTA and ALLMI - are in the process of developing a set of safe lifting standards for this type of load and intend to host a joint online seminar to launch the guidance.

In the case of CPA crane members, the principles and requirements of safe lift planning are well understood and implemented, but specific factors relating to hot tubs may be less well known. For example, pipework for new hot tubs often contains residual water from testing, adding to the weight to be lifted. The same applies to covers and other accessories such as steps etc... not always included in manufacturer's data.

A large percentage of tubs are delivered to domestic customers who do not have the requisite knowledge to plan or control the lift and therefore the guidance makes clear that domestic customers should only be offered a contract lift and not a crane hire agreement.







Strategic Forum Plant Safety Group aerial lift guidance

The Strategic Forum Plant Safety Group and IPAF are working on new guidance material for aerial work platforms, include secondary guarding, EN280 Part 2 - Suspended Loads, and using platforms as an overhead anchor point.

IPAF is chairing the Secondary Guarding and EN280 projects whilst the CPA is chairing the overhead anchor point project requested by the steelwork sector where steel is unloaded from a trailer bed in an open area, with no suitable anchoring points for personal fall arrest equipment, so elevated boom lift platforms are often used as temporary anchor points.



CPA focus



Dan Griffin R.I.P

In January we received the sad news that former CPA chairman and president Dan Griffin had died following a serious illness. He joined the CPA Council in 1991 and, having signed up to various sub committees, was heavily involved in modernising the way the CPA operated. In the years that followed, he was very supportive of the association and attended most of its events, rarely missing a Council meeting. He was also a director of the Rail Plant Association.

Dan was also chairman of the London Plant Association for many years, organising its annual dinner dance and monthly meetings. Although his business only provided non-operated equipment, he had a passion for larger kit, especially cranes. He and old friend Don Baldry maintained a shared interest an made a trip to see the largest crane in the UK at Earls Court in 2017.

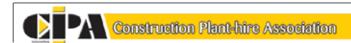
He took up sailing in his 50s and qualified as an offshore yacht master whilst circumnavigating Great Britain. The family often sailed in the Mediterranean, but his real love was "cold, wet and windy". He always enjoyed days out, especially Ascot which was a favourite.

Dan was a lifetime member of the Lighthouse Club and helped organise events in London.

No mention of him could be complete without Chelsea Football Club, wife Wendy said: "Even when ill, he said that if spectators had been allowed, he would have managed to get to Stamford Bridge. He was a supporter when I met him over 40 years ago and he was still a season ticket holder when he died."

Colin Wood - who along with Bill Law joined Council on the same day - summed up the feelings of those who knew him: "He will be remembered, more than anything else, for his warmth and humour. Many Council members commented on his welcoming approach when they joined. He was brilliant company and a great raconteur, and you never left Dan's company without a smile on your face."

We shall all miss his sense of humour and friendship, and we send our sympathies to his wife Wendy, and children John and Kate. The CPA has made a donation to the Motor Neurone Disease Association, to support its work and mark the contribution that Dan made to CPA.



INTHE NEXT ISSUE OF C&a



Place your products in front of 17,000 crane, telehandler and access buyers & users who will be reading the April/May issue of Cranes & Access...

The issue will include:

C&A Annual Product Source Guide

The C&A annual product source guide is an invaluable reference tool listing every crane, access, telehandler and ancillary equipment supplier, along with their key contact details.



Heavy Lift Applications

We will take a look at some interesting heavy lift applications from around the world and bring you news on the latest on heavy lift cranes available.

Low Level Access and Trailer Lifts

A detailed overview of the market, latest developments and techniques covering push around scissor, mast and micro self-propelled lifts with a review of the latest product launches. Have you got any new to tell?



Road Rail Lifting and Access

We will take a look at lifting and powered access equipment used in the important role of the building, maintaining and clearing rail networks.



Send any information, news, photographs or ideas on these subjects to editor@vertikal.net

Every issue of **C&A** is also packed with our **regular columns**, **news** and **reader's letters**, **books**, **models**, **training**, along with the latest news from the **CPA**, **ALLMI**, **IPAF** and **PASMA**.

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Choosing a safe mobile access tower

When you buy or hire a mobile access tower, you want to be sure you're getting a safe product that's right for your job. PASMA recommends you consider five areas.

Choose towers that have been manufactured by PASMA members, who prioritise safety first. It's a condition of membership that their towers meet the most up do date standards and are independently certified by a recognised certification body. If you are hiring, a PASMA hire centre provides the same reassurance. If you need someone to assemble, ask a PASMA hire & assembly member.



2. Certification

Double check that your tower is certified to design standard EN 1004. This means it's been independently checked and certified by a recognised certification body. To be doubly sure, ask your supplier for a copy of the certificate. If they can't provide it, you should seriously consider another source – a reputable supplier will be able to give it to you.

Certification to EN 1004 guarantees the tower meets minimum safety requirements in place across Europe, such as:

- · Purpose designed platforms with safe trapdoor entry and exit
- · Built in access for safe ascent and descent
- · Supplied with the correct size and quantity of stabilisers to prevent
- · Have the correct quantity and number of guardrails with the correct gaps and dimensions to prevent a fall

Note: there are various tower configurations that aren't covered by EN 1004, which come under BS 1139-6. However, this article is specifically about EN 1004 access towers - that's a straight up and down, single bay structure with four legs and wheels.

3. Capabilities

EN 1004 allows for mobile access towers to have different capabilities. When you're choosing a tower, pay attention to its designation code to make sure it will meet your needs. It will be marked on the tower and in the user

PASMA focus

instructions - an example is EN 1004-3-8/12-ABXX-H1. When it's broken down, this code tells you several things:

- The load that can be placed on the working platform
- . The maximum height it can be built to indoors and outdoors
- . The types of built in access that are available
- · The clear height i.e. the free height available for someone to move around on the platform

4. Training

Even an EN 1004 tower is only safe if it's assembled, inspected, used and dismantled by a competent person, who should have completed a PASMA Towers for Users training course while their managers and supervisors should complete PASMA Towers for Managers.

5. Instruction manuals

Even though the person assembling the tower is trained, they must always follow the instruction manual provided by the manufacturer or hirer. Manuals are considered so important for safe use that they have their own special standard, because they contain critical safety information, including:

- · How to assemble the tower without ever standing on an unprotected platform
- The bracing pattern, which is what gives the tower its strength
- Which stabilisers or outriggers to use for the height of the tower you're building
- · Guidance on maximum allowable side loads, such as the wind or use of high pressure jets
- · The maximum safe working load that a single platform and the whole tower can support
- A schedule of the components and their number required for each configuration

A library of manuals can be found on PASMA's website/app.

With these five steps covered, you'll have the peace of mind you need to get on with the job at hand. Whatever you do, don't be tempted to buy a so called 'DIY tower' - there's a reason they are a lot cheaper!



Awkward access challenges?

There are a whole range of scaffold towers available, from towers with advanced features like bridges or cantilevers right up to completely bespoke structures. So, what are the advantages of choosing aluminium towers for your awkward access job?

- Quick to build and dismantle suiting tight timescales
- Lightweight essential when the floor/ground can't hold steel or powered access
- Low carbon footprint it travels in a transit van, not a 10 tonne truck
- · Aesthetically pleasing aluminium looks good in high profile locations
- Flexible gets into awkward spaces
- · Collective fall prevention at all times no harnesses required
- · Competitively priced

When you're looking for a company to install a tower structure for you, including complex, non-standard configurations, the service you need is known as 'hire & assembly'. For a list of PASMA hire & assembly members: https://pasma.co.uk/ hire-and-assembly/



EN 1004 is changing

A new edition of EN 1004 - EN 1004 Part 1 - was published last year with the changes applying by 30th November. The main points to note are:

- All towers are now in scope even those under 2.5 metres
- · Towers will be even safer, thanks to various improved safeguards
- Smaller maximum distance between platform levels and the ground and first platform
- Expect innovations as manufacturers gain more freedom to develop products.

Learn more at pasma.co.uk/en1004





For more information about the Access Industry Forum (AIF) and the No Falls Foundation charity for working at height, please visit www.accessindustryforum.org.uk and www.nofallsfoundation.org













IPAF ePAL app a 'gamechanger'

IPAF's new digital app is expected to be a 'game changer' for work site safety and efficiency and marks a stride forward in IPAF's drive for greater sustainability as it shifts away from issuing plastic PAL Cards via the post.

The ePAL, which will be launched in April, will be free to use and feature a digital PAL Card, operator logbook and operator safety guides. It will also allow operators to receive the latest IPAF safety information and best practice guidance and will ultimately allow construction managers to quickly and easily verify a card holder's qualifications, while enabling operators to log and share their equipment time digitally.

The app will phase out paper certifications and time logs, while replacing the printed version of IPAF's operator safety guide. It will also speed up processing time and resources required to issue PAL Cards and certifications, which are replaced each time a new machine category qualification is added, or training is renewed.

Chief executive Peter Douglas said: "When IPAF launched the PAL Card as a credit card size identification with name, photo and categories of machine the holder was qualified to operate, it was revolutionary. Since then, technology has evolved, which makes this latest step possible. This wholesale move from a plastic to digital is a natural evolution. Developing an operator app has been a key priority for IPAF since I took up post in 2019, and we were excited to team up with Trackunit to bring its considerable technical expertise to bear to roll this out."

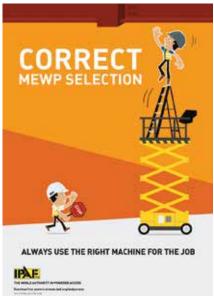
"ePAL will bring benefits for operators and training centres alike, while allowing us to streamline and digitise our processes, and help operators keep track of their machine operating experience via the digital logbook function. IPAF seeks to be at the forefront in driving change for our industry and involved as much as possible in shaping the future of these technological advancements. These are exciting times."

The new app will initially be offered in English with other languages to follow. It will be available for Apple iOS and Android devices and will be updated with additional features as usage demands and developing technology allows.



Selecting the correct machine

The next in IPAF's ongoing series of online workshops and seminars will look at the importance of selecting the correct aerial work platform for the job to enable work to be carried out safely and effectively. Some jobs are extremely challenging to access. Knowing which machine to apply to each given situation makes a huge difference in terms of ease of access, time taken to complete the work, and ensuring site safety. The complexities and considerations of site access will be highlighted by the speakers which include Mark Keily of Sunbelt Rentals, who will give



an industry and rental company's perspective of site surveys, along with Brian Parker and Paul Roddis of IPAF and will be hosted by Richard Whiting of IPAF. The seminar will conclude with an overview of IPAF's new Site Assessment (For MEWP Selection) training.

This event will be broadcast via Zoom in English, with simultaneous translation into German, Spanish and Portuguese, subject to demand. Simultaneous translation is only available when watching live, using the free Zoom desktop or mobile app. For more details visit www.ipaf.org/events



IPAF IAPA winners

Around 1,000 registered for this year's virtual Summit and IAPA awards on March 18th.

The winners were:

IPAF/Access International Lifetime Achievement Award Roger Wickens - who tragically

passed away in 2019

The IAPA Innovative **Technology Prize**

Hinowa - for the TeleCrawler13 telescopic spider lift

Product of the Year - Mast Climbing Work Platforms & Hoists

Scanclimber - Heavy Duty mast climbing work platform

Product of the Year - Scissor Lifts & Vertical Mast Platforms

Snorkel - S3019E 19ft scissor lift

Product of the Year - Self **Propelled Booms & Atrium Lifts** Niftylft - HR17NE 49ft all electric boom lift

Product of the Year - Vehicle **Mounted Platforms**

Ruthmann - TB 300 30 metre truck mount

Access Rental Company of the Year

Mateco, Luxembourg

Contribution to Safe Working at Height

Outriggerpads - for its online outrigger pad calculator

Digital Development Award Riwal – for various digital initiatives

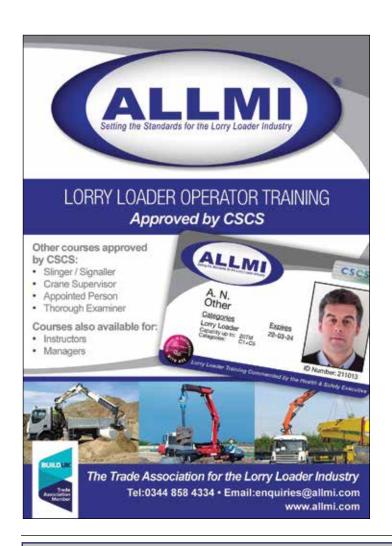
IPAF Training Centre of the Year Kompetenzzentrum für Arbeitssich-

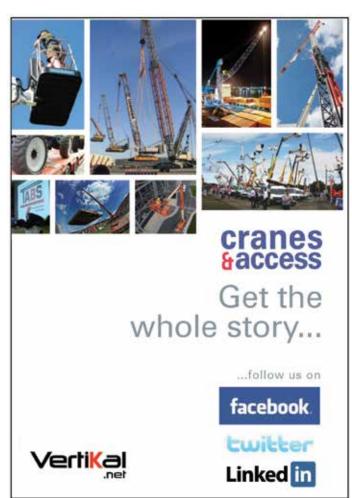
IPAF Training Instructor of the Year

erheit, Switzerland

Andrew Williams - of UTN Training









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ALLMI Operators' Forum - 15 year anniversary

15 years ago, ALLMI opened its doors to fleet owners by establishing its Operators' Forum division, having previously only granted membership to manufacturers, service companies and ancillary equipment suppliers.

The move has proved a great success and one that has played a key role in the impressive phase of growth and development that ALLMI has experienced during recent years. Chief executive Tom Wakefield said: "In 2005 we received interest from several fleet owners regarding membership and this coincided with discussions we were already having concerning ways in which we could expand the association to be even more effective in achieving our aim of raising standards throughout the lorry loader industry. The solution was obvious and in February 2006 we held the inaugural meeting of the Operators' Forum. Since then, the Forum has gone from strength to strength and now makes up around half of the ALLMI membership. There is no doubt that having fleet owners on board facilitates an even greater interchange of ideas and opinions, which further improves our ability to identify and address the key issues affecting safety and good practice."

Mobile Mini is a long standing member of ALLMI's fleet owner division, the company's lifting operations manager Nick Sesevic, a member of the Operators' Forum Executive Committee for the past year added: "Our company undertakes over 100,000 lorry loader operations every year and so this is a sector which is crucial to our business. We joined ALLMI because we wanted to be part of a body with a strong, collective voice on lorry loader issues, and that would keep us well informed on matters regarding legislation, standards, technical issues and safety."

"ALLMI membership has certainly given us these benefits but has also far exceeded our expectations. The association does a great job of representing the industry and the level of support and guidance we receive is second to none. In addition, even though Mobile Mini's reputation for health and safety has always been excellent, we have seen our credibility further enhanced by being part of the association and bearing its logo."

If you run lorry loaders and would like to know more about membership, please contact ALLMI or visit www.allmi.com/operators-forum.

Election time

ALLMI has concluded its annual election process for the positions of chairman and Operators' Forum chairman. Alan Johnson, managing director of Palfinger UK, was elected to continue as chairman of the

association, whilst Steve Frazer-Brown. health & safety director of David Watson Transport, was reappointed to chair the Operators'







Caa ALLMI focus

CAP 1096 trial reminder

As previously reported, in September last year the Civil Aviation Authority (CAA) delayed the implementation of its updated 'CAP 1096 Guidance to Crane Users on Aviation Lighting and Notification', a publication which places duties on crane operators to mitigate the risk of collisions with aircraft. Originally targeted for 1st October 2020, the new requirements will come into force on 31st May this year, with the CAA using this postponement period to conduct a formal trial of the new notification systems, and to undertake further consultation of CAP 1096 content.

As the postponement was prompted by industry concerns over the significant new requirements, wide scale participation in the trial is essential in providing valuable feedback to the CAA. Should any stakeholders wish to take part in the trial, they should contact the CAA: ARops@caa.co.uk



Requirements of the new CAP 1096

All crane operations, regardless of location, should be notified in advance to the CAA if at any stage during the planned lift the highest point of the crane or load will exceed 10 metres above ground level or the surrounding structures or trees (if higher). The CAA will then identify parties that may be affected by the crane and notify them accordingly.

For lifts of this type where there is less than five working days for notification, the crane user is required to contact all aerodromes that have perimeters within 18.5 km from the location of the crane, as well as the CAA.

Note: the above requirements cover all types of crane operation and so include the raising of booms when carrying out repairs or thorough examinations. However, this type of activity can be addressed by a periodic, blanket approval for the site in question.

Membership subs rebate

ALLMI has announced that it will provide a further 25 percent rebate against membership subscription fees, a move which follows an identical initiative by the association in May 2020.





For details of ALLMI standards, guidance documents and training, visit: www.allmi.com





Electric boom lift

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IPAF associate member,
North Warwickshire & South
Leicestershire College,
has launched its Lift Truck
and Powered Access
Apprenticeship course.
Forming part of IPAF's
'Roadmap to Qualified MEWP
Technician or Engineer
Status', the course covers



the inspection, maintenance and repair of lifting equipment and will include modules on batteries and hydraulics as well as diagnosing and repairing faults. The first course in April has already been filled, while a second course has been scheduled for September.

Fatal incident costs \$18,500

The Occupational Safety and Health Administration (OSHA) of Oregon fined two companies - Pickathon and GuildWorks - following the death of Brad Swet, 35, of Foster Trees and Brandon Blackmore, 27, of GuildWorks, after their boom lift overturned at the Pickathon music festival in Portland, Oregon in 2019.

The two men had gone up in the boom lift and climbed into the trees to reach ropes holding a giant canopy. They remained attached to the platform with their lanyards, but the combination of no weight in the platform, the high elevation of the retracted boom and slope caused the boom to tip rearwards, pulling the men from the trees and hurling them to the ground.

OSHA's investigation found that the machine's slope sensor alarm and the secondary guarding device had been disabled. The companies were fined \$12,500 for disabling the alarms. Guildworks also received an additional \$6,000 fine for not following the manufacturer's instructions, which included maintaining a firm footing on the platform's floor at all times, not raising the lift on an uneven surface, not moving the machine while the boom was extended on a slope, and not putting the lift in a raised position with the counterweight on a downward side of a slope. The investigation also revealed that the companies had a history of not following standard safety procedures.

Brad Swet's mother Darlene has filed a lawsuit against Pickathon, GuildWorks, Pendarvis Farms, Herc Rentals, Terex and Genie for \$37 million in compensation.

No Falls support pack

The No Falls Foundation, a UK charity dedicated to preventing falls from height and helping those affected, has published a free support pack with advice and assistance following a fall from height in the workplace. It contains information on a wide range of topics and can either be downloaded from The No Falls Foundation website or the safety section of the Vertikal online library.

Fatal dropped load costs £60k

UK steelwork company PCR Steel was fined £50,000 plus costs of £9,900 after a man died in a telehandler incident at the company's premises in Grays, Essex in 2019. A man employed by South East Galvanizers, who was collecting the base of a steel balcony, was using a telehandler to load the 400kg balcony onto a trailer. It slipped off the forks while being lifted, fatally crushing a second man, 47, who was standing on the trailer. The HSE found that PCR had failed to ensure that the lifting operation was properly planned by a competent person, appropriately supervised, or carried out in a safe manner. It had also failed to plan how the load would be set down or exclude people from the danger zone. HSE inspector Jill Mead said: "This was a tragic and avoidable incident, caused by the failure of the host company to implement safe systems of work. Those in control of work have a responsibility to devise safe methods of working and provide the necessary information, instruction and training to their workers in the safe system of working."

\$10k phone fine

US tower crane operator Michael Chichester was fined \$10,000 by the NYC department of buildings after an inspector observed him on his mobile phone while lifting a steel beam on a job site in the Bronx last June. NYC inspector Andrew Rudansky said: "Chichester was found with both hands and eyes focused on his mobile phone, while a steel beam was attached to the crane hook as workers tried to connect the beam to its columns. Everyone knows that driving a car while on your cell phone is dangerous. It should be even more obvious that this behaviour is completely unacceptable when operating a large crane."

Who trained him?

Spotted in the UK, a man hanging from a third floor window whilst standing on the thin protective rails in order to clean the stonework above.





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XCMG XCA 230

The XCMG XCA 230 is a five axle All Terrain crane with a capacity of 230 tonnes. This 1:50 scale model is from XCMG's preferred model supplier, Yagao, and tools are provided to help with the assembly and operation of the model, but no instructions are included.

The chassis is detailed and all axles steer independently and have sprung suspension. The carrier cab has nice interior detail which is visible because the cab doors can be opened. Behind the cab the engine area has nice fine mesh grilles, and tiny graphics add detail along the carrier sides.

The outrigger beams are metal with separate pads, but the model engineering is unusual as the outriggers are not load bearing, which is a disappointment. Metal spreader plates are included.

The crane cab is very good as it tilts and has a sliding door. The

with graphics, metal platforms and handrails. The counterweight is made of separate parts, so it is configurable, although care is needed during display as the counterweight hangs but is not locked when fitted. The winch drums have good quality rope, but there are no hydraulic hoses running to the motors.

The boom is detailed with spooling drums, sharp graphics, and metal sheaves. The boom raises easily and is locked by tightening grub screws in the lift cylinder jacket and this works well. The telescopic sections pull out smoothly but lock at full extension only.

The bi fold swingaway extension is

very good, but surprisingly there are no brackets on the side of the boom to stow it in transport mode, but this may reflect the real crane. It is luffing so it can be set at variable offset angles using a reasonably stiff hydraulic cylinder. Two nice metal hook blocks are supplied.

Overall, this is a well made crane model which looks good. However, in terms of functionality it is odd that the outriggers are not load bearing. It is not easy to find but can ordered direct from China for around \$180.

To read the full review of this model visit www.cranesetc.co.uk



Cranes Etc Model Rating

Packaging (max 10)	7
Detail (max 30)	27
Features (max 20)	14
Quality (max 25)	21
Price (max 15)	11
Overall (max 100)	80%

books & models











Northwest picture book volume 3

This is the final book in a series of three covering Northwest **Engineering Company – the crane** and excavator manufacturer that was established in 1918, and which petered out in 1990 having provided the foundations for the current Terex Cranes business in 1986.

The book by Mathew E. Folsom and Mario Torres is characterised as 'A photographic Archive Collection' and covers the final days of the company and its premises along with series two machines and hydraulic and experimental models from 1967 to 1990. Unlike volume two, this book has a strong lift crane content, with a wealth of old photographs, and while it is dubbed as a picture book, it actually contains a wealth

of documented information, with a particular focus on the engineering side of the business, clearly with an abundance of inside knowledge. The authors carried out extensive research speaking to dozens of ex Northwest employees.

The book highlights the company's resistance to making the move from traditional cable excavators to hydraulic machines is a classic example of how the big names of the American crane and excavator industry lost their market dominance and vanished almost without trace. During the period covered Northwest did finally move into Hydraulics for both its excavators and cranes, but it was coming from behind and never managed to catch up.

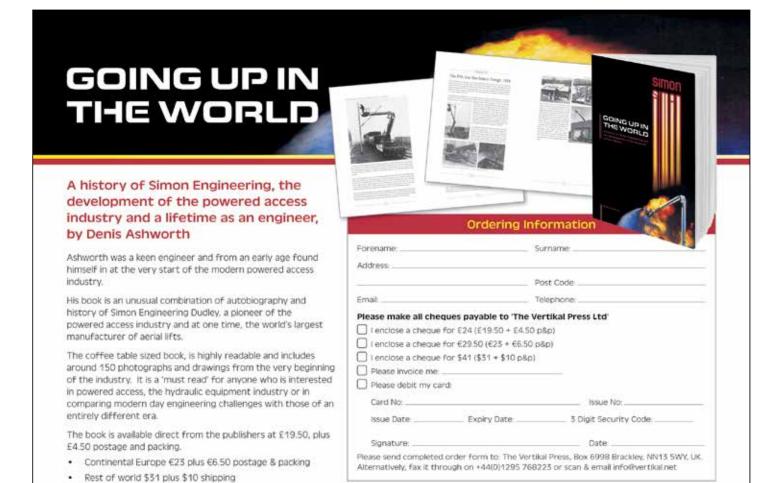
This book provides a fascinating

insight into what proved to be a critical period in the development of cranes and excavators, which saw customer loyalty switch from the long established, all powerful names like American Hoist & Derrick, Lorain, Koehring, Northwest, Bucyrus Erie and P&H/Harnischfeger - many of which ended up as brands within Terex - to upstarts like Grove Manufacturing. It managed to go from a regional farm trailer manufacturer to market leading

crane manufacture in a little over a decade, as the giants of the industry failed to adequately respond to changing market. If the history of the crane industry interests you, especially North American manufacturers then this book is a must have.

It is published by Buffalo Road Imports and can be purchased on Amazon, from the Historical **Construction Equipment Association** for \$54.95.





Readers Lt



The following responses were received in response to the article published in the last edition of Cranes & Access which reported on the long term efforts to make wind turbine installation lifting safer.

Dear Sir,

I read this with interest having been involved in turbine erecting, albeit in a smaller role as a tailing crane for the tower sections and the tandem lifting of blades off of transport and onto a lay down area. What surprised me about this article is that the people in the conference were shocked into silence. I only have a rudimentary understanding of physics due to only having an O level in it, academically wise, but basic physics, and to me common sense, means that this stands to reason! I've lifted concrete fascia slabs that have a similar surface area to fire panels for houses - the drag effect, of course, is far greater on this than the concrete therefore the likelihood of the load shifting outside of the safe working envelope of the crane and leading to an accident is greater - this is just basic stuff of crane operating. Maybe I'm assuming too much because I've experienced it personally as an operator and perhaps, therein lies the problem - the crane industry, certainly in the UK, is populated by a lot of people who have only a theoretical knowledge or worse still, none whatsoever but have jobs because they are sales people - who have no practical experience of the service they are selling. Experience counts for a lot!

Steven Schmalenbach

Crane operator

Dear Sir,

Very very interesting and the heavy lifting industry needs to take on board the importance of sharing critical safety information

Andy Tymon Lifting Engineer

Adapting and keeping going

Greetings Leigh,

Snow and freezing cold has gripped our region of Arkansas, USA for three weeks or better. However, I'm still an avid dedicated follower of your mission in the lifting industry. I turned 80 last November and had a good business year in 2020 until November. That is normally a slow time for tree services, but it stopped the first week of November.

I still own a 2003 Niftylift TM40 and it runs very well. If my crystal ball weren't cracked and clouded, I'd announce I am prepared for another good year, my 31st in tree care. In November I saw the dead time as perfect timing renew my business of spinning tops or spinners in the UK. I hopped on the planning mode to develop my 10th workshop the smallest ever at 6 x 8ft. It is about 80% done and with this cold weather we have, I am driving myself to complete the setup and turn on the lathe. My blog site - www.shermanstops.com - will soon have spinners for sale, and I hope to learn how to make and spin whip tops which have been popular in the British Isles.

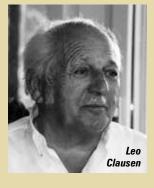
Praying your good health and success this year,

Sherm Anderson

treetopguy2028@yahoo.com Beelinewarner589@gmail.com

Leo Clausen-Gerold 1939-2021

Swiss crane veteran Leo Clausen-Gerold passed away on March 4th after a long illness. He would have been 82 next month. Clausen laid the foundation for his crane rental company, Clausen Kran, in 1969 when he purchased a tracked excavator and set up as an excavation contractor in the town of Brig, along with his wife Marie-Therese Clausen-Gerold, who died from cancer in 2004. They



acquired their first crane, a 15 tonne PPM 1507, in 1972 and in the years that followed added larger cranes to the fleet. Today the company's 'flagship' is a 250 tonne Liebherr LTM 1250-5.1.

In 2002 Leo handed over day to day management of the business to the next generation in the form of Geri and Cornelia Clausen. The company has gone on to become a real specialist in alpine lifting and has used its 60 tonne telescopic crawler cranes to great effect, installing cable car stations at high mountain elevations.

Clausen Kran issued the following message: "Words cannot describe

how touched we are to hear how much love and appreciation others had for Leo, and who grieve with us and will miss him. Thank you very much for all of great sympathy. We are so proud to be able to continue Leo's and Marie-Therese's life's work."





Denis Henry Ashworth 1923-2021

Access industry veteran Denis Ashworth passed away on February 28th at the tender age of 97.

Ashworth was in at the very start of the powered access market, having joined Simon Engineering in Dudley in 1951 as a management trainee. An engineer by training, his

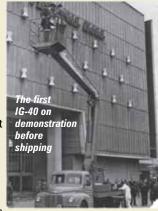


career began in 1939 as a student apprentice with Renold & Coventry Chain company in Manchester. But he had always wanted to work at Simon, as his father was employed there, and he had visited the factory on numerous occasions in his youth. He eventually went to work with the Thomas Adshead subsidiary which Simon had acquired along the way.

His first encounter with an aerial work platform came in 1953 when Ted Trump arrived at the Dudley plant from Canada, having reached a partnership agreement with the British manufacturer. He brought with him a stack of drawings of his first truck mounted platform, the IG-40 - or Industrial Giraffe as he called it - a development of Trump's self-propelled Orchard Giraffe. Ashworth was promoted to works superintendent and told to convert the scrappy drawings into a proper design ready for production. The first 10 units had already been sold by Trump for delivery to Pitman in the USA. The team succeeded, largely it seems by trial and error, as the concept required some completely new designs and structures.

Ashworth and his colleagues worked around the clock and shipped the first production unit seven months later. Needless to say, it developed some major issues and Ashworth was flown out to Kansas to sort them out. He worked with Ray Pitman over a three week period and developed a friendship that lasted until Pitman passed away in 2014. The order was ultimately cancelled but the IG-40 went on to become a very successful machine. The next step though was to start designing work platforms from scratch, with the first unit - the P30 - launched in 1956.

Simon went on to become the world's leading aerial lift manufacturer, through a series of acquisitions which were never properly integrated or thought through. But Ashworth became chief engineer and served as engineering director for many years. He was rewarded in the



Queen's 1974 Birthday Honours with an MBE and in 2009 given an IPAF Lifetime Achievement award.

However, Simon went into terminal decline and Ashworth retired from the company in 1994. But his career did not end there, as chairman of IPAF's technical committee he was heavily involved in the EU



Ashworth with his family collecting his MBE at the palace in 1974.

Machinery Directive and its application to aerial lifts. In 1995 he was retained by IPAF as technical director to represent the association in the development of the new European standards for aerial work platforms and was most instrumental in the drafting, and eventually the harmonisation, of the EN280 standard, a job which took years and was finally completed in 2004.

The work he did on this was a classic example of his persistence and patience. He presented updates at every IPAF council and manufacturer's committee meeting, having the unenviable job of updating a room full of people who had long ago given up on and lost interest in the detail of the ongoing saga of the new European standard. His dogged persistence paid off however, and the workable and sensible standard that he played a major role in developing has set the parameters for the latest global ISO standards for aerial work platforms.

In addition to his work in the access industry Ashworth spent 50 years in scouting, picking up numerous awards along the way. He was also a Scottish country dancing fan and travelled all over the country in a small camper van attending events. The industry has almost certainly lost its longest serving and one of its most talented engineers.

Ashworth published a book on both his life - in the form of an autobiography - and the history of Simon Engineering which is still available for those wishing to learn more.



John Ball (L) presents Denis Ashworth with his IPAF Lifetime award in 2009.

The letter below was received following the publication of the original obituary on Vertikal.net

Dear Leigh,

"I first met Denis in the late 1960's when ordering two Simon S 85 platforms for Eddison Plant Ltd. That was the first of so many meetings over the next 40 years through which Denis worked tirelessly with the International Work Platform Association, which through its amalgamation with the International Federation of Hydraulic Platform Manufacturers became IPAF. Few people in our wonderful worldwide powered access industry today will be aware of the massive contribution Denis made through his 23 years of patient determination and dedication as a leading member of EC Committee PrEN 280, whose purpose was to produce an EC Standard for the design and construction of mobile elevating work platforms. As a direct result of that standard, which is now regularly reviewed and updated to reflect engineering advances, manufacturers are able to produce products which by compliance with the standard ensure ever increasing safety for operators and members of the public.

I will always remember and admire Denis as a man who remained cool under pressure and who would stick to his guns when he knew he was right, and these were his great strengths when dealing with technical experts from other EC countries on PrEN 280, some of whom were more interested in personal vanity than the creation of a really viable and safe Standard for the European Community.

Thank you, Denis, for your massive contribution to technical advancement and safety in an incredible industry!"

Paul Adorian



Dan Kaplan 1942-2021

Rental industry veteran Dan Kaplan sadly passed away on February 28th at the age of 78 having developed pneumonia and complications resulting from a fall and broken hip.



Kaplan made his name as president of Hertz Equipment Rentals where, between 1982 and 1997, he is credited with building the first major national rental company in the USA, taking revenues from \$58 million to more than \$500 million. After leaving the business in 1997 he set up a consulting business - Dan Kaplan Associates - working with rental companies in North America, Australia and Europe. He also wrote a book Service Success! Lessons From a Leader on How to Turn Around a Service Business and was a regular speaker at industry events. He was inducted into the American Rental Association's Hall of Fame in 2006.

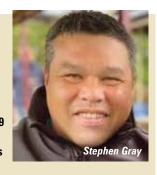
At Hertz, Kaplan developed a way for the multi outlet organisation to work as a unit, with a unified image, sharing equipment between branches and making use of economies of scale along with a systematic management structure with branch managers, districts and regions, and a system of reporting and communication. He introduced and developed a range of measurement criteria in order to gauge the performance of individual managers and employees and was an early advocate of using dedicated rental software to help manage the business. As a consultant he played a significant role in helping United Rentals manage its industry 'roll-up' which developed into the world's largest equipment rental company.

Larry Silber, chief executive of Herc Rentals - as Hertz is now known - said: "We are deeply saddened by the passing of Dan Kaplan. Dan was a true pioneer, visionary, and innovator in the equipment rental industry, and created a legacy that those in the industry will benefit from for many years to come. He was a leader, mentor and friend to many people in our business and his influence was felt far and wide, from small independents to global equipment rental companies. Dan will always hold a special place in Herc Rentals as a central figure in our company's history, and we were especially honoured by his presence and remarks at our company's annual conference and expo in 2018. We know he was proud of what we had accomplished since becoming an independent company and he gave us excellent advice to help us continue our momentum. We will miss Dan tremendously and we will always do our best to live up to the example he set."

He is survived by his wife Doris, son Bradley and daughter Tammy, along with three grandchildren.

Stephen Gray 1977-2021

We received the tragic news that Stephen Gray, a tower crane operator with UK based tower crane company Falcon Tower Cranes, passed away in early February, after contracting Covid-19 in December and being admitted to hospital on December 26th. He was only 43.



He began his working life in 1999 as a stock quality and co-pack manager with DHL, before deciding to train as a crane operator, joining Falcon in 2015. Everyone who knew him has commented on what a first class human being he was, emphasising how funny, kind, generous and totally devoted to his family he was. He leaves behind his beloved wife Angela and two children.

The company said: "Stephen was a model employee, and he will be sadly missed by all that had the pleasure of working with him. He turned up for work every day with a smile on his face and would always have time for others that he came into contact with during the day and for the past six years we have had the privilege of his service."

"He contracted Covid-19 during December and was in intensive care throughout January. He had no underlining health conditions and this serves as a reminder of how indiscriminate the virus can be for all ages. He leaves behind a wife and two children. Our thoughts and condolences go out to his family and friends at this very sad time. He will be missed by all who knew him."

José Antonio Eiriz 1959-2021

José Antonio Eiriz, owner and chief executive of Spanish crane and aerial lift rental company Gruas Eiriz passed away in late January, just a few days after going into hospital with Covid-19. He was just 61. Eiriz took over the management of the company, which is based in A Coruña in north east Spain, after his father, Angel Eiriz, passed away in 2011, having started the business as a transport company in 1967 and added a wrecker crane/tow truck in 1974



moving on to focus on crane and aerial lift rental. Today the company has revenues in the region of € million, employs 28 and runs cranes up to the 650 tonne Demag AC650 and work platforms to 40 metres. José's son lago will now take over the management of the business.

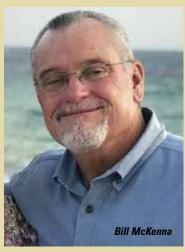
Macarena García Oliver of Spain's crane and access magazine Movicarga, said: "The Spanish crane sector is in mourning with this sad loss. José Antonio was one of those people that absolutely everyone qualifies as good, no matter if he was a customer, friend, competitor or employee. He followed the legacy of his father with pride, optimism and respect. He was a very loved person in the sector and the loss of him is a jug of cold water. We send the family all the courage and all the strength to overcome this terrible event. We feel it from the heart. His son lago will continue the saga and will make José Antonio very proud of him."



William 'Bill' McKenna 1956-2021

William 'Bill' McKenna of US crane and rigging supply company F&M Mafco passed away on January 4th at the age of 64, after having contracted the Covid-19 virus.

McKenna grew up in Cincinnati, Ohio, in a family of four older brothers and a younger sister. His



father Bill and maternal grandfather A.I. Friedmann had set up the F&M trading company in 1945, initially buying and selling just about any surplus materials put up for sale by the Department of War Assets. The company later merged with Mafco to create F&M Mafco. At high school Bill Junior had a number of usual teenage jobs, including paperboy and filling station attendant and later a trainee mechanic working with his brothers at the family firm.

He formally joined the Mafco company in 1974 before it was consolidated with F&M and became chief operating officer in 2014, playing a key role along the way in building the company into what it is today. His hobbies and interests included working on motorcycles and riding out with wife Carole on a mission to find the perfect diner with the best cup of coffee, or the best fried chicken, or pie etc...as well as antiques.

Those that knew him personally have recounted numerous examples of how kind, generous, genuine and easy going he was. "Deliberate and precise with his words, he was honest, clever, hilarious, and chock full of wit and wisdom with a knack for knowing the perfect place to drop a certain word."

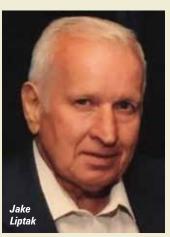
The company said: "Last Friday we laid to rest an amazing man. As an owner, the chief operating officer, and a one of a kind human being, Bill McKenna inspired us to do great things. His lasting legacy will forever energise us as we make our way forward. Bill's wisdom from nearly 30 years ago still rings true. The only constant in life is change, in fact, to change is to grow. Here at F&M Mafco, that is exactly what we are doing — changing and growing."

He leaves behind his beloved wife of 43 years Carole and children Shannon, Kane, Kyle and Corey, along with six grandchildren, and is also survived by brothers Robert, Patrick, Daniel and Michael, and sister Mary.

Jerome 'Jake' Liptak 1937-2021

Jerome 'Jake' Liptak, one of the co-founders of ALL Erection & Crane Rental and a pioneer of the US crane rental industry, has passed away. He was only just 83.

He and his brothers Larry and Mike and his wife Marvine, founded the company in Independence (Cleveland), Ohio in 1964 with the purchase of a 46 tonne/52.5 ton American #20. Jake spent many years operating a Galion cab-down Rough Terrain crane in the steel mills



of Cleveland and gained a reputation for his cheery disposition and work ethic. While he never married, he loved his family, his friends, his work, travelling, slot machines and attending equipment auctions.

The brothers expanded the business organically and then in 1978 acquired Dawes Rigging & Crane Rental of Wisconsin, opening an aerial work platform division in 1980. That same year it moved into West Virginia, buying a branch in Nitro from ACE. The company continued opening new branches and spreading its coverage, moving into Georgia in 1989 and acquiring Jeffers Crane Service in North Western Ohio in 1995. It moved into Tennessee in 1999 and also acquired a branch in Elkhart, Indiana from Central-Rent-A-Cranes. Branches were also opened in the Carolinas, Alabama and Louisiana.

Today the ALL group claims to be the largest privately owned crane sales and rental business in North America, with 33 branches, 1,500 employees, and a fleet of around 3,500 machines.

A statement from the company said: "Jake Liptak is remembered as an industrious man who loved his work in the field, even after ALL became a leading brand across all of North America. He remained active in the company until just a few years ago, when he retired from his day to day work to focus more on his health. He passed away on Wednesday, January 27th, with his family by his side."

Nephew, and current ALL chief executive, Michael Liptak, added: "I have been overwhelmed with tales of my uncle's generosity. It seems everyone has a Jake story. He was a 'shirt off his back' type of person and we are finding out how many times he came to someone's aid, without seeking attention and without expecting anything in return. He had friends everywhere and will be missed by so many people."

"The brothers and my mother all complemented one another. In those early days, each was crucial to establishing the company we know today. They worked 100 hour weeks to get this company up and running. I am still amazed by what they built. Without Jake, ALL Crane as we know it would not exist."

Another nephew, Lawrence Liptak, said: "Jake was vital to maintaining the family atmosphere as the company grew. Jake would say that he 'never met a stranger'. He was accessible, knew everyone's name, and always had time to listen. That went a long way toward creating the type of culture we are now so blessed to have here at ALL."

Vhat's

AED Summit 2021

March 29-31, 2021 AED's annual convention for North America's equipment distributors Las Vegas, USA Tel: +1 630-574-0650 www.//aednet.org/events/summit

SC&RA Annual Conference

April 12-16, 2021 Annual Conference of the US crane and heavy transport association including the Jobs of the Year awards. La Cantera Resort, San Antonio, Texas, USA

Tel: +1(703) 698-0291 www.scranet.org



Innovationstage der Höhenzugangstechnik 2021 April 15-165, 2021

www.borntolift.de/innovationstag/

Informal event for access equipment, mini cranes and telehandlers Hohenroda, Germany Fax: +49 931 270563939

Hire 21

May 11-13, 2021 Annual convention and exhibition of the Hire and Rental Association of Australia and the Elevating Work Platform Association Gold Coast, Australia Tel: +61 (0)2 9998 2255 www.hire21.com.au

Bauma CTT 2021

May 25-28, 2021 Russian construction equipment exhibition. Moscow, Russia Tel: +4989 94922-339 www.bauma-ctt.ru bauma

Apex 2021

June 15-17, 2021 International powered access trade show Maastricht, The Netherlands Tel: +31 (0)547 271 566 www.apexshow.com

JDL Expo

June 23 - September 24, 2021 French cranes and access exhibition/event Beaune. France Tel: +33 (0)1 45 63 68 22 www.jdlexpo.com



HIANZ - Conference 2021

Postponed from 2020 -date and venue to be confirmed. Annual conference and exhibition of the Hire Association of New Zealand Queenstown, New Zealand Tel: +64 7 575 2563 Website: www.hianz.net.nz

HCEA International Convention and Old Equipment Exposition

August 27-29, 2021 The Historical Construction Equipment Association's annual convention and expo. Concordia, Kansas, USA Tel: +1 785 243 0083 www.hcea.net

Platformers' Days 2021

10 to 11. September German access and lifting show Karlsruhe, Germany Tel: +49 721 3720 5096 www.platformers-days.de

PASMA Conference 2021

15-16 September Free conference from the scaffold tower association Nottingham, United Kingdom P&SMA +44 (0) 345 230 4041 www.pasma.co.uk/conference

Vertikal Days 2021

22-23 September UK/Ireland Crane, access and telehandler event. East of England showground, Peterborough Tel: +44 (0) 8448 155900 www.vertikaldays.net

LiftEx Middle East

September 27-28, 2021. The first Mid East conference of the Lifting Equipment Engineers Association Manama, Bahrain Tel: +44 (0) 203 488 2865 Mili by Sii www.liftex.org

The Utility Expo

September 28-30, 2021 Previously The International Construction & Utility Equipment Exposition /Demo Expo - is the US utility industry's largest show

Louisville, Kentucky, USA Tel: +1 414-274-0644 www.theutilityexpo.com



LiftEx 2021

GIS

October 07-09, 2021 Italian crane, access and heavy transport exhibition Piacenza, Italy Tel: +39 010/5704948

The ARA Show 2021

www.gisexpo.it

October 18-20 2021 ARA convention and rental show Las Vegas, Nevada, USA Tel: +1 800 334 2177 www.arashow.org

CICA Conference 2021

November 3-5, 2021- to be confirmed The annual conference of the Australian crane association - possibly the best crane conference in the world. Perth. Australia

Tel: +61 03 8320 0411 www.cica.com.au

Smopyc 2021 November 17-20, 2021

Spanish construction equipment exhibition Zaragoza, Spain Tel: +34 976 764 700 www.feriazaragoza.es/smopyc-2020

2022

Executive Hire Show

February 09-10, 2022 UK tool and small rental equipment show Ricoh Arena Coventry, UK Tel: 0207 973 4630 www.executivehireshow.co.uk

Bauma 2022

April 4 -10th World's largest construction equipment exhibition, Munich, Germany Tel: +49 (0) 89 51070 Gauma www.bauma.de

Interschutz 2022

June 20 -25 2022 International fire and rescue show Hannover, Germany Tel: +49 511 89-0 www.interschutz.de



Liftex conference October 5-6 2022 Annual conference of LEEA Lifting **Equipment Engineers Association** Aberden, UK Tel: +44 (0) 203 488 2865 www.liftex.org LiftEx 2022

Bauma China 2022

November 24-27, 2022 SNIEC Shanghai, China Tel: +49 (0)89-9492051 www.bauma-china.com



Bauma Conexpo India

December 06-09, 2022 The bauma/Conexpo exhibition in India Delhi, India Tel: +49 89 949-20255 www.bcindia.com

2023

Baumag January 26-29, 2023 BAUMAG Swiss construction equipment show Lucerne, Switzerland Tel: +41 56 204 20 20 www.baumaschinen-messe.ch/htm/ home.htm

The ARA Show 2023

February 12-15, 2023 he American Rental Association's annual conference and exhibition Orlando, Florida, USA Tel: +1800 334 2177 www.arashow.org

Samoter

March, 2023 International earthmoving and building equipment show Verona, Italy Tel: +39 045 8298111 SaMoTer www.samoter.it/it

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Intermat 2024

April 22-27 2024 The big French international construction equipment show Paris, France +33 (0)1 76 77 15 21 www.paris.intermatconstruction.com



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www.southerncranes.co.uk Contact: jobs@southerncranes.co.uk

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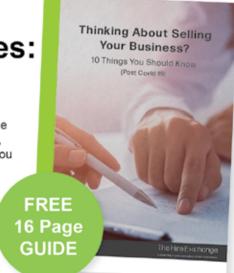
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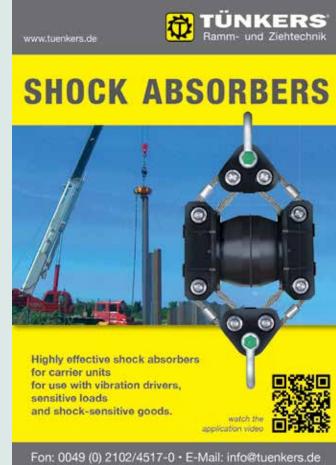
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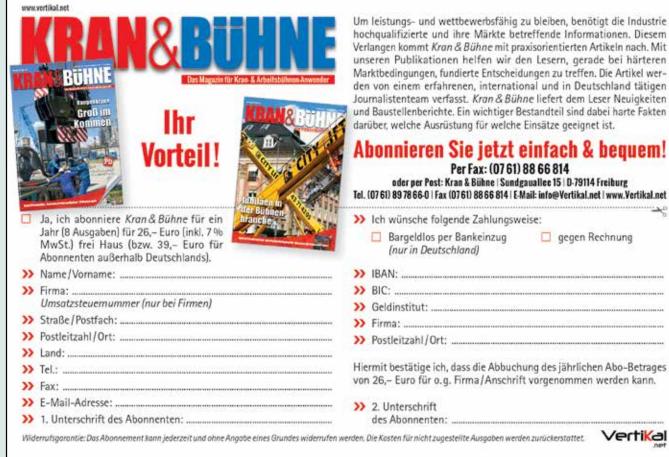
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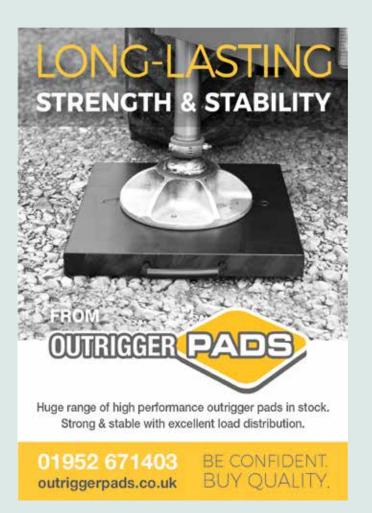
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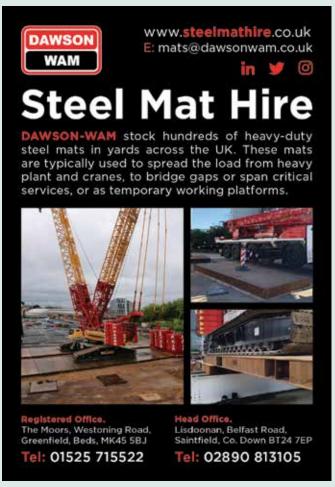
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Potain www.manitowoccranes.com	London Tower Cranes www.londontowercranes.co.uk	vWork www.vworkapp.com
Raimondi www.raimondi.co	Electrogen Int www.electrogen.ie	Structural Repairs
Sany www.sany.com.cn	Heavy Lift Management	Avezaat Cranes www.avezaat.com
Sennebogen www.sennebogen.com	DWLS www.dwls.co.uk	Crowland Cranes www.crowlandcranes.co.uk
Spierings www.spieringskranen.nl	Heavy Lift Planning & Risk Analysis	John Taylor Crane Services www.jtcranes.co.uk
Tadano www.tadano.com	A1A Software alasoftware.com	Training Associations & Networks
Tadano Faun www.tadano.com	DWLS www.dwls.com	ALLMI www.allmi.com
Tadano Demag www.demagmobilecranes.com	HLI Consulting www.hliconsulting.com	AWPT www.awpt.org
Unic Cranes www.unic-cranes.co.uk		IPAF www.ipaf.org
Valla www.valla-cranes.co.uk	Ancillary Equipment	NASC www.nasc.org.uk
Wolffkran www.wolffkran.de	TMC lifting supplies www.tmc-lifting.com	Pasma www.pasma.co.uk
Zoomlion www.zoomlioncranes.co.uk	Auction Houses	Training Centres & Trainers
Lorry/Truck Loader Cranes	Ritchie Brothers www.rbauction.com	
Atlas Cranes UK www.atlasgmbh.com	Battery Suppliers & Manufacturers	Access Platforms Direct www.accessplatformsdirect.co.uk
Effer www.attasymbir.com	Shield Batteries www.shieldbatteries.co.uk	Access Platform Sales (APS) www.iapsgroup.com
Ernest Doe & Sons Ltd. www.ernestdoeloadercranes.com	Trojan Battery www.trojanbattery.com	Astra Access www.astratraining.co.uk
Hiab www.emestudeloadercranes.com	Platinum International www.platinuminternational.com	Boss Training www.bosstraining.co.uk
Palfinger www.palfinger.com	• • • • • • • • • • • • • • • • • • • •	Active Safety www.activerentals.co.uk
Penny Hydraulics www.pennyhydraulics.com	Load Cells & Load Monitoring Systems	Advanced Access Platforms www.accessplatformsuk.com
PM Cranes www.pm-group.eu	MSL Oilfield Services Ltd www.msluk.net	Ainscough www.ainscoughtraining.co.uk
	PCE Instruments UK Ltd www.pce-instruments.com	AJ Access www.accessplatforms.com
New & Used Cranes	Control Systems	Approved Safety www.approvedsafetytraining.com
AGD Equipment www.agd-equipment.co.uk	MOBA Automation www.moba.de	Training -Ca
Cotac Oy www.crane.fi	Intercontrol www.intercontrol.de	CMT www.c-m-t.co.uk
Cranes4Cranes www.cranes4Cranes.com	Generator Sales & Rental	Elevation www.elevation.net
Cranes UK www.cranesuk.net	Electrogen Int www.electrogen.ie	Emerson www.emersoncranes.com/training
Crowland Cranes www.crowlandcranes.co.uk	JMS Powered Access www.jms.co.uk	GT Access www.gtaccess.co.uk
Delden Cranes www.deldencranes.co.uk	Insurance	Haulotte www.haulotte.com
Electrogen Int www.electrogen.ie	Specialist Insurance www.finchgroup.net	IAPS www.iapsgroup.com
Ernest Doe & Sons Ltd. www.ernestdoeloadercranes.com	Online Technical Help	Lift-Manager www.lift-manager.com
High Sparks TCS www.highsparks.co.uk	Crane Tools www.cranetools.com	LTC Training Services www.ltctrainingservices.co.uk
Hird www.hird.co.uk	Outrigger Pads, Mats & Roadways	Mentor Training Solutions www.mentortrainingsolutions.co.uk
Jones-Iron Fairy www.jonesironfairy.co.uk	Alimats www.craneriggermats.co.uk	Nationwide Platforms www.nationwideplatforms.co.uk/Training
Kobelco www.kobelco-cranes.com	GTP Europe www.gtp-europe.com	SGB www.sgb.co.uk
Leader www.leader-piatt.it	Marwood www.marwoodgroup.co.uk	Smart Platform Rentals www.smartplatforms.com
London Tower Cranes www.londontowercranes.co.uk	Mat & Timber Services www.sarumhardwood.co.uk	TVH Group www.tvh.com
Maeda www.maedaminicranes.co.uk	Nolim www.nolim.co.uk	UTN www.utntraining.co.uk
Mantis Cranes www.mantiscranes.co.uk	Outriggerpads www.outriggerpads.co.uk	Versalift Training Direct www.versalift.co.uk/training
M. Stemick www.stemick-krane.de	Timbermat www.timbermat.co.uk	Warren www.warrenaccesstraining.co.uk/courses/
NRC www.nrcplant.co.uk	TMC lifting supplies www.tmc-lifting.com	Access Training
P.V. Adrighem BV www.adrighem.com	Universal Crane Mats www.universal-crane-mats.com	Workplatform www.workplatformltd.co.uk/
Rivertek Services www.rivertekservices.com	Welex Group www.welexgroup.com	customer-support/operator-training
Terex Demag www.terex-cranes.com	Component Suppliers	Safety Training
Utility Equipment www.utility-equipment.com	Cone Drive www.conedrive.com	
Heavy Lifting Equipment		
Lifting Gear UK www.lifting-equipment.co.uk	PCE Instruments UK Ltd www.pce-instruments.com UE Components www.ue-components.com	Avon Crane www.avoncrane.co.uk
		Brogan Group www.brogangroup.com Davis Access www.davisaccess.co.uk
Furniture Hoists	Parts & Service Suppliers	
Böcker www.boecker.de	Aerial & Handling Services www.aerialandhandlingservices.com Alfa Access Services www.alfa-access-services.com	Emerson www.emersontrainingservices.co.uk Height for Hire www.heightforhire.com
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Crane Hire		Training Services
ABBA www.abbaplanthire.co.uk	AWD www.awdgrp.com.au Caunton - Access www.caunton-access.com	Facelift www.facelift.co.uk
Ainscough www.ainscough.co.uk	Cone Drive www.cauntoir-access.com	HCS www.hydrauliccraneservices.co.uk
Berry Cranes www.berrycranes.co.uk	Crowland Cranes www.crowlandcranes.co.uk	Hewden Training www.hewden.co.uk/training
Bob Francis Crane Hirex www.bobfranciscranehire.co.uk	C-Tech Industries www.ctech-ind.com	Hi-Reach www.hi-reach.co.uk
Bryn Thomas Cranes www.brynthomascranes.com	Davis Access Platforms www.davisaccess.co.uk	Hiab www.hiab.com
Cadman Cranes www.cadmancranes.com	Donghua Limited www.donghua.co.uk	Horizon Platforms www.ipaftrainingcourses.co.uk
Cork Crane Hire (Liverpool) www.corkcranehire.com	Electrogen Int www.electrogen.ie	JLG Training www.jlgeurope.com
Crane Hire Ltd www.cranehireltd.com	Ernest Doe & Sons Ltd. www.ernestdoeloadercranes.com	L&B Transport www.lbtransport.co.uk
City Lifting www.citylifitng.co.uk	Haulotte www.haulotte.com	Liebherr Training (UK) www.liebherr.co.uk
Delden Cranes www.deldencranes.co.uk	IPS www.ipspartsonline.com	Lifting Equipment Training www.letltd.co.uk
Emerson www.emersoncranes.co.uk	JLG www.jlgeurope.com	Loxam www.loxam-access.co.uk
Graham Jones Cranes www.grahamjonescranes.co.uk	Lift-Manager www.lift-manager.com	Lyte www.lyteladders.co.uk
High Sparks TCS www.highsparks.co.uk	OTR Wheel Engineering Europe www.otrwheel.co.uk	Mainline Access www.mainline-access.co.uk
J&M Crane Hire www.jandmcranehire.co.uk	PCE Instruments UK Ltd www.pce-instruments.com	Mentor Training www.mentortraining.co.uk
John Sutch Cranes www.johnsutchcranes.co.uk	TVH - Group Thermote & Vanhalst www.tvh.be	Mr Plant Hire www.mrplanthire.co.uk
King Lifting www.kinglifting.co.uk	UE Components www.ue-components.com	Nationwide Platforms www.nationwideplatforms.co.uk
Ladybird tower crane hire www.ladybirdcranehire.co.uk	Unified Parts www.unifiedparts.com	Norfolk Training Services www.norfolktraining.co.uk
London Tower Cranes www.londontowercranes.co.uk	Vertimac www.vertimac.com	Rapid Platforms www.rapidplatforms.co.uk
Mantis Cranes www.mantiscranes.co.uk	Workplatform www.workplatformltd.co.uk	Southern Crane & Access www.southerncranes.co.uk
McNally crane hire www.cranehire-ireland.com	Innovations	TH White www.thwhite.co.uk
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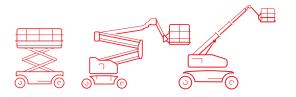
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Power	Diesel 4x4
Working height	16 m
Platform height	14 m
Reach	12.50 m

Length	8.84 m
Width	2.30 m
Height	2.39 m
Weight	7804 kg



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2x 2018 **⇒** € 22.500

Power	Electric
Working height	12 m
Platform height	10 m

Length	2.46 m
Width	1.20 m
Height	2.38 m
Weight	2470 kg



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Power	Diesel 4x4
Working height	11.8 m
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Length	3.35 m
Width	1.76 m
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