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Arborists

Boom

ifts

..New Potain Igo tower crane...New Dingli DC mega scissors...26m Xtreme telehandler..

Genie Z-45

Genie

16

Hybrid

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#### Telehandlers 35

The ability to provide forward reach for forklift work put the telescopic handler on the map.

> With the market continuing to grow, with more choice and types than ever, Nick Johnson reports on the recent introduction of Stage V powered units, the larger and more innovative developments, and the arrival of all electric models.



#### Vertikal Days preview 45

After what will be 28 long months since the last Vertikal Days event, there is a very positive vibe in the air among those who buy or use cranes and aerial work platforms in the UK as they look forward to attending what will be one of the first live industry events in 18 months.

#### Arborists 53

Will North reports on how access and load monitoring equipment can help arborists plan and

perform their work safely, while Saul Chernos learns more about lifting and moving in the Canadian timber and logging industry.

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New Potain Igo T 99, CTE unveils 27m spider lift, High reach HD electric scissors from Dinali, CTE's new 24m MultiPurpose truck mount, Link-Belt launches 59t 65 | HT truck crane and 50t TCC-550 telescopic crawler, Ruthmann introduces its compact 30m T 300 XS truck mount, Konecranes launches Generation 6 mobile harbour crane, Lithium powered Jekko SPX1280 spider crane, IPAF's accident report, New 15m trailer

telehandler - plus a roundup of the latest financials, acquisitions and news highlights.

#### Boom lifts 17

Almost 50 years after John Grove introduced the first telescopic selfpropelled boom lift there are now hundreds of models from a dizzying array of suppliers. We take a look at the latest new product introductions as well as some of the key factors in a purchasing decision.

#### Tower cranes 25

Since their introduction the market for hydraulic luffing jib tower cranes has largely been limited to the UK - specifically in London. However over the past few years it has gone from a single supplier to a point where almost every tower crane manufacturer has entered the

market, while several are extending their product range. Will North looks into why that might be?

#### In the next C&A

## The next issue of Cranes & Access, scheduled for the end of August, will include features on

loader cranes, slab electric scissor lifts and the latest software and technology employed in the lifting industry. It will also contain the 28 page Vertikal Show Guide, detailing every exhibitors and products on display at the event. If you have any contributions or suggestions to make, or are interested in advertising in this issue, please contact us today.

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lift from Ommelift, Pettibone's 4.5t/17.2m T1056X Traverse





Tower cranes



**Telehandlers** 



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#### On the cover:

A Genie Z-45 FE Hybrid works on the intricate central arcade ceiling of Leadenhall Market in London's financial district.

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#### Reaping what you sow

Almost every successful business relies on three critical partnerships. The first and most important is, of course, the customer. No business can succeed without providing a great product, or a service that people want, need and like. Even when the success is running high, the customer must still be respected, nurtured and never taken for granted.

**CH**a

comment

The second critical partnership is with a company's employees. You may have a great product but if you can't recruit good people, train them well and empower them to do their best, they are less likely to handle customers as well as they might and more likely to leave. High

staff turnover is a death knell for any business.

Finally, the third critical partnership for a business is with its suppliers. It's a partnership that too many companies do not take seriously enough, all too often treating them as a form of free credit, a resource that should be squeezed of any margin, and one that should simply be grateful for the business. However the relationship with suppliers is as important as the first two partnerships.

My father used to say: "Always leave something in the deal for the other side. If the deal ends up being too one-sided, let them know that it's their turn next time." I'm not sure he always honoured those principles in his personal life however, he would haggle shamelessly for anything, anywhere and embarrass us all. I recall, as a youngster, him negotiating to buy a small apartment in Portugal. He haggled persistently for an extra percent or so of discount. Eventually, he pushed the developer over the top. The man suddenly snapped and said: "That's it! I'm not selling to you, on any terms!" And he meant it!

My brothers and I had been standing around watching all this in the underground car park of the apartment block. We were bored, embarrassed and wishing we could get back to the pool. The shock on his face when the developer said "no" was a sight to behold. We smirked all the way back to the hotel, while my mother berated him for blowing the deal by being too greedy. She had set her mind on the place.

The past 18 months have been tough ones for our industry, with many rental companies turning off all capital expenditure, almost crippling manufacturers overnight. Some even cancelled commitments that they had signed up to, while others demanded deep and retrospective discounts because of the "changed circumstances". Most rental companies maintained the investment freeze well after the crisis began to ease and revenues were heading back towards pre-pandemic levels.

In turn, manufacturers cut back orders for components, while their suppliers attempted to cut capacity and cancel raw material deliveries. More recently we have seen a wide range of supply shortages emerging, exasperated by a shipping container crisis and semi-conductor supply disruption.

Manufacturers are now back in the driving seat and must surely be reflecting on how each customer treated them when the going got rough. No doubt, their suppliers will be doing exactly the same when planning delivery priorities. The repercussions could be very interesting and far reaching over the next year or so.

Be careful what you sow.

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



## n e w s **New Potain** lgo T 99

Potain has unveiled the new six tonne Igo T 99 self-erecting tower crane which offers a maximum jib length of 48 metres with an under hook height of 38.5 metres. Fitting between the six tonne Igo T 85 A and the eight tonne T 130, the T 99 can handle its maximum capacity at a 15 metre radius and has a 1.2 tonne jib tip capacity. Maximum lifting height with the jib luffed to 30 degrees is 56.5 metres, while the hook is permanently reeved with four falls. The crane can be powered from both a 480 volt/60hz and 400 volt/50hz power source.

Transport to site is possible as a trailer with a 25kph/15mph top speed, or in a semi-trailer configuration with road speeds of up 80kph/50mph. The overall stowed length is 15.65 metres. The T 99 is also compatible with all current Potain Igo and Igo T series transport axles. Once on site the new outrigger set up uses screw jacks and forms a base of 4.5 by 4.5 metres.

The stacked counterweight is entirely self-installed with the help of a remote controller, while Potain's Smart Set-Up technology with large, colour screen shows step by step progress of the erection/unfolding process. Operators can also use the remote for lifting functions, while the Operator Control Function enables the pre-programming of three operating profiles, allowing owners to customise the crane to suit the job or the customer. There is a choice of Ultra View or Ultra View Light cabs, cabs, complete with a new electrical cabinet with top hinged door includes dedicated storage for the remote control transmitter and battery charger. Manitowoc's CraneSTAR telematics and remote diagnostics is standard.







## **Bigger Dingli electric scissors**

Chinese manufacturer Dingli has launched two new narrow aisle battery electric powered scissor lifts, the 86ft JCPT2814DC and 99ft JCPT3214DC. The new models offer working heights of 28 and 32 metres respectively, share the same componentry, but have different scissor stacks, with the JCPT3214 gaining its extra height from slightly longer arms. Overall width on both models is 1.39 metres and maximum platform capacity is 600kg on both, with a two person rating.

The key difference between the two machines is the overall length, the JCPT2814 is 5.69 metres long, while the JCPT3214 is 6.41 metres. This extra length flows over into the platform length which is 5.08 metres on the JCPT2814 and 5.85 metres on the JCPT3214. Both offer the same 1.9 metre roll out extension though and have no capacity restrictions. The overall weight of each machine is 18,060kg and 22,200kg respectively, and the stowed height with the guardrails folded is 3.17 metres.

Other features include four wheel electric wheel motor drive, four wheel steer, levelling jacks and the ability to drive at full height. The 80 volt/520Ah lithium-ion battery pack is said to be good for a full shift - and then some. Gradeability is 25 percent, and the units need to be within one percent of level in order to raise the platform.



The 99ft JCPT3214DC narrow aisle battery electric scissor lift





## New 27m CTE spider lift

Italian truck mount and spider lift manufacturer CTE has launched a new 27 metre spider lift, the Traccess 270, extending the company's range. The new model features a dual sigma type riser - with the top element longer than the lower one - plus a three section telescopic boom and articulated jib. It offers a maximum outreach of 14 metres at a 10 metre up & over height. Its 250kg maximum platform capacity is available at the full 14 metres outreach, however it is restricted to 11 metres in certain outrigger and slew positions. The unrestricted capacity is 200kg.

The 270 also features the company's new S3 EVO control and machine management system, so far only seen on the company's latest truck mounted lifts. It allows the operator to position each outrigger individually, automatically calculating a safe working envelope for the actual set up.

The new machine has an overall stowed width of 780mm, with the basket removed, while the track width extends to 1.28 or 1.4 metres. The overall length is 6.47 metres with an overall height of 2.05 metres. Weighing 4,350kg, power comes from a Kubota diesel however an additional AGM battery pack can be supplied which is good for around an hour's continuous operation. It can also be operated while plugged in and recharging, so in essence three power sources on the same machine.

The Traccess 270 also includes wireless radio remote controller with a large display screen, which can be used both from the ground and in the basket as the main control station. It offers full access to all the available functions, while a graphic display allows the operator to view and manage which functions can be operated at the same time. A second fixed wired control console for the platform is available as an option. Remote diagnostics and telematics are included.

Other features include the ability to drive with the jib raised, which is particularly helpful on slopes or ramps where a high approach or departure angle is essential. A 230kg winch attachment is also available as an option.





#### New cranes The Link-Belt 65 | HT from Link-Belt

Link-Belt has launched a new four axle 65 ton (59 tonne) 65 | HT truck crane and started production of the 50 tonne TCC-550 telescopic crawler crane.

Replacing the 60 ton HTC-8660 Series II, the 65 | HT features a new four section 35 metre full power boom with Teflon wear pads, said to eliminate the need for grease, plus an 8.7 to 15.6 metre swingaway extension. The crane is said to provide improved lifting capacities over its predecessor thanks to three optimised boom extension modes and an increased counterweight of 8,482kg. The crane has an all up weight on the road of 29.5 tonnes when the counterweight is removed or 38 tonnes when left in situ. Power comes from a Cummins L9 diesel.

Operator controls combine with Link-Belt's Pulse operating system to display the crane's available capacity, wind speeds, boom length, angle and radius depending on its configuration. Its Vision camera system provides greater visibility during travel, setup, and lifting, while an optional lighting package is also available. The carrier deck features durable textured and slip-resistant paint and is accessible from four areas.

The TCC-550 crawler crane features the same four section 35 metre full power boom as the 65 | HT plus an 8.7 to 15.6 metre bi-fold swingaway extension, offsetable by two, 20 and 40 degrees, to offer a maximum tip height of 50 metres. It offers three track widths - 3.49, 4.12 and 4.63 metres - and two travel speeds up to 3.2kph.

It can be transported on a single transport vehicle with a gross weight of just over 45 tonnes, including 11,340kg of counterweight. It features the same slip-resistant paint on the carrier and Vision camera system as the 65HT as well as a 360 degree lighting system and various fall arrest anchor points.

> Link-Belt's 50 tonne TCC-550 telescopic crawler crane

#### Ruthmann unveils new T 300 XS

Cla

#### Ruthmann has launched a redesigned and more compact version of its 30 metre T 300 truck mounted platform.

The T 300 XS (Xtra Short) features an all new four section main boom plus an articulating jib to offer an outreach of 23 metres - two metres more than its predecessor - with a 100kg platform capacity. Its maximum platform capacity has also been increased by 30kg to 350kg.

Available on a variety of Euro 6 Mercedes, MAN or lveco chassis with gross vehicle weights of 7. 5 to 8.6 tonnes, the stowed boom length has been reduced by 600mm for an overall length of 7.59 metres. Coupled with a reduced rear overhang and a shorter base frame, the company claims it is the most compact 30 metre truck mount on a 7.5 tonne chassis. As a result, the T 300 XS is aimed at urban applications, ranging from building cleaning

to tree pruning. Further improvements include a complete redesign of the superstructure frame to provide weight savings and increased stability, while its two telescopic cylinders are now made from high strength fine grain steel. For the first time



in the T series, the T 300 XS will feature the company's new outrigger set up controls with automatic monitoring and envelope calculation. It can be supplied with a range pruning, insulated and extra wide platforms.



#### **Konecranes Generation 6**

Konecranes has launched its sixth generation series of mobile harbour cranes, 15 years after the launch of the fifth generation. The latest ESP (Electric, Smart, Powerful) range will initially include six models with lifting capacities to 200 tonnes and radii up to 64 metres. They will be available in two or four rope grab variations and will be available in pontoon, mobile rubber tyred, or portal rail mounted formats. Electric power options include the power grid or onboard generator, while for the first time a large battery pack can also be used to move between quays. Hybrid versions remain an option.





#### Lithium-ion Jekko SPX1280

#### Jekko has launched a lithium-ion battery powered version of its eight tonne SPX1280 spider crane.

The battery powered version uses a 20kW electric motor and a 96 volt 400Ah lithium ion battery pack. A dual voltage - 230 volt single phase or 400 volt three phase - onboard charger is standard, while the machine can also work while it is being recharged.

As with the diesel model, which was unveiled in 2019, it features a five section 17.7 metre main boom plus a range of jibs including a 3.5 tonne searcher jib and a 7.6 metre four section hydraulic jib that provides a maximum tip height of 26.6 metres. The overall dimensions remain the same, with a stowed length of 5.85 metres, an overall width of 1.45 metres and it is just over two metres high. The battery powered crane is slightly heavily than the diesel model at 7.65 tonnes.

Jekko sales director Alberto Franceschini, said: "The diesel version of SPX1280 has been a great success from the very beginning. The availability of the lithium battery version creates even more opportunities, as it meets the needs of an increasing number of customers who care not only about the performance, but also its environmental sustainability. We are investing a lot in this new technology and our efforts are being rewarded by an excellent market response."



## A new MP from CTE

Italian manufacturer CTE has launched its latest MultiPurpose truck mounted platform, the 24 metre MP 24 C. Joining the 32 metre MP 32.19 launched in 2017, the MP 24 C features a long fixed length riser topped by a two section telescopic boom and a double jib with 105 degrees articulation. It can achieve an outreach of 14 metres over the rear of the chassis with 80kg in the platform, or up to 11 metres with its 250kg maximum platform capacity. The lower boom also elevates to near vertical, providing an up & over height of 10.5 metres.

Mounted on a 3.5 tonne lveco Daily chassis, it has an overall length of 6.37 metres, an overall width of just over two metres and a height of 2.83 metres. The two front outriggers go forward and out to a maximum width of 3.68 metres, while the rear outriggers remain inboard.

Features include CTE's Connect system which provides remote diagnostics, geolocation and the ability to set parameter restrictions. It also features the company's S3 EVO control console which automatically adapts the working envelope depending on the outrigger configuration, while the platform control panel provides a full readout of working heights, outreach and platform loading, with information on the available outreach and remaining capacity.



## IPAF publishes safety report

IPAF has published its annual Global Safety Report and accident statistics, which highlights the fact that electrocution and falls from the platform are once again the main causes of serious injuries and fatalities with powered access.

This year the report provides a global overview,



followed by specific data on the six main accident types by location, machine type, industry sector, and lost time incident analysis. It reveals that over the past five years the two most common causes of fatal incidents are falls from the platform and electrocutions, each accounting for 23 percent of deaths - so almost half of the reported incidents. This is followed by operator entrapment at 19 percent, overturns at 12 percent, the platform being struck by another machine or vehicle at six percent and being hit by falling object at five percent.

Brian Parker, IPAF's head of safety & technical, said: "It may be statistically interesting to compare the number of accidents occurring around the world and between industry sectors, but it is more relevant and informative to be able to take a detailed look at electrocutions and falls from the platform, for example, to see what machine type, configuration, location or industry sector they are occurring in, consider the underlying factors and to plan ahead accordingly."

"One thing that we all agree on is we must now focus on areas we know we need more data from, this means gathering more information about near misses – we are getting comprehensive reporting of serious injuries and deaths but need more reports of the seemingly innocuous mistakes that might have led to a serious outcome but didn't."

The full report, with a breakdown of the stats, comments and advice, can be found at: https://www.ipaf.org/en/resource-library/ipaf-global-safety-report

#### MIGHTY MICRO MEANS BUSINESS

II SU

Skyjack's new SJ3014 micro DC scissor lift represents a significant new presence in the low level access arena.

Ideal for easy accessibility into tight spaces, it has a quiet and swift electric drive, and maintenance-free AGM batteries. The micro combines low cost of ownership

with Skyjack's renowned product support all at a price that means business.

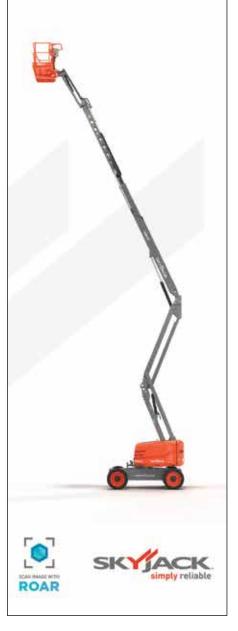


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## 1,000t crawler for Sarens

Belgian international crane and heavy lift company Sarens has taken delivery of a new 1,000 tonne Liebherr LR 11000 lattice boom crawler crane.

The LR 11000 was ordered with Liebherr's SL10DF2BV wind power boom system which features a 168 metre main boom and a fixed offset jib of up to 24 metres to provide hook heights up to 192 metres at which it has a capacity of 110 tonnes. It also includes Liebherr's VarioTray and V-Frame ballast systems.

The crane's first job was erecting 4.65MW Enercon E-136 EP5 wind turbines at Oostpolder wind farm on the north coast of the Netherlands. Configured with 162 metres of main boom and a 12 metre jib, the crane is lifting wind turbine components weighing up to 120 tonne to hub heights of 155 metres.



#### **New Bronto Fire rescue platform**

Bronto Skylift has launched a new 32 metre F32TLK truck mounted fire rescue platform. Available on a 16, 18 or 19 tonne chassis, the F32TLK offers outreaches of between 23.2 and 26.1 metres - depending on the chassis - and offers a maximum platform capacity of 500kg.

With an overall length of nine metres, the manufacturer says it is well suited for urban environments, congested roadways and narrow alleys.

Features include rapid automatic outrigger set up and

levelling, said to be 45 percent faster than previous models, the option of an integrated rescue ladder and up to 5.7 metres of below ground level reach, for use in water rescue applications on rivers and coastal areas. The work envelope is also automatically calculated depending on the actual outrigger configuration set, and the load in the platform.

The platform can be fully customised to suit different emergency departments, with integrated 2,500 litres a minute waterlines, power outlets for tools, stretcher carriers or wheelchair attachments, as well as detachable winches, lighting, video and thermal imaging camera systems. An optional water spray curtain below the platform helps protect operators and those being rescued from heat when operating over roofs, etc... while the fold down rescue platform guardrails also allows for safe efficient access to windows and balconies.





The platform can be equipped with a range of optional attachments and feature

#### Ommelift launches new 15m trailer lift

Danish manufacturer Ommelift has launched its new 15 metre 1500 EX compact articulated trailer lift.

The 1500 EX features two short risers in a sigma configuration, topped by a three section telescopic boom, to provide a 15 metre working height and up to 8.5 metres of outreach. It has an unrestricted platform capacity of 230kg and offers an



up and over height of almost five metres. The lift has 400 degrees of slew, while platform rotation is 100 degrees. Overall operating width with the outriggers set is 4.12 metres.



On the road, the overall width is 1.66 metres, with a length of just over six metres, while the stowed height is just under two metres. The AC mains or lithium-ion battery powered models have an overall weight of 2.000kg, including hydraulic outriggers and hydraulic drive assist for manoeuvring on site. The standard lead acid battery pack adds 50kg. Options include radio remote controls, diesel or petrol power.

The first units of the new model have already shipped, while the company has said it will also continue to offer its single riser Mini 15 EXJ telescopic model.

#### New Traverse from Pettibone

US telehandler manufacturer Pettibone has added a 4.5 tonne/17.2 metre T1056X telehandler to its Traverse range.

Weighing 14.7 tonnes, the T1056X can lift 2.85 tonne to its maximum lift height of 17.2 metres and take 1.42 tonnes to its maximum forward reach just shy of 14 metres. It offers an overall width of 2.6 metres, is 2.72 metres high and has an overall length of seven metres to the fork frame. Power comes from a Tier IV Final Cummins diesel.

As with other models in the Traverse range, the T1056X features a traversing boom carriage which can move the entire boom backwards and forwards along the chassis to provide up to 1.77 metres of additional reach. The company claims this not only allows operators to place loads at full height without the need for multiple boom functions, but that unlike other telehandlers, its 'landing height' is identical to the lift height.



## SJ9664 RT BIGGER. BETTER. SKYJACK.

Skyjack's new SJ9664 Full Size Rough Terrain has a working height of 21.51 m. With one of the largest work areas on the market, even more work can be done.

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



### **Financials round-up**

#### Collé acquires Rema

Access and telehandler rental group Collé has strengthened its presence in Germany with the acquisition of sales and rental company Rema Gabelstapler und Hebetechnik.

Located just outside of Augsburg, between Ulm and Munich, Rema provides forklifts and lifting equipment to the warehousing industry. It also represents

Doosan products and HMF loader cranes and offers used equipment and forklift training. Collé Augsburg - as it will be known going forward - joins eight other Collé locations in Germany and is the company's first in Bavaria.



#### Acquisition trio for Sunbelt

Sunbelt USA has confirmed the acquisition of access and telehandler rental companies Ross Aerial Equipment, American Aerial Equipment and DC Rentals.

Ross Aerial Equipment, which is based in Phoenix with branches in Dewey and Tucson, has already been incorporated into the Sunbelt network. It will

now be joined by American Aerial Equipment, which covers Massachusetts and Connecticut from its location in Attleboro, and DC Rentals, which covers the Hartford/New Haven region from its location in Brandford.



#### **TVH acquires Battery Supplies**

International replacement parts and aerial lift rental group TVH has acquired Belgian based Battery Supplies and its subsidiaries Battery Supplies France and Battec Batterie Vertrieb in Germany.

Established in 1999, Battery Supplies and its subsidiaries offer a range of batteries, chargers and accessories, and is a master dealer for Crown Batteries. It also offers battery and charger maintenance and repair services. Based in Deerlijk, the company has annual revenues

of more than €43 million with 80 employees. It will continue to operate as a stand alone business with TVH looking to "explore possible synergies" going forward.



#### Nordic expansion for Loxam

French international rental group Loxam made two Nordic acquisitions in June - JM Trykluft in Denmark and MaskinSlussen in Sweden.

Based in Aarhus, JM Trykluft was owned by Christian Kannegaard Samuelsen and Carl Frederik Studier. The company offers a wide range of aerial work platforms, telehandlers, forklifts, mini crawlers and spider cranes, as well as tools and equipment from nine locations throughout

Jutland with 70 employees. Last year it generated revenues of more than €18 million. The addition of JM Tryluft expands Loxam's network in Denmark to 37 locations, with more than 330 employees and 23,000 rental machines.



TRYKLUFT A/S

#### ...plus MaskinSlussen acquisition

Later in the month Loxam's Finnish subsidiary Ramirent acquired Swedish rental company MaskinSlussen from owners Jonas Bostöm and Mikael Johnansson.

Established in 1988, MaskinSlussen offers a wide range of aerial work

platforms, spider cranes and hoists, along with construction equipment and general tools from three locations in Västra Götaland, west of Sweden. In 2020, it had revenues of around €9 million and employs 44.





#### Strong finish for Ashtead

Ashtead, owner of Sunbelt Rentals in the US, UK and Canada, has reported its full year results to the end of April with revenues of £5.03 billion and pre-tax profits 6.5 percent lower at £936 million. Fourth quarter revenues increased 13 percent to £1.27 billion as the US market recovered however and pre-tax profits more than doubled to £220 million.

In the USA, Sunbelt saw annual revenues decline one percent to \$5.4 billion, while operating profits were 7.5 percent lower at \$1.44 billion. Sunbelt Canada's revenues improved 19 percent, thanks to the acquisition of William F White, while operating profits leapt more than 80 percent to \$97.8 million. Sunbelt UK (previously A-Plant) reported a 35 percent jump in revenues to £635.1 million, thanks to sales to the Department of Health which represented 29 percent of all UK revenues. Operating profits increased 65 percent to £60.9 million.

Capital expenditure was more than halved to  $\pm 718$  million with the average age of fleet increasing from 36 to 41 months.



#### Tough year for Speedy

UK rental business Speedy has reported its full year results to the end of

March with an 11 percent dip in revenues to £363.6 million. At the same time pre-tax profits plunged 41 percent to £12.3 million. Capital expenditure was cut 35 percent to £36 million, increasing the average age of the fleet from 39 to 42 months, while net debt was slashed 58 percent to £33.2 million.



#### Negative year for Vp

UK rental group Vp has published its full year results with lower revenues and a pre-tax loss, however its telehandler, low level access and mat/ trackway business held up well. Total revenues declined 15 percent to £308 million - of which the UK represented £281.3 million - while revenues from its international operations were 16 percent lower at £26.7 million. Most of the shortfall appears to have come from the Brandon Hire Station business with a major impact in the first quarter due to construction industry shutdowns.

Overall, it had pre-tax losses of £2.3 million, compared to a profit of £28.4 million last year.

Capital investment was 18 percent lower at £40.2 million and net debt was cut from just under £160 million to  $\pm$ 121.9 million.



For the full reports on all these stories check out Vertikal.net

## World's highest lift for fixed telehandler

US based Xtreme Manufacturing has unveiled the production version of what it claims is the world's highest reaching fixed frame telehandler – its 26 metre/5.4 tonne XR1585-C – which will enter full production by the end of the year.

The new machine, shown as a prototype at Conexpo last year, features a five section boom, with rollers rather than wear pads, and offers 20.4 metres of forward reach. Weighing 29.7 tonnes, it has an overall width of 2.6 metres, and a stowed height of 2.7 metres. Power comes from a Cummins Tier 4 Final diesel engine.

The XR1585-C also features a new patent-pending 'Operator Station' attachment, which consists of a single person platform fitted to the rear of the fork carriage. From this position operators can control all of the machine's boom functions via a wireless RF pendant type remote controller, as well as gain better views when placing loads at height.

Another new patented feature is the company's Coordinated Motion boom control function which uses two new sensors on the boom to coordinate the horizontal and vertical boom operations. This allows it

to achieve a true horizontal or perfect vertical fork motion, regardless of the chassis angle. It is currently available on Xtreme's XR1585-C, XR944-B and XR1147-B telehandlers but will be rolled out across the range during the year.



Xtreme's new 26m/5.4t XR1585-C

The new Operator Station is attached directly to the fork carriage allowing the operator to ride with the load

## Cybersecurity incident at Manitowoc

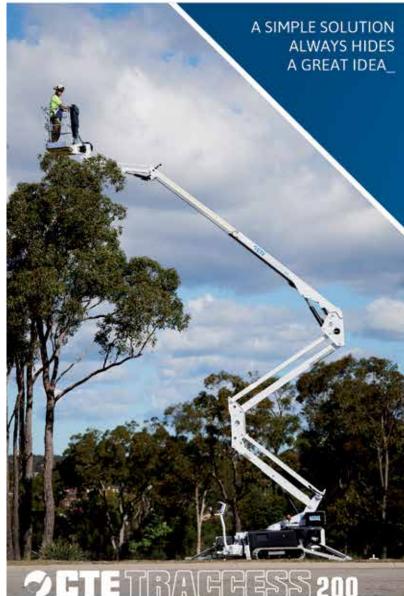
#### Manitowoc experienced a "cybersecurity incident" within its operating systems in early June, causing delays and disruption to its business.

A statement from the company read: "Manitowoc experienced a cybersecurity incident, resulting in a systems outage. Upon identifying the issue, the company promptly engaged an industry leading third party information technology firm, forensics specialist and legal counsel to assist in the investigation. Federal law enforcement has been notified, and the company is diligently working to restore its systems. This matter has caused and may continue to cause a delay or disruption to the

company's business. The company considers the security and integrity of its network among its highest priorities and is taking all appropriate actions to minimize its risk."







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## **EWS** HIGHLIGHTS

Steve Swanson

Giuseppe Pep Ventrella

Richard Breedon

Marcello Fortunato

Jim Field

- International engineering group EnerMech has appointed Steve Swanson as head of cranes and lifting, Africa
- Belgian lifting equipment distributor **BLE** has sold its 500th **Potain** selferecting tower crane
- Dutch crane company Wagenborg Nedlift has agreed a 29 crane fleet replacement with Liebherr
- Italian company **Fedeli Noleggi** has taken a new 160t **Demag** AC 160-5
- UK rental company AFI has equipped its delivery fleet with live tracking systems
- US based **Select Crane Sales** has expanded its Branchburg premises in New Jersey
- Belgium's **Sarens** has ordered four zero-emission **Spierings** eLift self-erecting mobile tower cranes
- Germany's Hofmann has taken a Böcker truck crane, trailer crane and spider crane
- UK rental company **Star Platforms** has appointed **Giuseppe 'Pep' Ventrella** as technical director
- Dutch international rental group **Boels** has purchased 354 12ft **Snorkel** TM12 mast lifts
- Australia's Preston Hire has taken the first two all-electric **Maeda** MC285CB-3 spider cranes in the country
- Germany's Krösche-Kran Service has taken two Liebherr LTF 1045-4.1 truck cranes
- Spanish company **Grúas Roxu** has taken a 90m **Palfinger** P900 truck mounted platform
- Spain's **Grúas Cigales** has taken the first **Tadano** ATF 60G-3 All Terrain crane in the country
- Long term crane man Richard
- Breedon has retired from Ainscough Crane Hire after 45 years
- Italian manufacturer **Almac** has appointed **Alfa Access** as its service partner for the UK
- Danish rental company **City Lift** has taken a 57m **Palfinger** P570 truck mounted lift
- French rental company **Autaa** has taken a 55t **Demag** AC 55-3 and 70t **Tadano** ATF 70-G4 cranes
- Paolo Balugani, the CEO/founder of Palfinger Platforms Italy, has left the company. He is replaced by Marcello
- Fortunato with the business being integrated Balugani into the Palfinger group
- Germany's Roggermaier has taken 10 Multitel truck mounted platforms
- Scotland's **Bernard Hunter** has taken a 700t Liebherr LTM 1650-8.1 All Terrain crane
- Argentinian heavy lift company **Coamtra-Symco** has taken three, four and five axle **Liebherr** cranes
- UK rental company **United Powered Access** (**UPA**) has added a further 19 **LGMG** scissor lifts
- Former Height for Hire manager Ross O'Neill has set up a new rental company Munster Platforms
- **Collett & Sons** has become the first UK company to use a **Goldhofer** Blade Lifter
- Belgium's **Neemnatie** has taken the first 308t **Liebherr** LHM 800 mobile harbour crane in the Benelux
- Spain's **Grupo Tudic Construcciones** has taken a 125t/m **Palfinger** PK 165.002 TEC 7 loader crane
- Indonesian crane company Surabaya Express has taken the first 100t Grove GRT8100 in the country
- Dubai based Al Faris has taken delivery of four large Liebherr crawler cranes
- Software supplier **Point of Rental** has appointed **Jim Field** as business development manager UK

Genie has appointed Will Westley as sales director for UK/Ireland while **Arjen Snijder** takes on the Benelux

Italian rental company Hoist Noleggio has taken two customised Easy Lift spider lifts

- Italian manufacturer Almac has opened a UK sales subsidiary Alma Atlantic
- German rental company **Beyer-Mietservice** has purchased 20 **Multitel** truck mounts UK regional **Merlo** dealer **CJ Saunders** has been acquired by service manager **Tom Banbury**

Will Westley

Arjen Snijder

Petre Babiceanu

Franci Motz

Dougia: Davis

See www.Vertikal.net news archive for full versions of all these stories

- UK tower crane company **Bennetts Cranes** is supporting a crane conservation project Swedish low level platform manufacturer Safelift has appointed Lift Safe as UK distributor
- Jamaica's Kingston Wharves has ordered a Konecranes Gottwald Model 8 mobile harbour crane
- German rental company **Gräber** has taken a fifth **Almac** Jibbi 1670 tracked boom lift **CTE**'s dealer in Serbia, **Tenge Doo**, has taken the first 25m ZED 25 HV truck mount for its rental fleet
- Finnish manufacturer **Leguan Lifts** has appointed **FSI Franskan** as distributor for France
  - Germany's Krösche-Kran Service has taken a 40t Tadano HK 40 truck crane
- Zoomlion has appointed Petre Babiceanu as general manager of its European subsidiary
- Forsyth of Denny has taken the last 500t Liebherr LTM 1500 and the first 120t LTM 1120 in Scotland
- UK rental company **Speedy** has opened a new regional service centre in Reading
- Sin Heng Heavy Machinery has taken the first 250t Grove GMK5250XL-1 in Singapore
- Spanish manufacturer Ausa has appointed **Riwal Hoogwerkers** as dealer for the Netherlands
- Franci Motz, publisher of Crane Hotline and Lift and Access has died after contracting Covid 19
- UK's **Delden Cranes** has taken four **Kobelco** CKE900G-3 crawler cranes
- US based Beta Max Hoists has appointed LGH as its distributor in North America Italy's **Easy Lift** has appointed **Independent** Access Sales as its distributor for England
- Liebherr is selling part of its French tower crane rental business to Hexagone Services
- International rental group Loxam has acquired Danish rental company JM Trykluft
- Dutch company **Kraanverhuur Boekestijn** has ordered its first truck mounted lift, a **Bronto** \$56XR
- JLG and Jerr Dan owner Oshkosh has appointed Douglas Davis to its board of directors
- UK rental company Highway Hire has ordered 18 Versalift van and pick up lifts
- UK based **Brogan group** is hosting a charity event to raise funds for the **Lighthouse Club**
- UK/US based private equity firm TowerBrook Capital is to acquire tower crane sales and rental group Uperio Versalift USA/Time Manufacturing has acquired Canadian distributor Calco Equipment, rebranding it Versalift Canada

- The LEEA has appointed Duncan Barrier as technical engineer Haulotte has added its Activ/Energy battery management system to its Star mast/mast boom lifts
- Italy's Vernazza Autogru has taken a 250t Grove GMK5250XL-1 All Terrain Duncan Barrier crane
- Dutch rental company **Boekestijn** has taken the first **Liebherr** MK 73-3.1 mobile self-erecting tower crane

UK rental company GTAccess has acquired Bedfordshire's Neon Hire Services



n e w s

- Terex has appointed Michael Goll as RT business development manager and Jonathon Caldwell as sales rep for tower cranes in North America
- Italian manufacturer **Palazzani** has upgraded its 37m XTJ 37 + spider lift with extendable tracks
- UK's **Speedy Powered Access** has purchased 100 **Skyjack** boom and scissor lifts
- UK based **Palfinger/Manitou** distributor **T** H White is to acquire the Warwick and Stourport locations of the **Murley group**
- **GSR** is mounting truck mounted platforms on the latest **lveco** Daily chassis
- Germany's Sahalift has merged with sister company Team Liftservice & Parts
- IPAF has launched the digital ePAL mobile app for operators
- **Grove** has upgraded the carrier cabs on its four and five axle ATs up to 150t
- Austria's **Felbermayr** has taken two **Hinowa** spider lifts
- Magni has appointed Overseas Plant Exports as distributor for Ireland
- UK's **Quinto Crane & Plant** has taken the first **Goldhofer** Stepstar trailer in the country
- Dutch international crane company **Hovago** has ordered nine big **Tadano Demag** cranes The **Louvre Museum Abu Dhabi** has taken three black 29m **Falcon** 290 wheeled spider lifts
  - Niftylift has recruited Aleksej Borisov to its German sales team
  - UK's Southern Cranes & Access has taken five Liebherr All Terrain cranes



- The first new 70t **Tadano** GR-700EX-4 Rough Terrain crane has arrived in Europe from Japan
- US **Tropical Shipping** has ordered two **Kalmar** reach stackers and three hybrid straddle carriers
- The U.S. Commerce Department is continuing its investigation into imports of self-propelled lifts from China after finding that US manufacturers are being harmed
- UK based **AER Rents**, part of **O'Flaherty Holdings**, has acquired **Welfare 4 Hire Versalift UK** has appointed **Niall Brannigan** as sales manager Ireland
- **Bobcat** has upgraded its telehandler range with Stage V diesels in the form of the R-Series

Dutch contractor Jos Vrolijk is taking four 35ft Rhinox RX12CS tracked telescopic boom lifts





Mark Filippelli

Tim Eker

#### Spain's **Rentaire** has ordered 50 **Haulotte** boom and scissor lifts

- Utah based Wagstaff Crane Service acquired tower crane company Bronson Crane Italian transport company Goitese Trasporti has taken a 15.51 Jekko JF545 spider crane
- Brazil's **Cunzolo** has taken a 400t **Tadano** ATF 400G-6 All Terrain crane

June 2021 cranes & access 15

Spain's Gruas Pernia has taken a 45.7 t/m Palfinger PK 48.002 loader crane Sinoboom has launched

two new electric tracked scissor lifts Australia's Verton has appointed Mark Filippelli as GM North America and Tim Ekert as global sales and distribution manager

## ACCESS WITH ZOOMLION GREEN



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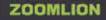
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# Boom lift a growing to be from and his small

It is almost 50 years since John Grove and his small team began working on what was to become the very first modern - telescopic - self-propelled boom lift. Today there are hundreds of models from a dizzying array of suppliers. So, what are the key factors in a purchasing decision?

While John Grove and his team can be credited with developing the first telescopic self-propelled boom lift, it was not the first boom lift, as the company often claims. That credit goes to Ted Trump, Selma Manlift and others with their self-propelled cherry pickers, that were really used to pick fruit. Since then, the market has grown beyond all recognition, we estimate that there are at least 40 manufacturers offering several hundred different models - at least 500 at last count. And that's before you add in all of the different power variants such as diesel, battery electric - lithium or lead acid - hybrid, bi-fuel/LPG etc....

Most buyers narrow this overwhelming choice down to a short list of no more than 10 manufacturers, depending on what they are looking at. Even then the choice can still be mind numbing, so it usually comes down to what you already have and know, whether you like doing business with the dealer or manufacturer's sales subsidiary, the strength of product support, reputation and of course price. All too often the availability of an attractive finance package or payment holiday - regardless of your credit rating - will 'swing the deal'. The relationship with the salesman is also a major factor in a decision, as is potential resale value, although

for many buyers this tends to be a subconscious factor.

#### Will a better mousetrap bring buyers to your door?

The detailed specification of a machine often tends to be a secondary consideration. A specific case in point occurred when an aerial lift manufacturer decided to add boom lifts to its range. It decided to start out with a 45ft articulated model, given it was the largest single market segment at the time. It was however also one of the most competitive, dominated by the Genie Z-45.

The manufacturer in question conducted the most comprehensive and professional market research study I have ever seen in this business, both in North America and Europe. The results were fully quantified and boiled down into a specification that users said they wanted. 'Essential' features included: a generous sized basket, fully proportional all joystick controls, a jib with a good range of articulation, easy entry into the platform when carrying materials, a tight turning circle - preferably without the complexities of four wheel steer - a rigid/solid feel to the elevated platform, zero tailswing, easy service access, and a full range of power options, plus 4x4 versions. Good platform capacity with great outreach and up & over reach went without saying.

The resulting machine met or exceed virtually all of the criteria on paper, visually and operationally. It was certainly a considerably 'better mousetrap'. It then came to pitching the initial price point, the president of the US business, which was to build the machine, considered the specifications, performance and side by side evaluations, comparing the final machine with the demands arising from the market research and focus groups, as well as reactions of influential buyers that had seen the prototypes. Based on all of this he insisted that it be priced at a 10 percent premium over the established market leader. After all it was exactly what hundreds of customers and fleet owners said they wanted and needed. And so the product was launched with a 10 percent premium - which it was unquestionably worth. What he overlooked and refused to acknowledge was that although it had a strong reputation for other

types of selfpropelled lifts, it was unproven in the boom lift market. So, what happened? It flopped!

Rental customers that made up most of the market all acknowledged that it was a great machine, that it met all of their desires and then some, that their customers - the end users - would love its features. "But you cannot expect to sell it for more than a Genie 45! In fact, it needs to be cheaper, otherwise why should I take the risk?" "My customers know the Genie they ask for it by name. I could even buy a JLG for less." This was the reaction from a very wide swathe of the market. The senior manager held stubbornly to his premium, rightfully pointing

The latest incarnation of the Genie Z-45

boom lifts

out that the extra features - most of which have been adopted over the intervening years - carried a cost and stating: "You can not sell a Mercedes for the price of a Ford". By the time the policy was changed the golden moment that comes when a new product is launched had passed. The market then slowed for a while, existing products were updated, and the shiny new model never become the market leading machine that it deserved to be.

A salutary lesson that a) it's not all about the specifications and b) customers can be fickle.

So, having said all that, the following is a roundup of the latest boom lift developments and new product launches.

#### What's new

Soaring higher

A six year wait then two arrive together!

The biggest developments of the past 12 to 18 months has been the arrival of the bigger self-propelled boom lifts breaking through the 200ft height range. This began with the unveiling of the 210ft Snorkel 2100SJ at Conexpo in March 2020, as the Covid-19 lockdowns began. It was the first time the boom lift height record had been broken since the 185ft JLG 1850SJ boom lift appeared at Conexpo 2014, which itself was a

The 210ft Snorkel 2100SJ]

#### boom lifts



year on from Genie having taken the title with its 180ft SX-180, with the first units delivered just weeks before the JLG launch. I should also point out that Chinese manufacturer XCMG did break JLG's 185ft record with the 186ft GTBZ 58S telescopic unveiled in November 2018. However, the actual platform height on these big machines can differ by as much as a metre from the claimed height - due to variety of factors, including boom deflection variance. So the XCMG fell within the margin for error more likely matching the record rather than breaking it.

Six months after the 210ft Snorkel was unveiled, Chinese manufacturer Zoomlion surprised the world by unveiling the 217ft ZT68J at bauma China in November. However, while that unit was an early prototype it is likely to remain a domestic machine for now. The production units of the big Snorkels have been on test, resulting in some major specification changes. The most notable being the outreach, which has increased to 35 metres, from the original

#### How do these mega boom lifts stack up?

Manufacturer Model	Snorkel 2100SJ	Zoomlion ZT68J	JLG 1850SJ	Genie SX-180	XCMG GTBZ58S
Work height	66m	67.5m	58.4m	56.9m	58.6m
Working outreach	35m	31m	25m	25m	25m
Max platform cap.	454kg	454kg	454kg	340kg	450kg
Unrestricted cap.	300kg	300kg	230kg	340kg	230kg
Jib length	Tele 9.1m	Tele 9.15m	Tele 4-6.1m	Fixed 3.05m	Tele 4-6m
Jib articulation	128°	125°	120°	135°	120°
Jib rotation	No	No	No	60°	No
Working width	5.49m	5.15m	5.04m	4.72m	5.03m
Travel width	2.5m	2.5m	2.49m	2.49m	2.49m
GVW	41,730kg	35,900kg	27,350kg	24,950kg	27,200kg
Transport length	15.5m	15.5m	14.6m	13m	14.6m



31.5 metres, as a result, says the company, of test programme data. Although, the fact that the overall weight has also increased from 36.3 to 41.73 tonnes may be more of a factor.

The new Zoomlion ZT68J is quite similar to the Snorkel, from its swing out axles - although the Snorkel has patented double jointed steering allowing axles to be 'driven in or out' rather than pushed or pulled - to the 9.1 metre telescopic articulated jib. While similar, the ZT68J currently weighs almost six tonnes less than the Snorkel.

It will be interesting to see the 'take up' of these new super mega boom lifts. The 180/185ft models have proved to be more popular than originally anticipated with new applications popping up for them. The biggest challenge is transporting them, and the cost in comparison to a 65 /70 metre truck mounted lifts.

#### Back down closer to earth

When it comes to the more mundane working heights there is much more to talk about, companies have been busy innovating and expanding their product lines and upgrading models.

#### Haulotte's Sigma

Haulotte has launched another all new 'white paper' Pulseo machine in the form of the 46ft Sigma 16 and 16 Pro (Sigma 46/Pro in North America) all-electric compact articulated boom lift. The new model

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#### **boom** lifts



Niftylift's new HR17N with direct electric drive



follows on from the HL20 LE Pro launched at Intermat 2018, as part of a programme to replace all diesel models with electrics by the middle of the decade.

The Sigma 16 Pro uses a classic dual sigma over centre/in line 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. Working height is 16.1 metres with an unrestricted platform capacity of 230kg. Maximum outreach is 8.35 metres (8.05 metres on the Pro due to its rotating jib) at an up & over height of 7.6 metres, with a perfectly vertical lift from two metres. The standard platform is 1.2 metres wide with dual side and a front entrance, while a 1.5 metre wide option is available.

#### Skyjack upgrades and rationalises

Skyjack has upgraded its 40/45ft and 60/66ft telescopic and articulated boom lifts and streamlined its product line. The new models include the 45ft SJ45T+ and 66ft SJ66T telescopics, replacing existing models with the same designation, while the two new articulated models are the 45ft SJ45AJ+, which replaces the SJ46AJ and SJ46AJ+, and the 60ft SJ60AJ+ which replace the SJ51/SJ63 and SJ63AJ+.

The new booms adopt the company's new SmarTorque axle drive and high efficiency hydraulic

> Two of Skyjack's new generation boom lifts

system that harnesses the engine's output more effectively. This allows the use of a smaller more efficient diesel, without the need for additional sensors, diesel particulate filters or DEF fluid. Performance is similar to the models they replace, possibly with a little less 'grunt'? However, the company has used two years of telematics data from hundreds of machines on real job sites in the design of the new machines, the first time it has been able to do so. It says that tractive effort is within 10 percent. A dual fuel engine also available for use with LPG.

The two articulated models are around 20 percent lighter than those they replace, albeit with slightly lower working heights - guided again by feedback from the live telematics data. The SJ45AJ+ weighs 5,075kg compared to the SJ46AJ+'s 5,990kg, while the SJ60AJ+ has an all up weight of 8,557kg compared to 10,235kg on the SJ63AJ+. Platform capacities are 300kg on the SJ45J+ articulated boom while the new SJ60AJ+ is 300kg unrestricted, with a 454kg maximum. The new telescopics offer 272kg unrestricted and a 454kg maximum. The first units have started to ship.

#### Niftylift's Gen 2 and HR17

Niftylift quietly updates its boom lift line all the time, without making a song or dance about it. Last year it introduced the new hybrid Gen2 diesel/electric power pack for its HR17 and HR21 boom lifts. These feature Stage V diesels and improvements to the electric drive train, which are said to reduce fuel consumption when used as a diesel by up to 50 percent. Niftylift believes that diesel engine's days are numbered and has upgraded its all electric range to direct electric wheel motor drive and AGM maintenance free batteries with a lithium-ion option, with the result that a single charge is now good for between two and four full day shifts.

#### Sinoboom's new 60ft hybrid

Sinoboom launched an all new 60ft AB18HJ hybrid articulated boom lift at bauma China in November, and two high capacity telescopics including the 85ft TB26EJ Plus electric and the 120ft TB 36C shipyard boom lift.

The AB18HJ is essentially a battery powered, four wheel drive unit with oscillating axle and 40 percent gradeability, and is available as the plain EJ pure electric, or the HJ with onboard diesel to drive the electrics and recharge the battery pack if desired. The machine features dual short risers, a two section telescopic boom and a relatively long articulated jib with an unrestricted platform capacity of 230kg. The company has also updated its 52ft AB16EJ.

#### **Essential performance**

Last year Genie launched two new simpler, lighter 'J' machines - the 80ft S-80 J telescopic, which is also available as a TraX crawler,

The new Genie SI-80 J

The Terex Utilities Z-45 SUB insulated boom lift

and the 60ft S-60 J. Both are lighter and easier to transport than the company's existing models. The S-80 J has a 26 metre working height, up to 16.8 metres of outreach and an unrestricted platform capacity of 300kg. It features a 1.8 metre jib and weighs just 10.4 tonnes, including four wheel drive and oscillating axles.

Sinoboom's new AB18HJ

The S-60 J has a simple two section boom and 1.8 metre articulated jib, with unrestricted platform capacity of 300kg, a 20.5 metre working height and 12.3 metres of outreach. Transport weight is 7,550kg compared to the S-65XC at 11,400kg. Genie has also introduced a European TraX version of its 62ft Z-62/40 articulating boom lift.

#### Substation 'Z' boom

Sister company Terex Utilities has launched the 45ft Z-45 Substation Utility Boom (SUB), based on the Genie Z-45 XC self-propelled boom lift, but heavily modified for substation and insulated applications, with insulated fibreglass articulating jib and levelling rods and a heavy duty fibreglass platform.





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#### Dingli all electric booms

Dingli has started shipping its new 86ft EAB28ERT all electric articulated boom lift, with the same four wheel drive. They feature the same four wheel steer telehandler drive line with full differential locking as its diesel booms, but powered by an 80 volt/520Ah lithium battery pack and large AC electric motor. The machine has two charging modes, a 1.5 hour quick charge system, and six hour slow charge programme with Dingli claiming the machines can work three to four typical shifts on a single charge. Performance is the same as the diesel model with which it shares the vast majority of its components. The unrestricted platform capacity is 230kg with a working height of 28.1 metres and up to 19.1 metres of outreach at an up & over height of nine metres. The new model is the first of seven new Dingli lithium electric boom lifts coming on stream.

#### Mini crawler boom

Vertimac/Nagano have launched an all new 22ft self-propelled articulated tracked boom lift, the Nagano 09AC. It features a short single riser topped by a two section telescopic boom for a working height of 8.8 metres - drivable up to six metres - with 4.5 metres of outreach at an up & over height of almost four metres. Maximum platform capacity is 150kg. Overall width is 1.65 metres, and it has an overall length just over four metres. Total weight is 2,620kg, so transportable on a two axle trailer while providing a low ground bearing pressures. Power comes from a Kubota diesel providing 36 percent gradeability.





#### **Electric Aichi**

Aichi Europe has launched a battery electric version of Japanese manufacturer Aichi's new 46ft telescopic boom - the SP14DJE. The new machine is essentially a conversion of the standard diesel SP14DJ and shares all of the fabrications and most components, to maintain a similar performance including hydraulic four wheel drive and oscillating axle. Power comes from two lithium-ion battery packs and a large electric motor.

#### Airo hybrid

Italy's Airo has launched a hybrid version of its new 54ft A18JRTD Xtreme articulated boom lift dubbed the A18JRTH Plus. With a working height of 18.45 metres, the new boom has 9.9 metres of outreach with an unrestricted 300kg platform capacity, while its maximum 400kg capacity is available up to 8.5 metres with an up & over height of 8.5 metres. The articulating jib can rotate horizontally by 130 degrees, while 180 degrees platform rotation is standard.



Quad tracked growth Snorkel has launched 60ft and 66ft quad tracked version of its 600/660SJ telescopic booms,



dubbed the 600/660SJ All Terrain. They offer a maximum outreach of 16 and 17.8 metres respectively with 272kg/454kg platform capacity. At the same time Genie has updated its TraX product range with the already mentioned S-80 J TraX, and European version of its 62ft Z-62/40 articulating boom, taking its TraX range to six models.

#### LGMG's new 62ft

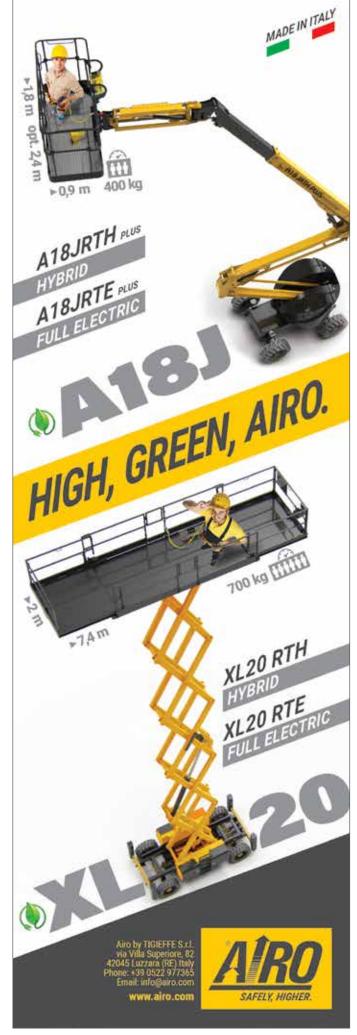
Chinese manufacturer LGMG launched several new boom lifts at bauma China in November, including the new 62ft AR19J articulated boom with short dual risers, a two section over centre telescopic boom and 1.5 metre articulating iib providing a working height of 20.8 metres with an outreach of 12.1 metres. The unit has an overall width of 2.49 metres and is 9.2 metres long. Four wheel drive, front oscillating axle, a "low emission quiet diesel" and intelligent on board diagnostics are all standard, while it weighs just over 10,500kg. If the specifications sound familiar, they are very similar to the Genie Z-62/40.

#### Almac Ultralight crawler

Italy's Almac has teamed up with Multitel Pagliero to develop a new light weight self-propelled AlmaCrawler tracked auto levelling telescopic boom lift, the 43ft Jibbi U-1570. The first of a new 'Ultralight' range, the Jibbi U-1570 has a three section telescopic boom and articulating jib to offer a 15 metre working height with up to 8.4 metres of outreach with 80kg in the 1.4 metre wide platform. Its maximum capacity of 250kg is available at up to 5.8 metres outreach. The U-1570 combines a Multitel aluminium boom with AlmaCrawler's Bi-Levelling undercarriage, to provide a machine that weighs less than 2,900kg and can drive at heights of up to 9.5 metres on uneven ground or slopes of up to 22 degrees. This is thanks to Alma's Dynamic and Pro-Active automatic levelling technology which can fully level the machine up on slopes of up to 15 degrees in both axis.









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## From London to the world?

Hydraulic luffing jib tower cranes, like jellied eels, exorbitantly priced beer, and tutting at outsiders for standing on the wrong side of the escalator, are a distinctly London tradition. So why, Will North asks, are so many manufacturers entering the market and introducing more models?

None of these traditions sprung up without reason. The eels were a cheap source of protein in the poverty of the Victorian East End, the beer prices are pushed up by sky high commercial rents and business rates, the escalator etiquette comes from being one of the world's first and busiest commuter cities. All are in some way rooted in this being the world's original global city, tucked into a corner of a small, densely populated, island.

So, what is it about the city that made the hydraulic luffer such a peculiarly London crane type? The simple answer is oversailing rights. In the UK, property rights extend up from the ground to the sky. If you want your crane to over sail a building or plot of land, you'll likely need to pay the owner. During the working day the operator can ensure the crane stays within the job site's air space. But overnight, as it weathervanes, there is no such control. Instead, you must choose a crane with the smallest possible out of service radius, so that it cannot intrude on the neighbour's air space.

#### **Tight fit**

Hydraulic luffers offer significantly reduced radius. Norfolk based Falcon Cranes has a wide range of PA rope and HPA hydraulic luffers from Spain's Jaso. Nick Hurrell, associate technical director, says: "The J168HPA, with a 50 metre jib, parks up with a nine metres radius. The J180PA, a similar sized rope luffer, has 18 metres. So, you're saving 10 metres for a similar jib length."





Jib length is important on all luffers. But, as Edward Seager of Bennetts' explains, in the early days of rope luffers, this was primarily for reaching up, not out: "The normal thing that you use luffers for is for building super tall buildings. Oversailing limits are virtually unknown outside of the UK. If you've got a 100 metre high building and you need three cranes, rather than having one with a 110 metre tower height, one with 120, and one at 130, you can have all three with 60 metre towers with the rest coming from the elevated jib angle."



Traditional luffers competed with saddle jib tower cranes and climbing derricks on skyscraper construction, not for maximum radius, but for their ability to reach high, without needing a very high tower or frequent climbing.

Seager continues: "It was very difficult to find small or medium sized luffers, they are used to build high rise buildings with quite heavy cores. So, the world market for luffers was typically 400 to 600 tonne/metre machines. They offer decent free standing heights, good climbing systems, and long jibs for the extra height, and usually lift 16 to 24 tonnes or more at short radii, few cared what they lifted further out, because they were rarely, if ever, used at 50 or 60 metres radius.

"Once people became aware of the oversailing issue, demand jumped for 60, 100, and 160 tonne/metre luffers. There is little or no market elsewhere in the world, except maybe a little in Australia. Why would a worldwide manufacturer like Liebherr or Terex make hydraulic luffers? It didn't make sense for them.

"When Franc Jost launched his hydraulic luffer range, he went from being nowhere to being the bestselling tower crane brand in the UK in six months. Hundreds were sold, because they were precisely aimed at the UK market."

#### tower cranes







With the development of these smaller hydraulic luffers, which offered limited radius and tail swing, new opportunities opened up for tight sites. In the past couple of years Northampton based Radius has brought Potain's two new hydraulic luffers, the MRH 125 and MRH 175 to the UK. It has two working on a site in Nottingham, which is constrained on one side by a neighbouring pub.

Operations director Teddy Holt said: "In Nottingham, it wasn't just the case that we were struggling with oversailing, we also needed the luffers because the site was a bit of a 'postage stamp'. They wanted two hooks because of the nature of how tight the site was, without having to go to a massive crane, which would have slowed down the build. So, the MRH 175 with its reduced out of service radius, was



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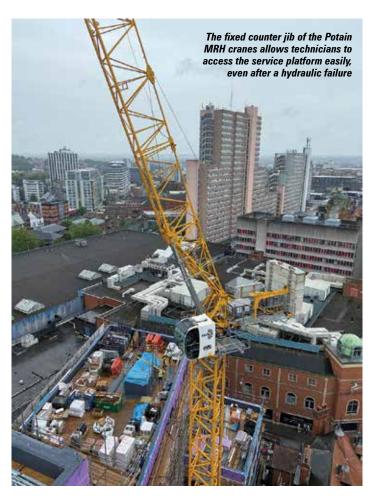
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ideal, they could push the crane right up to the boundary next to the pub. And each crane could interface with the other without fouling it."

#### Laying down in medieval lanes

Many larger cities are built to an organised plan. Often, because of their history of war and revolution. In the US, a wave of Enlightenment era settlers built cities to a rational grid formation, on land they considered empty. In Paris, Haussmann designed wide boulevards, in part to prevent the erection of barricades after a series of uprisings from 1830 to 1848. And, a hundred years later, planners across mainland Europe and Japan had to rebuild after the devastation of wartime bombing.

London avoided this, the last revolution ended in 1660, and capital was last destroyed in the 1666 Great Fire. Wren's post-fire vision of a hub and spoke city was never implemented, and while some areas of the East End were devastated in the Blitz, most of the city core made it through World War II unscathed.

That has left some of London's most commercially important areas laid out on narrow lanes, unchanged since the Middle Ages. While that may be charming, it is a nightmare when trying to find a spot for a long jibbed tower crane.

Falcon's Nick Hurrell explains: "With traditional rope luffers, you don't have to erect the whole jib in one go, but you do have to lift the first 25 to 30 metres at once, because that's where the pendants supporting the jib during erection are attached. With a hydraulic luffer you have more options. You can erect the jib section by section, from heel to jib tip."

That means that, rather than having to find perhaps 30 metres of unused ground close to the crane, you only need find 10 metres, or you can even pick and place the jib sections direct from the delivery truck. Whether you're working in Soho or the Square Mile, it's always going to be hard to find a clear 30 metre stretch of ground, without road closures.

#### Electricity city

London has long pioneered new approaches to energy use. In Brixton, Electric Avenue, built in the 1880s, was the first street market in the world to be lit purely by electric streetlamps. In the 2010s, pollution levels on nearby Brixton Hill would regularly breach annual limits within the first few days of the year. In response to the slow poisoning of Londoners, the Mayor, Sadiq Khan,



#### tower cranes

has begun rolling out ultra-low and zero emission zones across the city. As discussed in a previous issue (C&A Feb/March 2021, p35), regulations like this are beginning to push demand for fully electric cranes and construction equipment.

A rope luffer needs electric power both for hoisting and luffing. Bennetts' Seager says: "A traditional rope luffer has two and a half times the surge power on start up, compared to a saddle jib. That's because you have something like a 22kW hoist motor, but you also need a 30 or 40kW motor for luffing which has to cope with the load and the jib. As you pull the two levers to hoist and luff simultaneously, you get a nasty power spike."

Falcon managing director Andy Brown adds: "One benefit our customers like about the hydraulic luffers is the lower power requirements. You normally need 150 or 200kV of power for a traditional crane, which requires a generator, but that can drop to 100kV, or less, with hydraulic luffers."

Other solutions may be found to replace generator use with rope luffers. Hydraulic luffers are generally limited to 200 tonne/ metres, so it's hard to see the 750 tonne/metre rope luffers used on big skyscrapers, nuclear power stations, or bridge pylons, being replaced by hydraulic models anytime soon. Perhaps improvements in battery power and price may become practical solutions to cushion power spikes from luffing motors?

But on the lower end, hydraulic luffers have a clear head start to being truly emission free.

#### **Residual value**

The unique nature of the London tower crane market poses one serious challenge to fleet owners. Normally, if you buy a crane for a specific local niche application, and demand dries up locally, you can always find a buyer elsewhere in the world, where demand for that type of crane is buoyant. But if construction slows in London, where will you sell your hydraulic luffer? Not locally where everyone is facing the same downturn as you. All of those I spoke with for this article agreed that the only other market for these cranes is

on the other side of the world, in Australia. While fleet sales may be possible locally in the good times, when things slow down the residual value of your crane is significantly impaired.

#### New in town

There are some strong reasons to believe that hydraulic luffers may one day move beyond being a peculiar London taste, like those lumps of eel flesh wobbling in congealed aspic, to become a global phenomenon. The benefits clearly go well beyond the small out of service radius. They are easier to erect, with minimal space requirements, use less power and can be set up closer together, allowing contractors on big sites to plan their work around maybe a dozen hooks, without worrying about interference while working, or needing to make space for weather vaning.

A flurry of recent launches by manufacturers new to the world of hydraulic luffing suggests that at least a few are making a bet on a new global market for these cranes. And, for now, with construction performing well in London and the UK, any bet made on these cranes is unlikely to turn out too badly.

Manitowoc/Potain has made two recent forays into the hydraulic luffing market with the MRH 125 and MRH 175. The smaller crane lifts a maximum of eight tonnes, with a 50 metre jib and two tonnes at maximum radius. Its big sister lifts 10 tonnes, with a 55 metre jib, and has a 1.5 tonne tip capacity. One thing that Falcon's operations director Teddy Holt particularly likes about these cranes is the fixed counter jib, rather than the more usual dynamic counter jib. In normal operations, counter jib design may not make much difference but when something goes wrong, you see the difference, he says.

On other crane designs, the counter jib and jib are a single structure with the counterweight moving down and in as the jib elevates. Holt says: "I've previously seen a hydraulic failure cause the jib to automatically go all the way up. That stops the jib entering a dangerous position, unattended, but with the counter jib, and service platform, all the way down fixing a fault can be a problem. With a

#### tower cranes

static counter jib, the counterweight is not mobile so that cannot occur, so the technicians always have a horizontal platform from which to work on the pump set, even if the jib is up in the air."

Raimondi's first hydraulic luffer is the LRH174. This 10 tonne crane has a tip load of 2,225kg in 'ultralift' mode with two falls. The crane can also be utilised with a single fall, which allows for a maximum capacity of five tonnes and a tip load of 2,476kg.

It's these reeving options that Bennetts' Seager highlights. "It's one fall/two fall whereas many others are two fall/four fall. A one fall/two fall crane is automatically twice as fast. that's a major benefit and has more chance of retaining a residual value because it is going to be good for high rise work, where most of the rest of the world uses them."

Jaso's HPA hydraulic luffers join an existing range of 11 traditional rope luffers, from the 80 tonne/ metre J80PA, through to the giant J780PA.64 with a maximum capacity of 64 tonnes. The new hydraulic cranes, the J118HPA and J168PA have a six tonne maximum capacity, with 45 and 50 metre jibs and 1.6 and 2.5 tonne jib tip capacities respectively.

Andy Brown points out one interesting option on these cranes of using a 1.2 metre tower on the J118HPA. "You do have rope luffers on 1.2 metre towers, but, for the UK market a narrow tower on a hydraulic is quite significant, in that you can get them comfortably into a lift shaft. They have really thought about keeping the tower sections as small as possible in order to fit them into places that other cranes might not be able to."

Falcon works closely with Jaso on its new cranes. The Spanish manufacturer has a proven track record building very large rope luffers. One thing Brown is hoping for right now - and no doubt talking to Jaso's designers about - is a larger hydraulic model. He says: "We would like a larger capacity with a longer jib to really take the market away from rope luffers at a 200 tonne/metre and below capacity range.

"We are also looking at ways to reduce that parked radius further, even though the 118 and a 168 have very good out of service radii,





but we are pushing, not just Jaso but other manufacturers, to do even better than that. We are looking for a 118 size hydraulic luffer with a very, very small out of service radius. And we're hoping that we'll see something in the market by the end of the year with an under four metre out of service radius and 40 metre jib radius."

Terex's entrant to the market is the CTLH 192-12. With a maximum capacity of 12 tonnes, this 55 metre jib crane lifts more and reaches further than many of the other hydraulic luffers we've looked at. It still keeps to an in-service radius of three metres, and out of service radius of eight metres. Terex's Luca Grisenti, engineering director, points out the ease of erection of these cranes. He says: "The hydraulic ram is already in place when the cabin mast is erected, as well as the power pack, which is built into the cabin platform. It's enough to connect the two with hydraulic hoses once everything is in place and it's done." Select Plant

Hire, along with a variety of other customers, have already put a number of these cranes to work in the UK.

It's hard to go far in central London without seeing the red towers of a group of Wolff cranes. The company has also been building its business across the Atlantic, with its rope luffers used on prestige projects like the World Trade Center, where Federated Crane puts its first giant Wolff 700 B US to work.

It continues this transatlantic approach with its hydraulic luffer, the 160 tonne/metre class 166 B, which offers a 12 tonnes maximum capacity and 1.8 tonnes at maximum radius with 55 metre jib. Launched in Europe in 2012 the company has finally launched an American version pointing to a degree of confidence in the growing global appeal of these cranes.

Four Wolff 166 B hydraulic luffers have been working alongside a Wolff 180 B rope luffer on a residential development in Nine Elms, in South London. Telford Homes is building two







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#### tower cranes

phases with construction continuing as residents move into the first block. By using the larger rope luffer and two hydraulics, disruption to residents will be reduced as the hydraulics will be taken down by the larger tower, reducing the need for mobile cranes at the end of the project.

Saez has an established position in the hydraulic luffer market, with three models in its range, alongside five rope luffers. The hydraulic luffers range from the five tonne SLH 80 through the six tonne SLH 110 and 10 tonne SLH 205. The two smaller models have a 45 metre jibs, while the larger model has 55 metres. The cranes have tip



loads of 1.1, two and 2.6 tonnes respectively.

A recent job by Clark Cranes in Australia, shows the versatility of these cranes, with a mains powered SLH 80 installed on a gantry in a narrow Melbourne Street, allowing traffic to pass below. The crane is mounted on 1.2 metre tower sections and has an out of service radius of less than 10 metres.

#### Luffing up

The market for hydraulic luffers has clearly been gathering steam in recent years, with demand increasing for larger models and smaller out of service radii. The UK has already seen hydraulics being







used in smaller, less crowded, cities beyond the capital. As crane owners elsewhere try these cranes, we might see higher residual prices kicking off a virtuous cycle of uptake. One major tower crane manufacturer notable for its absence in this article is Liebherr. Might we expect to see the German giant enter this market too soon? Who knows what the next bauma might bring?

## Low radius, on a rope luffer

The Moritsch family has played a leading role in tower crane development, with Ferrucio Moritsch founding Comedil - now Terex - with a series of innovations. He passed away in 2011, but son Mariano launched a new business in 2015, under the family name, to continue this tradition of innovation.

The latest product from the company is the RTL 195-16 with sales director, Mauro Masetti, stating: "The only product not available in our range was a hydraulic luffer". The company was put off by concerns over hydraulic leaks and adding complexity to

a crane. It considered alternatives, such as electric cylinders, but took the view that with demand increasing for larger luffers for precast work, a traditional approach was better. With an eye on the UK hydraulic luffer market he set to work. The resulting 16 tonne capacity crane retains traditional rope luffing but uses a patented locking mechanism to keep the boom in a narrow out of service radius, which allows the crane to hold its boom safely at an angle of 82 degrees.

The company is now working on introducing the concept on both larger and smaller models.





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## A big vision for narrow spaces

City Lifting has established a dominant position in the market for cranes in spaces too constricted even for hydraulic luffers. Managing director Trevor Jepson shared with Cranes & Access how he has worked with his manufacturing supplier, Artic Cranes, to develop cranes that fit into any nook or cranny.

It has been 10 years since the first Raptor articulated crane was delivered by Artic Crane, a smaller specialist manufacturer based in Sweden, which is open to exploring new ideas and technologies.

"The Raptor articulated jib cranes have been built with high specification and quality in mind. And they have been around for a long time, mainly in dockyards around the world. Tornborgs and Kroll manufactured these types in the past but have not done so for a very long time now," says Jepson.

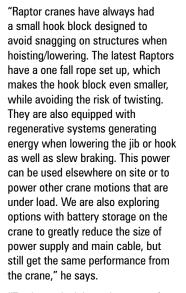
City Lifting currently has around 30 Raptor articulated jib cranes, which have quite a few surprising advantages over conventional luffers. Unlike luffers, which have to weathervane to maintain stability and to prevent a collapse in extreme winds, articulated cranes can be left with the slew brake on as the structure and base are designed to

withstand storm force winds from any direction. This allows them to achieve an out of service radius of only four metres in complete safety. The short counter jib means tailswing is constant, allowing the crane to be sited close to the site boundary without the counter jib oversailing.

The Raptor operates like a trolley jib crane with the load moving in a horizontal plane as the working radius changes. As the jib tip is lower to achieve a given radius, a shorter rope length can be used, making the crane quicker and easier to operate. Powerful floodlights attached to the jib illuminate the working area while a camera is mounted next to the floodlights.

Jepson says that they are also better for operating near airports when there are oversailing issues, and that, for a given maximum radius, the total crane height can be up to 20 metres less than a regular luffing crane.





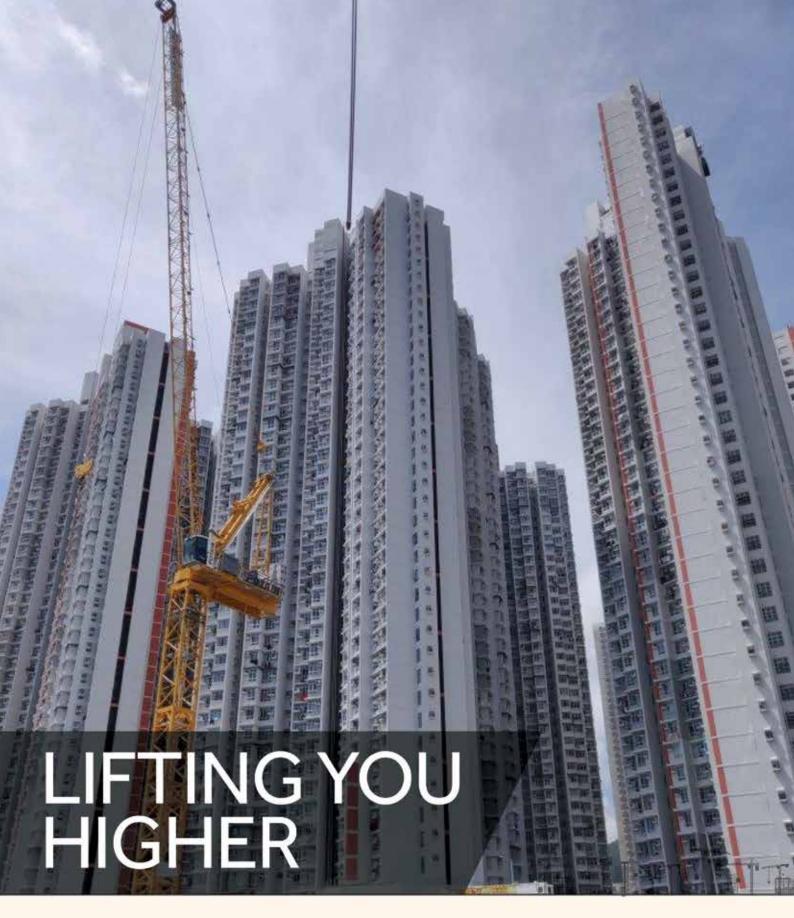
"To give an insight to the types of jobs that suit a Raptor crane, we successfully managed to site a crane in between the lines at Ilford railway station in East London. The main contractor was able to complete the whole station rebuild with only two railway possessions/road closures. This saved time and minimised the impact of the rebuild for all parties involved."

"Up until now all these cranes have been delivered to the UK, but we currently have one crane on hire in Stockholm city centre and the first Raptor 85 has been sold to a Swedish customer for a difficult railway job in Varberg."

The City Lifter CL25 can lift 2.5t on jibs o six, eight or 10 metres, with an extremely long rope drum stowage, making it ideal for finishing work on skyscrapers



Aside from the Raptor, Artic Crane also manufactures the City Lifter CL25, a mini saddle jib tower crane with a large hoist drum for working at great heights if required. It can be rigged with jib lengths of six, eight or 10 metres and has a maximum capacity of 2.5 tonnes. The crane is radio remote controlled and can be used to unload trucks standing in the road, placing materials directly onto loading platforms on different levels. They are said to be ideal for finishing larger projects after the main tower crane is dismantled, or just providing an extra hook to speed up a project by freeing up the main crane.



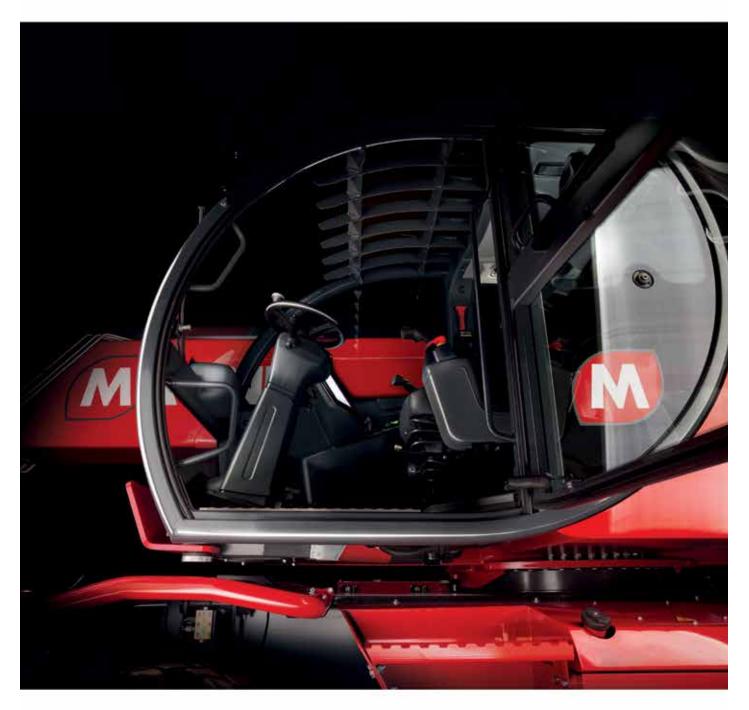
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## Telehandle upgrades proliferate

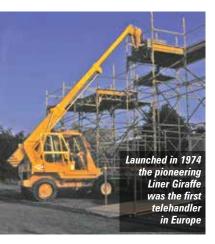
The ability to provide forward reach for forklift work put the telescopic handler on the map, with the market continuing to grow with more choice and types than ever. This year is seeing significant upgrades from manufacturers based around the move to Stage V power units, but also larger and more innovative developments, Nick Johnson reports.

#### Diversity growth 50 years on

The development of the telescopic handler goes back a long way with Koehring, Lull and Pettibone in North America credited with some of the earliest machines with high rear boom pivots – a style still utilised in this market today. The first Pettibone Model 88 Extendo was delivered back in 1970.

In Europe the first telehandler was almost certainly the Giraffe launched by the Liner Concrete Machinery Company of Gateshead in 1974. Developed following market research with forklift users by Loughborough University of Technology, it set the pattern for the machines now used in so many construction, industrial and agricultural applications.

Originally described by Liner as a site placing vehicle, the Giraffe had equal sized small wheels that



provided both all wheel drive and steer. Maximum capacity was 2,032kg and it could raise 1,016kg up to a maximum height of 8.53 metres. Whilst the Liner company and its Giraffe have long been consigned to history, the company that really put the telehandler on the map was JCB. It launched its first model, the two wheel drive Loadall 520, in 1977 and, after quickly adding 4x4 models, it become a leading supplier of telehandlers.

Merlo of Italy has the distinction of introducing the first telehandler with a side mounted engine and a low boom pivot point, with its Panoramic XS in 1987. It then went on to launch the world's first 360 degree telehandler – the Roto 25.11XS in 1991.

Adding a slew ring to a telehandler created a new product concept, with a large proportion now supplied with work platforms as well as winches and jibs to effectively create a Rough Terrain crane. 360 degree machines have also taken the telehandler concept to new heights with Magni of Italy leading the way, last year it broke its own existing record with the 51 metre RTH 6.51.

#### New power and ranges

Meanwhile fixed frame telehandlers are now effectively sub-divided into different types such as ultra compact, compact, standard and heavy duty, while manufacturers have been fitting ever more environmentally friendly diesel engines to meet emissions





requirements. The trend to go a step further is also growing, with lithium-ion batteries electric models able to meet the requirements of the stringent ultra-low emission zones that are proliferating in cities around the world. Italian telehandler manufacturer Faresin was the first to bring an electric compact telehandler to market, the pioneering 6.26 Electric, which was spotted at bauma 2019 by UK based GGR which subsequently became a dealer and pioneer. A significant number of UK companies, including Bennie Equipment, Flannery Plant

Hire, O'Brien Plant Hire, Sunbelt Rentals and Thomas Plant Hire have already taken units.

With an overall height of 1.93 metres and a width of 1.89 metres, the compact Faresin 6.26 Electric has a maximum capacity of 2,600kg and a 5.9 metre lift height. It also has a very useful boom suspension option. The potential of the Faresins were also spotted by Snorkel which now sells the electric machine in its own colours as the SR626E. Powered by 80V/32kW lithium-ion batteries, the SR626E can perform up to six hours



#### telehandlers



continuously between charges depending on site conditions.

As part of its Road to Zero initiative, JCB has added the 525-60E electric telehandler to its growing portfolio of small electric machines and matched chargers (see article on page 41). The first models are now with customers, including rental company UK Forks which showed the first of six units it has ordered at Rail Live earlier this month.

Other companies developing compact electric telehandlers include Manitou and Merlo which have been testing their new models for some time. The Manitou contender is the 2,500kg/4.8 metre

MT625e Oxygen, while Merlo will offer both two and four wheel drive versions of its new 2,500kg/4.8 metre E-Worker.

#### **Common rapid chargers**

As more manufacturers unveil electric machines, there will be increased demand for rapid charging equipment to be standardised in terms of power output and connections providing sites with greater flexibility and charging stations.

#### The ultras

Whilst compact telehandlers have overall widths and heights of under two metres there are now an

increasing number of significantly narrower, lighter machines being dubbed 'ultra-compacts'. A good example is Ausa's 1,350kg/four metre T144H-4 Taurulift with an overall width of 1.4 metres and a two metre overall height. Importantly its overall weight of 2,527kg allows it to be carried on a two axle trailer. The same applies to the 1,250kg/4.3 metre Wacker Neuson TH412, which weighs 2,750kg. Even Chinese manufacturers are looking at the market, with Everun Machinery offering the 1,300kg/4.02 metre ERT1500, which weighs 2,800kg

and is 1.44 metres wide by just under two metres high. The Perkins powered machine is sold in Europe as the JMac JMT1500.

In an initiative that it calls 'Build the Future', Manitou has announced the development of new Ultra-Light Manitous (ULMs) weighing no more than 2,700kg with attachments. They are said to have an overall width of 1.5 metres by 1.9 metres high and will feature the company's JSM joystick controller.

#### **Bigger compacts**

Manitou is also introducing new three tonne MT 730 H and MT 930 H







hydrostatic telehandlers with maximum lift heights of seven and nine metres respectively. Both are compact machines powered by a Kubota Stage V engine and with a width and height of no more than two metres.

A new standard size fixed frame telehandler is the 6,500kg capacity Snorkel SR1065 that reaches up to 9.5 metres with a similar forward reach. Built by Faresin it is 2.3 metres wide by 2.5 metres high and is powered by a turbo-charged Stage V compliant Deutz diesel.

JCB's entire construction range is now available with Stage V compliant engines. All models from seven metre 531-70 to 20 metre 540-200, can be powered by the 81kW JCB 448 DieselMAX engine with no requirement for EGR. They also feature auto engine stop to reduce fuel consumption and excessive idling hours. The new engine has the same footprint as previous power units, so no changes in overall dimensions, turning circles or view lines. Indeed, right-hand visibility over the engine cover has improved slightly, as the exhaust pipe passes through a new integrated vent grille and is no longer visible.

The big news from Bobcat in May was the new generation R-Series fixed frame telehandler range with Stage V engines – 12 models for construction and seven for agriculture. The new telehandlers have lift heights from six to 18 metres with maximum lifting capacities between 2,600kg and 4,100kg.

#### **Double production**

Bobcat currently has a capacity limit of 3,000 machines a year at its plant in Pontchâteau, France, but with the arrival of the new R-series models, it aims to double telehandler production



#### telehandlers

by 2025. The newcomers gain a completely redesigned cab with a new Grammer seat, a new ergonomic joystick, a new central control panel and a new five-inch LCD display (that can include feed from the optional rear view camera). There is a choice of 56kW or 75kW Stage V Bobcat D34 diesels.

With designations reflecting maximum capacity and lift height, there are three new 'Compact' models, four 'Middle Range' models and five 'High Lift' models for the construction market. The Compact construction trio are designated the 2,600kg/six metre TL26.60, the 3,000kg/six metre TL30.60 and 3,000kg/seven metre TL30.70. They are all 2.1 metres wide on standard tyres and either 2.14 or 2.29 metre high with low or high cab.

The Middle Range models are the TL35.70. TL10S. TL35.10SL and the TL36.120SL. S = Stabilisers, L = Frame Levelling and P indicates the boom positioning system, providing built-in side-shift. The High Lift machines are the T35.130S, T35.130SLP, T35.130SLP, T35.140S, T412.140SLP and T40.180SLP.







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Bobcat previously badged Dieci 360 degree telehandlers, but has now turned to Magni for these machines, in a new OEM badging deal. The resulting Bobcat TR range includes 10 models, all Stage V compliant, with lift heights from 18 to 39 metres and lifting capacities from 4,000kg to 7,000kg.

At the same time Magni will launch six more fixed frame 'TH' models with capacities from 5,000kg to 6,000kg and lift heights from eight to 19 metres. Powered by Deutz engines, the first TH newcomers are the 24 metre/5,500kg TH 5,5.24 and the 9.7 metre/6,000kg TH 6.10. The company is also building a new 35,000 square metre production facility alongside its original 6,000 square metre plant, which will more than double its current capacity while bringing more fabrication in house.

#### Extreme Xtreme rides the load

Xtreme Manufacturing unveiled what it claims is the world's highest reaching fixed frame telehandler at the recent World of Concrete show in Las Vegas. Designated the XR1585-C, its five section boom provides a maximum fork height of 25.9 metres and offers a maximum capacity of 5,443kg. Overall weight is just under 30 tonnes and power comes from a Cummins Tier 4 Final diesel.

It has also applied for a patent on what it calls the 'Operator Station', a

platform fitted to the rear of the fork carriage with a wireless RF pendant remote controller for all boom functions, enabling the operator to travel with the load for enhanced view and control of load placement.

The company also launched a new patent-pending coordinated boom control option, also referred to as 'coordinated motion', which is designed to aid picking and placing loads at height when the telehandler is working on uneven terrain.

This option - initially for the XR944-B and XR1147-B models uses boom length and angle sensors to allow operators to achieve true horizontal and perpendicular fork motions, independent from the chassis angle.

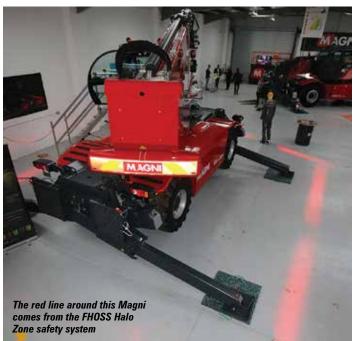
#### **Heavy Merlo**

Amongst the increasing number of heavy duty rigid frame telehandlers developed especially for use in arduous agricultural, aggregates, renewable energy, timber and waste applications is the new Merlo TF65.9TCS170-HF. Providing a maximum capacity of 6,500kg and 8.8 metre lift height, it sports a Stage V 125kW FPT turbo diesel matched to a Merlo hydrostatic transmission with EPD TOP/ 'Eco Power Drive' electronic transmission control allowing the operator to select Eco or Speed control characteristics. Another feature is the brand new Adaptive Stability Control System (ASCS) that comes with a 10.1 inch LCD





#### telehandlers



colour screen that updates and displays the load dynamics and capacity in real time.

#### New range new look

Market leading Manitou is looking to strengthen its position in the 360 degree market with a slew of new MRT models, in two ranges Vision and Vision+. All models gain the same very distinctive cab style, joining Magni with a curved front screen for improved visibility, along with a common control station.

The more basic Vision range includes four models with lift heights of 16, 18, 21 and 25 metres, all with a maximum capacity of 4,500kg. Designated MRT 1645, MRT 1845, MRT 2145 and MRT 2545, they are powered by Deutz Stage V diesels.

The higher capacity Vision + range offers capacities of six and seven tonnes, with lift heights from 22 to 35 metres in the form of the MRT 2260, MRT 2660, MRT3050, MRT 2570, MRT 3570 and MRT 3570 ES. The Vision + models are all powered by Yanmar Stage V engines with the option of a removable bi-energy system that allows the machine to operate on electric power once the outriggers are set.

#### **Safety beams**

A useful on site telehandler safety system is the Halo Zone from UK based FHOSS. This system uses seven LED lights to create a red line on the ground all around the machine to clearly identify an exclusion zone for anyone on site.

For 360 degree telehandlers operating with a winch and hook there is also a Hook Path indicator. Two powerful LED lights on the telehandler's boom nose shine straight down to provide a red spot on the ground, helping the operator to check that the hook is precisely above the load, while also warning those in the area to keep clear of the path of the hook.



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Nick Johnson at the controls at

ICB's Customer Experience Centre

The arrival of battery powered telehandlers is a major factor in the industry, Nick Johnson visited JCB to take a closer look at the 525-60E Electric telehandler announced last year and now in production.

As the car industry is busy introducing ever more environmentally friendly electric and hybrid vehicles so construction equipment makers are becoming more focused on developing 'greener' machines. Small equipment lends itself to being battery powered and JCB is amongst the notable producers leading the charge towards a range of equipment powered by the latest generation lithium-ion batteries.

As it travels ever faster along what it describes as its 'Road to Zero', JCB has introduced a variety of battery powered machines with matched charging systems, including scissor lifts, a 1.9 tonne mini excavator, a 500kg capacity tracked carrier, a one tonne capacity high tip dumper, two Teletruk industrial telehandlers and the new compact telehandler.

With JCB - arguably - claiming world leadership in telescopic handlers, the arrival of its first electric compact model created a lot of interest. Announced last November, during a virtual online launch due to Covid-19 restrictions, the 525-60E High-Viz Loadall is an electric version of the 525-60 Hi-Viz powered by a JCB Diesel by Kohler engine.

#### As good as diesel

fast On a charge

> In developing an electric version of the 525-60, JCB engineers have sensibly retained the diesel machine's well accepted operational characteristics, including the 2,500kg maximum lift capacity and ability to take 2,000kg to the full height of six metres. Physically they have similar external dimensions, at 1.9 metres high, with an overall width of 1.8 metres, and the same 3.7 metre outside turning radius.

> JCB contends that the battery powered 525-60E performs as well as its diesel counterpart whilst being quieter and fume free. So, this 'green' machine, distinguished by its prominent E-Tech blue and white chevron markings, will satisfy the growing demand for a quiet, emissions free compact telehandler able to work effectively inside and in sensitive areas, including ultra-low city centre emission zones.

#### **Quarry test track**

A quarry is not the place one would expect to find an electric telehandler working but, as Covid restrictions eased in May, such a location - close to JCB's factory in Staffordshire - provided an ideal outside, socially distanced opportunity to check out a 525-60E. Having shut the Arena





prominent E-Tech blue and white chevron markings



demonstration at its headquarters in Rocester, JCB has been busy developing a better location for machine demonstrations and customer appraisals.

The new JCB Customer Experience Centre is located in Kevin Quarry (a former Tarmac facility) where 100 of its 550 acres can be used for realistic displays, a 250 seat grandstand is also being constructed.

Apart from its blue 'electric' wording, plug symbol and rear chevrons, there is not much visually to set the 525-60E apart from its diesel brother. But a look under the skin reveals that JCB has not simply electrified the diesel machine but has effectively created a brand new electric model.

Cleverly utilising the existing side mounted engine compartment, the JCB designers have neatly installed a Jungheinrich 96 volt/24 kWh lithium-ion battery pack. Having studied data on compact telehandler operation from its LiveLink telematics system, the company is confident that it is more than capable of working a typical full day shift on a single charge.

The lithium-ion battery pack is designed to be maintenance free and operate at temperatures from -20°C to 60°C. It also carries a five

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A motor controller manages electrical power demand, converting the DC output from the batteries into AC to power the machine's two Jungheinrich electric motors. A 17kW transmission drive motor, mounted centrally behind the front axle, and a 22kW hydraulic system drive motor, both are 85 percent efficient, according to JCB, compared to the 45 percent efficiency of a diesel engine.

#### Electric drive & regeneration

The drive motor is connected via a dropbox and prop shafts to the front and rear axles. Whilst the axles are the same in terms of looks, beam strength and durability, as those used on the diesel model, they have been refined internally to provide higher efficiency and conserve battery life. Changes include the use of different oils and finishes on the gears.

Interestingly, the 525-60E has regenerative braking so that, whenever the operator takes their foot off the accelerator, the machine recuperates electrical energy that is returned to the battery. The brake regeneration function automatically turns off when the battery is fully charged.

The electric motor for the hydraulic system powers a low noise gear pump that provides the same flow and pressure as that on the diesel. Hydraulic flow is not linked to



engine rpm and so joystick position alone determines the flow and speed of operation. The electric unit also features smart hydraulics controlled by an electro-hydraulic Husco valve block with hydraulic regeneration on boom lower and retract to help preserve battery charge. I wonder if to make the machines even 'greener' it would be possible to install a solar panel along the flat top of the base boom section so that, when the sun shines, even more battery charging could be achieved on the move?

#### Charger choice

The machine has the same onboard charger as other JCB E-Tech products, capable of recharging the battery in eight hours from a standard 240 volt/16 amp electrical supply. An optional three phase/415 volt JCB Universal Rapid Charger will take a completely empty battery to being fully charged in just 60 minutes. The rapid charger can be used for a rapid top-up during breaks, in as little as 35 minutes. A good safety feature on the electric model is the magnetic sensor fitted on the charging port door so you cannot drive off with the machine connected.

JCB has designed its Universal Rapid Charger to automatically adapt the voltage and the current supply to suit the machine as the plug is inserted, allowing it to be used for the 96 volts on this machine, as well as the 48 volt systems in JCB's electric mini excavator and dumpers. Contractors and rental companies - for whom chargers provide a welcome additional rental stream - should welcome this innovation.

For sites with limited access to a mains supply, JCB offers a range of easily transportable power packs. A typical example is the 1.250E with manganese laminated lithiumion batteries that provides a total storage capacity of 23kWh. This can be used to feed the onboard charger.

#### Cab comforts

The new machine has an easy entry, roomy ROPS/FOPS cab with good all round vision, aided by the low boom pivot point and sizable rear view mirrors, helping it live up to its Hi-Viz description. Inside the operator gets a comfortable and notably quieter working environment. Quoted noise level in the cab is 75LpA. However, as I drove across the rough quarry floor, I experienced an irritating rattle from the top half of the cab window when it was latched back in the fully open position.



Fork pockets allow the 1.250E power pack to be easily moved around on site



Although I did not need them on my sunny test day, the front, rear and side screens are all heated for rapid defrosting/ demisting and the operator even gets a heated suspension seat, but no air conditioning as it would create a significant drain on the battery.

The controls are all logical and the instrument panel display includes a clear indication of the charge left in the battery so there is no excuse to run out. Safety is aided by the fitment of JCB's EN1500 compliant Adaptive Load Control system. This longitudinal load moment indicator receives a signal from a load sensor on the rear axle and clearly displays any approach to overload by means of coloured lights. There is an audible warning and prevention of unsafe movements when overload approaches.

My test drive revealed that, whenever you take foot off accelerator, the motor does the braking, so you rarely need to depress the brake pedal. The test machine had a compact tool carrier attachment bracket which meant that the loader bucket did not have as much roll back as it would have done on the more usual Q-Fit carriage.

The machine performed well, and its maximum speed of 15km/h is significantly faster than some competitive machines. However, the 525-60E does not have the option of the boom suspension system available on some equivalent electric models.

Whilst electric telehandlers are significantly more expensive than their diesel counterparts, their use will increase rapidly as more jobs demand low emission machines. With this 525-60E (the 505-20E in North America) and its other electric machines and matched chargers, JCB is now well placed to benefit from a switch to greener machines.







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# Get real of the ortical days of the ortical da

After what will be 28 long months since the last Vertikal Days event, there is a very positive vibe in the air from the UK crane and access fraternity looking forward to catching up in late September at our new venue, the East of England Arena & Showground in Peterborough.

Taking place on September 22nd and 23rd after a double postponement, Vertikal Days will be one of the first industry events since lockdown restrictions started to ease. It will also be the first outing for a host of new products, so visitors can expect to see a good few 'firsts' from crane, aerial and telehandler manufacturers plus an abundance of new ancillary products and services in the Marketplace.

#### New venue

Our new Peterborough venue is located off the A1(M) with easy access whether driving from the north or the south. There are good rail links from the East Coast Mainline running from London Kings Cross to Edinburgh, and the venue is within an hour's drive of several airports, including Birmingham, London Stanstead, Luton and East Midlands.

#### Save your wallet for equipment purchases

The show is the one of largest events in Europe dedicated to lifting and working at height. As in previous years everything is complimentary for visitors, including parking, tea, coffee and a hot lunch. It will be an ideal event for rental companies, utilities, major contractors, and the plethora of end users who are interested in lifting and working at height, to see the latest products, services and technology, as well as meeting the manufacturers face to face. The show is almost fully booked and includes a number of new exhibitors.

#### **Full Guide**

A full 28 page guide to the event will be published in the July/August issue of Cranes & Access magazine, however in the meantime, the following pages include a glimpse of just some of the new products and



#### **Show Information**

Venue:

Vertikal Days Event, East of England Arena and Events Centre, Peterborough, PE2 6XE

#### Dates/Times:

Wednesday 22nd September 10am to 5.30pm Thursday 23rd September 10am to 4pm

services that have already been announced for the show.

#### The Marketplace Pavilion

Located centrally within the showground, the Marketplace Pavilion is almost a show within a show and will include an even more comprehensive mix of companies displaying the very latest in ancillary products and services related to cranes, access equipment and telehandlers, such as safety equipment, software, innovative components, rigging solutions, training suppliers, financial solutions and electronics. It will also feature the main café serving tea, coffee and soft drinks all day - a great place to network or simply sit for 10 minutes to digest not only the complimentary pastries, but the host of equipment and services on offer.

#### Outside area

Vertikal Days is mostly an outdoors event, and a number of ancillary products and service suppliers such as those offering parts & service, crane mats and heavier rigging equipment will be located outside alongside the equipment providers.

The show provides an opportunity for both visitors and exhibitors to network and make new contacts, while the calmer atmosphere compared to the big international shows - allows exhibitors to spend more quality time with visitors, either on their stands or in the public areas. As usual, the CPA and IPAF will be on hand to greet members, while hosting seminars, meetings and workshops, so look out for announcements in the coming weeks to find out what's on.

#### There is such a thing as a free lunch!

Lunch will be provided each day from 12:30- 2:30 in the Catering Pavilion, located at the top of the showground. Our popular free range hog roast, alongside the barbecue and a sandwich bar will also be available.

Hotel rooms within a five-mile radius are plentiful, although we would recommend you book as early as possible. On Wednesday evening there will be a networking event (ticket only) kindly sponsored this year by Access Platform Sales and partners Hinowa, LGMG and BoSS.

#### Safety & hygiene

Everything will be carried out in line with current government guidelines which we hope will be 'restriction free'. If the rules change, we will of course change layouts to suit whilst continuing to provide everything that visitors have experienced before.

#### **Vertikal Days sponsors**

We'd like to say thank you to those exhibitors helping support the event through sponsorship:



#### vertikal days

The following list includes all exhibitors and the brands that they represent attending this year's event.



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#### vertikal days

## What's new?

The following pages highlight just a few examples of the new products and services that you can expect to see at this year's Vertikal Days. Many exhibitors are choosing to keep their product launches under wraps until closer to the event, while others are waiting to make sure that their exhibits are fully confirmed before publicising them.

#### Lifting equipment

All Terrain cranes, crawler cranes, Rough Terrain cranes, spider cranes, mini crawler cranes, pick & carry cranes, aluminium cranes, trailer cranes, truck mounted cranes, loader cranes, rigging equipment, and much much more.

Liebherr's 150 tonne LTM 1150-5.3 All Terrain crane will make its global debut at the show, replacing the manufacturer's popular 130 tonne LTM 1130-5.1. On the Kranlyft stand will be the new all electric Maeda MC285CB-3 spider crane alongside a range of other Maeda cranes, including a compact mini crawler. This will also be the first chance to see the new six tonne Klaas K1100 RHX truck mounted aluminium crane and the heavy duty Uplifter GW1125 glass handler. Jekko distributor JT Cranes will have the recently launched lithium-ion powered five tonne SPX650 spider crane on show, as well as its 600kg MPK06 battery powered mini pick & carry crane/glass handler.

For Spierings it is the first opportunity to demonstrate its new zero-emission eLift self-erecting mobile tower cranes in the form of the seven tonne SK597-AT4 and 10 tonne SK1265-AT6. Another form of mobile tower crane will be found on the Ladybird stand in the form of the Montarent M21 self-erecting tower crane mounted on a 4x4x4 self-propelled chassis complete with its own generator. Manitowoc UK will show the 150 tonne Grove GMK 5150L-1 All Terrain alongside a new Potain HUP40-30 self-erecting tower crane. Tadano Demag has yet to confirm the models on show, but this will be its first opportunity to unveil its new merged branding due to take effect in late September.

Böcker UK will highlight the latest version of its largest truck crane model, the AK 52 on a four axle carrier. Crowland Cranes will show two Rough Terrain cranes from two different manufacturers - the Terex RT1080L and Grove RT550E. City Lifting will have a different looking tower crane in the form of its latest Raptor from Artic Cranes, ideal for tight city centre sites.

Kobelco will have its latest 100 tonne Stage V compliant CKE900G-3 lattice boom crawler crane on its stand, while also being the first outing for its new Used Cranes Services. GGR will, as usual, have a busy stand with its Unic range of spider cranes, including the latest ECO battery powered models. It represents Galizia pick & carry cranes and will have at least one new model to show - all this alongside its range of vacuum lifting equipment. Finally, last but by no means least, the Hird stand will have much to discuss, including the chance to see the latest Valla electric pick & carry cranes.



























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#### vertikal days



Boom lifts, scissor lifts, spider lifts, trailer lifts, truck and van mounted lifts, mast climbers and hoists.

Genie is another company with a host of new models to display, including the 14ft GS-1432m and 19ft GS-1932m micro scissor lifts launched last month. along with other E-Drive models. Dingli could well take the award for most new products on its stand, with both diesel and electric versions of its new telescopic and articulated boom lift range, as well as its new high reach Rough Terrain and narrow aisle scissor lifts. Haulotte will be another stand brimming over with new technology, in the form of its all new Pulseo HS18E-Pro electric Rough Terrain scissor lift and 46ft all electric Sigma16 Pro articulated boom lift. Snorkel will launch its new lithium-ion battery powered 27ft S2755RTE and 39ft S3970BE Rough Terrain scissor lifts, as well as the battery powered SL30RTE Speed Level. It will also be ready to provide delivery updates for its new 210ft S100SJ boom lift. For Niftylift the show is the first opportunity to demonstrate its new 50ft HR17 while highlighting a range of the latest technology it has introduced over the past two years. AJ Access will launch the Zoomlion boom and scissor lift range in the UK, while Sinoboom and its UK dealer Pinnacle Platforms will have a number of products including a UK first of its 19ft 1932ME electric scissor lift.

Italian spider lift company CMC will display a number of new spider lifts including the fully hydraulic S18F, the heavy duty 22 metre S22HD and 23 metre S23. This will also be the first show for Access Platform Sales (APS) since it took on the distribution of the LGMG range of scissors and booms, which it will show alongside a number of Hinowa spider lifts, including the 33 metre 33.17. It will also unveil the new

BoSS PA-lift push around scissor lift which is set to replace the current BoSS models. Platform Basket distributor Promax will have the all new 25ft tracked RR9/200 Road Rail self-propelled articulated boom alongside a 20 metre hybrid Spider 20.95 and a 33 metre Spider 33.15. Avant UK will have Leguan's newly redesigned 13.5 metre 135 Neo and 19 metre 190 spider lifts, while new subsidiary Almac Atlantic will have two world first outings on its stand - the 18 metre B1890 from its new Spiderboom range and the ML 3.0 FX MultiLoader tracked carrier, as well as the 43ft Jibbi U-1570 which features a Multitel Pagliero boom on Almac tracked chassis.

The Imer line up of scissor and spider lifts will include its new 15 metre IM R 15 DA lithium-ion spider lift, the first model in its range to feature a dual sigma type riser. Versalift will unveil the all new VTA-135 pick-up mounted lift on a Toyota Hilux and Isuzu D-Max chassis, alongside its type approved VTL-135 van mount and a new hybrid model. CPL /Klubb will look to rival it with its KT range of 3.5 tonne van mounts and new 13.1 metre Palfinger P130A on an Isuzu D-Max 4x4 pick-up truck. More European debuts can be found on the GSR stand with its 21 metre B210PXJ on a 3.5 tonne Mercedes Sprinter chassis, a 22 metre B220TJ telescopic that now features a jib and its newly updated PX/PXE range.

At the opposite end of the spectrum the latest developments in mast climbers and hoists can be found on the Alimak and Mace/Geda stands while CLM will show the latest developments from Maber including its two tonne MBC2000 mast climber alongside its most popular rack & pinion hoists.

















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World firsts from JCB include it's all new fully electric 2.5 tonne/six metre 525-60E compact telehandlers as well as the 5.5 tonne/20.5 metre 555-210R 360 degree model. Snorkel will also have its 626 electric telehandler on show, while Magni will debut its six tonne/10 metre TH 6.10 fixed frame

telehandler announced at the start of the year. GGR will highlight its increasingly popular Faresin Full Electric compact telehandler and might just have news on a larger electric model from the Italian manufacturer.











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## Marketplace

PPE and safety equipment, parts, components and accessories, tyres, batteries, remote controls, software, lifting gear, outrigger mats, cameras, training, finance/insurance, and used equipment.

As always, the Marketplace Pavilion will include a range of safety equipment, software, components, training, financial solutions and electronics suppliers, including a number of lifting equipment manufacturers and suppliers on show such as LGUK, Durham Lifting and Modulift discussing all things 'below the hook'. Tyre manufacturer OTR will have a wide range of non-marking tyres on show including its latest and biggest tyre to date, the 445/50D710NM. Several training companies will be present including Industrial Training International UK, with its VR crane simulator plus a new VR assessment for construction hazard identification. Technology company AMCS will show its all new DCS 61-S anticollision system for tower and mobile cranes. Be sure to check out vWork's messenger app, Trackunit's Kin, inspHire's Onrent and MCS' timesheet mobile app which can help increase efficiency, reduce costs, and improve utilisation.

There will also be a number of new outrigger pads and ground protection products on show including Nolim's new PE sleepers and new stackable jacking blocks and testing ramps from Outriggerpads. Orlaco's sales partner OEM Automatic will showcase new camera solutions, while RHC Lifting will show Autec's range of radio remote controls, including the

latest Dynamic+ and Dynamic+P. Magnetek will demonstrate its wireless controls, including the Flex Pro, MHR radio controller, and Flex VUE transmitter with graphic display.

Load Monitoring Systems will launch the world's first digital pad eye tester for testing lifting eyes and lugs, and eye bolts. Xenith Heights' new products include tool tether kits from Gripps and safety harnesses

from Aresta Heights. Battery manufacturers and suppliers include DC Battery Technologies and Shield Batteries hoping to discuss the latest in battery technology.









## Sylvan safety

Given how tree work poses a range of serious safety risks, Will North takes a look at how access and load monitoring equipment can help arborists plan and perform their work safely. A second instalment to feature in the next issue of Cranes & Access will also look at the important developments in how cranes and new attachments are being used for this type of work.

The difference between forestry, covered later in this issue, and tree surgery is similar to that between farming and gardening. In forestry, the job is usually to fell, transport, and cut entire trees in large numbers. Arborists, or tree surgeons, are more concerned with removing or pruning single trees or small numbers of them, without interfering with the surrounding environment.

In forestry, speed and efficiency are key. For arborists, precision is more important. The task might be to remove a damaged tree from an urban garden, or to stop an overgrown tree from posing a threat to a railway line. On a job like this, a tree can't simply be felled, for fear that it will then damage nearby homes or railway lines. Instead, it must be cut or pruned from the top down, with each piece lowered carefully to the ground. This requires an expert eye to estimate the weight of pieces to be cut, something that varies depending on species and time of year. Anyone working in the lifting industry can immediately sense the risks involved: working at

height, suddenly taking on loads of undetermined weight, using chainsaws at height. Other risks perhaps take a moment's more consideration but are equally important.

In normal lifting operations, the load is taken up from ground level and the load moment indicator will warn before it's too late. Taking the weight of a tree section as it is cut offers no such grace period: if the rigging used is insufficient the load will make its way uncontrollably to the ground.







Similarly, on a normal lift a competent operator will add the load to the hook gradually. Taking a tree section at height applies the full load instantly, possibly with an added dynamic loading, which can both take the lifting device over its safe working load and introduce stresses across the equipment for which it may not have been designed. Slewing gear and telescopic booms are also not built for the regular side loadings or bounce that can occur in tree work.

#### Cutting trees, cutting risks

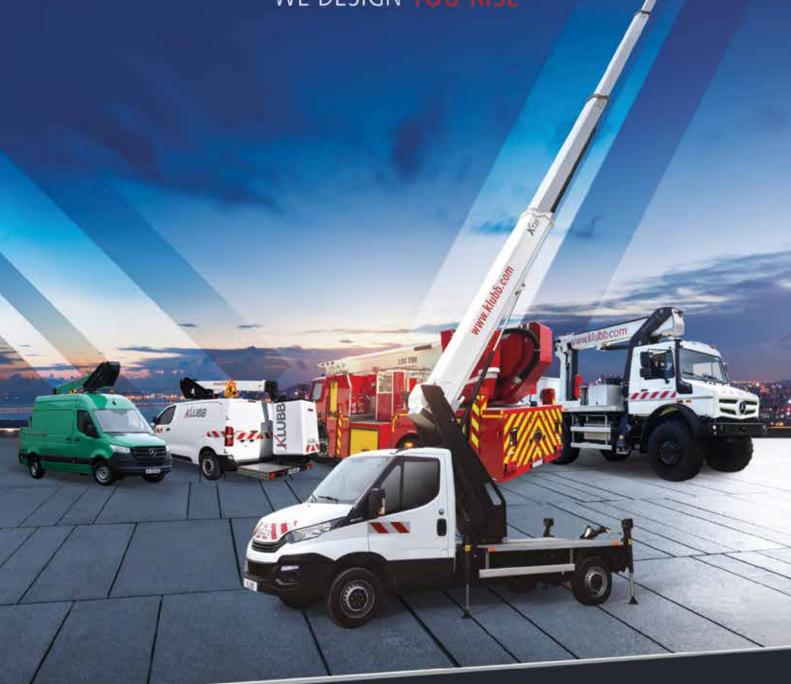
As in many jobs, it is impossible to remove every risk from tree work, but they can be minimised. In part two of this article, we will look at how some tree companies have worked with equipment suppliers to remove the need for work at height entirely. But this approach involves significant investment in equipment. Even with the right kit, climbing and work at height may be unavoidable.

One way to cut risks is to use aerial work platforms. When first promoted in the sector, there was a degree of scepticism. Some arborists may have felt that it undermined a core competence of the job, climbing and work at height skills. Others felt that the equipment would reduce efficiency.

In the UK, HSE conducted research on the use of platforms. RR123 -Use and Effectiveness of Mobile **Elevating Work Platforms for** Tree Work compared a number of different aerial work platform designs, in various working environments. The report's introduction says the use of platforms, rather than climbing, offered "a more safe and secure working environment, reduced effort of the operator when gaining access to the working position and potential increases in effectiveness and efficiency." The HSE also produced a guidance document, Mobile elevating work platforms (MEWPs) for tree work AFAG403.

Shaun Day of Platform Basket distributor Promax Access was involved with the development of RR123 and believes the research helped convince the sector of the benefits of using access equipment: "The HSE were using tracked spiders, vehicle mounts and trailer mounts, and timed different





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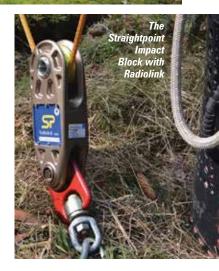
on a 3.5 tonne chassis. This unit offers up to 8.2 metres outreach. with a platform capacity 200kg which may be a little light for some arborist's work. However, from the Klubb line, CPL can fit units in the KT range on the 3.5 tonne lveco Daily, with working heights from 17 to 20.6 metres, up to 12.5 metres outreach and 300kg platform capacity.

Versalift, the main competitor to Klubb/CPL for pickup mounted 4x4 lifts, is planning to unveil a brand new product in this sector at Vertikal Days in September. We may well have more information in the next issue.

#### **Expert estimates**

A platform can take arborists safely to where they need to work without climbing. But there is one core skill that machinery cannot replace: assessing the load before a tree is cut. Load monitoring equipment cannot replace the expert eye and experience, but it can help assess working methods.

David Ayling of FAD Equipment Store helped develop equipment for this application at Straightpoint (now part of Crosby) including the Impact Block, which was developed with the help of Chris Cowell at Treemagineers. Cowell uses the Impact Block to take measurements via a rapid sampling rate. A normal load cell will take measurements two or three times a second. That may sound fast, but it's nowhere



near what Cowell needed. When a section is cut from a tree, whether it's rigged to a crane or to a rope system attached to the base of the tree, dynamic loading puts stresses throughout the system. To understand these forces, the Impact Block captures data at a sampling rate of 100 times a second.

The Impact Block is now being used by other expert arborists. Mika Vainionpää is a climbing teacher at Finnish arborist school, Sedu. He says: "Unlike crane related or other typical rigging scenarios, in tree applications, professionals do not always have an anchor above the lifting point. It's a type of negative rigging. Every tree is different. There are no labels in a tree that say to the climber how much the rig can take. You have to study and learn where those limits are. Branches are



Versalift will launch a new pick up mounted lift in September

jobs being done using different equipment."

He notes that even then many only made partial use of the equipment, using platforms up to 15 metres to avoid the initial climb, but then climbing into the crown to do the actual work. More tree specialists are now buying lifts big enough to work from directly in the crown.

He adds: "The smallest we see now from tree surgeons is an 18 metre lift, while the 20 and the 22 metre versions are increasingly chosen, and we've even got some investing in the 27 and 33 metre machines. The key thing for tree guys is that they need to be far enough away from the base. So, if anything drops, it doesn't cause a problem to the machine."

"Our 33 metre, for example, has 15 metres of outreach, while the 27 metre, has 14.5 metres outreach. Keeping nine to 11 metres away seems to be where tree guys want to be, so it's as much about



higher reaching platforms

outreach as working height." With arborists needing to take all their gear with them, such as chainsaws and protective gear, platform capacities need to be at least 250kg.

It has become a significant part of Day's business. He says around three quarters of the smaller spider lifts are sold to arborists. They often have just a handful of staff, so take just one or two lifts. However, the specialist rental sector is growing. One of Day's customers, Cutting Edge Plant Hire, now runs a range of aerial lifts from 18 to 27 metres, alongside its other equipment. The company also offers rigging gear and other tools, via its store Arb Bits.

#### On the road, in the woods

Getting to the job also needs to be considered. Spider lifts are good in that they can be transported by a two axle trailer but depending on the type of work, some prefer a vehicle mounted platform. Klubb subsidiary Cumberland Platforms offers what it calls an All Terrain Arb Truck or ATAT. It has just launched the first platform, a 13 metre Palfinger P130 on the new Isuzu D-Max pickup truck, with suspension upgrade to 3.5 tonnes and all terrain tyres. The unit offers a 240kg platform capacity and 6.2 metres of outreach. It can operate within the vehicle width, reducing risks when working alongside roads.

The new model includes a 24 degree departure angle and can tow up to 3.5 tonnes for a gross train weight of seven tonnes, critical for arborists who want to tow a chipper or trailer.

CPL is now the distributor for the full Palfinger Platforms product line. It has the 20 metres P200 as a handy tool for tree work, mounted

#### arborists

one thing, while leaves and smaller branches can limit the force, but logs can be more unpredictable."

Vainionpää used a 60kN Impact Block to measure and record the impact of the heaviest weights at the top and base anchors. Impact Block can be installed at the top of a tree or lower in the canopy before starting to cut limbs off.

"The Impact Block adds weight and rigging to our projects, but that is outweighed by the education it gives us. Trees are very complicated and normal rigging rules don't apply. However, we are at the lower end of our learning curve with this technology and must continue to conduct tests and deliver education before it can make a widespread difference across arboriculture. For that reason, it remains more of a training product than a site only tool."

While trainers and academics like Cowell and Vainionpää can use load cells to develop new methods of safe, efficient, working, load monitoring can also be a useful tool on the job. Steve Connally of Adaptable Aerial Solutions in Virginia, USA, uses a 25,000lbs/11,340kg Radiolink Plus load cell in his regular work, having initially put it to work a couple of years ago in Chesapeake, Virginia, to remove loblolly pine trees near a residential property, one of which had been struck by lightning. He used the wireless load cell below the hook on his Palfinger crane, to

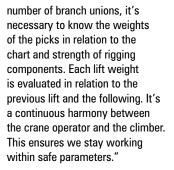


monitor each load as it was cut. Four arborists worked at heights of up to 28 metres, to bring down the trees piecemeal. The team employed spliced eye balancing and endless loop slings. The balancers were tied with a non-binding hitch and the round slings were set in a choker configuration using shackles and hooks for attachment at the choking point to prevent fabric on fabric friction.

Wood weights were calculated in advance using a green weight log chart that provides a general guideline by species and size. On-site, the load cell recorded the smallest pick at 1,625lbs/737kg and the heaviest at 6,500lbs - or just under three tonnes.

Connally said: "The crane doesn't have an LMI like a cable crane. The controller shows the percentage of load on an LED light cluster. Since the wood weight varies considerably with environmental factors, time of year, and the

Mika Vainionpää of Finland's arborist school, Sedu, used a 60kN Radiolink Plus load cell to monitor loads while working



#### **Climbing to new heights**

While many young people may join the industry eager to spend their working lives climbing, the strains of manual work and responsibilities of middle age may make the risks of work at height far less appealing. With the right access equipment, tree workers can continue to work safely and efficiently, allowing experienced arborists to continue without risking life and limb. The latest load monitoring equipment can help develop their expertise still further. In the next issue of Cranes & Access we take a look at how users in Europe are trialling new techniques from other parts of the world, including crane attachments that can eliminate work at height for some applications. And we'll look at new guidance on the horizon to help such new equipment to be used safely.

#### Resources

RR123 - Use and effectiveness of mobile elevating work platforms (MEWPS) for tree work

www.hse.gov.uk/research/rrpdf/ rr123.pdf

Mobile elevating work platforms (MEWPs) for tree work AFAG403: www.hse.gov.uk/pubns/afag403.htm.

Other HSE Arboriculture and Forestry Advisory Group guidance:

www.hse.gov.uk/treework/ resources/publications.htm















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#### arborists Cta

## From hoe chuckers to helicopters

When we speak of the tree care market we naturally think of urban or semi-rural neighborhoods and pruning or felling in restricted or difficult to reach areas. But there is another side to tree work, where lumberjacks and 'difficult to reach' takes on a totally different meaning. Saul Chernos takes a look at lifting in the Canadian timber and logging industry.

Canadian forestry has long captured the world's attention. From the earliest days of European colonialism, when immigrants cleared massive tracts of land, Canadians have been reputed as drawers of water and hewers of wood. The Lumberjack Song, a 1969 musical hit by Monty Python, poked gentle fun at a masculine, back to the woods image, with the star attraction wearing a plaid flannel shirt and suspenders (braces), surrounded by uniformed Roval **Canadian Mounted Police. In** the 1990s, television screens the world over captured images of environmentalists protesting the clear-cutting of old growth in Clayoquot Sound, British Columbia, and Temagami, Ontario.

Forestry is serious business in Canada. Natural Resources Canada estimates it contributes more than \$24.6 billion to GDP and directly employs more than 200,000 people - 1.1 percent of Canada's working population. The industry's ups and downs regularly make headlines, from struggling pulp and paper to softwood lumber trade disputes, to shortages of wood products induced by Covid related





supply chain bottlenecks. Still, tree felling continues apace, with a wide variety of lifting systems and technologies employed.

Forests across Canada differ in terms of the species diversity, and physical landscapes, resulting in different tools being used for extraction and transport to market. Even in a single province like British Columbia, the range of technologies used can be considerable. Gerard Messier, program development manager with the not-for-profit BC





Forest Safety Council, identifies significant differences between interior and coastal operations.

In the interior, logging begins with the feller buncher, a tracked machine with a saw blade and grapple extension. "Basically, it reaches out, grabs the tree in its clamp before cutting it and placing it on the ground," says Messier. A four or six wheel skidder then raises one end of the logs with its rear mounted hydraulic arm and drags them to the nearest logging road where the branches and tops are removed. Loader cranes then lift the stripped logs onto trucks



for transport to sawmills and other destinations."

Coastal logging differs dramatically, with temperate forests yielding some of Canada's largest old growth, and the terrain often too steep for tracked machines. "A typical coastal operation will be dropped by a feller using a chainsaw to insert cuts into the base of the tree," Messier says. A hoe chucker, a tracked machine designed specifically to navigate the terrain, drags the felled trees towards the nearest road. But if the land is particularly steep, a cable varder positioned on the road uses a winch with a cable mounted grapple to reach felled timber. The hoe chucker is attached to an anchor - usually a stump with a block or a pulley on the end, to allow it to go up or down the slope. "Imagine the machine sitting on the road," Messier says. "It lets out the wire rope, drops the grapple down, grabs the logs, and then tightens the slackened wire and pulls the logs to the roadside."

Based in Nanaimo on Vancouver Island, Maritime Timber provides hand felling for industrial logging operations that employ skidders, hoe chuckers and loaders. Senior



A Madill swing yarder/cable yarder in action brings logs to the nearest road with blocks, grabs and cables

project manager Brendan Flanagan says cable yarders are used for super steep, worst of the worst operating conditions. The machines, with a gantry on top of a carriage, are relatively mobile, with multiple lines that get strung up through a system of pulleys, snatch blocks and tension lines. "They can either run chokers or grapples. The logs are partially or fully elevated in the air depending on the specific cable system being used and dragging one end is sometimes necessary to overcome the massive size of the timber found in British Columbia."

When terrain is even more challenging, forestry companies will turn to heavy lift helicopter operators such as Erickson's Canadian Air-Crane subsidiary to remove the felled timber. The Erickson S-64 Air Crane lifts up to nine tonnes, while the Sikorsky S61 and Kamov 32a manage up to 4.5 tonnes. Medium lift helicopters, such as the Kaman K-max, manages 2.7 tonnes, while Bell has a range of models, with capacities between two and three tonnes. "There's a variety of helicopters used depending on the size of the timber and the terrain," says Bob Hawthorne, chief pilot with Canadian Air-Crane. The capacity is affected

by variables such as altitude, temperature, and a helicopter's fuel load. Terrain also affects airflow, which in turn can affect the maximum weight. Helicopters are costly to run, of course, so their use is determined based on the overall value of the haul and also necessity. "They're for when the economics allow, so typically large old growth forests with cedar or high grade fir and spruce," says Flanagan. "They're lifting 11,000lbs (5,000kg) logs pretty frequently and show up for hilly logging jobs where they don't have roads. If a First Nations band, licensee or landowner wants to log an area where they don't want to build roads, it can be done by aerial transportation." It's vital to maximise load capacity and hasten turnaround times for a fully productive cycle on the machine, so units will be stripped of non-essentials such as seating. Some old growth trees are so enormous they'll be sliced down the middle, with halves weighing in the order of 9,000lbs (4,000kg). Crews then use a winch and belly hook to bring the logs down to the ocean, where a barge tows them to market.





While coastal mountains can be steep and challenging, so are many interior ranges. Harvesting from the abundant spruce, fir and lodgepole pine in Crowsnest Pass on the Alberta side of the Canadian Rockies, Caber Logging works some of Canada's steepest, hilliest terrain. A recent profile in Logging & Sawmilling Journal described the family business as "the mountain goats of the forest industry" with good reason. The daily routine of felling trees, hoisting them onto logging trucks, and hauling load upon load to the local sawmill can be gruelling and fraught with risk. Slopes of up to 50 percent add to the heavy lift challenges requiring owner Kent Strandquist and his team to get creative. Caber relies largely on Tiger





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Cat skidders, which have tracks suited to steep inclines, to retrieve felled trees. But when landscapes become truly challenging crews bring in hoe chuckers to reach otherwise inaccessible places, grab trees and move them to more level ground. Caber converted one Hyundai 250 tracked excavator, into a hoe chucker, which the crew affectionately named Chucky.

While steep slopes are a fact of life for Caber, Strandquist acknowledges initial nerves when handling equipment such as feller bunchers for the first time in challenging circumstances. "When you first start it feels scary. Once you get used to it, you realise it's just the way the machine is, and it doesn't bother you anymore. I





grew up with this. My dad was a lifetime logger, and my family all did it." Still, Strandquist recognises the job's inherent dangers and Caber has a rigorous training process backed by a 300 page manual drafted with mountains in mind. "I haven't had anybody hurt on my crew for years and I'd like to keep it that way," he says, citing overconfidence and cutting corners as leading risk factors. "On a lot of the machines. we now have two way radios to communicate with each other," Strandquist says, pointing to safety enhancements such as cabs placed so operators sit level with materials being handled in their immediate line of sight.

In Ontario, Dan Searson at H. J. Searson owns more than 2,500 acres

> of forest in the Ottawa Valley. The business, started by his father Harry in 1960, offering pulp and lumber brokerage services, now harvests hard and soft woods, including red and white pine, spruce, oak and



maple. The company designed its own machine for handling and loading felled trees onto trucks, in the form of the Serco loader. "Manufacturers were getting too big and weren't looking out for the customers, who began to complain, so we saw a niche," says Searson. The company formed a 50/50 joint venture with Two Harbors Machine Shop in Minnesota, which manufactured the products.

Two Harbors recently acquired Searson's shares, but H. J. Searson continues to distribute the product line which now runs to 10 models, some being high mount loader cranes, and others more specialised. The Serco loaders used by Searson can handle a couple of five metre logs weighing up to 4,500kg, topping trucks up to their legal 4.1 metre maximum height. Searco also offers selfpropelled and stationary version of the loaders for sawmill type applications.



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## Surge in membership growth

Applications for ALLMI membership have soared since the start of the association's current financial year, with levels increasing eight fold compared to the same period in 2020.



Chief executive Tom Wakefield said: "For obvious reasons, 2020 was slower than usual in terms of membership applications

and whilst we expected an improvement this year, growth in quarter one has exceeded all expectations. We have seen a surge of new members joining and if sign ups continue at the present rate, it could turn out to be our best year ever on this front."

Hallett Silbermann, a leading provider of logistics solutions and specialist heavy haulage services is an example of the new members. Operations director, Charlie Threapleton said: "We have been using ALLMI's training courses for many years, so becoming a member of the association was a natural next step for us. The joining process was incredibly thorough and included a full review of our lorry loader activities, mapping them against legislative requirements and industry good practice."

"We are proud to have met the standard and attain a membership status that carries significant weight within the lorry loader industry. We now look forward to receiving an excellent level of ongoing advice and guidance, which will help us to achieve continual advancement and compliance."

Wakefield added: "The industry recognises the value in dealing with an ALLMI member and the investment in quality the company will have made to have the right to display the association's logo. Along with our membership services, this credibility provides us with a strong foundation for membership retention and growth, and is the reason we have experienced such a significant upturn following the events of last year."

ALLMI provides membership for manufacturers/importers, installers, service companies, ancillary equipment suppliers, fleet operators and site operators. Annual subscriptions start at just £450. Contact ALLMI for details of becoming part of the strongest voice in the UK lorry loader industry, or visit www.allmi.com/membership

#### Lift Planning Calculator -Coming soon

ALLMI is in the final stages of developing its new Lift Planning Calculator for use by trained and competent Appointed Persons. The tool will facilitate a range of calculations to assist with the lift planning process, covering issues such as stabiliser loadings, mat sizes, rated capacity utilisation, permissible wind speeds and sling selection. The tool will automatically populate calculation results into a text template

that can be copied directly to a lift plan set out in the ALLMI recommended format. Look out for further details

in future

issues.





#### Training boom

The association has also experienced a 70 percent increase in demand for training so far this year compared to 2020, with training levels on several courses even exceeding those experienced in 2019.

ALLMI technical manager, Keith Silvester, said: "ALLMI has long been regarded as delivering the industry's leading training programmes for members of the lorry loader lifting team and these latest figures further demonstrate the scheme's credibility. Whilst training levels obviously dropped for a period in 2020, we made a strong recovery in the second half, and that progress has carried forward into 2021. If the current rate of demand continues, it could well result in a record year."

"To maintain and further strengthen this position, engagement with our numerous committees and working groups is essential, as it helps ensure that training remains relevant, up to date, and the benchmark for safety and good practice. With developments to certain courses well underway, we have a significant amount of consultation planned for the second half of this year and we look forward to keeping the industry informed."

As the UK's only accrediting body to provide specialist training for each member of the lorry loader lifting team, as well as engineers, instructors and managers, ALLMI's courses are approved by CSCS and delivered to the highest standard. Visit www.allmi.com/training for further details.

#### Welding repairs

Following a recent enquiry from the wider industry, ALLMI's Technical Committee has reconfirmed the association's long held position on welding repairs to loader cranes and attachments. Any weld on a loader crane or attachment structure - or component - should only be undertaken if it is approved by the manufacturer and is in accordance with their given welding specification. Completed welding repairs must also be subsequently signed off by the manufacturer. This process should be fully documented and followed by completion of the appropriate tests.





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



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#### NOS Controlling Lifting Operations review

A working group has been formed by the Construction Industry Training Board (CITB) to review the National Occupational Standards (NOS) for Controlling Lifting Operations, which are used as a basis of National Vocational Qualifications (NVQs) and used directly as the evidence requirements for Scottish Vocational Qualifications (SVQs).

The working group, chaired by the CPA, includes representatives from the lifting sector, training providers, other associations and contractors. Broken down into the following three qualification structures, the lifting control standards have been in use with very few changes since they were developed in 2007.

- Slinging/Signalling at Level 2
- Supervising Lifts at Level 4
- Planning Lifts at Level 5

The working group has virtually completed its review with updates and minor amendments with the industry now being given a chance to comment on the amendments. Units that have been reviewed include:

- Unit VR529: Plan Lifting Activities
- Unit VR530: Plan and Establish Safety, Health, Welfare & Environmental Systems for Lifting Operations
- Unit VR531: Supervise Lifting Activities
- Unit VR402: Slinging and Signalling and the Movement of Suspended Loads

The qualification structures for both Supervising Lifts and Planning Lifts incorporate units taken directly from construction management and supervisory suites. However, these did not form part of the review.

The units, along with a feedback form, can be downloaded from: www.cpa.uk.net/cpasurveysandconsultations.

All feedback will be collated and reviewed by the working group at its next meeting in order to meet CITB publication deadlines.

#### Update to CAA CAP1096

As previously reported, the Civil Aviation Authority (CAA) has deferred the implementation date of its updated document, CAP1096: Guidance to crane users on the crane notification process and obstacle lighting and marking. The intended changes will not apply until 1st April 2022 at the earliest, while the CAA runs a phased trial programme with selected users. In the meantime, crane users not involved in the trials are advised to follow the notification requirements described in CPA Technical Information Notice (TIN) 039C - which is cited within the 2013 version of CPA1096. TIN 039C can be downloaded free of charge at:

www.cpa.uk.net/crane-interest-group-publications-guidance or at: www.cpa.uk.net/tower-crane-interest-group-tcig-publications



## Standards based (Trailblazer) apprenticeships update

Registrations and the number of training providers for equipment based occupational apprenticeships continues to grow, coupled with an increasing interest by employers in the taking on of apprentices. The latest figures show the following uptake so far:

Hire Controller - 63 registrations mostly in the West Midlands and South

East regions. Six end point assessments have been completed since the launch of the apprenticeship in 2019.

Lifting Technician - 17 registrations, predominately in the South East and Yorkshire/ Humber.

**Construction Equipment Mechanic** - No registrations listed. A number of providers

have expressed an interest in adding it, and the CPA has appointed an apprenticeship/skills delivery ambassador to work with providers and employers, to encourage the take up and advise on the particular aspects of each of the equipment based occupations. Available training providers and assessment organisations for all equipment based apprenticeships are listed at: www.cpa.uk.net/trailblazerproviders

#### 80 years of the CPA



Founded in 1941, 2021 marks the 80th anniversary of the CPA. Originally known as the Contractors Plant Association it was established by a group of contractors and hire companies, engaging with the Ministry of Works regarding the supply of machinery during World War II.

The first Annual General Meeting was held in September 1941, with Harold Spragg becoming the first president and chairman. By the end of the War, the CPA had accumulated 100 members and was actively advising on rental issues, while the concept of equipment rental was already established in the UK.

A significant achievement was the creation of the Model Conditions in 1951, with various updates and supplementary conditions added along the way. From the outset, the CPA has been governed by a council composed of elected representatives from the membership, with their expertise and support helping the association grow and prosper.

By 1961 more equipment was being purchased by rental companies than contractors, so the name was changed to the Construction Plant-hire Association, and the first full time staff were recruited and an office opened. The oldest member still trading is Plantire of Ashford, Middlesex, which joined in July 1941 as an excavator rental company, today it focuses on hoists and transport platforms. The second oldest CPA member still in business is crane and telehandler rental company Marsh Plant, which joined in 1950.

Membership now tops 1,700, with new members joining every week.





Crane Hire in CPA's early days





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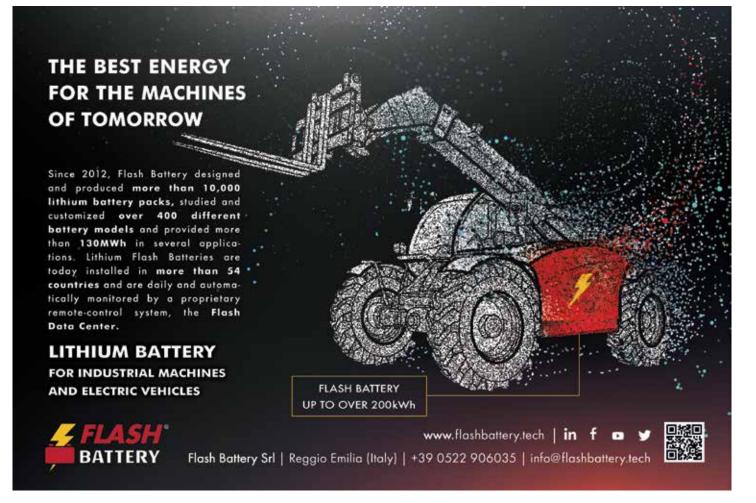
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#### **IPAF's ePAL app**

Last month IPAF's new mobile app for operators went live as it aims to bring training certification into the digital era and reduce the environmental impact involved in issuing physical PAL Card and training certifications.

The new ePAL app is free to use and features the operator's digital IPAF PAL Card, logbook and safety guide. It also allows operators to receive the latest tips and safety information and for them to share qualifications with site managers quickly and easily. It also phases out paper certificates and the manual logging of operating hours and speeds up the processing time and resources



required to issue training certificates and PAL cards.

Chief executive Peter Douglas said: "A typical year's output of IPAF PAL Cards and certificates amounts to a 130 metre stack of printed plastic and paper, shipped from supplier, to IPAF, to the IPAF training centre and on to candidates. After five years, the candidate repeats the whole thing again. The app helps reduce waste and cost. Its development has been a key priority since I came on board and when we teamed up with Trackunit to roll this out."

Trackunit chief executive Søren Brogaard, added: "This is a big step up for the industry when it comes to safety and efficiency. We know filling out logbooks and keeping them up to date can be a challenge. This app provides contractors and operators secure access to equipment and a convenient way to document machine activities. We can also use the app to encourage and make it easier to report accidents or near misses. My hope is we can all contribute to building a safer, digital future for operators."

The app is available now in the UK and Ireland in English, with other languages to follow.

## Reporting portal adds extra languages

IPAF has added additional languages to its worldwide accident reporting portal and a new interactive dashboard for members to access the latest available accident data. The reporting portal was updated last year to make it easier to report an accident or near miss, which are particularly useful in preventing more serious accidents. It also now allows multiple users per company and for members to register subsidiary companies. The new dashboard, available via the members area of the IPAF website, allows users to view charts and access configurable graphs covering accidents sorted by date, country and incident outcome - all of which have been anonymised.





#### Members urged to support in-work service technician training

IPAF is encouraging members to embrace the options for in-work training to support and certify their technicians, as the first wave of candidates complete their level 2 and level 3 NVQs under the scheme.

IPAF's Richard Whiting, who led the development, said: "The first candidates

have now completed their NVQs and are certified as service technicians. They now have a number of options open to them to continue training and are a step further along the route to IPAF Competent Assessed Person (CAP) status."





IPAF focus

to complete the six day course to attain his level 2 NVQ, added: "I'd recommend this course to anyone looking to get into this line of work who has little to no prior knowledge, because it breaks down all parts of the job in a way that's easy to understand. It is challenging, rewarding and interesting."

For more information visit: www.ipaf.org/en-gb/industry-training

#### Toolbox Talks on fall protection equipment

New Toolbox Talks, designed to share specific safety messages on work sites, are now available from IPAF. They consist of two short presentations aimed at explaining the use of personal fall prevention equipment and what to look for when checking the equipment before use.

Peter Douglas said: "These Toolbox Talks are a simple way for employers to get safety messages across. Complacency and overfamiliarity with a task can be a danger in every workplace, by introducing new topics you can ensure

safety briefings stay fresh and help concentrate minds. Even experienced operators will benefit from being reminded of the safety basics that sometimes get forgotten or overlooked during a busy working day."

The Toolbox Talks can be downloaded from: www.ipaf.org/toolboxtalks



#### Have your say on red diesel

IPAF is to work with members over concerns about the planned end of UK tax relief on red diesel for construction machinery, which is due to come into effect next year. To share your views on this issue with IPAF, email: Richard.Whiting@ipaf.org



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## Two injured as tower scaffold collapses

A facilities and construction management company, and its director, were fined following the partial collapse of a six metre scaffold tower, which left two men seriously injured. One suffered broken ribs, tendon damage and suffered from depression and short term memory loss ever since. The other suffered three broken vertebrae and has been diagnosed with post-traumatic stress disorder.

An investigation by the Health & Safety Executive found that the tower was not suitable for the type of work (demolition) being undertaken. It was not erected by a person trained and competent to do so, had been erected to a height above the manufacturer's recommendations and was loaded with a weight greater than the safe working load stated by the manufacturer.

Invictus Facilities and Construction Management of Pontprennau, Cardiff

pleaded guilty to breaching sections of The Health and Safety at Work Act, 1974, and was fined £106,000 plus costs of £8,501. Company director Simon Paul Wright pleaded guilty and was sentenced to 150 hours of community service.



PASMA chairman Roger Verallo said: "This story highlights the devastating physical and mental effects that falling from a tower scaffold can have on people. That's why it's so vital that managers are trained to plan and supervise such work and know how to select a suitable tower for each job. In addition, towers must only ever be assembled and dismantled by properly trained workers who know how to ensure it's safe, stable and structurally secure at each stage. In this case, simply following the manufacturer's instruction manual would have prevented the tower being erected to an unsafe height and exceeding its safe working load. This prosecution is an example of the financial and personal consequences rightfully imposed on companies and their directors when they fail to meet their responsibilities."

#### For your diary... Tower Week 2022

Tower Week was established by PASMA to bring the whole industry together to promote positive stories, images and messages about mobile access towers, prefabricated tower scaffolds and low level work platforms. The international event aims to inspire people by showing them the different ways they can use towers and to help everyone work more safely by showcasing good practice. It's an opportunity for all those who work with

towers to celebrate their commitment to safety and all the exciting things that towers have helped them achieve.

The next Tower Week event will take place from 6th – 12th March 2022. For more information visit: pasma.co.uk/tower-week



#### New training course – Linked Towers for Users

Sometimes one tower just isn't enough. When you need a bit more space, for example to work on the façade, a linked tower - two or more

towers joined together - provides that extra platform length. Anyone planning to use them will be interested to know that PASMA has launched a brand new one day training course 'Linked Towers for Users' aimed at experienced staff who have already completed PASMA Towers for Users training.



#### Cta PASMA focus



Alison Thewliss MP (L) with Peter Bennett of PASMA at the launch of the APPG report on saving lives while working at height

#### Support the All-Party Parliamentary Group on working at height

PASMA supports the UK All Party Parliamentary Group (APPG) on working at height, which is chaired by Alison Thewliss MP. Anyone with an interest in height safety is welcome to attend the next meeting, which is being held online at 16:00 on Monday 12th July. Attendees will hear from the No Falls Foundation about its upcoming No Falls Charter, a standardised action plan for businesses who commit to striving for zero falls from height. It will bring together good height safety practices from existing standards, policies, regulations and industry bodies into a single document that can be adapted and implemented by any organisation. The meeting will focus on the aims of the Charter as well as explore the importance of reporting near misses. For more details, visit: workingatheight.info

Towers on Stairways

Stepped towers, stairway access towers, towers on stairs... they have various names, but all do the same thing, they are designed for use on stairways where access is tricky. Typically used for painting and decorating,

stairways where access is tricky. Typically used for painting maintenance and repair work over stairwells, they can also be used anywhere that the ends of the tower will be at different heights. Anyone thinking of using one should ask about PASMA's new and improved one day 'Towers on Stairways for Users' training course. Aimed at experienced users it combines theory and practical work to equip delegates with the specialist knowledge they need to safely assemble, use and dismantle a stairway tower.





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

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#### Powered access apprenticeships -Back to the future

The first IPAF approved aerial lift technician apprenticeship courses are now well underway in the UK which are, in many ways, similar to the traditional mechanic type apprenticeships from the 1950s that were formalised by an act of parliament in 1964.

Since the advent of the 'modern apprenticeship' and the structured frameworks in the mid-1990s, which were updated in 2009, the system seemed to lose its way. More and more school leavers were steered towards university based non-technical forms of education. In spite of the fact that apprentices earnt a salary while gaining a qualification, as well as avoiding the burden of student debt. A resulting skill shortage has also meant that many of those that followed the apprenticeship route of higher education are earning more than the average university graduate! Fortunately, there appears to be a shift back towards apprenticeships - although this is yet to show up in the numbers.

Within the aerial lift or telehandler industry, the closest apprenticeship courses available for aspiring mechanics/service engineers was in 'Plant Maintenance', which focused on construction equipment in general, largely excavators and other earthmoving equipment. While they included a good grounding in engines, hydraulics and basic electrics - all of which are present in aerial work platforms and telehandlers - they fail to cover specific aerial lift related training, such as safety inspections critical for working at height equipment or platform operation. At the same time, they also included many

aspects that are of little use for those working with aerial lifts.

IPAF has been working on changing this for some time, however it was not until the latest changes to the UK apprenticeship schemes, and the various support available, that it became possible. A good deal of committee work and investigation also led the federation to discover that the forklift industry faced similar issues. The FLTA, BITA and IPAF therefore got together and, finding that their requirements were exceptionally similar, began to jointly develop the Level 3 Lift Truck and Powered Access Engineering Technician apprenticeship.

The apprenticeship will not only give students from both fields specific education on both types of equipment, but also take apprentices a step further towards gaining IPAF Competent Assessed Person (CAP) status. The fact that an increasing number of forklift rental companies are now also running aerial work platforms is also proving an additional attraction, along with benefits for the trainees.

The first eight apprentices to set out on the three-year programme started their block release college training in late April at the North Warwickshire & South Leicestershire College. Spread over 10 weeks of college training each year, the modules include



the service, repair and maintenance of forklifts and powered access equipment, as well as the inspection and maintenance of vehicles and equipment, diagnosing and repairing faults. The course costs £14,000, but if you are in the UK and pay the Angreaticeshin

are in the UK and pay the Apprenticeship Levy it is usually covered by a grant from the government,

or rather from the Levy you pay! If you do not pay the Levy, you are still only required to cover five percent of the cost - so in this case £700 per student for the three-year course. Interest in the course and the apprenticeship programme is such that the college has already extended it to include an additional cohort in September - which is already fully subscribed - and two further intakes in October to meet demand. F-TEC in Swindon also operates a rolling intake and at the same time a number of other colleges are considering adding the course to their syllabus.

IPAF's UK & Ireland general manager Richard Whiting, who played a leading role in the development of the 'IPAF Roadmap', said: "It is very



positive that this newly developed pathway to certification is already proving very popular, and that both existing employees in the powered access workforce and new recruits to our industry are set to benefit as part of this first tranche of inductees. We are also pleased to welcome North Warwickshire & South Leicestershire College as an associate member, the second wave of inductions will occur in September. Wider interest is such that the college has already extended its next intake."

"Instructors at the college are all experienced engineers and lift truck instructors and they will be upskilling and increasing their knowledge of powered access by completing their IPAF operator

> training and MEWPs for Managers course. IPAF is also providing the college with Andy Access safety posters, technical guidance documents and other relevant materials, while member companies such as CTE, GT Access, Power Towers, Nationwide Platforms, Skyjack, Versalift, Spanset and Niftylift have all provided equipment for apprentices to train on."



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## IN THE NEXT ISSUE OF C&a



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

The issue will include:

#### The Official Vertikal Days Show Guide

Vertikal Days is moving to Peterborough this year on 22nd & 23rd September. Preparations are well underway for what is likely to be one of Europe's first and largest live crane, access and telehandler event of 2021. With so many machines making their European and UK debuts, alongside countless new releases, it is not a show to be missed! Every exhibitor will be included, along with details of products and services on display, in this 24 page show guide which will feature as a pull-out from the centre of the July/August issue of Cranes & Access magazine.





#### Loader cranes

In this annual feature we will take at look at new product developments and techniques, along with an overview of the market, covering loader cranes and new product launches. Have you got any news or information to add?

#### Slab electric scissor lifts

Always plenty to talk about in the electric scissor sector – we'll bring you all the latest so if you have any news, we'd love to hear from you.





#### Software & Technology/BIM

We'll be looking at what's new in software and technology for the access & lifting sectors.

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

Every issue of **C&A** is also packed with our **regular columns**, **news** plus **reader's letters**, **books**, **models**, **training**, along with the latest news from the **CPA**, **ALLMI**, **IPAF** and **PASMA**. Whether you are looking for local or global markets for these products you simply cannot do better than to promote your products in Cranes & Access.

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## XCMG Platforms

The aerial work platform sector is not particularly well served when it comes to scale model replicas, but XCMG has commissioned two from its range. They are made by Yagao in 1/35 scale, which is a popular scale for Chinese manufacturers. The 92ft XGS 30 is a selfpropelled telescopic boom lift with a 30 metre working height, while the 46ft XGA 16 is articulated model with a 16 metre working height.

#### Both models come in XCMG branded boxes, and no assembly is required. They are made to a similar standard.

The XGS 30 chassis is fairly simple, and although the modelling suggests extendable axles, the functionality is not implemented. A few graphics are applied to provide detail, including for the control panel. The XCMG name on the counterweight is embossed in.

The telescopic boom has three sections with some graphics. The boom lift cylinder has a plastic barrel and there are no hydraulic hoses. This large model rolls well, and both axles have steering with a good range of movement. The superstructure rotates smoothly. The boom raises and holds any pose.

The basket is an all metal part with an adjustable angle to maintain level, and also rotates. The model has reasonable stability with the boom fully extended over the side, but extendible axles would be an improvement.

The XGA 16 is also a fairly simple model. Some graphics are applied, and the rounded shape of the

<complex-block>

superstructure covers and counterweight are modelled well. The XCMG name on the counterweight is embossed, and the graphics for the control panel are finely detailed.

The model rolls well, with steering on the front axle with a good range of movement.

The two risers and base boom section are all metal sections, as are the telescopic section and basket. The boom raises easily with just a little looseness in the cylinder so not every elevation can be posed.

The basket angle is adjustable to maintain a level attitude. It also rotates.

These are both straightforward and robust models which are decent value based on the prices charged from China.

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

tal scopic boom little r so not osed.						
Cranes Etc Model Rating						
Packaging (n	nax 10)	<b>XGS 30</b> 7	<b>XCA 16</b> 7			

		XGS 30	XCA 1		
	Packaging (max 10)	7	7		
	Detail (max 30)	22	22		
Ł	Features (max 20)	12	13		
	Quality (max 25)	19	19		
	Price (max 15)	12	12		
	Overall (max 100)	72%	73%		







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XGS 30 shows

off its reach

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## letters

# The following letter came as response to the editorial/

comment in the last issue of Cranes & Access talking about resistance to trying new things and new ways of working - even when they are safer and more efficient.

#### Dear Sir,

"We've never done it that way" has been an evil response I often heard in management to changing ways of doing something. Now we call it thinking outside the box. I truly enjoyed your article, sir.

In my work as an arborist the phone calls I get for an estimate often start with the prospect asking if I have a bucket truck. Their assumption is if I have a bucket truck I am automatically or assuredly qualified to work on trees. When I answer that I own a Niftylift trailer lift, it yields dead silence. Similar to your daughter's preference for spaghetti sauce. Then comes the challenge to get a service call commitment for the estimate when the caller expects this to be free. I answer that request by asking where can I get free gas to come to their home.

Another case about making changes happened this way. 15 years ago, I commenced to make and sell a gyroscope spinning top of which Sir Malcolm North and wife Sylvia have a pair called "Zorro". In the Spanish language the word Zorro means foxy or sly. Approval to make that toy top was required at the Ozark Folk Center state park where I worked for 15 seasons operating a spring pole lathe in the craft village. The Craft Director at that time approved adding that item to my product line. She asked how much I would sell it for, to which I answered \$19.95 US. She said "Oh, we have never sold a toy for \$20 here". I responded, "I need \$20 to make a profit and you'd better get ready for the commission income". I really didn't know how many would sell but the fact is 1,900 units have generated \$38,000. She is retired and living here and when we cross paths, she beams a broad smile. Your daughter might enjoy this story. Regards,

Sherm Anderson Best Tree Service

## **Trailer Lifts**

Your article on trailer lifts in this month's magazine came at a perfect time for me looking at exactly this type of equipment. I have found it hard to obtain all the information I wanted and felt I needed. For someone whose day job is not access equipment its not easy - if I had wanted a scissor lift or a boom machine no bother but no one is pushing new trailersno wonder second hand prices are sky high finding them was easy. So just wanted to say thank you and to suggest that maybe you let the powers that be know that for people like me it's not easy to find enough information so that you feel you have had a good shop around before deciding. The following letter crossed in the mail with our last issue which included an obituary to crane veteran John Rome.

#### Hi Leigh

I wanted to say a few words on the sad passing of John Rome, we did an enormous amount of business with him over the last 40 years buying Grove and then Kato cranes from him. He also worked with us selling our used equipment.

The following is the Eulogy I read at his funeral.

Martin Ainscough

## John Rome Funeral Monday 24 May 2021



I first met John in the late 1970's. He was a young fresh faced crane salesman and we instantly hit it off. John was working for Fords at Halewood as a tool maker, and he saw an advert for a sales role with Cole's Cranes. Before his interview, in true John style, he swatted up on anything to do with cranes and, with his technical background, he landed his first sales role !

John Rome

He was interviewed by a Cole's veteran named Ted Tart who was obviously impressed with John's ability to quickly learn sufficient knowledge to go out and sell cranes.

We had only recently started Ainscough Crane Hire and John was already selling cranes to our cousin Sam Ainscough. Another customer of John's was Fox Brothers in Blackpool where he met George Davis who also became a good friend and is here today.

Unfortunately for John's wife, the combination of Sam, George and myself as customers were a bad example as we encouraged John to spend more time in the local pubs than was good for him !! We spent many happy hours together and this is when we became firm friends.

Fortunately, in the early 80's we all grew up and started to take our family responsibility much more seriously. Around this time Cole's Cranes were taken over by American manufacturer Grove. John flourished with this forward thinking company, and he established himself as the Northwest's premier salesman.

We spent many happy times at the annual Haydock Plant Show, and we even went as far afield to crane shows in Sweden, Germany and the USA.

In the late 80's John was recruited by Kato of Japan to take on a National UK sales roles rather than just a regional one. I think it's fair to say that during the late 80's and 90's John was selling more Cranes than anyone else in the industry. Ainscough Crane Hire was growing rapidly at this time and in one year alone John sold us over 100 new machines. I think that must be a record for any salesman in the UK.

Around the turn of the Millennium John decided to become self-employed and started to sell cranes on behalf of Spierings and also used cranes on our behalf. Working alongside my brother James, John became very much part of our team for over 20 years. We spent time with him almost every working day and he even ended up with his own office on the director's floor of the building !

Above all John was a family man and someone who liked an organised life and achieved so much in his chosen career.

He leaves behind his beloved wife Jan, his two fine sons Dan and Craig, daughter in law Rachael and two granddaughters Abigail and Holly. John got his son Dan a start in the workshops of

Ainscough Crane Hire and he also became a great asset to the Company.

John was a good friend to me and to many here today. I know he will be sadly missed by his family and also by his many friends around the world in the crane industry.

God Bless you John !

A Kato crane hand over in the 1990s, (L-R) Martin Ainscough, John Rome, Brendan Ainscough, Paul Rosevere and James Ainscough.



Vincent Hudson



At the end of May we heard the tragic news that Franci Motz, publisher of Crane Hotline and Lift and Access magazines in the USA, and a senior manager at owner Heartland Communications group, had passed away in hospital on May 27th, following complications from Covid 19. She was only 46 and died just two and a half weeks before her birthday.

A well-known figure in the crane and aerial work platform industry, she joined Heartland almost 12 years ago, initially as the digital media director, becoming associate publisher in 2017 and publisher in 2018. She began her career with BigFish publications in 1999 and tried her hand at something different in 2008, taking up a job as an account manager with Altour Incentive Management, returning to publishing and Heartland just seven months later when she found the crane and access industry which suited her outgoing personality perfectly.

She is survived by her life partner Jason Furrow and their 13 year old son Kade, as well as her mother Carol Pride and sisters Kristin and Jessica. Her family said: "Franci was amazing! She was funny, kind, compassionate, thoughtful - a little sarcastic perhaps - and loving to everyone, especially the joy of her life, Kade. She was deeply loved and will be truly missed."

Pat Sharkey of Heartland



Communications added: "Franci was a great leader of our Crane/Lift group. She always solved problems with the same calm approach. She will be missed."

Another person added: "As a serious online and print source of info for our industry this must be very difficult to report about such a vibrant and young individual that you knew well.

R.I.P. Franci, we are better individuals for having known and worked with you.

Condolences to your loved ones and colleagues."



# Vhat's

#### Innovationstage der Höhenzugangstechnik 2021

July 6-7th, 2021 Informal event for access equipment, mini cranes and telehandlers Hohenroda, Germany Fax: +49 931 270563939 www.borntolift.de/innovationstag

#### HIANZ - Conference 2021 August 11-12th, 2021

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

Construction Days September 14-16, 2021 New earthmoving and general construction event for the French market. Lyons, France Tel: +33 1 76 77 15 35 and sold in www.construction-days.com

## **PASMA Conference 2021**

15-16 September Free conference from the scaffold tower association Nottingham, United Kingdom PASMA +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.vertikaldavs.net

The Utility Expo September 28-30, 2021

Previously The International Construction & Utility Équipment Exposition /Demo Expo - is the US utility industry's largest show Louisville, Kentucky, USA Tel: +1 414-274-0644 UTILITY www.theutilityexpo.com

GIS October 07-09, 2021 Italian crane, access and heavy transport exhibition Piacenza, Italy

Tel: +39 010/5704948 www.gisexpo.it GIS

## The ARA Show 2021

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

## **SC&RA Annual Conference**

October 25-29, 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 Karlen 6 Rigging www.scranet.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

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www.swissbau.ch

## Bauma 2022

October 24 - 30th 2022 World's largest construction equipment exhibition, Munich, Germany

Tel: +49 (0) 89 51070 Gauma www.bauma.de

Bauma China 2022 November 24-27, 2022 SNIEC Shanghai, China Tel: +49 (0)89-9492051



www.bauma-china.com Bauma Conexpo India

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Baumag January 26-29, 2023 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 ARA www.arashow.org



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Teupen Turner Access	www.teupen.com www.turner-access.co.uk
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Versalift UK	www.versalift.co.uk
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## USED EQUIPMENT June 2021

ALL A	Gen C5-1932

EX-UK				
Model	Year	Specification	Hours	Price (GBP)
Genie double-decl	c scisso	rs		
Genie GS3384RT	2019	Full CE, 4x4, double-deck extension	310	33,000.00
Genie GS4390RT	2019	Full CE, 4x4, double-deck extension	245	35,000.00
Genie GS4390RT	2019	Full CE, 4x4, double-deck extension	238	35,000.00
Genie GS4390RT	2020	Full CE, 4x4, double-deck extension	199	38,000.00
Genie - other				
Genie Z45/25RT	2018	Full CE, 4x4, generator, anti-entrap	357	33,000.00
Genie Z45/25XC	2018	Full CE, 4x4, generator, anti-entrap	247	36,000.00
Genie Z60/37FE	2018	Full CE, 4x4, NMT, anti-entrap	155	45,000.00
Genie Z33/18	2018	Full CE, NMT	74	22,000.00
Genie 1932	2019	Full CE, deck extension, NMT	29	6,500.00

Model	Year	Specification	Hours	Price (GBP)
Snorkel				
S2755RT	2019	Full CE, 4x4, deck extension	59	24,000.00
S2755RT	2019	Full CE, 4x4, deck extension	78	24,000.00
S2755RT	2019	Full CE, 4x4, deck extension	124	24,000.00
S3010P (choice of 6	) 2020	Full CE		3,200.00











USED EQUIPMENT - Ex-Jebel Ali UAE June 2021					
Model	Year	Specification	Price		
Genie					
Genie Z45/25RT	2001	Full CE 4x4	POA		
Genie Z45/25RT	2003	Full CE 4x4	POA		
Genie S85	2002	Full CE 4x4	POA		
Genie S125	2001	Full CE 4x4	POA		
JLG					
JLG 450AJ	2004	Full CE 4x4	POA		
JLG 600AJ	2002	Full CE 4x4	POA		



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