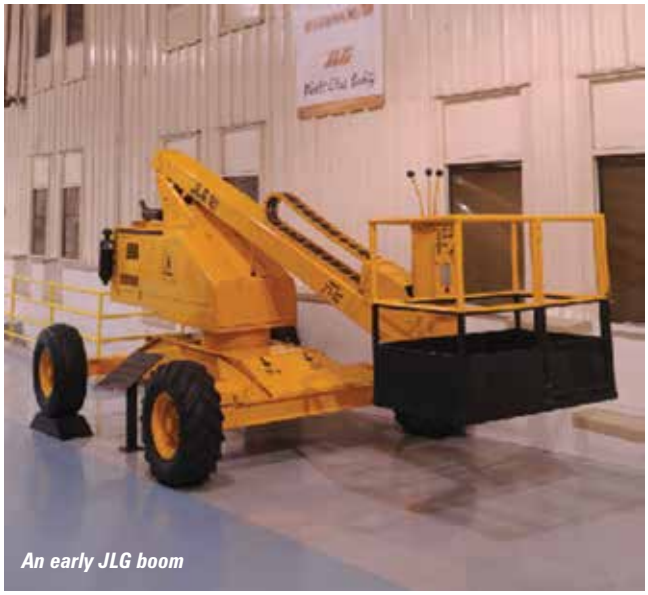

An early JLG boom


JCB is the latest manufacturer to enter the sector with its AJ48D

HALF A CENTURY OF BOOMS

If you have not purchased a new boom lift in a while and you are a canny and thorough buyer, you might be amazed at the sheer number of manufacturers you can chose from and the mind boggling range of machines they offer. At the latest count - and with the addition of JCB's latest machine - there are now 37 boom manufacturers from 10 countries. This is a far cry from when the sector was just getting underway in the early 1970s.

At that time your choice would have been limited to a handful of suppliers, all of them located in the USA. Fulton Industries/JLG and Selma Manlift were two of the earliest companies that began producing telescopic booms in the early 70's, they were soon joined by Snorkel, Krause and Fabtek. All of these companies exhibited at the 1977 PEM - Plant Engineering and Maintenance - exhibition in McCormick Place, Chicago. The show was attended by a number of European rental companies and contractors with inhouse fleets and as a result, that single show proved pivotable in the development of the self-propelled market in a number of European countries, with several signing distribution agreements there and then.

TOO LATE TO THE MARKET

When Snorkel's Art Moore had pondered his company's entry into the market in 1976, he said: "I realised we would be the seventh manufacturer to enter the market if we went ahead with producing a boom."

He went ahead and managed to have a prototype ready for the PEM show as a last minute entrant, managing to squeeze Snorkel on a stand at the very back of the hall. Moore then stopped by the JLG stand and invited John Grove to visit his stand and take a look at the Snorkel TB-42 prototype. After Moore had shown him around his new boom lift, Grove said: "I'll tell you three things about your machine. It's a nice-looking machine and you have devoted more time to the cosmetics than others. You have described an interesting hydraulic system, but I'll reserve judgement until I see how it operates." "And the third thing?" asked Moore. "You are too late Art!"

Art Moore and Snorkel pushed on regardless and began producing the new boom lift. Demand for these new machines increased and one or two new companies entered the fray. However, by the mid-1980s, many thought that too many manufacturers had entered the market for all of them to survive. Some consolidation did occur through competitor acquisitions and business failures and some stability ensued.

EUROPEAN STRUGGLE

The first European manufacturers to enter the market struggled to compete with the American producers, given that production volumes were so wildly different, thanks to the much larger and more developed North American home market. Despite all this there are now more manufacturers than ever, with several European companies doing very well. The 2021 Cranes & Access product source guide/directory lists 36 boom lift manufacturers, JCB's recent entry takes that to 37 from 10 countries - and that is only counting those that are present on the international markets. A similar survey in 1990 would barely have yielded 15 companies, from six countries.

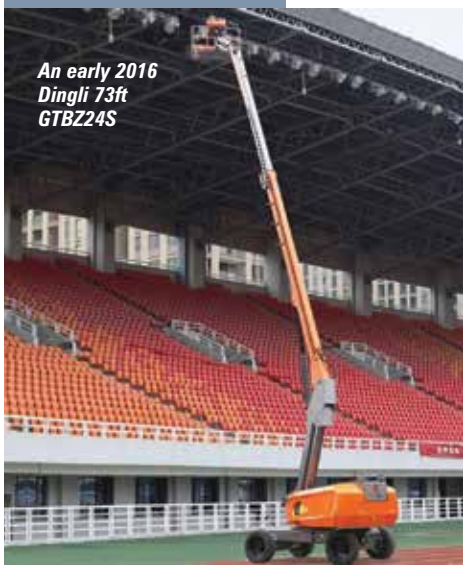
John Grove's comment in 1977 is very similar to one attributed to IBM chairman Thomas Watson in 1943: "I think there is a world market for maybe five computers." Followed by Ken Olson of Digital in 1977 who said: "There is no reason anyone would want a computer in their home."

The rapid rise in the number of manufacturers has been in response to a massive growth in demand for powered access. The number of different machines that they offer has also grown exponentially. Articulated booms came along in the mid-1980s thanks mostly to Genie and Simon, followed by industrial models and ever higher working heights. More recently we have seen a focus on different power and drive options, including hybrid, all-electric and direct electric drive.

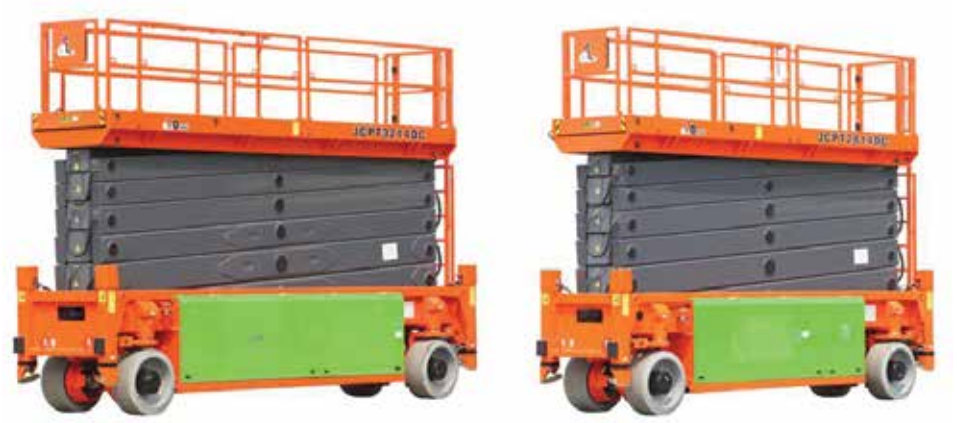

Art Moore with a restored 1979 Snorkel TB-42 at the ARA 2017 show


John Grove in front of an early boom lift


McCormick Place, Chicago in the 1970's



An early 2016 Dingli 73ft GTBZ24S



Many aerial lift fleet buyers are taking large numbers of big Chinese built platforms such as these 32 metre Dingli scissors and more recently its booms

CHINA RISING

One of the biggest changes in recent years has been the arrival of Chinese manufacturers - of which there are dozens in China, but only a handful of them stand any hope or have any designs or potential to export to western markets. It should be remembered that it is only 10 years since the first Chinese platforms (Dingli) arrived in Europe.

Now the increasingly popular brands include Dingli, LGMG, Sinoboom, Mantall and to a lesser but growing extent the major construction equipment manufacturers of Zoomlion and XCMG.

While the Chinese products were initially dismissed as 'cheap, poor quality and using copied designs', their acceptance has grown incredibly over the past few years. So much so that in the USA, JLG and Genie teamed up to form the 'Coalition of American Manufacturers of Mobile Access Equipment' to lobby the US government to launch an investigation into their claims that they have been damaged by low prices from the Chinese importers and accusing them of selling at uncommercial price levels (dumping). The desire was for import tariffs to be applied on Chinese-built aerial lifts. So far it looks as though the main Chinese producers will face tariffs of between 14 and 20 percent. Interestingly most Chinese imports to date have been slab electric scissor lifts, which both JLG and Genie also manufacture in China and import to the USA.

RAPID APPROVAL PROGRESS

What has surprised many in the market is how fast the privately held Chinese aerial lift manufacturers have learnt and adapted by taking customer input on board and improving or re-engineering their products.

When it comes to boom lifts or very large scissor lifts - or any large and expensive equipment for that matter - buyers are understandably much slower to adopt a new supplier than for small less expensive machines. There are many reasons for this, particularly the fear of the unknown. If a 19ft scissor breaks down and the parts take a while to arrive, it's not the end of the world. However, if an €80,000 boom lift is unable to work for any length of time it's another story. Of course, resale values and relationships - being easy to do business with - also play a vitally important role.

BUYERS BECOME LESS ADVENTUROUS

Manufacturers of small or simple equipment have long faced the challenge of persuading customers to also purchase larger or more complex new machines when they launch them. And the higher the unit cost of a product, the less willing buyers are to try a completely new product or supplier.

For example, when UpRight and Skyjack entered the boom lift market after having achieved market leading positions with their scissor lifts, they found that persuading their customers to switch from JLG, Genie, Haulotte or Snorkel etc... proved to be a long hard slog, requiring a great deal of persistence. Skyjack eventually overcame the challenge and continues to cement and expand its position, while UpRight never quite managed it for a number of reasons.

In the telehandler market JLG, Liebherr and Bobcat, have also struggled to win a significant share of the European market, in spite of having the strongest brand reputations, excellent product support and all of the direct customer contacts.

And yet… in an increasing number of European markets, aerial lift fleet buyers are already taking large numbers of larger Chinese built platforms such as big Dingli scissors and increasingly its boom lifts. The same applies to LGMG, while Sinoboom is also gaining traction. Even relative newcomers such as XCMG are finding that some buyers are willing to give them a go, such as Dutch international rental company Collé which purchased a large number of its booms including its 80ft models prior to its European launch.

STRONG MARKET

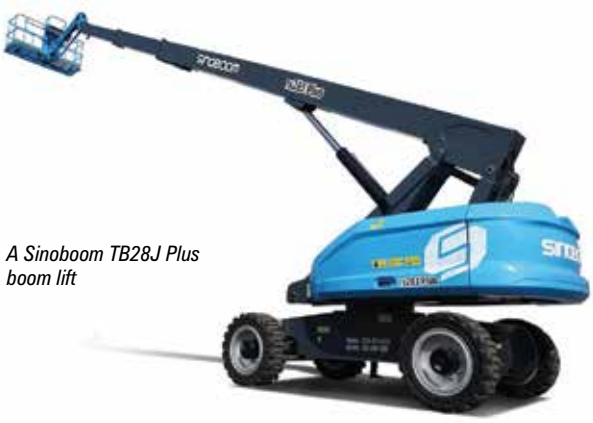
At the moment all aerial lift manufacturers are busy, with strong order books and long lead times. This has made it easier for alternative suppliers to gain a foothold in the market, however it will be interesting to see what happens when activity slows and it becomes a buyers' market once again, as it inevitably will. Innovation plays an important role of course, and all-electric 4x4 booms have certainly helped Dingli, while ready availability has also been an important factor for most of the newcomers.

NEW PRODUCT LAUNCHES GATHER PACE

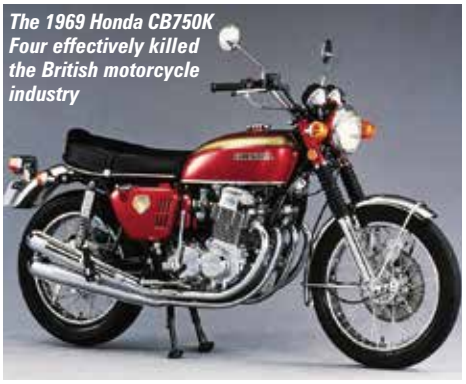
This past year or so has also seen a host of new product launches and new ideas, which looks set to continue in the future.

History has shown that having the 'right product at the right time' is critical and has often changed the market forever. The launch of Honda's 750 Four motorcycle in the late 1960s killed the British bike industry, which took the best part of 45 years to show any sign of recovery. The bike was no more innovative than others at the time, but it had the overall package - good design, good performance and a good price (and it didn't leak oil) effectively ended British bike production almost overnight.

John Grove was convinced that Snorkel was too late to the market in 1977. However, it does not follow that manufacturers that are early into a sector are the most successful or long lasting. Innovation is important but for rental buyers - which take 80 percent of all equipment - a machine that has good performance, is reliable and has good back up is generally far more desirable. It will be interesting to see how the current 37 manufacturers fare over the next few years. ■



A Sinoboom TB28J Plus boom lift



The 1969 Honda CB750K Four effectively killed the British motorcycle industry

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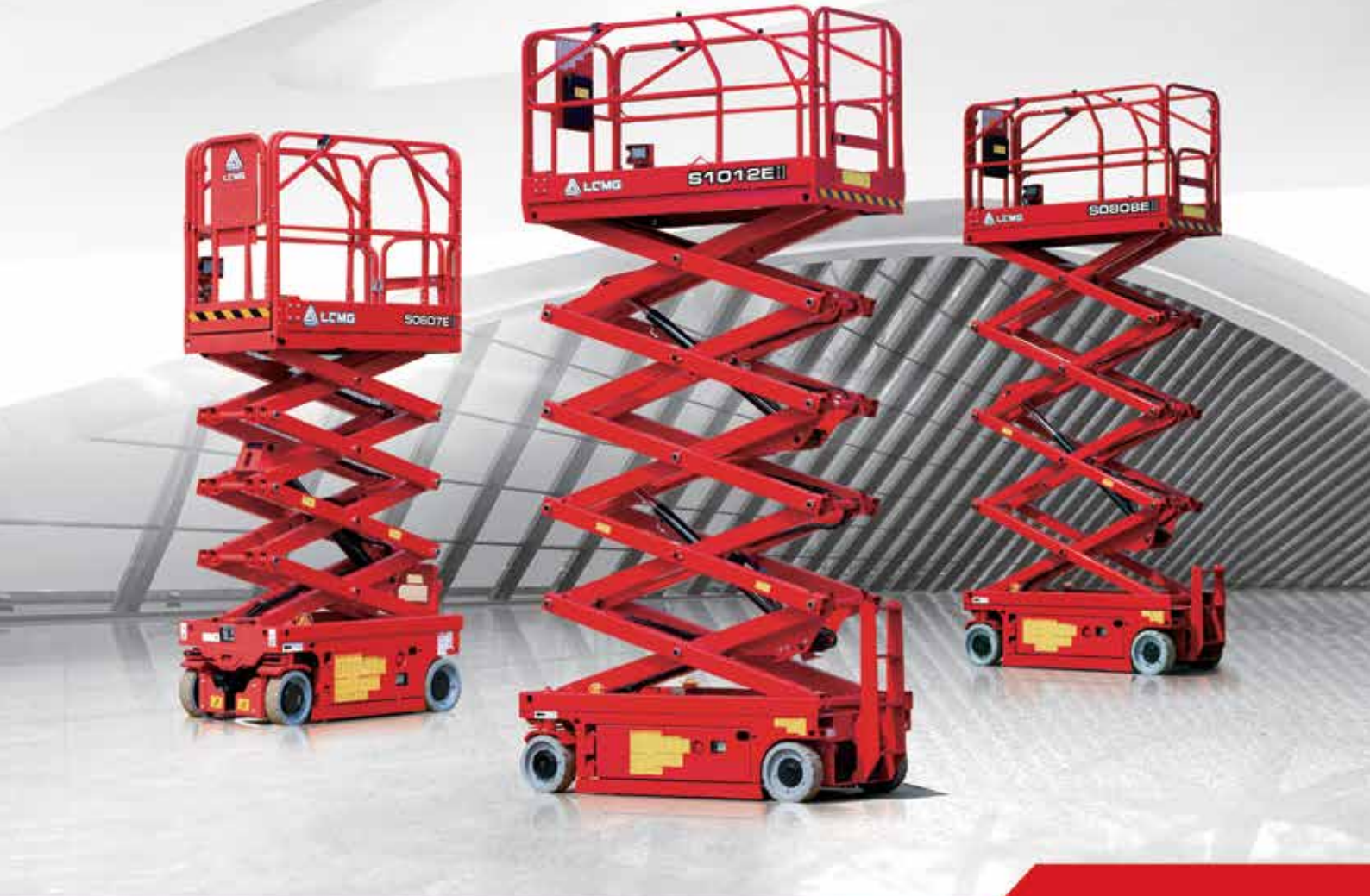

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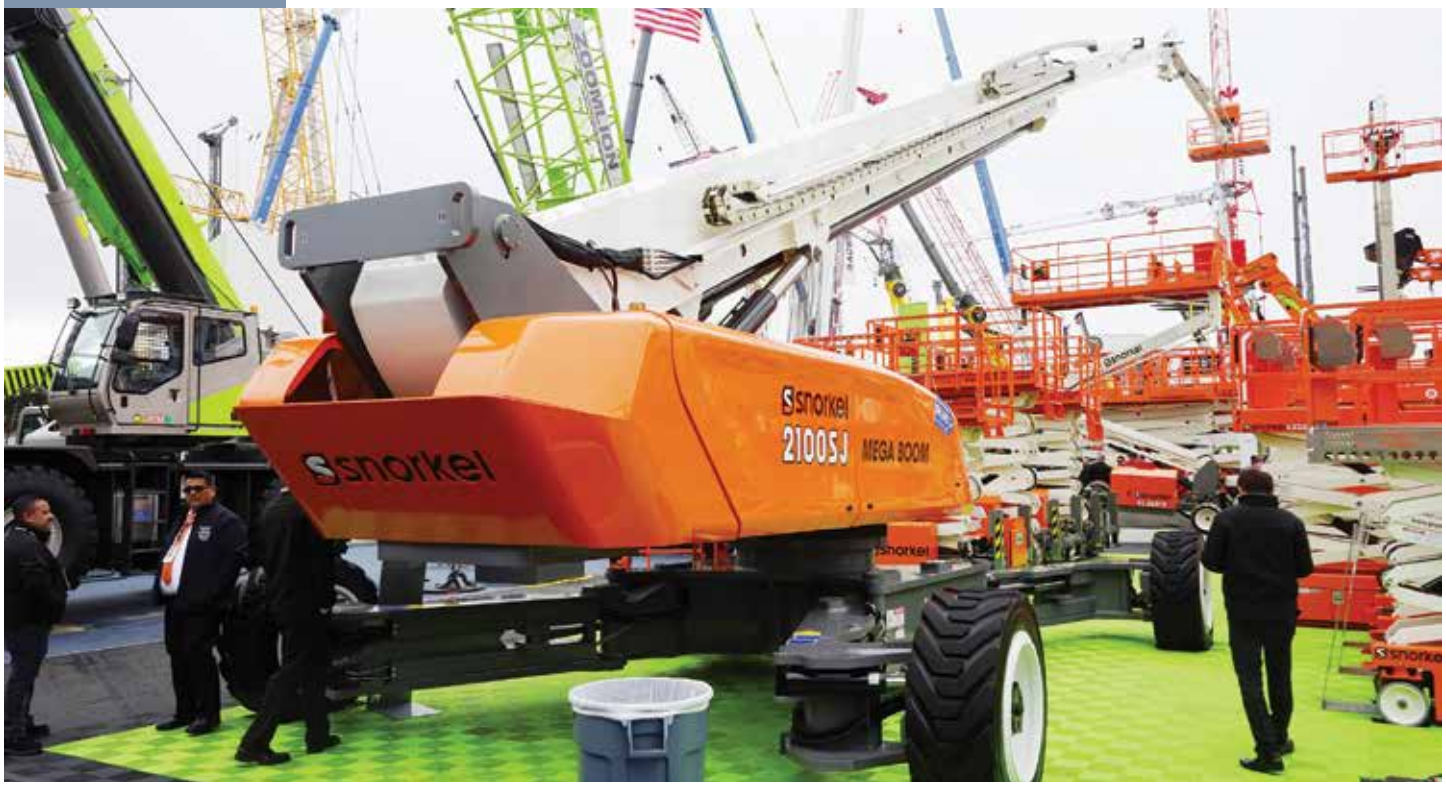
RELIABILITY IN ACTION



LONG LIVE 'MEGA BOOMS'

"I hope the new Snorkel 2100SJ project shows that going bigger isn't dead," said Ryan Sobotka Snorkel 2100SJ project manager. "There is a lot of development on the electrification of equipment, which is cool - there are a lot of really cool things you can do with electric motors - but there is also an 'old school' side of me that just likes big hydraulics, big motors and big structures, creating something that can take an operator higher and further than they have ever gone before."

When Ryan Sobotka made this comment the 210ft Snorkel 2100SJ - unveiled at Conexpo 2020 - was the world's largest boom lift, topping JLG's 185ft 1850SJ. Many had thought the JLG - launched in 2014 - would remain the largest for quite some time, given the challenges of transporting anything larger without dismantling. Incumbent manufacturers design capabilities were also being eaten up by efforts to reduce engine emissions, meet changing standards, reduce weight and introduce electric power options. However just six months after the launch of the Snorkel another mega boom was launched at Bauma China - the 215ft Zoomlion ZT68J.

We should be thankful to those manufacturers that have the courage to invest in new machines for which there is no current market. Over the years such efforts have been the life blood for the crane and aerial lift markets which has helped make work at height or lifting more efficient. We are also suckers for the biggest, longest, heaviest, tallest etc and with the growth of taller and taller structures these monster booms do have a valid place in the sector.

SURPRISE SURPRISE

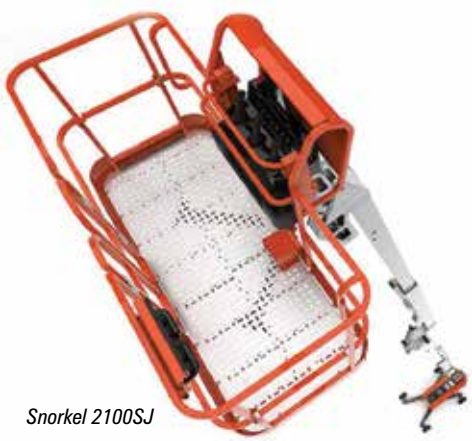
Both the Snorkel 2100SJ and the Zoomlion ZT68J were something of a surprise, coming from manufacturers with no pedigree at the very top end of the large boom market - in the case of Zoomlion it has limited experience of regular sized boom lifts. Even the Snorkel 2100SJ is more than 25 metres higher than its previous largest machine, the 40 metre TB126J so very little, if anything regarding design could be carried over.

THE BIG CHINAMAN

Zoomlion also has a history of showing record breaking machines at major shows - particularly Bauma China - which do not always make it into series production, and in some cases, are never seen again. However in the case of the 67.5 metre working height ZT68J several have been spotted working and the first was delivered to Chinese sales and rental company Shanghai Lvgong Machinery Engineering in October last year. One of its jobs involved work at a petrochemical facility in Shanghai, where it was used to apply rust prevention treatment, while another involved the painting of a new 17 storey - 56 metre high - fire services training complex in Shanghai.

Jason Liu, deputy general manager of Zoomlion Access overseas, said: "Zoomlion is committed to new ways to work, that's why we decided to develop the ZT68J. There is a growing demand for a super-sized boom in China, following the trend of increasing height on buildings like stadiums and airport buildings."

The ZT68J features a five section boom topped by a two section jib with 125 degrees of articulation for a 67.7 metre working height and a maximum



Snorkel 2100SJ

Zoomlion ZT68J

670SJ

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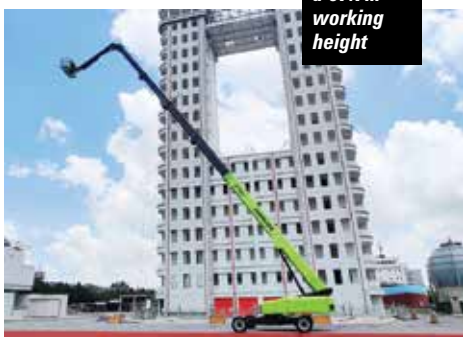
ZT68J has a 67.7m working height



outreach of 31 metres with a dual 300/455kg platform capacity. Features include 40 percent gradeability and four wheel drive.

INNOVATIVE SNORKEL

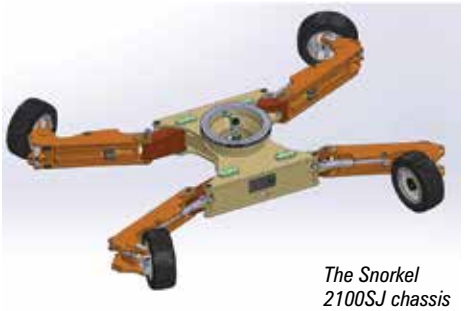
Although it has now lost its 'world's largest' title, the 2100SJ incorporates several truly innovative new features that make it so much more than just about its size. The basic specs are impressive - 65.8 metres working height, 30.4 metres outreach and an enormous working envelope said to cover 155,176 cubic metres, thanks to a 9.1 metre telescopic jib with 128 degrees of articulation. However, there are several patent pending innovations. While the heavy duty chassis initially looks similar to the X-type chassis on other large booms, it has a mechanism - activated by the press of single toggle switch - that enables the wheels to drive the chassis legs into position while the lift is static without causing tyre scrub. Not only does it extend tyre life and reduce ground disturbance, but also provides a much smoother extension.

For such as big machine - it weighs 36.3 tonnes - the 2100SJ is highly manoeuvrable and includes a fifth 'lateral' steering mode where all wheels turn a full 90 degrees allowing it to move sideways - this in addition to the usual front, rear, crab, and four wheel co-ordinated steering modes. Designed to comply with all global standards, the 2100SJ has a stowed width of 2.5 metres and overall transport length of 14.9 metres with jib stowed.

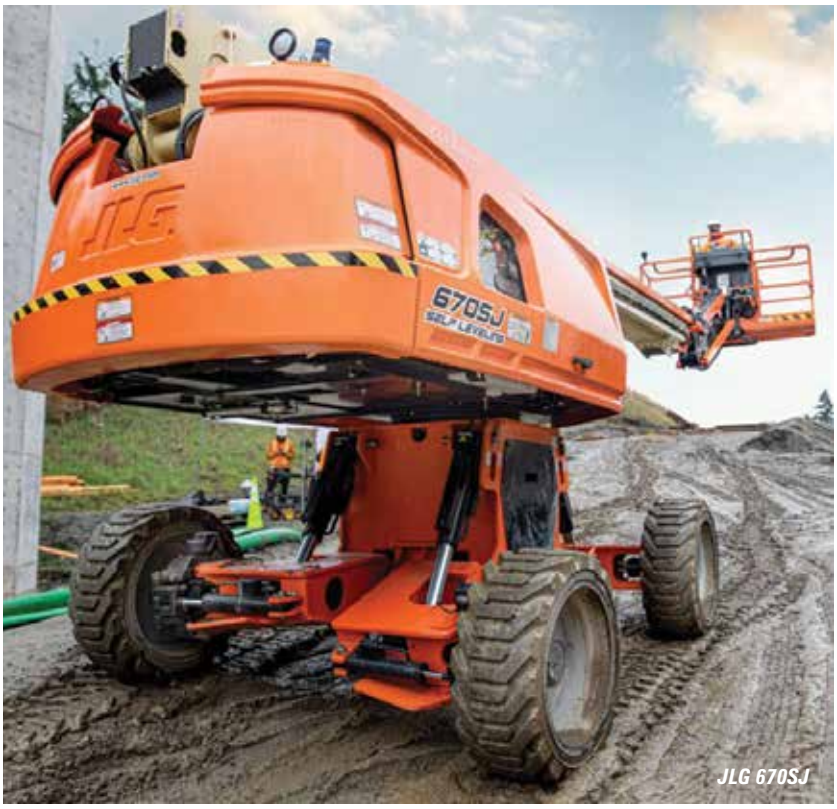
The boom is said to have 40 percent fewer moving parts and the dual capacity working envelope is kept really simple, with the jib retracted platform capacity is 454kg unrestricted, switching to 300kg as soon as it is telescoped. In the platform in addition to the main control box, there is a secondary set of mini 'inching' controls on the opposite side facing the work, which include all machine functions other than drive allowing the operator to carry out fine positioning of the platform. It simply folds away when not in use and both control panels include Snorkel Guard entrapment systems. The boom obviously impressed at its launch with three orders placed at the show. The first was sold to Canadian company Mortier en Trémie ABL, while UK-based Hire Safe Solutions ordered the first two units outside of North America. However it would appear that the machines will not be delivered until later this year.

'Mega booms' over 200ft/60 metres are never going to be high volume machines, however the very fact that two new manufacturers have decided to enter the market shows that there may be some development life in the sector yet. ■

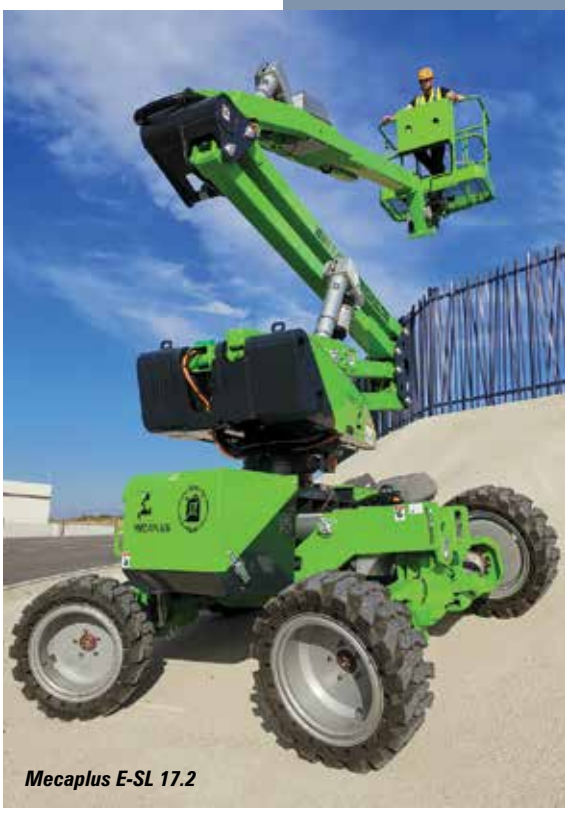
The 2100SJ's wheels turn 90º allowing it to move sideways



The Snorkel 2100SJ chassis



JLG 670SJ


Mecaplus E-SL 17.2

THE RISE AND FALL OF THE SELF-LEVELLING BOOM

With 37 boom lift manufacturers all looking to differentiate themselves in a congested market, innovation is the key. Some say it is the lifeblood of any business, with companies devoting substantial design time to gain a competitive edge - be it bigger, smaller, lighter, all-electric, low emission etc - and exploit it before it is copied. In the past year or so several boom lift manufacturers have bet on self-levelling as the next big thing.

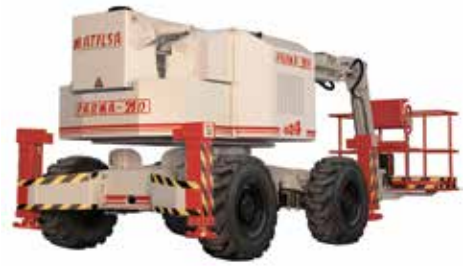
Perhaps the most notable launch has been JLG's 67ft 4x4 670SJ first seen as a concept five years ago. With production starting last September - initially for North America only - it is now more widely available. The 670SJ includes technology that automatically adapts to slopes while driving at height. While the concept is not new, JLG has created a solution that provides three operating modes and with relatively traditional technology.

One of the long-time pioneers of dynamic self-levelling on boom lifts is the small Spanish company Mecaplus, which developed a line of self-levelling boom lifts for efficiently pruning avenues of trees while working from steep slopes and side verges. It is now looking to take the next big step with an all-electric - 'zero oil' - model in the form of the 50ft Mecaplus E-SL 17.2 articulated four wheel drive self-levelling boom lift, using electric wheel motor drive and electric screw actuators in place of the hydraulic cylinders.

FINALLY IN PRODUCTION

The JLG 670SJ has evolved significantly since the concept saw first light at Conexpo 2017, with the self-levelling technology automatically adapting to slopes of up to 10 degrees in any direction while driving at full height. Each wheel is mounted on an independent control arm, constantly adjusted by hydraulic cylinders that keep the base machine level. It also has two other operating modes, one to allow manual levelling and another to lower the overall height for travel on steeper side slopes and transport.

The 'advanced control system' continuously receives data from a range of sensors and displays the information on a digital screen in the platform, allowing the operator to see what is going on at ground level while working at height. In addition to its dynamic levelling on the move, the new model offers a working height of 22.3 metres, a maximum outreach of 17.5 metres with


Matilsa Parma 21D can automatically evel on its outriggers


Platform Basket RR19/500

the unrestricted platform capacity of 250kg, or just over 15 metres with the 340kg maximum capacity. Overall width is 2.5 metres, length 10.7 metres and height 2.77 metres, which can be lowered to 2.22 metres for transport. Ground clearance is 330mm and the machine has an all-up weight of 11.5 tonnes.

ALL-ELECTRIC MECAPLUS

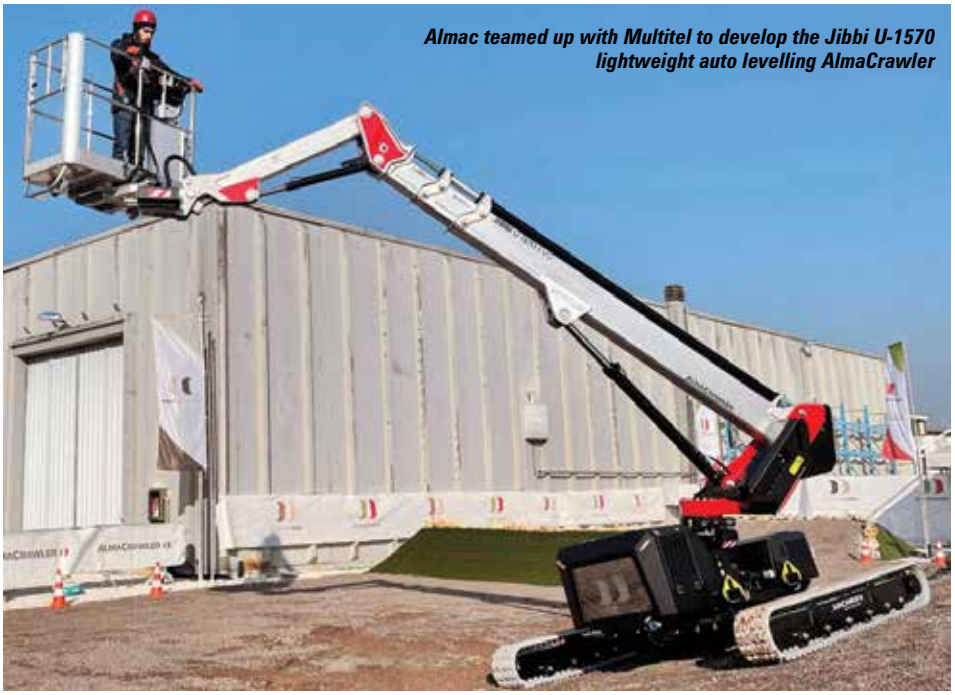
Mecaplus' new machine is totally different in that it has no hydraulics, and as with the well-proven traditional Mecaplus boom lifts the E-SL17.2 - which has a working height of 17.2 metres - dynamically levels while travelling at heights of up to 12 metres even with the boom over the side. Maximum outreach is 7.5 metres at an up & over height of 7.8 metres. The platform capacity is 230kg unrestricted and the wireless controller can be removed from the platform and used as a remote.

The screw actuators are also regenerative, putting power back into the battery pack when descending. The machine has an overall length of 6.2 metres, a width of 2.2 metres and stowed height of 2.25 metres. Total weight is 6,600kg. The unit is on test with production likely to start later this year, depending on how well the test programme goes.

While the all-electric - no hydraulics - concept appears to be coming of age for small scissor lifts, it may prove to be too radical a step at the moment, given the number of actuators required, their geometry and the rugged nature of the work they are used for. It does however shine a light to the future. The design and function of electric 'cylinders' need to become less bulky and more rugged to match up to their hydraulic counterparts. However, they are improving all the time and at some point will be the product of choice.

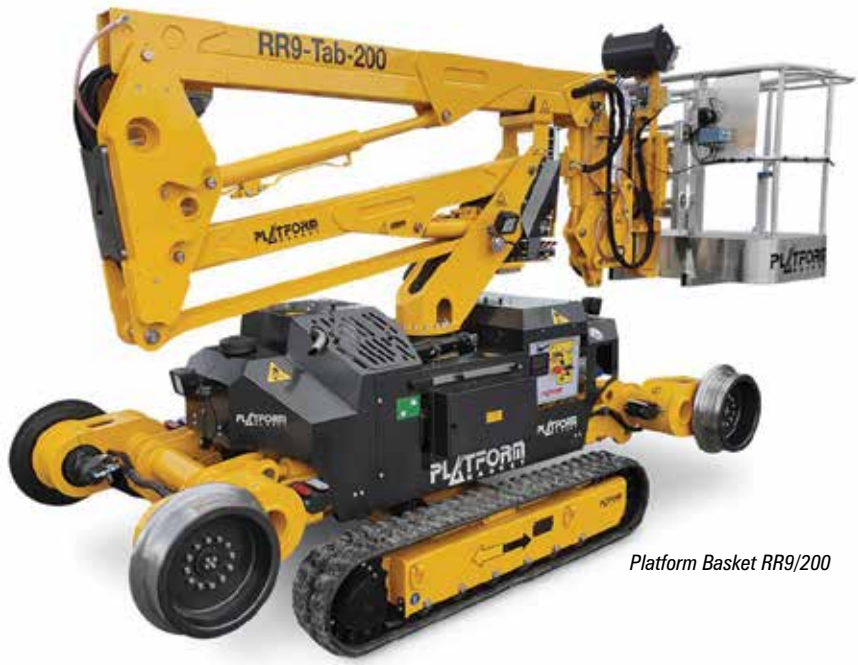
TRACKED OPTIONS

This concept of a self-levelling boom has made most progress with the growing market for crawler mounted boom lifts from manufacturers such as Almac with its JT Jibbi series and now Platform Basket which added a tracked self-levelling road rail boom, the 25ft RR9/200 to its road rail self-propelled boom lift range, joining its wheeled models, the popular 40ft RR14/400 and the new 56ft RR19/500. The RR9/200 offers a working height of 9.5 metres, an outreach of up to 4.7 metres with an up & over height of just over four metres with an unrestricted 200kg platform capacity.



Almac teamed up with Multitel to develop the Jibbi U-1570 lightweight auto levelling AlmaCrawler

The JLG 670SJ is now in production



Platform Basket RR9/200

Last year Almac teamed up with Multitel Pagliero to develop a new light weight self-propelled AlmaCrawler auto levelling telescopic boom lift, the 43ft Jibbi U-1570, which offers a 15 metre working height with up to 8.4 metres of outreach with 80kg in the 1.4 metre wide platform. Maximum capacity of 250kg is available at an outreach of 5.8 metres. The U-1570 combines a Multitel aluminium boom and AlmaCrawler Bi-Levelling undercarriage, as with other Almac JT boom lifts it includes dynamic 'Pro-Active' levelling allowing the machine to drive at height on slopes or undulating ground of up to 25 percent, with up to 15 degrees of side to side and longitudinal levelling. Its overall weight is less than 2,900kg.

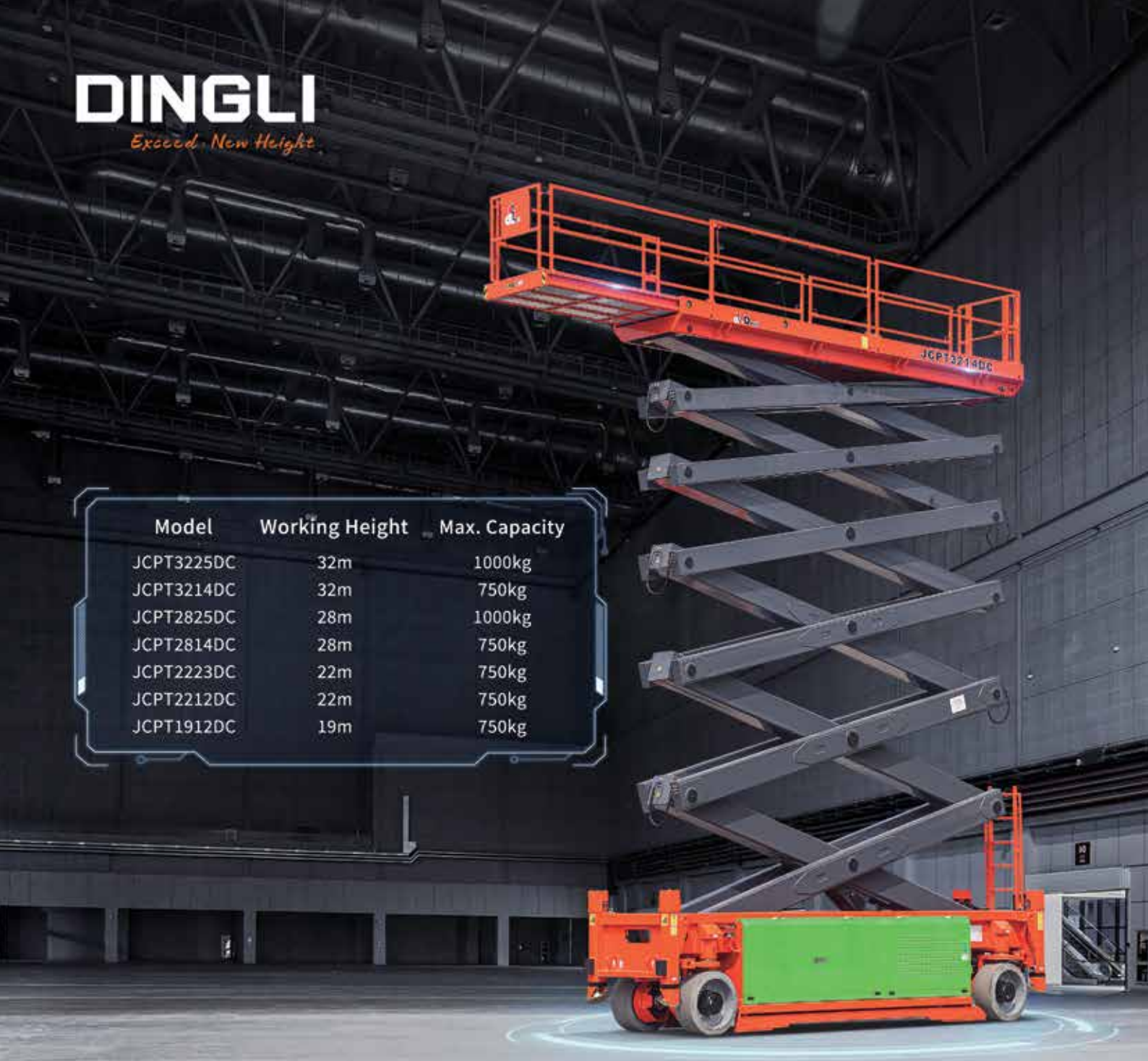
REAL LIFE WORK - THE TRUE TEST

It will be interesting to see what sort of reception the latest JLG or Mecaplus boom lifts receive when they arrive on site. The key factor will be price and complexity over the achievable rental rate. Will contractors like it enough to pay what is said to be a 20 percent premium for the JLG? One said: "It's a wonderful machine, very clever but I just don't know what to do with it."

Regardless of this it is good to see innovation such as this make it to market. ■

DINGLI

Exceed New Height



Model	Working Height	Max. Capacity
JCPT3225DC	32m	1000kg
JCPT3214DC	32m	750kg
JCPT2825DC	28m	1000kg
JCPT2814DC	28m	750kg
JCPT2223DC	22m	750kg
JCPT2212DC	22m	750kg
JCPT1912DC	19m	750kg

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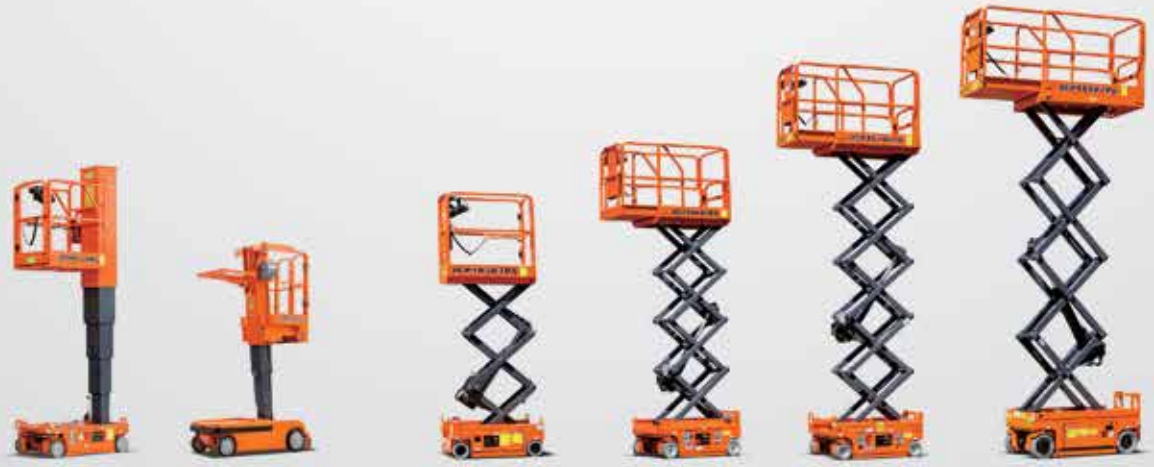

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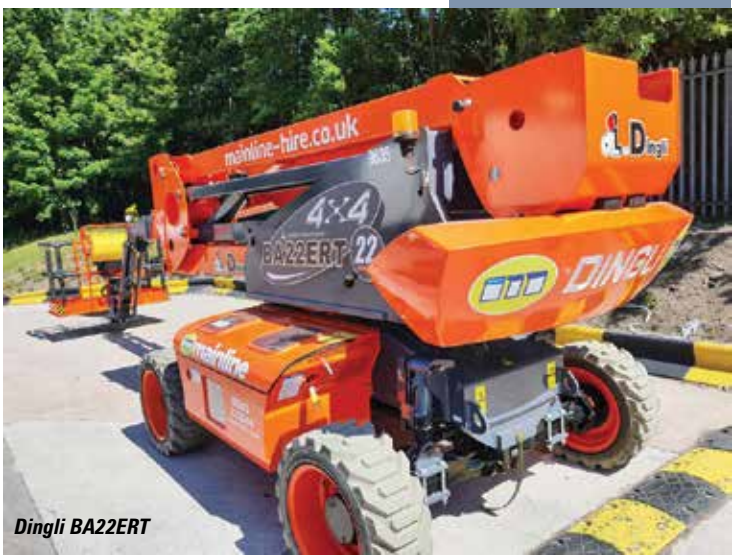
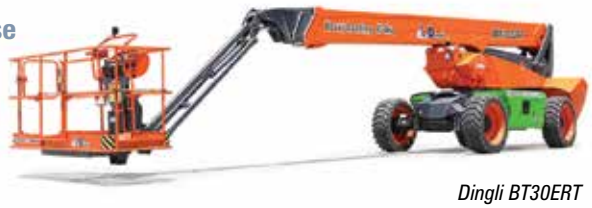


Dingli BA22ERT

ALL ELECTRIC BOOM, BOOM...

After the initial cries of poor quality, cheap product and bad design, Chinese aerial lift manufacturers have improved rapidly and steadily gained market share on the back of good quality, performance and value for money. Having concentrated on the smaller scissor market they are now turning their attention to boom lifts.


Dingli BT30ERT

This can clearly be seen at industry exhibitions such as the ARA and Bauma etc... and Vertikal Days, in Peterborough, UK on the 11th and 12th May will be no exception. Dingli, LGMG, Sinoboom, Zoomlion and XCMG will all be there and plan to launch several new boom lifts.

DINGLI

Dingli - China's leading aerial lift manufacturer - will show its new 90ft BT30ERT Lithium powered boom with a 30.2 metre working height, 22.4 metres outreach, a maximum platform capacity of 454kg, or 300kg unrestricted and an overall weight of just under 19 tonnes. The boom features all electric drive using an 80V 520Ah high capacity lithium battery pack with 1.5 hours fast charge capability. Overall stowed length is 12.3 metres.

Dingli is also finding success with its articulated electric booms such as the 66ft Dingli BA22ERT with the first units arriving in Europe early last year. The BA22ERT offers a working height of 22.21 metres, an outreach of 12.72 metres at an up & over height of eight metres with a 230kg platform capacity. Features include four wheel drive and steer, 30 percent gradeability, 360 continuous slew, foam filled non-marking tyres and 130 degrees of jib articulation. Weighing just over 10 tonnes, power comes from a 48 volt system made up of two 24 volt, 375Ah batteries.

LGMG

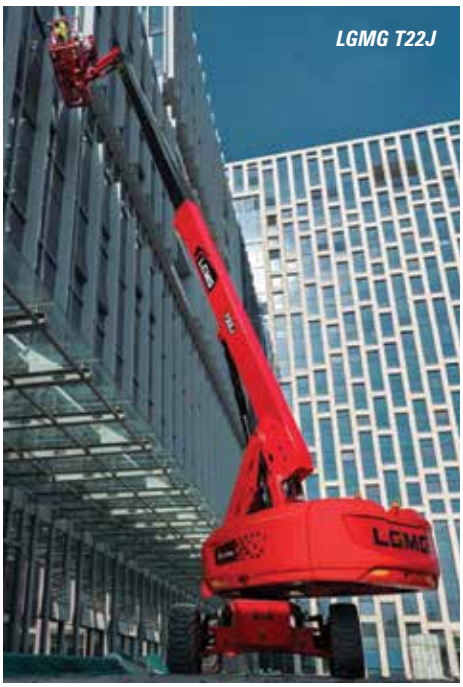
LGMG is planning to launch a new range of battery powered platforms at the show including a lithium version of its 66ft T20J telescopic and the articulated 46ft A14JE.

Last summer the company launched the new 72ft T22J (T72J in North America) dual capacity telescopic boom, with a three section telescopic boom topped by an articulating jib for a working height of 23.8 metres and a maximum outreach of 17.5 metres with a 300kg unrestricted platform capacity. Maximum platform capacity is 450kg with a three person outdoor rating.

The T22J is equipped with a 2.44 metre by 900mm platform with a triple entrance design. Power is supplied by a Deutz Stage V diesel with variable engine speed to reduce noise and fuel consumption. Four wheel drive and oscillating axles are standard. Total weight is 12,300kg and options include a generator, glass panel bracket, non-marking solid tyres, secondary guarding, and telematics system.

SINOBOOM

Sinoboom plans to launch two new fully electric boom lifts, the 66ft TB20EJ Plus battery powered straight telescopic and the 60ft all electric AB18EJ articulated boom. The new units join the 46/51ft AB14EJ and AB16EJ all electric articulated boom lifts announced last year.



LGMG T22J

The two boom lifts share most of the same components, including the same sigma type riser, two section telescopic boom and articulating jibs. However, the AB16EJ has longer boom sections and a wider chassis. Slew is 355 degrees, platform rotation 160 degrees and the battery

Sinoboom AB16EJ

pack is made up of eight six volt 420Ah lead acid batteries.

The AB14EJ offers a working height of 16 metres, an outreach of 7.6 metres with an up & over height of 7.8 metres and an unrestricted platform capacity of 230kg. It has an overall width of 1.73 metres and weights 7,100kg. The AB16EJ offers an 18 metre working height, an outreach of 9.3 metres at the same 7.8 metre up & over height with a 230kg platform capacity. It is slightly wider at 1.9 metres and weighs 7,300kg.

XCMG

XCMG has been ramping up its European operations this year and will unveil several new booms including the 86ft XGS28E and 66ft XGS22E. Two other recently launched electric boom lifts include the 62ft articulated 4x4 XGA20ACE and the 86ft XGS28KE lithium ion powered telescopic with 4x4 drive and dual 300/460kg platform capacity. XCMG kicked off its European efforts with Dutch rental company Collé placing a major order for 50 units of its diesel powered 86ft XGS28E boom lifts along with 50 scissor lifts.

XCMG XGS28E

ZOOMLION ACCESS

Zoomlion is launching several new all-electric boom lifts including the 88ft ZT26JE and the 32ft ZA10RJE and ZA20JE articulated booms. They follow the launch earlier this year of its first all-electric Rough Terrain articulated boom lift, the 51ft ZA16JERT. The machine features a dual over-centre sigma type riser, topped by a two section telescopic boom and 1.53 metre articulating jib, providing a working height of 17.8 metres with a maximum outreach of 9.7 metres at an up & over height of almost eight metres with its 250kg maximum platform capacity. Power comes from a 48 volt 320A/h battery pack feeding AC electric drive motors with four wheel drive and oscillating axle. The unit has an overall width of 2.3 metres, an overall length of 7.7 metres and a stowed height of 2.3 metres. Total weight is 7,300kg. The standard specification includes secondary guarding and a full on-board diagnostics package.


Zoomlion ZA16JERT

MANITOU

Manitou's new all-electric ATJ booms will also be at the show including its first fully electric Rough Terrain platform - the 60ft 200 ATJ E - with a 20 metre working height, up to 11.57 metres of outreach at and up & over height of almost eight metres and an unrestricted capacity of 230kg. Power comes from a 48 volt battery pack, which is said to be sufficient for full day's high use work. The drive train is unusual in that it features a single large electric motor mounted inboard to a transfer box with the usual shafts driving the axles in the same way as its well proven diesel RTs.

Manitou 200 ATJ

NIFTYLIFT

Niftylift has been developing its boom lift line-up with new technology, including new all electric models with direct electric wheel motor drive on its all-electric articulating boom lifts along with a lithium ion battery pack option. Having led the development of true hybrid boom lifts, the company has been introducing its Gen^2 Stage V Hybrids, with all models fully compatible with HVO fuel. If you have not seen its latest hybrids, make sure you take a look. Other new developments include the Niftylink telematics system.

JCB

JCB has finally launched its boom lift line, starting with the new 48ft AJ48D articulating boom lift, initially for the North American market but now coming to Europe. It features a working height of 16.7 metres, an outreach of 8.3 metres at an up & over height of 7.5 metres with an unrestricted platform capacity of 250kg. Weighing 7,885kg, it has a stowed length of 7.35 metres, a width of 2.26 metres and a height of 2.23 metres. Features include four wheel drive, electronic secondary guarding and the company's LiveLink telematics system with a colour display screen that provides a range of information such as the load in the basket and diagnostics. The new machine will be the first in a full range.


The JCB AJ48D

SNORKEL

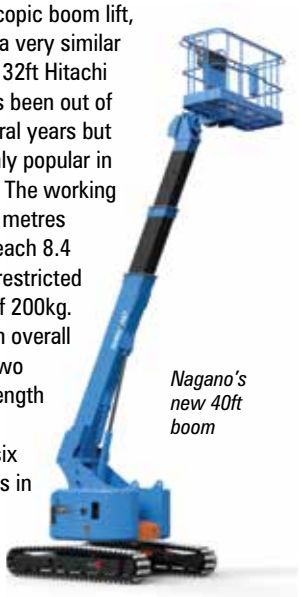
Late last year Snorkel unveiled a lithium-ion battery powered version of its 46ft A46JRT articulated boom lift. The A46JRTE is in essence a battery powered version of the diesel model and features three 111Ah lithium-ion battery packs. A battery management system, which continually monitors each cell and works with the charger and the rest of the machine to achieve maximum efficiency.

The batteries power a 20Kw AC motor which in turn drives two hydraulic pumps. After that the machine is almost identical to the diesel. It is however more powerful with more torque and traction. Snorkel says that in tests the battery pack can last up to a week in 'rough terrain conditions', and up to two weeks of light use. The company believes that, while the machine carries a premium sticker price, it has a fast payback with a lower cost of ownership.

NAGANO

Japanese manufacturer Nagano launched the 22ft 09AC articulated tracked boom last year featuring a short single riser topped by a two section telescopic boom, for a working height of 8.8 metres and up to 4.5 metres of outreach at an up and over height of almost four metres. It can drive at working heights of up to six metres. The all up weight of 2,620kg for transport on a standard two axle trailer.

The company is now set to unveil an all-new 32ft compact telescopic boom lift, the 12C which has a very similar specification to the 32ft Hitachi HX99B-2 which has been out of production for several years but which remains highly popular in the Benelux region. The working height is almost 12 metres while working outreach 8.4 metres with the unrestricted platform capacity of 200kg. The machine has an overall width of just over two metres, a stowed length of six metres and it weighs just under six tonnes. More details in the next issue.


Nagano's new 40ft boom

Nagano 09A

Haulotte Sigma 16 has a 1.75m overall width

HAULOTTE

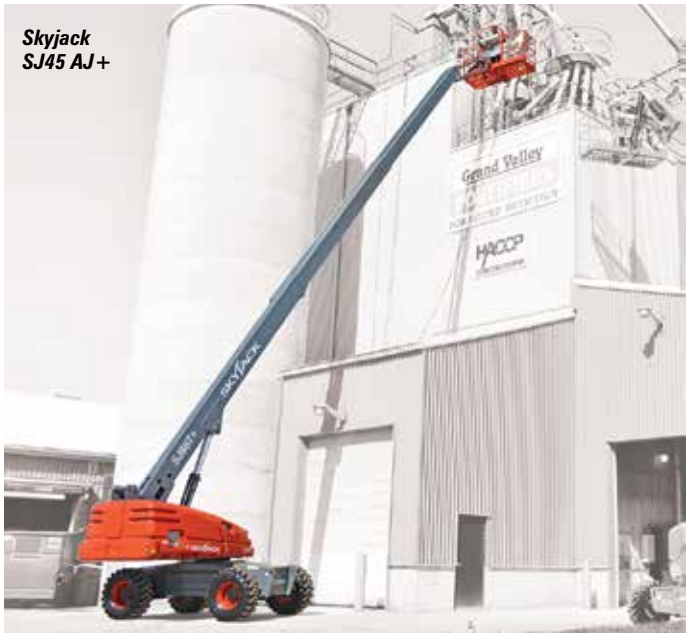
Last year Haulotte unveiled its all-new 46ft battery electric articulated boom lift, the Sigma 16 and Sigma 16 Pro. The lift uses a dual arm over centre riser, topped by a two section telescopic boom and jib with 130 degrees of articulation. The jib on the Pro model also offers 110 degrees of horizontal rotation - 55 degrees either side of centre. 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 thanks to its rotating jib - at a 7.6 metre up & over height.

Drive is direct AC electric wheel motors powered by a 48 volt system with eight 435Ah six volt lead acid batteries. The control box is similar to that used on Haulotte's RTJ range with the company's Activ Shield secondary guarding system. Other features include the Activ Lighting System for safer work at night, especially when loading on a trailer.

SKYJACK

Last year Skyjack upgraded its 40/45ft telescopic boom lifts and introduced new versions of its 45 and 60ft articulated boom lifts. The new telescopics are the SJ45T+ and SJ66T while the two new articulated models are the SJ45AJ+, and the SJ60AJ+ which replaces both the SJ51/SJ63 and SJ63AJ+. The key change on the new boom lifts is the adoption of the company's new SmarTorque axle type drive train and high efficiency hydraulic system which harnesses the engine's output more effectively, allowing the use of a smaller more efficient diesel, which does not require additional sensors, diesel particulate filters or DEF fluid. The company used two years of real job site telematics input from hundreds of machines when designing the new machines, the first time it has been able to do so. The two articulated models are up to 20 percent lighter than the units they replace.

Platform capacities are 300kg on the SJ45J+ while the new SJ60AJ+ offers a 300kg unrestricted platform capacity with a maximum of 454kg. The telescopics offer 272kg unrestricted with a 454kg maximum capacity. ■



Skyjack SJ45 AJ+

GET THE JOB DONE RIGHT

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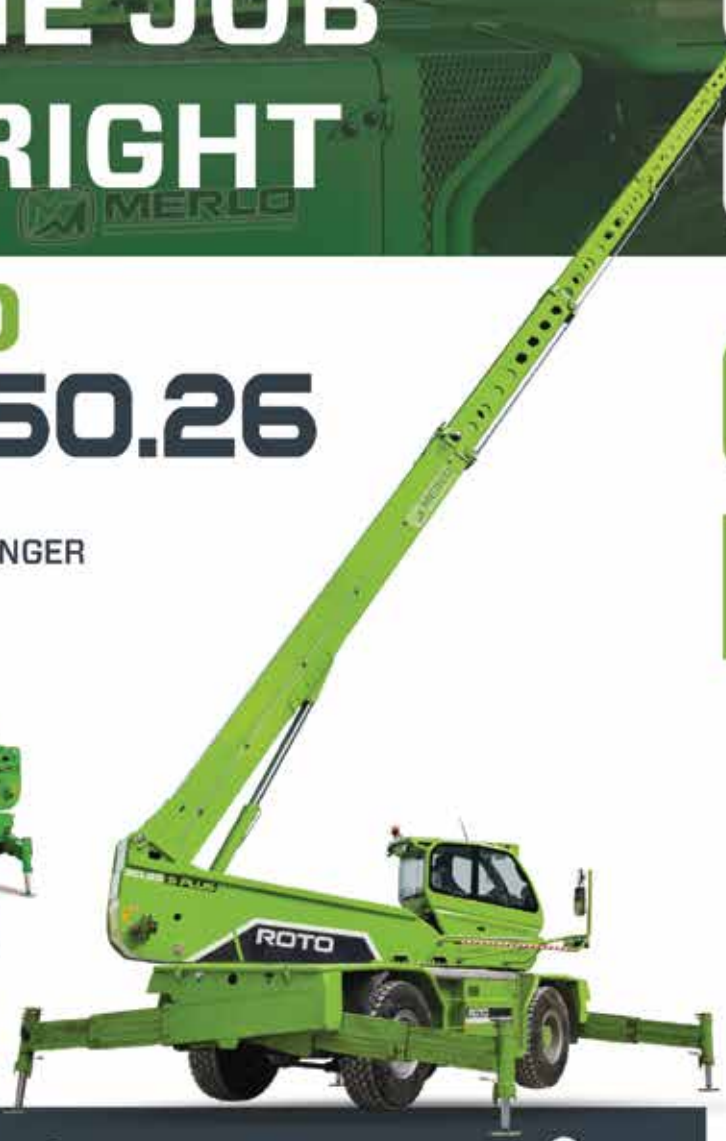
TOUGHER, SMARTER, STRONGER



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