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Alive and kicking

A Bronto S70XDT working on bridges over the Firth of Forth

The truck mounted lift market is alive and kicking with plenty of new products and developments over the past year. This has even included further attempts to push the working height envelope on 3.5 tonne chassis, contrary to the trend towards lower working heights and higher capacities that we reported on in the small truck mounted feature in June. We take a quick look at these developments before turning our attention to the equally active larger truck mounted platform market particularly around the 70 metre working height.

Since our coverage of small truck mounted lifts last June there have been some significant developments in the 3.5 tonne market, unsurprisingly it is Palfinger and Ruthmann that are once again pushing the working height envelope.

28m plus on 3.5 tonne

In October Ruthmann unveiled several new products including the 3.5 tonne record breaking TB 290. An upgrade of the TB 270+, it boasts a working height of 28.8 metres - although on the original Mercedes Sprinter Euro 6 chassis platform capacity at full height was limited to 200kg. However, the company has recently announced the possibility to mount the TB 290 on the Nissan Cabstar chassis which allows the full 230kg capacity at full height. It expects to extend this capability to the Mercedes. Maximum outreach with 100kg platform capacity is 16.2 metres over the rear, or 13 metres over the side. Outreach with its maximum 230kg capacity is limited to 9.8 metres over the side and 13 metres over the rear.

The TB 290 is also available on 6.5 and 7.5 tonne chassis for greater payload and a better working envelope. The extra height over the 270+ is achieved via a three degree increase in the maximum boom elevation and a little more telescope from each of the four inner boom sections, while improved fabrications with higher yield steels reduces boom weight and helps with stability.

Just a few weeks later Palfinger launched its new 28 metre P-280B mounted on the same Mercedes Euro 6 chassis, it chose to use an aluminium boom to reduce weight, but says that its thicker profiles, stiffer properties compared to the latest thin-wall tensile steel booms provide significant improvements in platform rigidity. Maximum platform capacity is 230kg at its full 27.6 metre working height. Maximum outreach is 17 metres with 100kg in the platform.

Larger trucks buoyant

The large truck mounted platform market has also been very active, particularly in the 70 to 75 metre area. The market above that appears to have stagnated in terms of development - or has it? For many years now the maximum working height of a truck mounted platform has been stuck at 112 metres. But with the growing height of wind turbines and a reduced willingness to use man baskets on cranes, there appears to be a growing demand for platforms with significantly greater working heights - possibly up to 150 metres! To achieve this sort of working height however requires a complete design rethink, possibly along the lines of a trailer mounted unit, or bigger crane chassis with removable counterweight and possibly components such as the jib/top boom. Rumours suggest that this size of platform may be available sooner than many think.

The Palfinger P-280B uses an aluminium boom to reduce weight and improved platform rigidity

70 to 75 metre hotbed

Currently the hottest sector is the 70 to 75 metre working height, with several manufacturers having launched new models, including

Mounted on a 3.5 tonne Mercedes Sprinter Ruthmann's TB 290 boasts a working height of 28.8 metres

The 112 metre Bronto is currently the largest truck mount - but for how long?

Italian manufacturers such as Socage and Multitel have 75 metre platforms. This is the Socage forSte 75TJJ

Ruthmann, Bronto and Palfinger, while Italian companies such as Socage and Multitel also have machines in this sector.

Ruthmann's largest model until recently was the 72 metre T720 but earlier this year it launched the 75 metre T750 HF, along with its sister machine the 65 metre T 650 HF. The four axle T750 HF has a five-section boom, three section top boom and short articulated end jib and a maximum capacity of 600kg which can be taken to about 70 metres height. Capacity at full height is reduced to 320kg with a maximum outreach of 41 metres and an impressive 14 metres of below ground reach. The T650 TH has the same boom and jib configuration but offers up to 43 metres of outreach with 100kg. Its 600kg maximum platform capacity is available up to a working height of 60 metres.

Earlier in the year Ruthmann launched its T510 HF which offers


The four axle T750 HF has a maximum capacity of 600kg

the highest working height - 51 metres - on a two axle truck. The unit which is proving highly popular has a maximum outreach of 33 metres with reduced capacity over each of the outrigger jacks. It also launched the 57 metre T570 HF mounted on a 26 tonne three axle chassis with 41 metres of outreach.


The T650 TH offers up to 43 metres of outreach with 100kg

How critical is the maximum working height?

All this talk of maximum working heights with varying platform capacities is all very well, but do we really use the full performance of a large truck mounted platform? Well, according to live data that Bronto Skylift and others have been collecting over the past few years the answer is No. It seems that in the real world the vast majority of users rarely use the maximum working height or outreach. Platform capacity however is one area that is used far more frequently. The findings suggest that end users or rental companies could perhaps vary the working heights of their fleets more. For example, rather than having five 90 metre truck mounts, a more efficient solution might be two 90 metre and three 70 metre platforms?


Bronto S70XDT

The problem with information such as this is that it is never a simple decision when buying a large truck mount. Many customers buy machines to cope with the


Do we really use the full performance of a large truck mounted platform?


The new Bronto S70XR

occasional use at maximum height/outreach covering more eventualities by opting for a larger platform than necessary and means that the end user has some additional capability in his 'back pocket'.

Whole Vehicle Type Approvals

The thorny subject of EU Whole Vehicle Type Approval is an issue that we have covered before regarding smaller units where it has been a critical factor for some time. But it is also an issue now with the larger truck mounted platforms. In a nutshell, WVTA allows manufacturers to produce and self-certify vehicles as compliant with relevant legislation. Of course, the design must meet technical and administrative requirements and the subsequent production must conform with the approved design.

WVTA for truck mounted lifts is possible but only if the chassis is less than 32 tonnes and overall length less than 12 metres. Bronto claims that its latest 70 metre S70XR is the highest working height truck mounted platform with WVTA. The S70XR uses a Scania P450LB 8x4 chassis giving it a GVW of just under 32 tonnes, while the overall length is 11.95 metres allowing it to have a WVTA. Bronto's other 70 metre platform - the S70XDT - which has an older design is 12.3 metres long and weighs 34.5 tonnes and therefore cannot be whole vehicle type approved. Although physically smaller the S70XR has 1.1 metres more outreach and 6.5 metres better up and over performance. It also has a longer jib with greater articulation and more platform rotation.

Having a WVTA allows a machine to be registered straight away, rather than waiting for Individual Approval which can take months in some countries due to the limited number of testing stations. And if a machine fails the first time it can be shunted to the back of a three month queue! A WVTA also makes the unit much easier to export when the time comes to sell it on or transfer it to an overseas subsidiary.

There are always ways around such problems - after all life must go on - one trick is to register a larger truck mounted lift as a crane. However this can bring a number of associated risks, especially if red diesel is used as permitted with a crane registration. The authorities are getting more 'savvy' when it comes to cranes and truck mounts, with reports of equipment being stopped by police or inspectors who know the law - or even interpret the law in their own way - being at an all-time high.

Bronto says that when it looked at a new product in this sector it focused on getting the best performance it could on a 32 tonne/12 metre truck, and thus sacrificed some height and outreach performance.


Bronto claims that its latest 70 metre S70XR is the highest working height truck mounted platform with WVTA

How the Bronto S70XR, Palfinger P750 and Ruthmann T750HF stack up

	Bronto S70XR	Palfinger P750	Ruthmann T750HF
Work height	70m	75m	75m
Max outreach	36.2m	39m	41m
L x B x H	12.0 x 2.55 x 3.95	13.99 x 2.55 x 3.99	13.99 x 2.55 x 3.99
Weight	32 tonnes	31.6 tonnes	Over 32 tonnes
Jib length	2.1m	2.1m	2.1m
Jib rotation	181 degrees	240 degrees	220 degrees
Platform rotation	440 degrees	400 degrees	440 degrees
Max platform capacity		600kg	600kg

Palfinger's Next Generation 75m

Palfinger unveiled its new 75 metre four axle P750 NX - the largest in its all new NX Jumbo class - machines at Bauma. With up to 39 metres of outreach the P750 NX has a similar design to other models in the Jumbo NX range - the 48 metre P480, 55 metre P550 now the 57 metre P570 and the 64 metre P640 - in that it features a telescopic main boom plus a long two-section top boom and innovative X-Jib with up to 240 degrees of articulation which also allows a platform rotation of 400 degrees.

Palfinger also quietly upgraded its three axle P550 which it had launched at Intermat in 2015 to the 57 metre P570 at Bauma a year later, possibly to match Ruthmann's new T570HF. Palfinger said that the additional two metres of working height were always there in reserve and that it has simply optimised the working height to suit customers focused on the maximum working height. Other than the extra height, the unit remains the same and the free upgrade has been offered all those customers who have already purchased a P550 to convert to the P570. The unit can also be mounted on a four axle chassis with additional counterweight for improved working envelope and more spare payload.


The 75 metre Palfinger P750 NX


Bronto's Special S90HLA is a 90 metre unit that can be split in half for transportation. The fully detachable boom package can be dismounted and mounted in four hours


Bronto's other 70 metre platform - the S70XDT - is longer and heavier than the S70XR

BMS - the best you can get?

With 300 mobile cranes and large truck mounted lifts BMS is one of the fastest growing specialist rental companies in Europe. It currently employs around 650 staff with operations in Denmark, Norway, Germany, Sweden, the UK, Poland and South Africa. Mark Darwin visited its head office in Aalborg, Denmark and talked with Ib Steffensen, director of the truck mounted lift division to find out what's behind its success.

BMS has a very simple philosophy for success - buy the best products, employ the best people and offer the best service possible. Some might say that this is impossible to achieve but the growth, performance and profitability of the company over the past five years or so shows that it is working, with revenues growing considerably to €166 million in 2015.

Jens Enggaard is chief executive of the BMS group which comprises three main companies - BMS Denmark, BMS Heavy Cranes Denmark and Kranringen Norway. It is Denmark's largest crane and truck mounted rental company with 11 locations across the country,

Ib Steffensen

and a fleet of more than 110 mobile cranes ranging from 55 to 750 tonnes capacity, 24 crawler cranes from 10 to 300 tonnes, more than 80 truck mounted loader cranes as well as 35 truck mounted lifts from 45 to 103 metres. The company also offers hydraulic towers and jacks, has more than 300 axle-lines from Goldhofer (of which 100 are SPMTs) as well as fork lift trucks and other rigging equipment.

BMS Wind (BMS Heavy Cranes) formed in 2011 primarily deals with the installation and handling of wind turbines in Northern Europe and South Africa and also has an impressive list of cranes including two, 1,350 tonne Liebherr LR 11350s, 10 750 tonne lattice boom cranes - seven mobiles and three crawlers - as well as 20 assist cranes from 100 to 500 tonnes.

BMS has a sizeable crawler crane fleet including two Liebherr LR 11350s

History

The company has a complicated past so keeping it relatively brief is a challenge. BMS was founded by the Danish State in 1953 as part of the Marshall Plan, it was not privatised until the 1980s when it became a division of MT Højgaards. In 2004 BMS was merged with Kran Ringen - itself the result of a merger between Kranløft Aalborg and Helsingør Kraner in 2002. This gave the Enggaard family of Kran Ringen a 50 percent stake in BMS, with MT Højgaards retaining the other half until the Enggaards purchased it in November 2007. The family had also formed KR Wind as a 50/50 joint venture with Mammoet in 2002, but sold its stake to Mammoet in 2011. Since 2004 BMS has expanded both organically and through acquisitions and become a major player in the wind turbine market in its own right.

An increasingly international business

Today BMS has 10 subsidiaries, including Kranexpressen, City Cranes and Torben Rafn in Denmark, BMS Kranar in Sweden, Kranringen and BMS Lifter in Norway, BMS Kran in Poland, BMS Krane in Germany, BMS Lifting in the UK and

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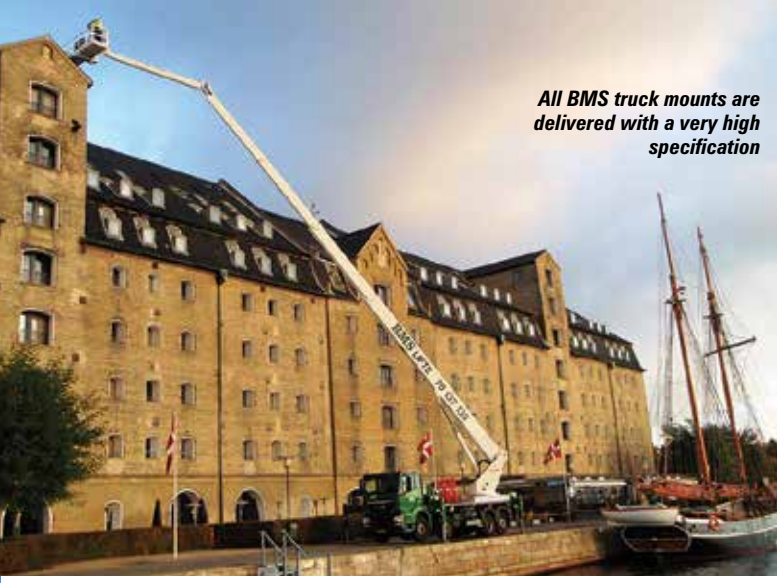

All BMS truck mounts are delivered with a very high specification

BMS has 35 large truck mounted lifts including four 103 metre WT1000s

BMS Heavy Cranes in South Africa.

The main activities focus on lifting and access for the construction and industrial clients, including specialist bridge jacking and skidding, and handling TBM machines on tunnel projects. Its range of equipment also enables it to work on a wide range of projects from refinery shut-downs, to the moving and installation of transformers and all things wind turbine related, including service and maintenance.

One area of the company that has grown significantly over the past five years is its truck mounted access division under Ib Steffensen who started his rental career in another rental company where he was for nine years before being offered the position to run the access division of BMS in 2011. BMS had been a major player in the self-propelled aerial lift market with a fleet of 700 units, but sold this to Riwal in 2011 and now focuses entirely on truck mounts.

Following through on its policy of buying the best products, all 35 of its large truck mounted lifts are Palfinger - including four 103 metre WT1000s - and it claims to be its largest customer. BMS also has four truck mounted Moog underbridge units and one specialist tracked Moog unit for work on harbour walls, although it also works closely with Wemo-Tec when it needs more. It has also been involved in the development of its two 53 metre 'mountain specification' truck mounted lifts and is looking to add four more units in 2017 to meet demand, particularly in Norway. *(See box story on page 22)*

"The most important resource in a company are the people, and everyone here at BMS is hardworking and willing to do anything to get the job done," he says. "I think Palfinger makes the best large truck mounted platforms and with excellent in-house support we achieve our goal of being the best."

Cosseting the operator

The BMS truck mounts are delivered with a very high specification, including features that take more care of the operators. After discussions with Palfinger and based on its customer suggestions, all of its platforms are now fitted with heated platform floor plates in the basket and upper level heaters which allow operators to work at height much longer before they are affected by the cold - which when working at up to 100 metres can be a relatively short time.

"One customer did query the slightly higher cost of renting our platforms because the previous rental company did not equip its platforms

The custom-built 53 metre work platform makes drilling anchors safer, easier and quicker

Drilling platform

Working on mountain safety restraints usually involves fixing huge steel nets to prevent rocks from falling onto the roads below. Traditionally this has been carried out by an operator holding on to a 40kg pneumatic hammer and drilling holes to install the large anchors which hold the nets.

A few years ago BMS developed a custom-built work platform that makes this task safer, easier and quicker by mounting a hydraulic and pneumatic driven drill guide with a 1.8 metre stroke onto a specially modified 53 metre truck mounted platform Because the operator is now not holding the drill it can be operated continuously for long periods, increasing drill rates from around 10 to as many as 1,000 a day. The lift has a 700 litre per minute water cannon and integrated eight cubic metre compressor. With a total weight of about 30 tonnes the trucks can travel around Europe without special permits. Platform capacity is 300kg and outreach 40 metres.

with these operator 'essentials'," says Steffensen. "However, with our heated machines the operators were able to work three to four hours before taking a break, compared to as little as 20 minutes with the competitor's non-heated platforms. By using BMS they may have paid a bit more on the rental but they achieve much greater productivity by extending the amount of time spent in the basket."

In addition all BMS's truck-mounted lifts are equipped with satellite connections to allow its various depots across European to track the machines and check their performance. The satellite link also allows software to be updated anywhere in Europe even if the vehicle doesn't have a decent local mobile connection.

Working safely in high winds

BMS together with dealer Danilift and Palfinger Platforms has also developed a 48 metre truck mounted platform capable of operating in a severe gale or a 'wind force 9' on the Beaufort Scale - much stronger winds than the current 12 metres per second 'wind force 6' or a strong breeze allows.

One of the Moog underbridge units

"The new lift is able to operate at up to 20.8 metres per second which is a big benefit to customers such as telecommunication companies when the network breaks down and there's a need for emergency repairs or error recovery. Weather still has a significant impact on the equipment - the less affect it has on our platforms the happier our customers will be. Less time wasted means money saved for our customers. We are glad that Palfinger listened to our requests and experiences and we are extremely pleased with the outcome."

BMS has 35 truck mounted lifts from 45 to 103 metres.

The higher wind speed ratting has been achieved primarily through 'over engineering' the platform, using a 75 metre chassis for the 48 metre working height boom. As well as having oversized outriggers for the working height the unit has additional counterweight to give it the stability to work in the higher wind speeds.

Major platform expansion

Just over 18 months ago the company launched a major international truck mounted strategy following the appointment of ex Palfinger Platforms director Stefan Kulawik to cover the UK and German markets. A major part of this initiative was called E24 - a guarantee to have one of its trained specialists on site with a customer anywhere in Europe within 24 hours. So far the service guarantee applies in Germany, the UK, Scandinavia and Benelux countries and it is gradually being extended to other countries in-line with the company's international expansion plans. A fast-driving truck-mounted lift with two drivers can travel a fair distance in 24 hours from BMS' expanding network of depots across Europe.

"The E24 concept is aimed at the demanding lifting tasks being carried out at height, for example drilling, welding, painting, bricklaying or working with power," says Steffensen. "It can be bridges, mountain safety restraints, power plants, wind turbines or platforms in the offshore industry."

Future developments?

With wind turbines being designed with larger capacity nacelles, and higher towers, there is pressure on the truck mounted manufacturers to produce lifts with greater working heights. "More and more often we are being asked for platforms even larger than we have in our fleet and which is currently available. I think that over the next few years we will see truck mounted platforms with greater working heights than the 112 metres currently available."

How this will be achieved nobody yet knows particularly if the chassis is to be kept to a size that can be moved without restrictions. Ruthmann's 100 metre working height TTS1000 which was introduced in 2001 was mounted on a six axle trailer towed by a three axle tractor. Only two units were ever built but both are still working in North America. Another alternative may be a design along the lines of a large All Terrain crane with additional ballast added before working?

Further acquisitions?

From a company point of view Steffensen believes that BMS will probably be setting up in the US in the near future and perhaps will be looking to increase its presence in the UK, possibly by acquiring a specialist truck rental company with a good knowledge of the market. It is also looking to expand elsewhere in Europe with more depots in Germany - possibly Cologne and Berlin.

"We are looking everywhere, we will supply whatever the customer wants."

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