

- without removing the boom
- Up to 50% gradeability
- Working heights between 5.68 m [46" 7"] and 21.9 m [72"]



Vertical Mast Lifts • Electric Scissor Lifts • Rough Terrain Scissors • Articulating Booms • Telescopic Booms • Telehandlers

^{*}Some features model dependent

Maxing two axle

Over the past six months, the three leading European truck mounted platform manufacturers - Bronto, Palfinger and Ruthmann - have all introduced a new two axle 18 tonne GVW product in the 47 to 48 metre working height range. The following article takes a detailed look at each of them and compares key performance data.

The lure of being the biggest, highest, fastest, strongest etc. is a driver for many individuals and companies - just take a look at the popularity of the Guinness **Book of World Records. When** it comes to truck mounted lifts there appears to be a similar competition between the major manufacturers.

Maximising working height on the 3.5 tonne chassis was all the rage a few years ago, with Ruthmann holding the 'top dog' spot with its 27 metre working height TB270. However most customers buying lifts on 3.5 tonne chassis prefer to stick with models in the 20 to 22 metre range which give a good combination of price, a stable secure feel to the platform while offering a little payload on the truck within the legal gross vehicle weight. Biggest does not necessarily mean best or best seller. In fact when looking at platforms from around 25 metres and up, most buyers tend to choose a larger chassis - 7.5 tonnes for example. This takes the machine out of the self-drive market in many countries, but as platform heights increase, the lift is more likely to be operated by a dedicated driver, and the larger chassis gives more capacity for carrying outrigger mats, tools and a few people.

Until now most buyers looking at larger lifts, have gone with either a 35 to 40 metre platform on two axles or moved up to 50 to 60 metres on three axles. The introduction of these new models has of course created a good deal of interest in the 45 to 48 metre height range on a two axle, 18 tonne chassis, which manufacturers say offers the best combination

of performance with compact dimensions and lower running costs. In addition to the new products from the manufacturers already mentioned - Palfinger, Ruthmann and Bronto - we will look at Italian manufacturer Socage which has considerably expanded its larger truck mounted range and has also just launched a model in this sector.

Bronto S 47 XR

Bronto Skylift launched the 47 metre S 47 XR at Apex in June last year, the latest and the smallest of its three model XR (eXtreme Reach) range, which includes the 56 metre 56 XR and the 65 metre S 65 XR. Bronto says the development of the XR Range was prompted by customer feedback, and has resulted in lighter more cost-effective platforms, using a completely new design giving larger working envelopes for the size of the chassis. This translates into a 20 percent better working heights, 15 percent more outreach (up to 28 metres) and a 35 percent greater working envelope. The S 47 XR offers 15 metres up and over reach, fully independent movement of the top boom, a 'Sky-Jib' with 180 degrees of articulation, 180 degrees of platform rotation and Bronto's B+ Geometric Control System.

Longer outrigger jack cylinders allow the machine to level on slopes of up to 10 degrees, without extra cribbing and it has fully automatic variable outrigger positioning with a 30 second set-up time. Platform capacity is 700kg but the machine can lift 2,000kg on the lifting eye fitted at the top of the main boom, 1,300kg with the boom winch and 300kg with the basket winch.

Bronto says the unit, which is



truck mounts



under 10 metres long, can be roaded without special permits and can be mounted on two or three axle chassis with rear and all-wheel drive as well as hydro drive. Improved serviceability features include grease fittings on all bearings, TeleControl remote diagnostics and calibration, quick-fit energy chain module, standardised components, Skylift Fleet service

and user interface and B+ anti-theft protection.

Palfinger P 480

Another Apex launch was Palfinger's first model in its new 'Jumbo NX' (next generation) class - the P480. With a working height of 48 metres it - along with the Ruthmann T480 is the highest platform available on a two axle chassis. Its maximum outreach of 31.5 metres is however



the best in class - a fair way ahead of the Bronto and Ruthmann, with the Socage its closest rival at 30 metres. Although the Ruthmann claims 31 metres it is when the boom is directly over one of the four outrigger jacks, not over the side or rear. The new two axle Palfinger features a four section main boom. 17 metre telescopic top boom and new double link articulated 'X jib' which allows up to 240 degrees of articulation. This combined with 400 degrees - 200 degrees left and right - of platform rotation, provides enormous flexibility to position the basket around the work.

The Gross Vehicle Weight of the P480 is 17.6 tonnes which, together with inbuilt storage areas provides room and some capacity for tools, accessories and materials to be carried on the vehicle.

Ruthmann T480

Around two and a half years ago Ruthmann launched its first Height performance-series platform - the

Steiger T 460. Since then a range of six models have been launched with working heights from 38 to 72 metres and Ruthmann claims more than 100 platforms have been sold

Its 48 metre T 480 was another Apex launch, and along with Palfinger offers the best working height on an 18 tonne two axle truck. Ruthmann also announced plans to add two more models, including a new 40 metre T 400.

The T 480 has a four section main boom with two section telescopic top boom - both of which use the company's multi-bevelled boom shape - and an articulated jib. Jib articulation is not quite as good as the Palfinger, at 180 degrees. Ruthmann claims a maximum outreach of 31 metres but this appears to be purely when the boom is almost directly over one of the outrigger jacks, giving it an almost square horizontal range diagram. However through most of its working range, including over the side and rear, it is closer to 28 metres.

Socage 47TJJ

The only other manufacturer offering a product in this 47/48 metre two axle sector is Italian manufacturer Socage with its new 47TJJ. It is fair to say that in Europe the 'big three' dominate the larger truck mounted lift market, while the Italian manufacturers - although dominating the smaller truck mounted market particularly 3.5 tonnes - have never truly broken into the mainstream European market for larger models. Of the many Italian manufacturers producing larger truck mounts - Cela, CMC, GSR, Isoli and Oil & Steel to name a few - Socage is the only one with a product in this category size and is currently building two for orders in the US.

Over the past year or so the company has put a lot of effort into its larger range and now has eight models in the TJ/TJJ (telescopic with jib and telescopic with two jibs) range between 35 and 75 metres with models providing 35, 39, 44, 47, 51, 54, 65 and 75 metre working heights.

The TJJ47 uses a shorter three section main boom than the others, but employs a longer top boom, and unusually two articulated jibs which provides a very useful 12 metres of below ground reach, making it suitable for underbridge work. The Socage may be lower on up and over reach but it does offer an outreach of 30 metres with 100kg platform capacity, although this is only over the front and back of the machine. Over the side this figure is reduced to about 23 metres, significantly less than the other machines, in spite of more than eight metres of outrigger spread, possibly reflecting a heavier boom and jib combination? Maximum platform capacity is on par with most at 600kg.

Standard equipment includes a platform mounted 7" LCD display giving the operator information including a 2D working area diagram, and indicator for the variable position stabilisers the rears having two hydraulic extensions giving a stabiliser width of 8,830mm (compared to six metres for the Palfinger). The 47TJJ can also be fitted with a jib-mounted hydraulic winch with 900kg load capacity which can be



Ruthmann has the smaller 40 metre T400 which has the same outreach as its bigger brother the T480.

used once the aluminium basket has been removed. Standard platform length is 2.3 metres, but this is hydraulically extendable to 3.6 metres, while featuring 360 degrees of rotation.

Two axle, 18 tonne **GVW** platforms

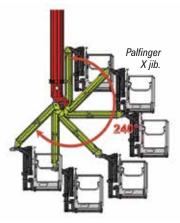
While these units offer the maximum working height from a two axle chassis, the most important figure for many end users is outreach and platform capacity, rather than working height. Looking at the outreach claims and the range diagrams supplied by each manufacturer, it would appear that there are some very long-armed users working in extended rotated baskets etc... when maximum outreach was calculated. We have included the 'claimed' maximum outreach of each machine however we have also used the charts to come up with the maximum outreach with maximum capacity which may give a better idea of each platform's performance.

Allowing for the variations in the charts it would appear that the Palfinger P480 still has a half metre advantage (at 22.5 metres) over the Bronto XR, although the Bronto has an additional 100kg of capacity









(700kg vs 600kg). Both Ruthmann platforms are a good 1.3 metres less than the Palfinger with the same capacity, with the Socage just a little way (200mm) behind the Ruthmann. Socage only claims a maximum side outreach of 23 metres anyway, so 21 metres with full capacity is a good result.

Where the Socage wins is its below ground reach of more than 12 metres which is significantly better than the rest. With its 240 degrees of jib articulation and 400 degrees of platform rotation, the Palfinger platform is clearly the most manoeuvrable at the end of the boom, with the other three having 180 degrees of jib articulation.

Overall, on paper, the Palfinger P480 appears to have the best combination of specifications

- with class leading working height and outreach, good below ground level reach and the most versatile jib. However all three four products clearly offer new levels of performance from a chassis that not that long ago would have been limited to working heights of under 30 metres. It will be interesting to see how they all compare when working in the real world....

How they compare statistically

	Palfinger P480	Bronto S 47 XR	Ruthmann T480	Ruthmann T400	Socage 47TJJ
Max platform height	46m	45m	46m	38m	45m
Max outreach side	28m w/100kg	28m w/ 120kg	28m w/ 100kg	28m w/100kg	23m w/ 100kg
Max outreach over rear	31.5m	28m	27m	27m	30m w/ 100kg
Reach below ground level	-10 metres	- 6 metres	- 7 metres	- 7 metres	-12+ metres
Maximum outreach side with max capacity	22.5m with 600kg	22m with 700kg	21.2m with 600kg	21.2m with 600kg	21m with 600kg
Platform rotation	400 degrees	180 degrees	180 degrees	180 degrees	360 degrees
Jib articulation	240 degrees	180 degrees	180 degrees	180 degrees	180 degrees
Max platform capacity	600kg	700kg	600kg	600kg	600kg
Cage size	3.88x1.05m	4.7x1.05m	3.82x0.97m	3.82x0.97m	3.6x0.90m
Height	3.93m	3.6m	3.95m	3.95	3.9m
O/A Width	2.5m	2.5m	2.5m	2.5m	2.5m
O/A Length	9.9m	9.9m	9.76m	9.75m	9.9m
Outrigger spread	6.5m	7.0m (4.9m one side, narrow 2.8m)	7.0m	7.0m	8.83m max 5.81 half extended.
Axles	2	2	2	2	2
Total weight	17.6 tonnes	18 tonnes	18 tonnes	18 tonnes	18 tonnes

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Loxam looking to expand

Ever since it made a big splash acquiring market leading powered access supplier PTP in 2000 Loxam has kept a relatively low profile in the UK. This is particularly surprising as the French-based group is the largest equipment rental company in Europe with a fleet of 120,000 machines, with more than 600 branches across 13 countries and revenues of over €800 million. Mark Darwin visited UK managing director Brian Stead at its Nottingham head office to find out more about the UK operation.



Being a large multi-national rental company has both advantages and disadvantages. Leveraging best business practices and economies of scale are often offset by having an imposed 'international' culture to the detriment of local initiative. Loxam however allows each country to retain its own culture. Yes, there is a French board and almost 80 percent of revenue is still generated in France, but this is down from over 90 percent five years ago - a combination of acquisitions such as Workx in Holland and several in Belgium along with a slower domestic market.

Loxam originates back in 1967 when it was formed under the name of SAM, creating its business in the Brittany and Loire-Atlanique regions of France. It changed its name to Loxam in 1994. Today the business is owned by a combination of the Déprez holdings, (as largest stakeholder), 3i, Pragma Capital and some Loxam employees. Déprez's daughter extends the family



involvement being in charge of the powered access division in France. This division is larger than Loxam UK however Stead believes this gives the UK a good foundation for information exchange between the countries.

The group also allows individual countries to take a lead in best practise. The UK for instance is more involved in Health & Safety - secondary guarding for example. The initial group reaction was "why would anyone want to do that?" However it is now mandatory in every country on every new Loxam boom. Managing directors meet



regularly to discuss issues and if they need further clarification they can see it first hand by spending a few days working with another country and this is encouraged by Déprez.

Loxam in the UK

Loxam in the UK has not been a match made in heaven with a difficult first 10 years. It entered the market with the purchase of PTP (Port Talbot Plant) from Rentokil in March 2000 and still has the original branch in Port Talbot. At that stage PTP was the UK's leading platform company with 16 branches and revenues of £16 million. However between 2000 and 2010 the market expanded fivefold while Loxam UK contracted by more than 40 percent to £9 million. It was an underperforming business with debts of 10 times EBITDA. During that period there were four managing directors - two from France, one from Canada and one from the UK - but none could seem to make it work.

"The main problem I think was the issue over culture and style - trying to run the UK as a mirror of the French businesses," says Stead. "I also experienced this with my previous company Saint Gobain. In 2009 Loxam like many UK companies reacted to the market downturn and sold a significant percentage of its fleet to create

cash and limit its position. It really needed sorting out. I came in with a background of turning companies round, but with industrial experience not access, so it was a bit of a gamble. The previous five managing directors had access experience but did not achieve what was expected so perhaps it was time for a gamble."

Loxam UK was Stead's eighth turnaround - and one start up - but he found the company in a worse state than he initially thought. However it is now back to the level of revenues last seen in 2000 which equates growth of around 65 to 70 percent over the past five years.

"When comparing EBITDA to hire revenues we became a top three player in the group in 2012 out of 11 counties and I expect we will again be in the top three this year out of the 13 counties."

What had to change?

During the early years 75 percent of the company's business came from construction and it was winning business on price, while not charging fully for damages. Now it claims that construction represents less than 30 percent as it has developed into new areas including industrial - now its largest sector - followed by energy, media and communications.



"The first unusual thing that struck me was that there were two companies in the UK - one for truck mounted platforms and one for self-propelled - similar to the French business. I created one company dealing with all solutions for working at height, which makes it much easier and more appealing to the customer."

"Combining the companies was not easily accepted within the group but it was persuaded after a 'zero change will give the same results' discussion. Headcount only went down by about 10 percent and all changes were completed within the first six months. Instead of being a smaller scale Nationwide Platforms we decided to go in another direction - the industrial sector. Having reliable machines is key and I set a target of halving breakdowns



over a two year period. After five years we have reduced them by 75 percent. That is a combination of the group providing budgets to enable the machines to be fixed but in many cases disposing of the older machines and replacing with new. We reinvest 60 to 70 percent of the hire revenue in new equipment every year and have done that over the past three years and will do it again in 2015."

"We measure breakdowns regardless of whether it is a customer error. This figure has reduced from 18 percent in 2009 to just under six percent in 2013. In 2014 it will be lower again and that includes 25 to 30 percent caused by lack of customer knowledge or flat batteries. If these are removed around four percent of contracts experience a breakdown in the UK - this figure is better than group and probably very good compared to other UK rental companies."

"When I first came into the business the group saw Nationwide Platforms as our number one competitor. I have never thought that, and today we don't cut across each other at all. On smaller industrial sites it is more likely to be the local independents or where it



is a truck mount it is more likely to be companies such as Blade, Elev8, AA Access and increasingly companies such as Clements which has added some trucks. I do not go out to undercut - we have a different business model and it works enabling us to maintain and reinvest in equipment. I don't think we have one major competitor."

Under pressure

"With the exception of the UK and Ireland, Loxam is a general rental company, however I am not under pressure to expand into other equipment," says Stead. "The original plan was to become a top three player in access and then go into general plant. At the moment

that won't change. I was surprised by the ability of the smaller access companies to survive the last recession. One of the attractions for me doing this turnaround was that the sector looked rife for consolidation. When at Saint Gobain I was one of the major players in the building products industry when there was a lot of consolidation, with the top three players ending up with 70 percent of the market so this looked like a big opportunity to do the same. During the recession though companies looked for historic valuations, and now they believe the good times are backbut I am not so sure.... Some are hanging on by not investing which



truck mounts

Caa

means there is some really horrible looking equipment out in the market at the moment."

So is it time to look at a maximum age on equipment or stricter inspections on older kit?

"Yes I think this recession has put the customer or person operating the machine more at risk because of the quality of the equipment. We have cleaned up our act and now track every machine electronically through the system, flagging age and reliability related issues, based on revenues and maintenance costs by individual machine - and manufacturer - which is important information for future purchasing decisions."

Loxam UK currently operates a fleet of 1,500 machines from 10 branches, with Stead visiting three a week. "I always walk the yard to have a look what is going on. I have a list of machines that have been flagged up, but there is nothing better than a visual check and if not up to standard we sell them on."

Low level access?

"My business model is based on low loaders and six wheelers and I don't believe it is safe or economic to deliver low level access on those vehicles. Also with 10 depots the distances to customers are too great for a low rental value product, combined with the issue of haulage and call-outs for breakdowns etc. Never say never but you have to invest sufficiently in safety and logistics before getting into that sector. Our original five year plan which is up soon - was to keep the range of machines tight, but go for depth. The customer's main concern is 'have you got the right equipment when I need it, in the place I want it?' and this is often more important than price."

"We don't supply any machine under eight metres working height and concentrate on booms and scissors. We widened our range this year adding 10 spider lifts - two per branch across five depots - with Hinowa in Scotland and Platform Basket as my choice in England and Wales. Last year we added a 70 metre Bronto truck mount because it was time to get back into that market - the previous 70 metre platform was sold off in 2009."

Future expansion

The next phase for Loxam UK is to add more depots, each of which it

estimates would involve a £4 million initial investment.

"Our current locations are perhaps not in ideal positions but we don't want to relocate. Perhaps 15 or 16 depots in total would put us within an hour's drive of 85 to 90 percent of the UK customer base. Areas where we are least strong include the South West and South East, Cambridgeshire/Norfolk, north of Teeside and parts of Yorkshire."

"We are looking to add more depots as all the other elements are in place and we are achieving group expectations. The fastest and the best way is through acquisition," he says. "The group has set aside a substantial amount of money - large enough to buy almost any powered access company in the UK - and it is just a matter of finding the right one with the right mix. The average gestation period for an acquisition in building products was two to three years so I would be surprised if anything happens in the short term."

Van and truck mounts

Loxam UK has 100 van mounted lifts, 50 small - 3.5 tonne - truck mounted lifts and 25 larger truck mounts. The company added three Bronto's last year - with 44, 50 and 70 metre working heights - the 50 and 70 metre units are fitted with cage winches that can lift 300kg panels.

Stead also has three 48 metre Palfinger P480s on order for delivery in March. "We bought these machines because they are compact and flexible. They will be the first of their type in the UK. With the UB40 underbridge units disappearing there is increasing pressure to find solutions for bridge inspections, P480's do not match exactly this need but they have exceptional below ground capabilities. France purchased its first Ruthmann's recently, but they are more construction orientated. The P480 is not widening our range but widening our solutions for the customer." Stead believes this is a very good example of the group working together to share expertise but enabling the final decision to be local.

Loxam also runs the only 65 metre Multitel in the UK and is very pleased with its performance since purchasing it at the end of 2007.

"The Multitel has been a phenomenal unit. It may only have a working height of 65 metres but









Loxam UK has 100 van mounts, 50 small 3,5 tonne truck mounts and 25 larger truck mounts up to 70 metres.



its knuckle positioning means that it can get up, over and down and that is its real specialism. It is used extensively in the petrochemical sector - fitted with Chelwyn valves and spark arrestors - and can get into intricate places the 70 metre cannot. It is coming up to seven years old so we have decided to carry out a major £100,000 refurbishment, which should give it another seven years of service. The unit went away to Multitel a few weeks ago and should be back in operation in February."

As yet it is not common for those operating trucks to make this mid-life refurbishment investment but Stead believes this not only increases safety but it brings with it enhanced customer service through longer life reliability.

Big booms or trucks?

"I won't be rushing into purchasing a big 150 foot or above boom and I have concerns over companies that are used to renting out small electric scissors adding these big booms. Have they considered if their customer base can safely operate them? I have concerns about driving an elevated big boom around site when you can't see the ground properly. Some companies are geared up for these machines and some are not. From a safety point of view I would favour a truck because they are inherently safer when in use."

"Our 70 metre is big enough for now, utilisation since it was delivered has been 92 percent - and it is only this low because it was parked on Vertikal Days and out of action for a few days without revenue! The bigger platforms are often used on wind farms and we don't chase that market because of the state of some of the access roads. It is a big risk taking an expensive machine designed for the public highway down a forest track."

Stead is now in a position to start expanding and given his past experience it can only be a matter of time before Loxam UK is on the acquisition trail.

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