

# taking **UpRight** to New Heights

**UpRight** goes from  
strength to strength

- Comprehensive product line with working heights up to 40m
- New line of straight telescopic and articulated boom lifts; plus slab and rough terrain scissors
- Global sales and support network providing local, high quality service

Find the right machine for you at  
[www.upright.com](http://www.upright.com)



b o o m s | t r a i l e r s | l i f t s | s c i s s o r s



Call 0845 0175 500 for more information on the full UpRight range or visit:

[www.upright.com](http://www.upright.com)

**UpRight**  
POWERED ACCESS

# Rough, tough and articulate

The new Merlo road-going platform may be something completely different but is it going to transform the rough terrain articulated platform market? We carry out an in-depth investigation into the unusual new machine (page 31) as well as looking at the equipment currently in this sector.

Articulated self propelled booms first appeared in the early 1980's but in those days most were two wheel drive and powered by battery or propane. Initial thinking for these industrial machines was the lower outreach for a given height meant that they could be more compact and/or lighter weight. Some manufacturers believed that there was little point in taking a multi-linkage machine over rough ground. Some also thought that all those joints would not stand up the shake, rattle and roll.

The machine that changed all that was probably the Grove Manlift AMZ66. When introducing its first articulated machine in 1986 several years after Simon, Genie, Snorkel and JLG, the company thought it ought to do something different. So it went to 60ft when all others were clustered around 30 and 45ft. It added four wheel drive and four wheel steer. The result was a runaway

*The popular Genie Z80.*



success and one of Manlift's most profitable aerial lift launches.

Simon soon followed putting jeep axles under its industrial models and before long most manufacturers were offering rough terrain versions of their 45's and looking at the 60ft market.

Many of these early models that were quick conversions of industrial machines were less than successful. The Snorkel UNO which sported balloon tyres gained a solid reputation but Genie was the first to follow and exceed Grove's lead by introducing the concept to the 45ft market in a solid winning package - the Z45/22 4WD.

## Benchmark

Although it looked like a regular articulated boom with massive tyres, it featured a big engine with good hydraulics giving it real rough terrain capability. Soon it became the benchmark for all 45ft 4x4 articulated booms and helped convert this sector from electric to rough terrain.

Most rough terrain articulated boom products on the market today build on the principles set by the Genie Z45/22 4WD most it not all offer great off-road ability with a fantastic working envelope and in some cases a narrower overall width.

Interestingly, the European market for these off-road articulated booms is larger than the North American. Why? Many American contractors prefer straight boom machines for their rugged works. They like the extra reach and the faster simpler lift mechanism. And they believe, a more rigid platform. This latter point is more of a hang-over from the



*Haulotte HA16PX*

past than modern reality. With most straight telescopic booms now sporting jibs while tighter tolerances and chunkier structures have made articulated booms more rigid, there is very little difference between the two. The biggest new development in the articulated rough terrain market is without question the road-going models launched earlier this year by Merlo (See separate story). Whether this catches on time will tell but they do offer an alternative for short duration work as well as offering a new level of rough terrain capability.

## New arrival

Another new arrival which has taken off in both the UK and Holland is the new Nifty HR21 Bi-Energy. Nifty, which only builds articulated booms, has come a long way in the Rough Terrain market, somehow managing to squeeze some extra outreach from its models at the same time as reducing the overall width.

The company has quietly introduced

a wide product range and taken a significant market share where its products are sold. The off-road capability of its current range is a far cry from the first Height Riders of the late 80's that bogged down at the mere thought of mud. The company's HR12 4x4 is a gutsy machine which combined with its light weight, makes it a great performer on soft ground.

*The lightweight Nifty HR21 is a good performer on soft ground.*





## Compact Size, Powerful Performance

The new ultra-compact **JLG® Model 1230ES**, a self-propelled mast lift that weighs only 790 kg and provides up to 5.7 m working height. The 1230ES features the same energy saving 'direct electric' drive system, found on the popular JLG ES Series scissor lifts. This system provides up to three times the number of duty cycles compared to other models in its class. Comfortable to operate with fully proportional control for drive and lift, it also features a new hydraulic system that provides elevation to full height in only 12 seconds.

With its reduced weight, superb manoeuvrability, and compact dimensions - 0.76 m wide and stowed height of 1.66 m - the Model 1230ES provides a cost effective solution for use in confined or weight-restricted areas so you can go to work on raised floors, in high-rise buildings and in multi-storey warehouses. It is also light and compact enough to be transported in most construction or industrial elevators and it can be lifted by crane to elevated work areas.

In your efficiency-driven work environment - let the JLG Model 1230ES give you the Power to do More.

Ask for the **JLG Model 1230ES**, only from JLG.

Visit [www.jlg.com](http://www.jlg.com).

**TREBLE**  
**your**  
**operation time**  
**HERE**

**WITH**  
**fast elevation**  
**TO FULL HEIGHT**

**AND MORE**  
**lightweight**  
**manoeuvrability**  
**HERE**



# JLG

*It will be interesting to see if Merlo's latest rough terrain machine is a success*



It will be interesting to see how this smaller end of the market develops. Until now most articulating boom lifts below 45ft have been electric or Bi-Energy slab machines. This raises several questions: Are there sufficient applications for a 33ft platform height articulated rough terrain boom and if so will the rental market see the benefit of buying such machines? Also will they continue to provide 45ft machines for this work? With an increasing number of buyers going for 50ft booms (stretched 45's) perhaps this opens up a gap wide enough to attract smaller models.

The fact that neither Genie, JLG or UpRight/Snorkel are likely to be drawn into this sector and that the 33ft Haulotte is heavy and wide in comparison, (in essence a different machine falling closer to the 45ft models), will limit the take up. Haulotte's HA16PX on the other hand is attracting buyers because of its performance. With a working height of 52ft and 30ft of outreach, and compact dimensions, the machine has good ground clearance and gradeability.

Nifty on its own is unlikely to create a major market, assuming that the underlying demand is there. It needs at least one of the major producers to introduce a similar model. With the big three

*Matilsa incorporates an oscillating axle and can also be equipped with outriggers for levelling on slopes.*



continuing to ignore the now significant market for electric machines of this height and size, it is difficult to imagine a rough terrain version coming from them anytime soon.

Currently Matilsa is the only other company with something similar. Its Parma 13D offers a similar package but also incorporates an oscillating axle and can be equipped with outriggers for levelling on slopes.

Another new development this year was to be the re-introduction of the UpRight AB46RT, the acquisition of Snorkel might well have put a stop to this however. The AB46 looked like something out of Mad Max with its massive tyres, unusual positioning of the engine in the chassis and its small superstructure. UpRight does acquire three badged articulated Snorkel machines the AB50JRT, AB60JRT and AB85JRT.



*The UpRight badged Snorkel AB85JRT*

However, the AB46 did perform well on rough terrain and scored the highest in the last Vertikal Check for this type of machine back in 2001. Interestingly the six rough terrain articulated boom lifts evaluated at that time are all still on the market - 45 to 50ft units entered by Genie, JLG, Haulotte, Snorkel, UpRight and Manitou.

The company not present at that time was Nifty, which as we have said, now boasts an impressive line up of rough terrain articulated booms. Aichi, so far a straight boom company is set to join this market sector towards the end of 2008 or start of 2009. It is not known yet what size of machine this will be, although it is likely to be either a 50ft or 65ft model. Given the company's reputation in terms of solid engineering and reliability, its first articulated boom will be eagerly awaited.

## Higher end

In recent years the 80 to 85ft articulated boom has become a relatively common piece of kit. Models are available from Haulotte, JLG, Genie and Snorkel - now of course also badged as UpRight.

The JLG 800AJ has led this market with more than 3,000 units delivered, while the Genie Z80/S has also become quite a popular unit with its similar lift mechanism. JLG is currently upgrading its units with a fairly sophisticated working envelope management system. This will not only prevent overloads but will also ensure that the machine's two booms are kept within the permitted working envelope.

The Haulotte HA260PX and Snorkel/UpRight AB85J differ from the Genie and JLG in that they both have conventional single section parallelogram risers, compared to the telescopic risers on the former units. The Haulotte is also lower in that its 26 metres is a working height rather than a platform height, but at 77.6ft it is relatively close to the other three units. The machine also offers a lower gross weight - almost two tonnes lower than the JLG - and a narrower width, being less than 2.4 metres compared to 2.5 metres on the JLG and Genie and 2.6 metres for the Snorkel. However where it wins on the compact dimensions and lower weight it gives up on the outreach, being two metres short of the Genie and Snorkel and a full three metres short of the JLG. However if



*One of several JLG rough terrain machines, the 510AJ has a 15.8 metre platform height and 9.5 metres outreach.*

you are looking for pure outreach then a telescopic boom will serve you better.

When Merlo introduced its machine at Bauma, it did so with a view of generating industry opinion and comment prior to going into production. While there are a few issues with the prototype machine, the concept looks like it might take off. It will be interesting to chart its development and impact on other manufacturers in the rough terrain sector, particularly those with both aerial lift and telehandler divisions. Watch this space.



*The Maniaccess 180 ATJ has a 17.65 metre working height and 4x4 steering*



# Now Genie® is within your reach

When you need to go up in the world, Genie has the machine for you.

Genie machines are built to provide a superb level of reliability and safety when you're working at height. And their exceptional performance means that they're strong enough to manage even the toughest jobs.

With a range that includes the highly manoeuvrable personnel and material lifts to the rugged telehandlers and articulating and telescoping booms with lifting heights of up to 43 metres there's sure to be one that suits you.

To find out more, contact our local team.

**Tel: 01476 584333**



Copyright © 2007 Genie Industries, Inc. All rights reserved.

**Genie**  
A TEREX COMPANY



[www.genieindustries.com](http://www.genieindustries.com)  
Email: [infoeurope@genieind.com](mailto:infoeurope@genieind.com)



## HOLLAND LIFT

### Reliable load monitoring ...

- New highly reliable platform overload monitor
- Fully mechanical design, no electronics, no data processing
- Accuracy independent of temperature, humidity or lift height

Holland Lift International B.V.  
Tel: +31 (0) 229 285555  
Fax: +31 (0) 229 285550  
E-mail: [info@hollandlift.com](mailto:info@hollandlift.com)



[www.hollandlift.com](http://www.hollandlift.com)

# Travelling boom

At this year's Bauma Merlo unveiled its platform range of self propelled, high speed articulated booms. The three prototypes - the result of a four year development project - were shown with the intention of soliciting access industry opinion and comment prior to finalising the designs and going into production. Leigh Sparrow had the opportunity earlier this year to visit Merlo headquarters in Cuneo, Italy to evaluate and test the new models.

The idea of a road going fully self propelled boom lift has been around for more than over 20 years. In 1988 JLG launched the Ranger, a relatively short compact truck mounted lift that could be driven from the platform while elevated. Built at the company's plant in Scotland a number of machines were sold, but they proved to be hopelessly unreliable. After several attempts at re-engineering, JLG eventually abandoned the product.



*JLG introduced the ill fated Ranger in 1988*

More recently Versalift showed a self propelled truck mount at Bauma 2004. The axles were locked when ready to work and the truck could then be driven from the platform at up to 12 metres. More recently the company has introduced a street lighting kit which allows users of its van mounted platforms to drive the lift between lamp-posts from the bucket as long as the boom is centred. Once in position the stabilisers must be reset before the boom can rotate or go above a certain height.

## The full hog

Unlike the above models, the new Merlo lifts go the 'full hog', offering all of the features of a full specification rough terrain self propelled boom lift with the ability to travel on the road at speeds of up to 40kph. In many ways the machine resembles the small two axle city cranes that are popular in urban areas.

The planned range consists of three models with 18, 23 and 28 metre platform heights. Merlo had considered exhibiting the prototypes at Bauma 2004 but decided to hold off until it felt the market was ready. The next stage is to build up to 30 pre-production machines for testing and placing with key customers for evaluation purposes, before fixing the design for production in 2008.

## Once on site

Once the new Merlo arrives on site the platform has to be transferred from its travel position and attached to the jib, roughly a three to five minute job. The current method of doing this is not physically difficult, but it is way too fiddly for the self drive rental market. This has to change before production designs are finalised.

When ready to work the unit can be operated from the cab or from the platform. The platform's suspension system incorporates two oscillating axles which lock when the boom is lifted. They also allow the machine to level itself on uneven or sloping ground by five degrees longitudinally and nine

## C&a articulated booms

*There are three models in the range*



degrees side to side. Add to this the fact that the platforms are calculated to work safely on slopes at up to three degrees from level and you have the ability to work safely on slopes of up to eight

degrees end to end and a 12 degrees side to side slope. The auto levelling function is a single push button which operates all four suspension cylinders to level the chassis.

*The basket is unpinned.*



*The jib folded.*



*The basket is reattached...*



*and off we go!*





## articulated booms C&a



*The MP30 offers up to 16 metres of outreach*

### The top of the line

I concentrated on the MP30, which offers a 30 metre work height, on the basis that the high cost of the base unit, will make the top of the line model the most popular. The lift mechanism comprises a two section telescopic riser/lower boom, a three section main boom and a jib that provides 180 degrees of articulation in any position thanks to its dual chain drive. The lift is fitted with a two metre by 850mm platform with full 180 degrees of rotation, 225 kg lift capacity and electric, water or air power the platform as standard.

### Controls need a re-think

The controls comprise five fully proportional, paddle type levers mounted in a removable cable type remote control box similar to those used on loader cranes, with a screen and a mode button to allow the doubling up of functions. The deadman control is a simple wand type micro switch which although looking a little 'Heath-Robinson', functions very well and would be very easy to release in an emergency. As the paddle levers control different functions depending on the mode selected, the decals only show an A B C D or E requiring the operator to consult a mini slide out safety manual located under the controller. The current controls are not practical for every day use and Merlo says that it is planning to use a more conventional control



*The upper controls are not self evident and will need to change*

panel on production machines. Having said this, operating the machine smoothly is very easy. The functions are reasonably fast and have full multi-function capability. The feel in the elevated basket is very solid and the substantial base machine reassuring. Outreach on the two larger models is restricted so that in the situation where a fully telescoped main boom is lowered from the lift cylinder the function will stop when it reaches the cut off point, forcing the operator to telescope in before continuing to lower the boom. With 16.5 metres maximum outreach the MP30 is a little short even when compared to regular self propelled articulated booms. On the 30, the lower boom must also be raised before it can be telescoped (the 20 and 25 have fixed lower booms) this will normally be the first thing the operator will do, leaving the lower boom telescope for when extra height is required.

### The top of the line

As the lower boom is raised it pulls on a mechanical linkage that raises the hinged counterweight slabs, effectively extending their ballasting effect when the boom is up while lowering and centralising it to reduce the centre of gravity and centralising it for road travel. When the lower boom/riser is raised, the machine has minimal tailswing, Merlo says that it will be possible to set pre-established limits on the lower boom position in order to prevent it being lowered or rotated into a traffic lane.

### Stowed length a missed opportunity

The overall chassis length is relatively compact at around 4.5 metres but this includes the

lighting board on a 500mm extension which can be removed with two pins, reducing the length to around four metres.

Boom overhang at the front and rear make the stowed machines overall length to just over eight metres, which while compact for a self propelled boom of this size is, in our opinion, unnecessarily long. A four section boom with a little less overhang at the rear and minimal overhang at the front would have created a much better 'city lift' although up and over reach would have been reduced a little.

On rough terrain the platforms will be excellent thanks to their telehandler running gear with



mounts for inner city and congested applications and where the ability to drive at height is appreciated or desirable.

### Comments welcome

Merlo says that it is very keen to take on board any comments and



*The counterweight is raised as the lower boom goes up*



powerful engine, two stage hydrostatic transmission, all round hydro pneumatic suspension system, rear axle diff-lock and large wheels. Merlo has targeted this product at steel erectors, local authority/

criticism for this product so the final production machine is likely to include further significant improvements. We think that the concept is potentially a winner, (depending on price) but believe that the current front overhang will put off some buyers.

If Merlo does not make significant changes before going into production it could find that a competitor such as Manitou or Genie with aerial lift divisions and 360 degree telehandlers launches an alternative product with a four section boom and more compact travel dimensions and then scoop the market out from under its nose.

*We felt that the front and rear overhang was greater than ideal.*



*The platform is very stable*

municipality work such as street lighting and tree trimming and of course industrial applications on large sites. We feel that it also has potential within the rental market, replacing some 30 metre truck





## A product range that reaches every stage of your business

- › ARTICULATING BOOMS
- › VERTICAL MASTS
- › TELESCOPIC BOOMS
- › SCISSOR LIFTS
- › PUSH AROUND
- › TRAILERS
- › TRUCK MOUNTED PLATFORMS
- › TELESCOPIC HANDLERS
- › MULTIJOB MJX

Choosing Haulotte makes you benefit from a guaranteed after-sales service.

- More than 50.000 spare parts shipped within 24 hours all over the world\*
- Training
- Technical support



\* According to stocks availability

[www.haulotte.com](http://www.haulotte.com)

**Haulotte**  
GROUP

Experience in innovation



# The Saints go marching up

When contractors needed to reach and inspect the upper levels of Southampton (the Saints) Football Club's St Mary's stadium, The Platform Company recommended a Genie Z-135/70 articulated boom lift and a Genie S85 straight boom for the work. The main challenge was to clear the outer wall which is around 18 metres high and reach out to inspection points near the top of the 36 metre high roof line. With more than 23 metres up and over reach and 21 metres of outreach the Genie was ideally suited for the job.

The Saints - which moved into St Mary's stadium in 2001 - is currently mid-table in its second season in the Coca-Cola Championship, following its relegation after a 27 year spell in the top flight league in 2005.

*The Genie needed its 23 metres up and over reach as well as its 21 metres of outreach for the contract at the Saints football ground.*



## Paint it white

Newcastle upon Tyne-based hirer Geoff Huntley Plant supplied one of its Manitou 160 ATJ machines for an unusual hire in Cumbria. The machine was used by Colchester artist Clive Wakeford to gain access to paint a tree in the middle of the Lakeland countryside. Other striking examples of his unique style of art can be found at [www.clivewakeford.co.uk](http://www.clivewakeford.co.uk).

(Picture by Steve Messam)

## Universal

### New Spider widens the fleet

The new Falcon Spider FS290 has arrived and is ready to hire. With 29 metres of working height and able to enter through a doorway of 0.8 by 2m, it allows internal applications rarely available. Not only will the spider FS290 set up on uneven ground conditions but can give outreach of 14m with one man operation.

Universal Aerial Platforms now runs the UK's widest range of narrow access equipment for hire or purchase. For more information on the spider and any of our machines call today or visit [www.universalplatforms.co.uk](http://www.universalplatforms.co.uk)

**0800 866 587**  
[www.universalplatforms.co.uk](http://www.universalplatforms.co.uk)



# BIG

ON

CHOICE  
STOCK  
VALUE  
PARTS  
SERVICE



We hold a large inventory of new machines

from major manufacturers, a large stock of replacement parts for next or same day delivery and a technical staff to solve all your problems. We make it easy and speak your language.

Call us today, you will be glad you did!



**PlatformSales Europe**  
Maxwellstraat 50  
3316 GP Dordrecht, The Netherlands  
Tel. +31 78 65 217 65 Fax. +31 78 65 217 60  
E-mail: sales@platformsaleseurope.com  
www.platformsaleseurope.com