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# Developing but not changing

In our last major feature on telehandlers we highlighted the enormous market expansion and developments that had taken place in the preceding 12 months. Since then progress has, if anything, gathered pace. Compact models are now more prevalent, several new manufacturers have entered the market and products are being further refined. Mark Darwin takes a look at this continually developing market.

Last year, much was written of Haulotte's and Liebherr's entrance into the telehandler market with their own products. Following its high profile launch, Haulotte's two model range - the 4014 and 4017 - has gradually started to reach end users. In the UK and Ireland Stream Plant Hire (Ireland) and Sangwin Plant Hire are trialing them, but at four tonnes lift and 14 metres or 17 metres lift height, they are at the top end of the rental market where the 'bread and butter' models tend to be smaller.

The Liebherr telehandlers have entered the UK market through Liebherr's own rental fleet, meanwhile the Caterpillar/JLG alliance is beginning to pick up pace with new products just starting to enter the market. Hewden - the UK's largest telescopic handler rental company added 283 of the new TH range including some of Cat's

smallest model, the TH255 compact telehandler (designed and built by JLG and similar to its own G5-18A/2505). The Hewden telehandler fleet now numbers some 2,600 units. The new TH Series incorporates improved ergonomics, a smoother and more comfortable ride for the operator and Cat's new high power, low emission engines.

#### Size matters

JCB shouted its market leadership of the telescopic handler market by placing a huge advertising hoarding on the front of the Marriott Suites Hotel directly overlooking the recent Conexpo Gold lot showground where most of the world's telehandler manufacturers were exhibiting. At the show, it was showing off its new HiViz telehandlers officially launched in Europe in January, as well as its new high boom 'North American' models.

Matthew Taylor - JCB group chief



Striking in black, Haulotte's telehandlers are just starting to appear in the UK.







Liebherr machines have entered the UK market through its own rental operation.

launch in Spain that 'the company was now global market leader having produced 13,500 telehandlers in 2007 and was clear UK leader with sales of 5,000 units giving it a 60 percent UK market share. Its main markets after the UK include



France, Italy, Spain and Germany with the company building sales in Scandinavia and Russia growing but still in its infancy.'

Until recently, Manitou has always been accepted as the global telehandler leader. In fact it is now





50 years since its idea of turning an agricultural tractor around and adding an extending mast. The company has always shied away from publicly quoting production figures to back up this long-held belief. However at Conexpo, it did release a number of key facts claiming - world market leadership in rough terrain fork trucks, which combines its telescopic and mast type models having produced over 15,000 units in 2007, with more than 250,000 units produced since it began. Given that most RT fork lifts are telehandlers it still seems that Manitou and JCB are 'neck and neck'.





and 3.43 metre maximum lift height and hooks on the back of a delivery truck.

#### The time is right?

The biggest change in the telehandler market over the last year has been the emergence of the super compact

models with several manufacturers entering the sector for the first time. Small materials handling machines have been around for many years with Merlo having designed a model which never took off and Manitou's Buggiscopic ploughing an almost lone furrow since the mid 1980's followed more recently by its innovative three-wheeled Twisco.

With brownfield developments and space-restricted sites becoming the norm rather than the exception, many new builds are forced to use underground car parks and parts of the building for material storage. This means the demand for low height, narrow manoeuvrable machines with good lift performance is growing. Combine this with the continued growth in worldwide telehandler sales (in spite of the recent dip in North America) and it is not surprising that more manufacturers are looking for a slice of the action.

Manitou's
Buggiscopic has
been around since
the mid 1980's.

One of the first telehandlers to kick off the compact revolution was the Manitou Twisco. These three wheeled 1.5 and 2.0 tonne capacity machines are remarkably manoeuvrable and compact and will handle loads in restricted spaces.

Ausa, having tried the telehandler market in the past and left it, used Conexpo to unveil its Taurulift T204H - an all-terrain, compact forklift with extending arm, tilting

cab and hydrostatic transmission.

largest dumper manufacturer has

The Spanish company - the world's

done well with its mast-type rough

terrain forklifts and obviously sees

growth in this sector of the market by looking at telehandlers again. Its new machine fits into the 'under 1,600mm wide, 2,000mm high' compact category and can lift 2,000kg to 4.2 metres. In the compact telehandler table we have included machines up to 2,000mm wide and about 2,000mm high. The Taurulift has a good standard specification and includes hydraulic quick hitch, beacon, anti-vandal and security systems as well as the tilting cabin which gives excellent service access.



AusaTaurulift T204H features an extending arm, tilting cab and hydrostatic transmission.

Another Spanish manufacturer looking to diversify into telehanders is Saez. Late last year, Saez - Spain's largest tower crane manufacturer - signalled its intentions to expand its product offering by renaming the company the Saez Group in preparation for.....its new range of telehandlers. Two machines are currently available - the SZ255 and the SZ306 - with a 17 metre model in the pipeline. Surprising for two newly introduced models, the machines are visually guite different. The more powerful SZ306 has a squatter, more purposeful look with a 70mm lower cab height at 1,970mm. Its 100hp Perkins engine is 15hp more powerful than the SZ225's John Deere but is longer and has less ground clearance than its more traditional looking smaller sister.

The company expects to begin shipping this summer and still hopes to produce about 400 units in 2008. Distribution has not been finalised but is thought to initially be through the existing tower crane dealers such as London Tower Crane Hire & Sales in the UK, but this has not yet been confirmed.

Another Spanish manufacturer MZ Imer already has rigid mast forklifts but has also launched a good looking, compact machine the MZ-2706 Lift. Built at



The more purposeful looking SZ306 seen for the first time at Conexpo.

its facility in Zaragoza, the unit

has a maximum lift height of six metres and a 2,700kg maximum capacity.

Measuring just over two metres high and 1,845mm wide, it has a Yanmar engine and maximum speed of 25 km per hour. Load charts indicate a maximum load of 800kg at 3.5 metres with the fully extended boom - about average for its size.

Yet another Spanish manufacturer offering a compact telehandler the MZ Imer 2706 Lift.

According to JCB, the overall market for telehandlers in the UK appears to have leveled off after several years of strong growth. "The UK and Ireland market as a whole is flat but taken in isolation Ireland is down by 35 percent because of the decline in house



said JCB sales managing director Tim Burnhope. "We would expect this situation to continue throughout

2008."

building,"



JCB has doubled

sales of its compact

machines last year







So while the giants argue it out for the number one spot, they should be very careful not take their eye off the market for a second, particularly with the raft of new entrants trying to muscle in. Ausa, Saez, MZ Imer and Galmax have all now added compact products while the more established manufacturers continually update and improve their offerings with Italian 'newcomers' such as Dieci and Farasin continuing to make strides in the UK and Ireland. Fortunately the global market is still growing allowing everyone to sell and enticing others into the sector. The Chinese, so active in other

Currently on the fringe

in the UK, Faresin has a

compact 6.25.

good range of machines including its

areas of construction equipment, are not yet making any inroads into the telehandler market. Hunan Sunward showed a 3,500kg, 13.65 metre machine at Bauma last year, but since then very little has been seen. The same applies to Portugese manufacturer Galmax with its compact machine.

#### Heavy weight champion

One of Manitou's latest additions is the monster MHT 10210 - the world's largest telehandler capable of lifting 21 tonnes and the bigger brother of the MHT 10160. The MHT 10210 can lift five tonnes at 5.79 metres and almost 13 tonnes to a maximum height of 9.7 metres. This massive model is targeted at special applications such as quarries, and is likely to take telehandlers into new markets, possibly taking business away from the largest mast-type fork trucks and possibly nibbling away at another part of the crane market.

An interesting new addition to the Manitou truck mounted line-up is the Manitransit TMT55 4-Way. This three-wheeled, bi-directional 'piggyback' machine has rotating front drive wheels that allow both front and side travel - ideal for handling and manoeuvring loads in confined areas. It has a 2.46 tonne capacity

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#### **Different story**

"JCB had its best ever year in 2007 with compact Loadalls, with sales up 200 percent compared to 2006." he said. "Driving market demand is the requirement to have machines in less accessible construction and industrial sites where visibility, manoeuvrability and load lift performance have to be comparable with much larger machines. Also, there is a need to lift and place machines in car parks and inside buildings where headroom is restricted and this has also contributed to the increase in sales of compact Loadalls."

JCB also said that the new HiViz range has spurred new orders. Huntley Plant Hire, the Newcastlebased access and telehandler rental company, has recently placed a £1.8 million order for a number of HiViz machines from five metres up to 17 metre lift heights, with the majority being the 12 and 14 metre 535-125 HiViz and 535-140 HiViz models. Huntley says that this is the first of 100 JCB telehandlers it plans to add during 2008 in order to keep the average age of its fleet at around eight months. "We have found that the new HiViz machines are well received on site and are considered a marked improvement on the previous models," said Stephen Huntley.

JCB has a wide range telehandlers including several compact models. The JCB 520-40 has one of the best turning circles in its class with an outside radius of just three metres, ideal for small yards and spaces. These compact machines often work alongside larger telehandlers helping in the more 'space-restricted' areas.

Terex telehandlers are now marketed under the Genie brand. The company offers a wide range of machines from compact to 360 degree models and has added several new products over the past year or so. At the smaller end of the scale Genie has improved its

GTH-2506 compact rough-terrain telehandler to include a stronger, more comfortable cab, increased load capacity at maximum reach, a new emission-compliant engine and a more easily accessible engine compartment for easier servicing.



"Our goal with the GTH-2506 redesign was to improve the machine's performance and serviceability while keeping it affordable and simple to use," said Carlo Forini, general manager for the telehandler product range. The machine now lifts 900kg at

its maximum reach, 100kg more than the previous model and features a new 50 kW Tier 3 compliant Deutz engine. Its compact dimensions remain the same but hydraulics have also been upgraded. The flow on the auxiliary line (which controls the hydraulic attachment connection/ disconnection function) now incorporates reversible and continuous flow functionality through a two-position electrical switch. The direction and the rate of the flow are controlled by a dedicated manual knob placed at the back of the joystick. When the auxiliary continuous flow function is activated, the other three functions of the boom are still active - boom up and down, telescope and fork tilt - enabling simultaneous operations.

#### C&a

#### telehandlers

A dedicated enable switch allows the attachment quick connect/ disconnect function to be activated through the joystick.

By re-engineering the telehandler's boom - with fewer welded parts, larger-diameter load-bearing pins, standard hoses in place of twin hoses routed internally in the boom and redesigned attachment articulation - there should be a reduction in the maintenance time and lower cost of ownership. Genie's larger GTH-3007 also benefits from these improvements.

Genie has redesigned its GTH-2506 improving its performance and serviceability

#### **Brands** galore

With Gradall, Lull and Skytrak as well as its own range, JLG must surely have the widest brand portfolio of any manufacturer, although only the JLG models are marketed in Europe. Its telehandler alliance with Caterpillar is also now starting to yield results with a new range of machines for both companies. Its focus this year has been on, yes you've guessed it, a new super compact machine in parallel to the Cat TH255 as well as upgrades to its existing range.

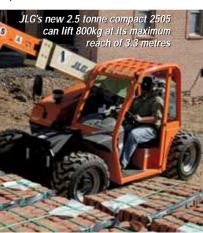


Its new 2.5 tonne five metre compact 2505 can lift 800kg at its maximum reach of 3.3 metres. JLG says it spent a lot of time gathering customer feed-back resulting in improved visibility and operator comfort. Standard service intervals of 250 hours and a gross weight of less than five tonnes means that it can be lifted by crane at most sites for use on higher level floors. As with many of the super compacts it can handle a wide range of skid steer attachments.

JLG also recently launched its new Model 3513PS - one of nine PS machines - which features a maximum lift capacity of 3,500kg with a forward reach of 1.85 metres at its maximum lift height of 13 metres. It can also lift 1,000kg to a maximum forward reach of 9.2 metres. All PS machines feature a number of improvements designed to enhance overall performance and operator appeal over the previous 3500 and 4000 Series machines.

"The PS Series' hydraulic system retains the industry-leading high-output (132 I/min) variable-displacement, load-sensing pump, coupled to a new flow-compensating valve," says Brian Boeckman, a JLG product manager for telehandlers. "This gives more responsive and balanced proportional control for faster cycles and better use of power, with improved overall efficiency, fuel economy and performance."

The drive train and main structural components remain unchanged from the 3500 and 4000 models, but provision has been made for subsequent updates to the new Tier 3 Perkins engine. The power shift transmission now incorporates a selectable brake-pedal operated de-clutch function with an improved stabiliser/chassis-levelling interlock system to facilitate positioning during loading-out operations.





"The power shift transmission offers distinct performance advantages in certain applications, where features such as high tractive effort throughout a wide speed range are important." said Boeckman.

Conexpo also saw JLG introduce AccuPlace with Ride Control which provides linear boom motion and boom suspension system for more stable movement over rough terrain. Said to enhance load placement and reduce bounce while transporting a load, it offers faster boom speeds, a significant reduction of leak points which helps maintenance requirements and a 25 percent increase in hydraulic flow allowing certain attachments to work more efficiently.

#### Skid steers

Masters of the compact equipment - Bobcat - has also recently entered the compact telehandler market



The Bobcat T2250 is said to offer the features and benefits of a skid steer, artic wheeled loader and telehandler all rolled into one.

with the 2.2 tonne, 5.2 metre lift height T2250. The first in the UK is now working on a long-term hire with Network Rail. The T2250 is said to offer features and benefits of the skid-steer loader, articulated wheeled loader and telehandler rolled into one machine, giving a good range of uses from plant hire, construction, industry, builders merchants and landscaping.

Supplied by AMS Bobcat of Scunthorpe in Lincolnshire, the new T2250 telehandler joins a fleet of Bobcat S130 and S100 skid-steer loaders that Network Rail regularly hires from AMS for maintenance contracts on the rail network. Fitted with the same Bob-Tach quick-change attachment mounting system that is used on the T250 and all other Bobcat compact loaders, it allows the T2250 to use conventional and combination buckets, sweepers, trenchers, rotary cutters, pallet forks, snow blades, rotary snow blowers and many others.

The Bob-Tach is an alternative to the conventional attachment system which can also be incorporated in the T2250. The multi-attachment capability and the compact dimensions of the T2250 - a height of 1970 mm, width of 1800 mm and length (without attachment) of 4190 mm made it an attractive package for Network Rail. Stevan Rhodes, Network Rail's assistant section manager for OffTrack in Leeds, said: "This machine can be used by every department here from the signal replacement and level crossing crews to the welding teams. Its lifting capacity means we can take on bigger jobs such as lifting quarter tonne panels with ease when we're taking out level crossings. This machine can do anything from grading for access roads to mowing overgrown vegetation at the trackside."



An electronically regulated hydrostatic transmission, a standard feature on all Bobcat telescopic handlers, enables the operator to choose between two driving modes - direct drive, where priority is given to travel speed, or soft drive, where priority is given to hydraulic power and torque.



In its low speed mode, the T2250 has a forward/reverse range of up to six km per hour, whilst in the high speed mode the speed range is tops out at 25 km per hour. An optional creep travel mode allows a low travel speed at high engine rpm to ensure adequate hydraulic flow for attachments such as the sweeper. Bobcat has also just launched the new 3.5 tonne, 12 metre T35120SL MP telehandler a fully 'man platform-ready' model designed for use with the company's new 'Man Platform' attachment. Equipped as standard with 24 inch Dunlop tyres, the new model extends the number of Bobcat telehandlers that can be used with the Man Platform to three, including the 14 metre T40140 and 17 metre T40170



As a man platform-ready telehandler, the T35120SL MP shares the electronics and joystick controls of the T40140 and T40170 models as well as an emergency control box at the rear of the machine, an additional electro-hydraulic pump for lowering and retracting the boom in case of engine failure and a sensor to detect the presence of the man platform. Once it has been detected, the safety functions of the T35120SL MP telehandler are automatically activated including the blocking of all controls but the platform remote control system.

The unit uses the same high tensile steel boom design utilised in the 14 and 17 metre Bobcat telehandlers which use of thinner plates, reducing its overall weight. It also has a counterbow design in order to counter deflection when loaded at full reach.

#### Its Roto time

Manitou's 30 metre, 360 degree MRT 3050 is now starting to attract the attention of rental fleets in the UK. However its significant price premium compared to the 25 metre models, not to mention the greater challenges of transporting it, all add to a rental rate about 40 percent higher than an MRT 2540 - means that most customers will opt for the smaller machine. Even so, 360 degree models are still not as popular in the UK as mainland Europe. Although this is beginning to change with Merlo, which leads the 360 degree market in the UK, reporting its best year ever for Roto sales into the UK market.

#### **Compact Size. Powerful Performance**

The new ultra-compact JLG® Model 1230ES, a selfpropelled 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.

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Merlo intrigued many last year with its telehandler-based self propelled, high speed articulated booms however its telehandlers are still its primary product and the company is without question the leading producer of 360 degree models. In fact its 360 degree nomenclature Roto has virtually become the generic word for 360 degree telehandlers. Its latest model is the Roto 40.26 an upgraded 40.25 - with increased lift height and a redesigned boom which gives more performance for the same weight.

The company also launched a new compact machine, the 39.10 with stabilisers as standard to satisfy demand in the UK and France where buyers have often purchased larger machines than they wanted or needed in order to have stabilisers which were not available in the past on smaller models. Merlo says that total telehandler output was up 20 percent in 2007 and having added further production space during the year, it expects this to continue to grow in 2008.

Merlo claims to have been in the 'super compact' market before most, but given that the machine farming sectors. Introduced in June 2006 they use the same wide cab as the new Turbofarmer/Panoramic models, as well as the 102hp Deutz turbocharged engines. The new chassis design keeps the width to 2,000mm, while overall height is 2,150mm or 2,000mm in the 'L' low profile models. Merlo uses a three section boom to give its P28.8 models a 'best in sector' 8.2 metre lift height. 'Plus' variants add a 40 km per hour travel speed and 'loadsensing' hydraulics on certain models. Boom suspension is also available.

#### **Getting serious**

New Holland is another company that having dabbled on the edge of the telehandler market for some time, is now trying to become a





used the same basic components as larger models, it just did not make sense financially. As with many innovations it was probably ahead of its time. The smallest models currently in the company's range are the P28.8 and P32.6 compact machines, originally introduced to satisfy demands for a low, narrow machine for the construction and



mainstream player. Its new, Italianbuilt low-boom, three machine M series range offers lift capacities from three to four tonnes with maximum lifts of 12.74 to 13.60 metres, single joystick control side mounted engine.

The way materials are supplied and used on site has been at the heart of the telehandler growth and development. This is reflected in the massive variations in their usage from country to country. For example Germany, typically the largest construction market in Europe buys relatively few telehandlers, with contractors traditionally using self erecting tower cranes and material hoists

to move materials on site. France possibly sits in the middle using large numbers of both. With better communications and the never ending push to improve efficiency, not to mention safety, we are likely to see the Germans using more telehandlers and the British using more cranes and hoists - in other words we might all be moving in the direction of the French!

With more manufacturers looking at this market and with more companies using telehandlers over a wider range of applications it will be interesting to see the effect this has on the products themselves as producers look for differentiation. Watch this space!

## Telehandlers and mast climbers

Milliners Wharf, part of the redevelopment of the Victoria Mills area of Ancotes being built by Manchester-based Ocon Construction is a new development of 261 apartments over a nine storey steel frame. Its site close to the Ashton Canal meant little space to the rear of the structure so the company used a



combination of mastclimbers and two, 25 metre Manitou MRT 2540 360 degree telehandlers supplied by Easi UpLifts, Midlands depot for access and handling duties. With the frame now fully erected, there is also the possibility that the site will take the latest 30 metre. Manitou MRT3050 - one of which is due to join the Easi UpLift fleet shortly - to give easier reach to the upper floors. Because of the lack of access to the rear of the building, all materials have to be loaded onto three landing stages at the front of the building and then 'rolled' through the building to the rear.

One of the Manitou MRT 2540 telehandlers placing materials on the upper floor.







