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# Increased demand for telehandlers

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Global demand for telescopic handlers continues unabated as rental companies and end users update and expand their fleets. The dark days of the financial crash appear long gone as many economies hit the hardest - including Spain, Portugal, Ireland and Italy - start to pick-up helping spur growth in the big telehandler markets such as North America, France and the UK.

A rapid replacement of an aged fleet machine population, presents its own problems, with inventories of second hand, trade-in machines expanding, with some dealers bursting at the seams with used equipment. To help ease the problem in the UK, JCB Finance has launched a two year interest free hire-purchase scheme for second hand machines stocked within its dealer network.

It says there is no upper limit for each transaction as long as a 20 percent deposit is paid and the equipment is not older than 10 years during the period of the finance agreement. Another incentive in the UK is that buyers will still be eligible to take advantage of the £500,000 Annual Investment Allowance (AIA) scheme. The AIA potentially offers the equivalent of a 20-45 percent discount, depending on the business rate of tax, but time is running out because the AIA is scheduled to fall to £200,000 in January with further reductions due in subsequent years.

In the year since our last telehandler feature the sector has seen many changes, including several new entrants, revised and relaunched ranges and a growth in the very large capacity machines. At the opposite end of the size scale, the compact telehandlers continue to grow both in Europe but also in North America.

Some things never change and the market leaders are still JCB and Manitou followed by JLG. The American company recently celebrated the production of its 100,000th telehandler - a 4017 RS - since acquiring Gradall in 1999 and Skytrack and Lull in 2003. The machine was unveiled at Internat in Paris - covered in 100,000 tiny JLG logos - before heading off to Vertical Days and a European tour that culminates in October when it will be auctioned for charity with the buyer choosing the good cause.

Accurate sales figures and market shares are difficult to obtain in this sector as manufacturers do not exchange information and most manufacturers' figures combine agriculture and construction sales. Telehandlers remain one of the most popular construction items and with building in most countries buoyant, demand continues to increase resulting in companies such as Kubota and Snorkel - now owned by Xtreme - dipping their toes in the



*Snorkel's first telehandler - the SR5919*

telehandler water.

## **New Snorkel**

Unveiled earlier this year the rugged looking, 2.7 tonne/5.8 metre Snorkel SR5919 is the first model of a new line of telescopic handlers with 3.4 metres forward reach. Now part of Don Ahern's Nevada-based Xtreme Manufacturing, the Snorkel measures 1.8 metres wide and two metres high with 274mm ground clearance and a 3.35 metre turning radius.

The new model is based on Xtreme's compact telehandler but with significant changes for the different customer base - the general rental market - and the Snorkel distribution network. The new model has good all-round visibility with a

choice of open or enclosed cabs, heavy-duty chassis, a large cross-section boom, protected tilt and extend cylinders, steel tanks and covers and melonite pins. The cab is designed for easy cleaning with a steel dashboard and suspended pedals.

## **Kubota prototype**

Kubota has showed its new telehandler prototype at several shows this spring as it tests the telehandler market. The THT4815 sub-compact machine



*The 100,000th JLG - a 4017 RS - with 100,000 JLG logos*



*The JLG 4017 RS*



The Kubota THT4815 sub-compact machine has a 4.8 metre lift height and 1,500kg capacity

has a 4.8 metre lift height and 1,500kg capacity. It has hydrostatic transmission, four wheel drive and four wheel steer and weighs just under three tonnes.

The company says the plan is to make it lighter so that it can be transported on a standard two-axle equipment trailer. The machine is made for Kubota by Dutch company Tobroco, based in Oisterwijk, the manufacturer of the Giant ultra-compact skid steers and articulated loaders. Kubota has emphasised that the THT4815 is a prototype and a decision has not yet been made whether to put it into full production or not. Given the growth in demand for compact telehandlers this may not be too long coming.



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**Higher capacity trends**

The trend to build large capacity telehandlers aimed at heavy duty industries such as mining and quarrying is also gathering pace. It was seven years ago that Manitou launched its monster, 21 tonne capacity, MHT 10210 - the world's

largest telehandler at the time - but little did we know how that would spur demand for even larger capacity machines, with models now hitting 45 tonnes. These large capacity machines are providing feasible alternatives to pick & carry cranes and with a huge array of attachments, they really can be a single lifting machine solution for many users.

Last year Manitou launched its biggest telehandler yet - the 35 tonne capacity, 14.2 metre reach MHT 14350 - which weighs in at a whopping 67.9 tonnes! However there are other companies which are also producing large capacity machines. Xtreme in the USA has a 30 tonne machine and Italian relative newcomer Magni has a seven model 'heavy' HTH range with capacities ranging from 10 to 45 tonnes with lift heights from 10 to 14 metres. As can be seen from the comparison chart below between the largest Manitou and Magni machines, the 45 tonne HTH 45.14, apart from its higher maximum lift capacity, generally falls short of the 35 tonne Manitou. The 35 tonne capacity Magni HTH 35.12 has a lift height of 11.72 metres and a 6.86 metre reach but although it has the same lifting capacity as the Manitou is a physically a far smaller machine and trails the Manitou in the main performance criteria, particularly capacity at maximum height (28 tonnes compared to just 18 tonnes.)



The first Magni in the steel industry - an HTH 27.11 - is ideal for handling heavy ingots.



The Magni HTH 35.12

The Magni machines appear to have tried to improve on the Manitou machines in other areas and feature a fully enclosed, pressurised (2.5 bar) air conditioned cab to keep dust out and allowing the machine to work in a polluted environment. The whole dash board has been replaced with a slim adjustable steering column and touch screen display, controlled by a joystick which has integrated diagnostics. Transmission is an electronically controlled hydrostatic power shift, with three forward and three reverse gears, while gradeability is 58 percent. Front wheel drive gives maximum torque when the load is on the forks however when on rough terrain the automatic diff lock engages four wheel drive.

**Manitou adds three heavies**

Earlier this month Manitou launched three large capacity MHT (Manitou Heavy Telehandler) telehandlers with maximum lift capacities of up to 23 tonnes. The new machines include the 13 tonne capacity MHT 10130, the 18 tonne MHT 10180 and the 23 tonne MHT 10230 and are built at the new Manitou Italia Cavazzona Plant at Castelfranco, Emilia-Romagna - (Magni built its factory next door).

Possibly under pressure to reassert itself as the market leader, Manitou has set itself some interesting and tough tasks to be completed by 2018, including being number one in its markets (telehandlers not

access), increase market share and deliver six to eight percent operating profit. It also hopes to grow services by more than 10 percent each year to a point where it exceeds 20 percent of revenues. It also plans that emerging markets will represent more than 30 percent of revenue and it also wants to reduce production costs by more than five percent while improving quality.

Currently (2014) most of its revenues (38 percent) come from Northern Europe with 30 percent from Southern Europe, 22 percent North America and 11 percent from Australia, Africa and the Asia Pacific region. Construction accounts for 41 percent of the total with agriculture 34 percent and industrial 25 percent.



Manitou has launched three large capacity MHT telehandlers including the 13 tonne capacity MHT 10130, the 18 tonne MHT 10180 and the 23 tonne MHT 10230 above.

**35 - 45 tonne capacity heavy duty telehandlers compared**

	Manitou MHT 14350	Magni HTH 35.12	Magni HTH 45.12
Max lift capacity	35 tonnes	35 tonnes	45 tonnes
Max lift height	13.6 metres	11.72 metres	14.0 metres
Max forward reach	8.5 metres	6.86 metres	8.0 metres
Capacity at max height	28 tonnes	18 tonnes	22 tonnes
Engine output	260 kW	240 kW	240 kW
Travel speed	25 kph	25 kph	20 kph
L x W x H	10.3 x 3.53 x 3.82m	7.98 x 3.0 x 3.58m	10.71 x 3.20 x 3.8m
Weight	67.9 tonnes	45 tonnes	58.0 tonnes

## Manitou Italia

The area of Emilia-Romagna where the Manitou factory is located - near Modena - is known as Motor Valley being the home to companies such as Ferrari, Pagani, Lamborghini, Maserati and Ducati. As a result the region has many excellent engineering companies producing quality components. The Manitou Italia facility dates back to 1972 when it was originally owned by Fargh and the Magni family. Having invested in the company, Manitou took control with a 51 percent stake in 1985, and the following year founded Manitou Costruzioni Industriali (MCI). It was MCI which claims to have launched the first rotating machine - the four tonne, 14.89 metre MRT 1540 in 1993.

It was another 19 years (in 2012) before the company bought out the Magni family and Manitou Italia was founded. The new Cavazzona plant - which has 36,000 square metres of production area - builds the telehandlers, while the old 6,500 square metre Castelfranco factory now houses the spare parts operation and the mining competence centre. It currently builds the 32 metre/7.5 tonne MRT 3255 Privilege+ as well as three, four tonne MRT models from 14 to 18 metres and MRT Privilege+ models from 18 to 32 metres. It also produces the 35 tonne heavy duty MHT 14350S and the other five heavy duty models, including the existing seven metre, nine

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tonne MHT 790 and the 14 metre, nine tonne MHT 1490. Seven MLT models including the MLT 960, Manitou's biggest agriculture machine and three MT models are also made there. Castelfranco also houses the attachments centre with a range of over 500 available and the mining competence centre which

includes eight specific telehandlers for hard rock and flameproof applications as well as 18 mining specific attachments.

*Manitou has a mining competence centre which includes eight specific telehandlers for hard rock and flameproof applications as well as 18 mining specific attachments*



The Manitou Cavazzona plant is located in Motor Valley near Modena and produces MRT, MHT, MLT and MT telehandlers.



A heavy duty Manitou MHT

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IN THE  
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RTH 5.23 SMART • RTH 5.25 SMART • RTH 5.26  
RTH 5.26S • RTH 5.23S • RTH 6.24 • RTH 6.24S  
RTH 5.30S • RTH 5.35S

#### HHTH RANGE:

HHTH 10.10 • HHTH 16.10 • HHTH 24.11 • HHTH 27.11  
HHTH 30.12 • HHTH 35.12 • HHTH 45.14

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**New MHT models**

The three new MHT machines have updated engines, improved safety and control/cab layouts to match other models in the range. Smallest of the new machines is the 13 tonne/9.62 metre MHT 10130 which can handle 7.5 tonnes at maximum height, and offers 5.17 metres of forward reach. Maximum speed is 31kph and frame levelling is plus or minus 10 degrees.

All three are powered by Mercedes engines in either Stage 4 (Tier IV final) or Stage 3a (Tier III), both mated to a hydrostatic transmission with two forward and reverse speeds. The 18 tonne/9.63 metre MHT 10180 can take 11 tonnes to full height, while forward reach is 5.56 metres. Powered by the same engine and transmission it also has the same frame levelling as the MHT 10130 with a 25kph road speed, but



One of Manitou's larger heavy duty telehandlers - the MHT 10225



The Genie Umbertide facility currently has five assembly lines - two AWP - the Z45/51 and Z33/18 - and compact, high reach and rotator telehandlers.

gradeability is 37 percent compared to 34 percent.

The largest new model is the 9.65 metre/23 tonne MHT 10230 which can lift 15 tonnes at full height and offers 5.8 metres forward reach. The same engine and transmission gives a maximum 25kph and 34 percent gradeability. The machines tip the scales at 18.49, 24.0 and 29.3 tonnes respectively, while overall widths vary from 2.5 to 2.85 metres.

The new cab design features a multi-function 7" or 9" display with load moment indicator on the MHT 10130 and a Load State Monitoring system with E-Reco on the larger models which measures the

weight of the load, boom angle and extension as well as automatically detecting the various attachments. All are available with numerous attachments including four types of work platforms - including one with platform winch - eight tyre clamps from two to 16.3 tonne capacity as well as forks, cylinder clamps, pipe handlers, hooks, hydraulic winch and conveyor belt.

**Genie relaunches**

Another international manufacturer building telehandlers in Italy is Genie, which has relaunches its telehandler range. Located in Umbertide in Umbria, Central Italy, the company has spent the last two years working towards the relaunch



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New Genie range - GTH 4018,  
GTH 2506 and GTH 5021R



of its GTH range. The new range of six machines is aimed squarely at the rental market, and focused on end users in the construction, waste handling, recycling, industrial and logistics sectors. All models - both fixed frame and 360 degree - are designed to be simple, rugged and easy to run. The range includes the fixed boom compact six metre/2.5 tonne GTH 2506, and 14 or 18 metre/four tonne GTH 4014 and GTH 4018 as well as three rotating models - the GTH 4016R, GTH 4018R and GTH 5021R.

The programme has involved everyone from engineers and technicians to the sales and support teams and has resulted in rationalising the range from more than 40 models to the current six that is thinks will satisfy most applications. The changes include new engines, easier maintenance and serviceability, more component commonality and simple to operate controls, with reduced running

costs and a new Genie livery (black replacing the grey).

The facility at Umbertide was originally the Italmacchine factory founded in 1973, as a subsidiary of Milan-based CIFA. The first telehandler, produced in 1986 was the Lift 4008. Terex acquired the company in 1998 producing machines for its construction division, adding aerial lift production in 2006 and installing the complete Z45/51 assembly line in 2007 with the Z33/18 added in 2014. Currently there are five assembly lines - the Z45/51, Z33/18, compact GTH, high reach GTH and GTH rotator - and it is currently being revised to cope with increased demand. This involves converting a nearby factory building and completely revising the work flow throughout the facility. At one time up to 40 delivery trucks were entering, unloading and then turning around in a small area at the plant, before leaving from the same entrance.

Located around a kilometre away is the demonstration and training area, together with a life cycle test track which tests telehandlers over 300 hours, checking life-cycle performances of GTH products and load bearing components (chassis, boom, transmission, wheels, etc.) over bumps, rough road simulation, pot holes, lateral slopes and speed and gear tests. Further along the course - which is also used for testing Genie platforms - the telehandler machine systems are checked for defects and to define the machine operations capabilities and limitations. Genie says that this 300 hour lifecycle test simulates about 10 years of average machine use.

#### Faster parts

Another aspect of the relaunch is that Genie is making sure that all critical replacement parts are available from stock within 24 hours and non-critical parts within five working days. Failure to meet this and the customer receives the part

free of charge (excluding freight). There is now a three year warranty and zero percent finance promotion via Terex Financial Services as well as support with trade-in deals.

#### North American success

As mentioned earlier, telehandler sales figures are difficult to accurately identify, although most estimate it at around 60,000 units or so, but this includes both construction and agriculture. Genie's market share is very small - about one percent. However it claims to have around four percent of the construction market, where it competes, estimated at 20,000 units. Its aim is to win a 10 percent market share - giving it about 2,000 units a year. Walking around the Genie facility it is clear to see that its big seller is its compact GTH 2506, introduced as the GTH 2306 in 1998 (it became the GTH 2506 in 2004). More than 14,000 units have shipped since then, with current production running as high as 15 a day. However what is more surprising is the North America version - the GTH5519 - sells more than five times the European version.

#### Bobcat's new rotary teles

Bobcat has launched its new EVO stage IIIB/Tier 4 interim 360 degree 'rotary' telescopic handlers, which the company says is a major step forward in design terms, being easy to use, more comfortable and safer to operate with new features offering increased performance and productivity. The four models include the 15.7 metre TR38160, the 18.7 metre TR50190, the 20.5 metre TR50210 and 24.1 metre TR40250. The 3.8 tonne TR38160 is Kubota powered and offers 13.4 metres of forward reach, while the five tonne



Genie has sold more than 14,000 compact GTH 2506 since 1998 - with five times as many going to North America than Europe



A busy GTH 2506-5519 production line at the Genie Umbertide facility in Italy





The four new Bobcat EVO models include the 15.7 metre TR38160, the 18.7 metre TR50190, the 20.5 metre TR50210 and 24.1 metre TR40250

TR50190 and TR50210 are powered by a FPT-NEF diesels as is the four tonne TR40250. The maximum forward reach is 16.4, 18.0 and 20.5 metres respectively. All four models have a new higher-mounted cab and a larger back window that offers improved all-round visibility. The steering column and pneumatic suspension seat can be easily adjusted to suit the operator which along with the semi-automatic air conditioning are aimed at improving operator comfort and efficiency. The Double Sensi-Touch joystick controls include an increased number of functions to improve efficiency, while maintaining safety and comfort. The important machine functions are displayed on the new control panel, which has a digital display offering a clear overview of machine performance.

**Can Bus Electronic Management**

New electronics and advanced software on all four machines have resulted in smoother more precise control functions, with all boom and slew operations monitored by digital sensors located on the main components of the machine. The operator is kept informed on the machine's status with boom position and capacity shown at all times, providing notifications of maintenance requirements, as well as service and repairs.

The configuration and parameters for a wide range of attachments are also stored as standard and there is an intuitive and user-friendly system for selecting work tools, allowing the operator to easily change between attachments. The new EVO telehandlers are designed and built



Bobcat's new five tonne/20.5 metre EVO TR50210 compares well against its competition



Bobcat TR50190



The Merlo 45.21 MCSS is lighter than the 21 metre 360 degree competition at just over 15 tonnes but only has a maximum capacity of 4.5 tonnes

to take a work platform as standard, with a choice of six different platform attachments, in addition to the usual buckets, extension jibs, winches and pallet forks etc... Other options include remote

controls, an anti-theft immobiliser, a carriage with hydraulic attachment lock, a cold start system and specialist options for tunnelling and underbridge applications.

The table to the left includes five 21 metre 360 degree machines and shows how close the performance specifications are. The Merlo is lighter at just over 15 tonnes but only has a maximum capacity of 4.5 tonnes. Its lift height and outreach are however competitive. The new Bobcat and Genie are very similar, with the Genie just edging ahead on performance (it has the best lift height and reach of all the machines) although it is slightly larger and has the slowest travel speed at 32kph.

**How the largest new Genie and Bobcat rotating machines compare with the Manitou and Merlo machines**

	Bobcat EVO TR50210	Genie GTH 5021R	Manitou MRT 2150 Privilege Plus	Merlo 45.21 MCSS	Magni RTH 5.21 Smart
Max capacity	5,000kg	5,000kg	4,999kg	4,500kg	4,999kg
Max lift height (on stabilisers)	20.5m	20.86m	20.6m	20.8m	20.7m
Max lift height (on wheels)	20.3m	20.65m	20.4m	N/A	N/A
Max forward reach	18 m	18.24m	18.1m	18 m	17.7m
Max travel speed	40 kph	32 kph	36 kph	40 kph	40 kph
Dimensions	7.15 x 2.38 x 3.03m	7.17 x 2.42 x 2.99m	6.78 x 2.43 x 3.05m		6.56 x 2.51 x 3.04m
Weight	17.54 tonnes	17.18 tonnes	16.41 tonnes	15.05 tonnes	16.1 tonnes

*JCB has recently started producing telehandlers designed for the local market at its Jaipur production facility*



### JCB bets on Indian telehandlers

JCB is now probably the world's largest manufacturer of telehandlers and is still the only company to offer a fixed frame machine over 18 metres, with its 20 metre model. At the end of last year it opened two new production buildings in Jaipur following an investment of £62 million. The company is celebrating 35 years of manufacturing in India, having started production under a joint venture agreement in 1979 at a site in Ballabgarh, near Delhi, which is now JCB India's headquarters. Since then the company has built 200,000 machines in the country, and India has been JCB's largest single market since 2007. Its five production plants build backhoe loaders, excavators and tractor cranes (see pick & carry feature on page 17) and has recently started producing telehandlers designed for the local market.

The 530-70 and 530-110 are both aimed at mechanising the handling processes across industries such as agricultural logistics, construction, and the material processing. These machines have a slightly lower lift capacity than its

equivalent European models with smaller JCB Ecomax engines. Lift heights are seven and 11 metres respectively and the booms are 'U' shaped and use hydraulic cylinders for all sections, rather than a chain extension system, making them simpler and more suited to heavy duty bucket applications. Cabs are ROPS and FOPS rated and feature a load moment indicator to warn the operator when exceeding load limits. The units also have the option of the telematics system JCB Livelink allowing users to remotely monitor the machine.

#### Future consolidation?

With so much happening in the telehandler market, rumours are naturally starting to spread about acquisitions and mergers. A few years ago there was much speculation about JCB branding the Magni 360 degree machines. While this came to nothing Magni is offering a JCB engine option in its machines and has been offering its 360 degree models to JCB dealers to sell alongside the JCB fixed boom machines. With several other smaller Italian telehandler manufacturers producing 360 degree machines perhaps the time is right for JCB to finally add a rotating machine to its line-up.....



*Made in India - JCB 530-70*



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