

MERLO - Specialising in Solutions!



- 1 Wide range of certified platforms
- 2 Slewing or fixed platforms
- 3 Protected controls in platform
- 4 Integral load limiter
- 5 Quick-change TAC-LOCK system
- 6 Boom sideshift built-in
- 7 Chassis levelling
- 8 Compact stabilisers
- 9 Panoramics from 6m - 17m lift



PLATFORM MPR15

- 15.7m working height
- 500/1000 kg capacity
- Rear loading gate
- Drive at 40 kph from cab
- Drive at up to 6 kph from platform
- 4-wheel drive/steer axles
- 100HP Perkins engine

P38.13 HIGHLIFT PANORAMIC
 3800kg lift capacity 12.6m lift height
 Perkins 100HP diesel - 40 kph travel speed
 Standard boom sideshift-stabilisers-levelling

The Merlo attachments catalogue includes a wide range of fully certified platforms. Even the smaller handlers can benefit from a simple, non-slewing 200 kg capacity platform with fully integrated controls. Larger machines can fit platforms up to 1000 kg capacity with many special variants for specific applications. And the unique SPACE 11 system offers 11m of further reach as well as its own 300 degrees of rotation. It can even be inverted for under-bridge maintenance.

MPR15
 Rapid access RT platform
 Capacity up to 1000 kg
 15.7 m working height

MULTI-TOOL
 Tractor + Telehandler
 3000kg lift capacity
 6m or 8.55m lift height
 Rear three-point linkage
 and PTO

ROTO MCSS
 Lift capacity up to 6 tonne
 Lift height up to 30m
 40 kph travel speed

Merlo has specialised in producing certified telehandler platform solutions for many years. All-hydrostatic full time 4WD ensures precise and consistent operation. Safety is paramount, with instant braking and legendary Merlo all-round visibility.

And what a range there is - Merlo handlers from 7m lift height all the way up to 30m lift. Roto models can benefit from a range of EN280-compliant platforms. Whether small or large capacity, Merlo telehandlers are exceptionally compact and manoeuvrable for their class!



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The economic indicator

c&a

telehandlers

If there is one item of equipment that gives an early indication of the economy - good or bad - it is the telehandler - at least in the UK, France and the USA. In 2008, way before many had realised the increasing scale of the global crisis, telehandler sales and rentals had already taken a serious dive. The reason for this is that most are used in the house building sector which can be stopped almost overnight when times get hard. Property market woes are also the driver to lack a general lack of confidence which cause economic downturns. Conversely, when the first green shoots of a recovery appear, the telehandler leads the way.

According to AEM statistics, in 2008 - probably the best of recent years - 39,000 telehandlers were sold worldwide. This figure had almost halved by 2010 (20,000) as the recession took hold, but bounced back to an estimated 30,000 units last year. This enormous fluctuation proved to be one of the major problem areas for telehandler manufacturers and their suppliers - drastically reducing and then gearing up production meant coping with component shortages and sourcing increasingly rare emission compliant engines.

Who buys telehandlers?

Surprisingly Western Europe typically takes the majority of telehandlers - usually over 60 percent, three times as many as in North America. The remaining market is made up by Russia, South America, Africa and the Middle East each with the small remainder taken by Australia and the Far East - mostly Australia.

The other surprising statistic is that the biggest selling sector with 35 percent of the market are the six to eight metre lift height models, with compacts - under six metres - the next largest at close to 20 percent. Looking at it another way, barely 40 percent of telehandlers sold are over 10 metres. These figures however include the agricultural sector which primarily purchases smaller lift height machines and which has been disproportionately significant in recent years due to the construction slump in North America and Western Europe.

In the construction sector, the telehandler has become the most useful item of equipment on building sites with sales surpassing the ubiquitous backhoe loader. With most materials either on pallets or bagged, the telehandler is able to unload quickly and easily from the delivery truck, move the materials to a central storage area or place on or near the work area. A true one-stop machine, particularly when fitted with the dozens of attachments and accessories now available.

In recent years there has been significant interest and growth in the compact sector - units under two metres high and two metres wide - which are primarily used for renovation contracts as well as urban and inner city jobs. Even the sub-compacts - around 1.5 metres high and 1.5 metres wide - have blossomed to create a specific niche sector.

The most popular model range though are units with lift heights of between six and 14 metres, which are generally used for housing and site distribution leaving the higher reaching fixed frame models - generally between 14 and 17 metres for taller residential buildings, steel frames and roofing contractors.

While there are now a few 18 and 20 metre fixed frame telehandlers on the market, projects requiring a reach of over 17 metres tend to employ 360 degree machines - rotos. Although 360 models are available from around 14 metres, most have lift heights in the 20 to



Bobcat TL470



Manitou MT1030S

25 metre range with the largest topping out at 30 metres. These machines tend to work on property development, steel frame erection and with roofing contractors. The larger 360 degree telehandlers tend to operate more like a crane, setting up in a central position (either inside or alongside buildings) to carry out the various material movements and lifts and a disproportionate number are rented with integral aerial work platform attachments - some of which are extremely sophisticated.

Market leader?

The two major producers of telehandlers are without question JCB and Manitou. Both claim

around 28 percent of the total market although JCB frequently claims market leadership something Manitou has never shouted about. In truth market leadership probably moves back and forth between the two, depending on which markets are strongest that year. Manitou is stronger in France - JCB in the UK typically the world's two largest markets. In North America neither come close to JLG which incorporates Gradall, Skytrak and Lull.

Over recent months Manitou has totally rationalised its product line, dropping older, less competitive products in order to focus on



K+S Kali has been using this telehandler in its potash mine in Unterbreizbach, Germany



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The Haulotte HTL3510 and HTL 4010



A Manitou MRT2150 working in the UK's Tyne Tunnel

increasing production of its more popular models such as its new compact MT625. This has meant pulling out of the rapidly growing ultra-compact sector by ending production of its aging Buggiscopic and Twisco product lines.

When asked why it was pulling out of this growing sector Manitou president Jean-Christophe Giroux said that "investing valuable engineering resources to update engines and systems on a very

dated original designs made no sense at the moment" but added "the company will certainly come back to this sector."

More rational range

Manitou's telehandler line now comprises of 23 fixed frame models in the Compact, Middle Lift and High lift classes with heights up 18 metres and seven 360 degree MRT models up to 30 metres. The compact range now consists of just one model - the MT 625, there are five High Lift models. Manitou says that its Middle Lift machines the MT732 to MT1235 will be the next products to be reviewed.

In response to suggestions that it might be getting out the compact sector Manitou says it has sold more than 1,200 MT625 units since shipments began in September 2010, in addition to 400 units of the agriculture derivative MLT 625. The result is that Manitou's share of the under six metre market for both construction and agriculture has increased from 25 percent in September 2009 to 36 percent a year later. (AEM numbers do not include Merlo.)

Early last year Manitou introduced the new 14 metre/4,000kg MT 1440 and 18 metre/4,000kg MT1840. Available with hydrostatic or torque convertor transmissions, which can also be specified with fully integrated access platform attachments. Another significant change is the move to a chain boom telescopic system on the four section MT1840 which provides a faster synchronised extension. Other improvements include a more intuitive operator interface, with improved navigation system and new LCD screen layout as well as an easy connect system (ECS) for attachments, standard tilt lever lock, an inching option and lift cylinder end of stroke - 'cushion stop' - shock absorber.

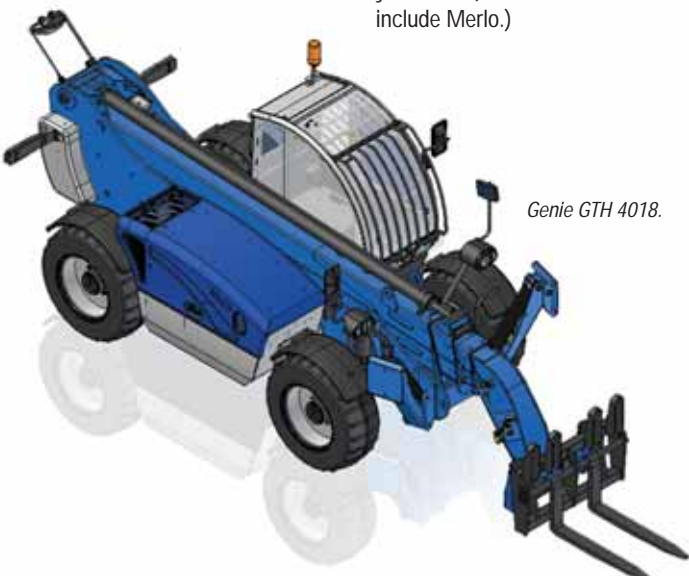
Manitou recently unveiled a new Stop & Go engine function at its customer Festival in Puerto Umbria, Spain. Developed jointly with Poclairn Hydraulics the system will be fitted on both the MT1440 and MT1840 next year and will be available as an option on all Manitou models fitted with Stage IIIB/Tier 4i engines in Europe and America. The company claims that savings of about €1,000 per year may be achieved through a five percent reduction in fuel consumption, reduced maintenance and the machine's higher

resale value because of the resulting lower operating hours. The stop/start function has a very quick half second restart time which, says the company, can save up to 30 percent of the running time when the engine would normally be at idle.

Manitou also has an MRT 'Bi-Energy' telehandler which uses a three-phase 11kW 380-400 volt AC motor to drive a dedicated hydraulic pump to power slew and all boom functions. The unit is designed to operate in any situation where noise and pollution is critical - and of course where a three phase power



Genie GTH 5021.



Genie GTH 4018.



The 20 metre JCB 540-200



Manitou's popular compact MT625



Merlo 60.24 MCSS

source is available. The unit can be operated from the cab, the access platform attachment or from a remote control unit.

European fixed telehandler record

JCB surprised a few at Intermat when it launched the JCB 540-200 - its first machine over 17 metres. It also saw the launch of the five tonne JCB 550-80, the heaviest capacity JCB model ever. The 20 metre 540-200 is the highest reach fixed frame telehandler in Europe - in North America Xtreme produces a 24 metre monster, the XR1270 - however the general consensus among JCB's competitors was 'is 20 metres needed?' JCB says that it is quite happy to lead and innovate rather than follow the pack so maybe it has spotted a niche sector ahead of everyone else? Visibility of the forks at these greater heights is of course an issue for which cameras are now available - but that's another issue.

JCB chief innovation officer Tim Burnhope said: "As the world's number one producer of telescopic handlers JCB is setting the pace in the development of new machines with greater lift heights and lift capacities. The 540-200 has been designed with the customer firmly in mind and will satisfy a demand for increased lift heights and forward reach capabilities from construction and industrial

customers. With fast cycle times, it will set a new benchmark for productivity."

The 540-200's five section boom - which uses an internal telescope cylinder and chain system - is made from higher tensile steels to improve the strength to weight ratio and thus the long reach capacity of the machine (200kg at 15.8 metres and one tonne at 10.6 metres). The five section boom also helps keep the overall length down, but so far now detailed specifications have been released. The 540-200 can lift 1,500kg to its full height of 20 metres.

The boom system uses a pre-lubricated chain and sealed-for-life rollers, increasing service intervals and minimising machine downtime. The system also visibly shows the operator and service engineer when chain adjustment is necessary. The one-piece boom nose is fitted with a JCB Clearview carriage for quick and easy changing of attachments. At the rear of the machine, the boom is mounted low in the chassis, helping maintain good visibility over boom for the operator as well as a more rigid structure to support the boom.

Genie magic?

Several other telehandler manufacturers have launched new



Ausa T235H

products this year, including Genie and Caterpillar. Genie has been working on its new range for some time now, with three models unveiled at Intermat - two 4,000kg fixed frame models - the GTH4014 and GTH4018 - with 14 and 17.6 metres lift heights and the 5,000kg/21 metre 360 degree GTH5021R.

Genie says that the new models are the most compact in their class in terms of overall width and height, as well as boasting a tight 3.8 metre outside turning radius.

Gert De Boon, Genie telehandler product manager for Europe said: "Our three new designs reinforce our commitment to reduce the complexity and cost of telehandler ownership, as well as complying with the European Stage IIIB emission standards. With energy efficiency, simple operation and innovative serviceability features, these redesigned models also offer best-in-class performances in their respective categories all from a smaller footprint, making them ideal for tough work in congested environments."

The new telehandlers are scheduled

to go into production during the fourth quarter of 2012.

In an effort to simplify telehandler fleet ownership, Genie has launched the GM-1 option which allows operators to use Manitou attachments on Genie GTH machines. It has also added to its extended warranty option - Terex Xtend - which increases the standard two year warranty by an extra 12 or 24 months on electrical and hydraulic components.

Cat C Series

Caterpillar has also launched four new C Series telehandlers with capacities up to 3,700kg and lift heights to 7.3 metres and new styling and colour scheme. The new Cat TH336C, TH337C, TH406C and TH407C telehandlers - all feature simple two section booms and are aimed at the agriculture, construction and industrial markets. They feature Cat stage IIIB C4.4 engines which feature improved fuel economy and lower operating costs.

The TH336 and TH337 have a lift capacity of 3,300kg, while the TH406 and TH407 can lift 3,700kg. Lift height for the TH336 and TH406 is 6.1 metres whereas the TH337 and 407 extends to 7.3 metres. Features include a new Cat powershift transmission with six forward and three reverse gears - all fully selectable and a maximum



One of four new C Series telehandlers from Caterpillar.

road speed of 40kph. A larger, redesigned engine cooling package features a hydraulic reversible fan as standard. The cab has a pneumatic suspension seat and improved visibility thanks to the larger glazed area and the new curved engine cover profile which helps particularly to the operator's front and rear on the right side of the machine.

The single lever, electro-hydraulic joystick has been redesigned to include the 'up and down' transmission control buttons for ease of operation and reduced operator fatigue. All functions, including auxiliary hydraulics, are fully proportional and controlled directly from the joystick. A new torque regulated load sensing hydraulic pump has an increased flow of 150 litres a minute.

Ride control (boom suspension) provides improved ride, which results in faster working cycles. Boom float also allows the free movement of the boom allowing the work tool to follow the ground contours.

A manual IT coupler comes standard, with the option of a hydraulic quick coupler to allow work tool changes

without leaving the cab. Under the cover service access points are easily accessible and routine daily maintenance is now reduced to checking fluid levels and a walk-around inspection. In addition, the service menu is visible via the machine keypad and LCD display.

Merlo

While Merlo cannot compete with the likes of JCB or Manitou in terms of overall shipments. Where it does score is with its ideas and innovation and of course leadership of the 360 degree market with its Roto models. The company invests heavily in research and development as well as manufacturing automation. Merlo leads the market in terms of in terms of percentage of in house production, building its own axles and transmissions - while



Merlo CDC colour display



Liebherr TL451



Kramer 2506

Reliability + Strength

The new Penny + Giles hand operated JC1500 joystick – with a high integrity contactless Hall-effect sensing system – is now available. Specific for single-axis operator control of cranes, aerial work platforms and other off-highway vehicle applications.

The joystick is available with a range of user-defined features, enabling designers to quickly and efficiently build safe and reliable control systems:

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A Manitou MT932 stacking vehicles at Babington Car Spares in Leeds, West Yorkshire

most other producers simply assemble using most of the same components. As a result of its heavy emphasis on new products is has by far the widest range of telescopic handlers on the market. Being totally family-owned, with little or no debt, the group has weathered the financial storm of recent years better than most and has kept on developing and growing despite the crisis. Its strong position in the agricultural and 360 degree market has also helped as these market sectors fared far better than construction and rental.

Although no new fixed frame models have been announced recently, Merlo always has something up its sleeve. Its CDC (Dynamic Load Control) system - said to exceed the longitudinal stability requirements of EN 15000 - automatically detects and recognises an attachment as soon

as it is fitted (bucket, clamp, platform winch etc.) and automatically creates a virtual work/range diagram, allowing the operator to view the position of the load - height and radius - via a very clean and clear multi-function colour display in the cab. Illuminated progress bars give an easy to understand graphic of the stability of the machine as well as showing real-time monitoring of the weight being handled, its height from the ground and the current forward reach. When in an overload situation - in the display's red zone - the operator must manually correct the situation.

Big rotos

Merlo pioneered the Roto concept in 1990, initially to overcome the challenge of achieving greater lift heights and to make it easily to lift material into the upper floors of buildings from narrow transport lanes. However the Roto has now developed into a multi-purpose machine with 20-25 metres being the most popular size range.

Merlo's most recently introduced Rotos - the 23.9 metre lift height 60.24 MCSS and the 29.2 metre 40.30 MSS - are the latest in a new family of higher capacity machines with capacities



New Holland LM625.

MT625

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The new 18 metre 360 degree Dieci Pegasus 40.18 at Vertikal Days

of 6,000 and 4,000kg respectively. Safety is constantly monitored throughout lifting operations by Merlo's own in-house developed MCSS (Merlo Continuous Slew Safety) system which controls and manages all the operating parameters of the machine. Both units have 360 continuous slew, although the MCSS system allows the driver to preselect a working arc if he wishes. The new models are equipped with a load-sensing hydraulic system, self-levelling hydro-pneumatic suspension, and stabilisers with independent extension and jacking, which can be infinitely configured to suit any stability footprint. The cab can be tilted by up to 18 degrees to offer an unequalled loading view at maximum height.

Raft of new models

Earlier this year saw a raft of new telehandlers introduced to tie in with

Intermat from manufacturers including Liebherr, Ausa, New Holland, Bobcat and Wacker Neuson.

Liebherr revised its four model range of telehandlers, lift heights at 10 and 13 metres remained the same as previous models however lift capacities have increased to 4,100 and 5,000kg. Other changes include a new, large cross-section more rigid boom profile coupled with a lower boom pivot point to improve the centre of gravity, adding to the machine's stability. A new audible and visual overload warning device is also fitted.

The 13 metre models, equipped with stabilisers, offer the option of lateral boom movement. This is obtained by sideways movement of the machine on its supports pads. The working attachment moves in parallel with the ground throughout its range, providing precise load movements even at full height,

without needing to move the base machine.

German equipment manufacturer Wacker Neuson has introduced its EN15000 compliant telehandler stability system "smart handling". The company says that unlike other devices it is a fully automatic system that retracts and/or lowers the boom and load in order to improve stability when the maximum load moment is reached/exceeded, without the machine cutting out or needing to be restarted. The new system is standard on all of its telehandlers apart from the ultra-compact models of five metres and under.

Bobcat has expanded its new

Dieci, the LM625 has a lift height of just under six metres and a 2,500kg lift capacity. Features include a turning radius of 3.4 metres, auto-locking front axle and choice of 70 or 84hp turbocharged engines.

Spanish equipment manufacturer Ausa launched a 2,300kg/ 4.5 metre T235 H, which- it says - completes its telehandler range. As with the diminutive T144 H, launched at Bauma, the T235 H features a tilt-up cab to provide easy service and maintenance access. It also features 4x4 drive and steer and can scale slopes of up to 44 percent under full load. Ausa says the machine is a real alternative to mini loaders with additional capacity, safety and



The 13.6 metre Merlo P38.14

generation TL telehandlers with the high horsepower TL470HF. Powered by the 97.5 kW (130 HP) Perkins 1104D-E44TA diesel engine, the new telehandler offers improved performance and a 40 km per hour maximum travel speed.

Maximum lift capacity is 3,500kg and maximum lift height seven metres. Capacity at full height is 3,000kg, while the maximum forward reach is four metres with a 1,500 kg load. A patented new asymmetric design means the right rear corner of the cab is free of structural components providing an unobstructed view across the entire rear of the machine.

New Holland is expanding its telehandler range to eight models with the introduction of the compact hydrostatic transmission LM625.

Manufactured by

comfort. It uses a Kubota engine and Rexroth hydrostatic transmission.

At Vertikal Days Dieci showed its new compact 18 metre, 360 degree 4,000kg Pegasus 40.18. Its UK affiliate - Dorset-based Dieci Telehandlers which now has 48 dealers around the UK - said that the new machine could be used for under bridge work and can be fitted with a rail undercarriage which will comply with the latest regulations due to be introduced next year.

Like many telehandler manufacturers not yet selling in big numbers to the large rental companies, Dieci tends to focus on selling to end users - less volume in terms of units, but with better margins on each deal. There is not much wrong with that strategy - unless you are a large manufacturer with a large dedicated production facility.



JCB 540-200.