



TEREX | DEMAG

No. 1 and still the Ultimate in City Class!

AC 55 City Crane

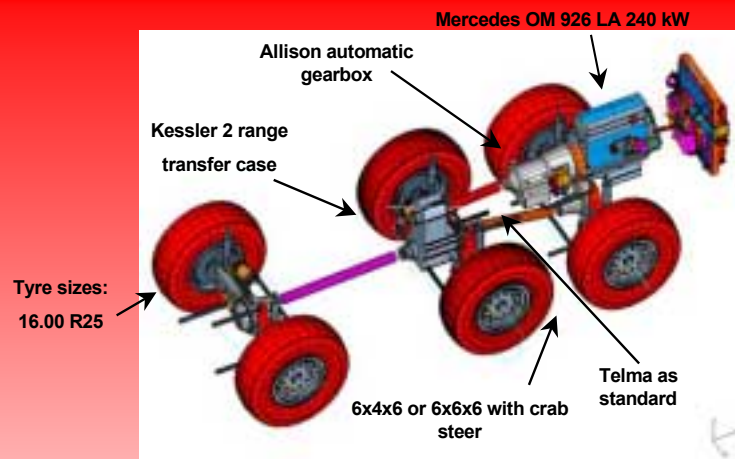
- 55 tonnes capacity
- 40m Main Boom
- 14m or 20.2m Folding Jib carried
- Jib offsets 20°, 35° and 50°
- Travels with full Counterweight
- Very High Capacities
- Flat boom capacities
- Extremely compact
- Air conditioned
- Mats and tackle storage
- IC-1 intelligent control
- Working Area Limitation



**Low headroom runner
(part of jib) 25.9t**



**Two seat cabin
Operator friendly**



**Terex-Demag are also
well known for City Class**

AC 30	30T
AC 40-1	40T
AC 70 (New)	70T

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STREET LIFE

The number of UK hire companies selecting 'city-type' cranes over the now traditional all-terrain (AT) crane is gradually increasing, but it seems that only a few manufacturers are convinced. *C&A* looks at what is still considered a niche product by many.

WITH a population of around 127 million people inhabiting a land mass of around 377,835 km², modern-day Japan's adoration for the compact can be put into context. And one such product born from this love affair is the city crane. Indeed, it was in the nooks and crannies of Tokyo's city streets that the very first units could be seen at work back in the late-80s and early 90s, from which point they went on to change the face of the market, replacing many small truck cranes. It was the Japanese producers, mainly Kobelco, Tadano and Kato that developed the city crane as it is known today. Kobelco is generally credited with launching the city crane concept with the introduction of its two-axle, 7 t capacity RK70 in 1989, which also saw the symbolic 'drop-nose' boom concept introduced for the first time. Close behind were Tadano and Kato, which also introduced their own compact versions, with multi-section booms that stowed at a steep angle to provide good 'on-the-road' visibility and handling.

The advent of city crane was seen by some as an evolution of the all-terrain (AT) crane, or a combination of the rough terrain (RT) and AT crane, but with essential differences, such as a



Liebherr's LTC 1055 in the colours of US-based Cranes Inc at bauma 2004.

much shorter boom in the stowed position made possible by a greater number of shorter extensions. A shorter boom overhang combined with the 'drop-nose' concept provided greater operator visibility for driving in restricted urban environments, while a lower centre of gravity on the crane increased its overall manoeuvrability. Another major difference was the use of a single cab, compared with the standard two-cab feature of the AT crane.

Despite the city crane's popularity in Japan, the technology was slow in being exported overseas. With lift capacities between just seven and ten t, the city crane was seen as expensive for the lift capacity offered. In Europe, however, the concept was eventually taken up by a new company, Compact Truck. This Swiss-based company, founded by Franz Lutz, developed the concept into the 35 t capacity class, with a boom length and road speeds to challenge the conventional AT crane, and projected the city crane concept onto the mainstream market.

A high price and Compact Truck being a relatively unknown company, however, limited the city crane's penetration and it was not until Mannesmann Demag introduced the 25 t capacity AC 75 in 1996 that the concept really began to gather pace in Europe, and particularly in the UK. Since then several producers have entered the market, such as Italy's Marchetti and Locatelli, and while Compact Truck followed Demag into bigger city crane model development, the company recently ceased

trading handing the larger European city crane sector to Demag.

In 1997 the company better known today as Terex-Demag launched the two-axle, 25 t capacity AC 25, which has since been replaced by the two-axle AC 30 with more ballast and better lifting duties as a result of a different grade of steel in its boom construction and a more powerful engine. Demag says that it has since delivered around 120 of its two-axle machines and more than 60 units of its subsequently launched three-axle, 40 t capacity AC 40-1.

ON THE BACK OF BAUMA

Hot off of the production line at bauma 2004 were the latest additions to the firm's city range in the three- and four-axle, AC 55 and AC 70 units. The smaller 55 t capacity AC 55 "is a very strong crane with excellent lifting duties," says Mark Evans, regional sales manager at Terex-Demag. The unit features a seven-section, pinned, 40 m main boom, and either a two-part 14 m, or a three-part 20.2 m folding jib, both of which, according to Demag, can be carried 'on-board' in the UK. The folding jib also has a 25.9 t capacity integrated runner (low-headroom adapter), while full-sized 16.00 tyres assists the crane in travelling with full ballast and all equipment and complies with the new STGO (Special Types General Order), which will govern the movement of most cranes on UK roads, following a transition period, which will



Terex-Demag's AC 70 launched at bauma 2004 replaces the 60 t capacity AC 60 and offers increased lifting capacity by way of an additionally mountable counterweight plate, also used on the new AC 55.

come to an end on December 1, this year. "Three orders for this machine were taken from UK customers during bauma with others to follow shortly," says Evans.

The larger AC 70 replaces the 60 t capacity

AC 60 and offers increased lifting capacity by way of an additionally mountable counterweight plate, also used on the AC 55. It also has a re-worked class-leading 52 m main boom, computer controlled electro-hydraulic rear-axle steering and, like the AC 60 and AC 55, features a two-person cab.

FIRST TIMER

Demag's success in the city crane sector is, to date, undisputed. But, now at least one other major crane producer is finding it difficult to ignore the sales potential. Liebherr's long-awaited entry into what it calls the "compact and performance" crane market was also seen at bauma, with its own city class interpretation, the LTC 1055 compact crane. Originally marketed as a 50 tonner, the 55 t capacity 1055 has been developed specifically for indoor use and confined industrial applications and, according to Liebherr, offers an alternative to an AT cranes where space is limited. The company also says that in transport configuration at 36 t gross weight, including 4.4 t of ballast and an 8 m folding fly jib, the lifting capacity of the LTC 1055 closely corresponds with that of its existing three-axle LTM 1055/1 AT crane, which can be increased considerably by adding a further six t of ballast.

Following in the footsteps of Compact Truck, the three-axle unit is a 100 per cent hydrostatically-driven crane, and taking the traditional city crane route, features the single

cab, for both road and crane operation, and the 'drop-nose' boom concept. The 36 m main boom comprises seven hydro-mechanically pinned sections. A short erecting jib for a maximum lifting capacity of 26 t has been integrated into the 8 m long double folding fly jib, while three intermediate sections that can be transported on the crane, each 2.4 m long, extend the fly jib to 15 m producing a 51 m maximum lift height.

"We took the decision to produce the LTC 1055 two years ago," says Liebherr's Dr Gerold Döbler. "Spain and the UK are currently the major markets for this crane and we have already sold 35 units, 12 of those were prior to bauma, while the rest will be delivered during the remainder of the year."

Not everyone, however, is convinced by the city crane concept. Grove for one has so far abstained from producing a traditional 'drop-nose', single-cab unit, opting instead for more conventional compact AT cranes, in two, three and four-axle configurations, which, in the words of the company, "outperforms in many respects the Japanese-inspired city cranes."

Grove says that it has sold more than 900 of its world-popular three-axle, 55 t capacity GMK 3055s since its launch back in 1994 and has taken over 100 orders for the new high-spec GMK 3055 since deliveries began in January. Also launched by the company is the 50 t capacity GMK 3050-1, which features the same carrier and superstructure as the new 3055, but with an alternative 38 m main boom, similar to the GMK 3050, but utilising Grove's Megaform U-shape boom for faster boom cycling applications.

Grove claims that many customers prefer the more all-round capability of the compact AT crane over a city crane. "Customers and drivers like the superior on-highway capability, such as ride-comfort, long distance travel ability and better visibility," says a Grove spokesperson. "They also appreciate the long boom capability

Originally marketed as a 50 tonner, Liebherr's new 55 t capacity LTC 1055 offers an alternative to an AT cranes for operations where space is restricted.



Bill Frost (centre) of UK rental firm, Bronzeshield Lifting, joins Mark Evans (left), regional sales manager at Terex-Demag and managing director at Demag Mobile Cranes, Barry Barnes, on his new AC40-1 city crane at bauma 2004. The crane was part of a seven-unit order, which also included a two-axle AC 30, an AC 35 and an AC 35L.



CITY CRANES



Locatelli has delivered more than 50 units of its AC 20 since its launch at bauma 2001.

and duties of the AT," - 43 m with pin-lock on the latest GMK 3055, or an alternative full-power on the GMK 3050-1.

"There is an occasional 'accessibility' advantage for the 'city' crane, in extreme low overhead situations, such as inside buildings, but more often than not this is more than compensated by the huge advantage of the in-cab controlled hydraulic luffing 'swingaway' jib, a Grove speciality, which is especially useful in typically confined city-centre job sites, where it would be difficult, or impossible, to lower the boom to change off-sets. The hydraulic luffer is

also especially useful for long-reach and up-and-over situations." Grove also claims that its three-axle carrier is the shortest in the 45 to 60 t AT class at an impressive 8.68 m, compared to 7.377 m on Liebherr's compact 1055 and 7.71 m on Demag's AC 55 city. With boom lowered, the total length of the Grove unit is 10.64 m, compared to a total length 8.38 m for the 1055 and 8.95 m for the Demag unit.

Demag's Mark Evans stands by the view that the city crane offers a viable alternative to AT cranes and says that this is more than justified by the company's sales figures. "They can do all of the work and more," he says, "with high telescoping and free-on-wheels capability,

combined with extremely compact overall dimensions and increased accessibility.

"The [Demag] AC 35 and AC 35L AT cranes have their own customer base, many of which are successfully operating city cranes. More than 100 units of the standard AC 35 have been delivered to customers in the UK in little over two years, and the AC 35L is proving to be just as popular with around 20 units delivered in the UK since its launch earlier this year."

The UK market is also one that Italy-based, Locatelli, has its eye on with its European-designed (which suggests why the company is yet to sell in the UK) 20 t capacity ATC 20 city unit. The ATC 20 comprises a six-section, 23.8



Terex-Demag's new AC 55 with the classic city 'drop-nose' boom concept first seen on Kobelco's two-axle, 7 t capacity RK70 introduced in 1989.



Deliveries of Grove's new 55 t GMK3055 have begun with recipients including the Terranova, Sutch and King Lifting in the UK and Meade in Ireland. Pictured is Germany-based firm Born & Schuch's new unit displayed at bauma 2004.

m hydraulic boom, which is fully electronically controllable through Locatelli's Locatronic internal control system, which also controls all crane motions. The company has delivered more than 50 units since its launch at bauma 2001, and says that speeds in excess of 70 km/h on a road or highway make this unit popular among customers.

"We need the high-speed combined with good quality crane parts because we are in direct competition with the likes of Liebherr and Demag," says Locatelli's Michelle Mortarino. "The unit has been specifically designed for the European rental culture which has grown significantly in recent years, particularly in Germany, Spain and the UK. And, although it is not yet that strong in Italy, it is certainly developing. With no separate licence needed for Europe, the city crane fits perfectly into this sector and we believe it is the future of lifting in the city environment." The environment is also one which Liebherr evidently also wants to make its mark on and with its LTC 1055 has "reacted to customer demand for a city unit after admittedly underestimating the significance of the city class concept."

C&A