

RAIMONDI MRT294 TOPLESS CRANE

MAX. LIFTING CAPACITY	16 t	35274 lb
MAX. RADIUS	76 m	249,34 ft
LIFTING CAPACITY AT MAX. RADIUS	2,75 t	6062,7 lb
HOIST MOTOR	73,5 kW	100 hp



Precise European craftsmanship for more than 150 years

Manufacturing luffing, tower, hammerhead and self-erecting cranes
for jobsites the world over

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Happy days

The improving economy around the world means that the tower crane market is once again buoyant - just take a look at the skyline of any major city and count the number of tower cranes at work. Recent trends include a move towards larger capacity cranes capable of lifting increasingly heavy prefabricated components on high rise buildings, while the luffing jib tower crane is finding increased popularity. At the smaller end of the market the hydraulic luffing jib crane is also making a comeback.

Until a few years ago, luffers were predominantly used in major cities in the UK as well as a few other UK centric countries such as Singapore and Hong Kong and some parts of Australia, mainly to avoid over sailing neighbouring properties.

While this is still the case, the crane's compact 'out of service' radius and ability to lift close in to the tower are ideal on congested job sites where buildings and cranes are in close proximity and air space is limited. Whatever the reason, luffing jib tower crane demand is strong and the major tower crane manufacturers are offering additional models to suit the various applications. Possibly the most prolific of these is Spanish manufacturer Linden Comansa which has launched a raft of new cranes including several luffers such as the LCL700 which should be hitting the market about now.

Two versions are available with 50 and 64 tonne maximum capacities in two-line configuration. These capacities reduce to 32 and 25 tonnes for single-line, higher speed operation. The maximum radius of the LCL700 is 65 metres at which

the 64 tonner can lift 7.2 tonnes while the 50 tonner can manage 7.5 tonnes.

The counter jib radius is 9.5 metres and this can be reduced to 8.7 metres by using steel rather than concrete counterweights. Maximum hoist speeds are 134 metres a minute for the 64 tonne model and 170 metres a minute on the 50 tonne.

The minimum lift radius on both models is just four metres, while the out-of-service radius is between 16 and 20.4 metres depending on jib length. Both models feature a high-capacity Lebus hoist cable drum capable of holding more than 1,000 metres of rope, sufficient to work at heights of up to 500 metres in dual-line lifting. Maximum freestanding height is almost 70 metres.

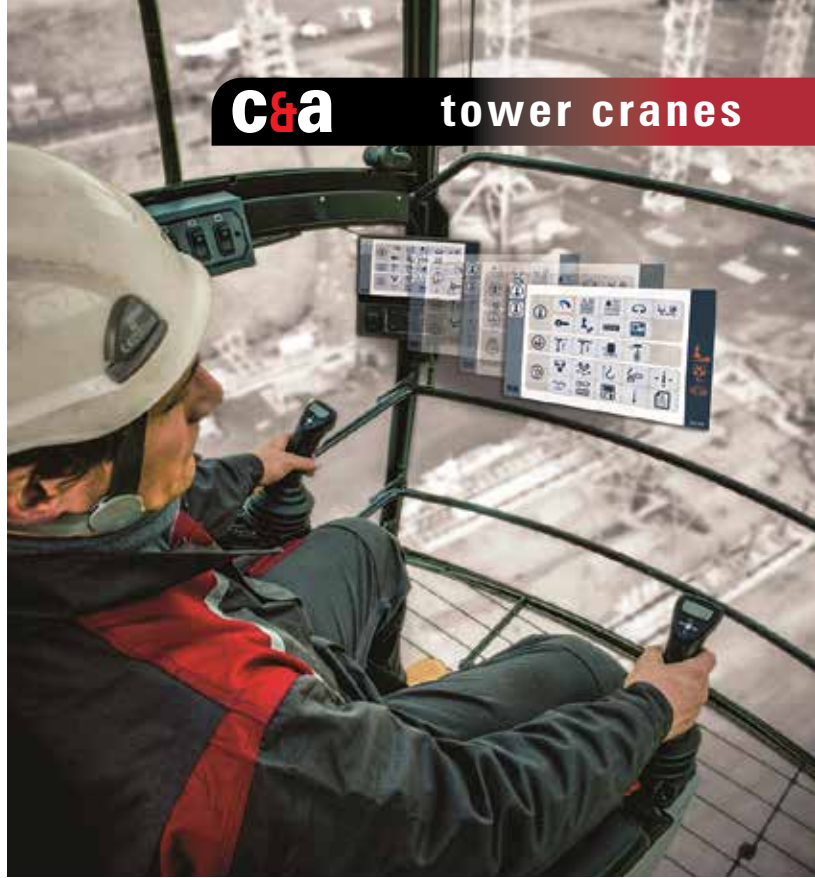
Comansa says the main feature of the LCL700 is its ease of assembly

with the heaviest weight for a quick crane erection being 18.5 tonnes but this can be reduced to 13 tonnes by removing some of the pre-assembled components.

"The large cities around the world are beginning to need high-capacity luffing-jib cranes in projects," says Comansa sales director Martín Echevarría. "We see that as an important market for the LCL700. Our new luffing-jib crane offers high performance, is extremely competitive and has a number of differential advantages that we hope set us apart from the competition."

Comansa's Chinese manufacturing operation - Comansa CM established as joint venture Comansa Jie in 2006 - also launched its first luffer, the CML 190, at Bauma China at the end of last year. Up to this time the Chinese business had focused exclusively on flat-top tower cranes. This is its first all-new product since Comansa took outright control of the company last April. Available in two versions with maximum capacities of 12 and 18 tonnes, both have free standing heights of 64.4 metres, are available with a range of jib lengths up to 60 metres and have jib-tip capacities of 1,550kg. The crane has been designed along Comansa's modular system with components designed for easy transportation and a fast erection. Hoist and luffing ropes are also pre-installed at the factory.

The main features include the hoist positioned alongside the cab which



The minimum lift radius of the Comansa LCL700 is just four metres with out-of-service radius is between 16 and 20.4 metres



The new Linden Comansa LCL700 comes in two versions - 50 and 64 tonnes

The CML190 crane is available in two versions with maximum load capacities of 12 and 18 tonnes

partners around the world. The two new models are the 14 tonne capacity LR213 luffer the largest in the company's current range and the recently launched 10 tonne capacity MRT159 flat top. The LR213 features a range of jib lengths from 28 to 55 metres. The 14 tonnes maximum capacity is possible on four parts of line with any of the jib lengths, and jib-tip capacity at 55 metres is 2,250kg. A choice of two new winches - 55 kW or 75 kW - are available both specifically designed for luffing jib crane duties and able to stow up to 1,000 metres of rope. Both are fitted to the extra-wide counter jib structure along with most other key components. The crane is also equipped with Raimondi's new deluxe R16 crane cab with good all-round vision.

"The crane's new control system will appeal to contractors, it is also easy to maintain with hoisting and luffing winches mounted on the big counter jib platform," says Raimondi technical director Domenico Ciano. "All the safety mechanisms and electronic devices are located on the counter jib, hence easy access for technicians and operators alike. Contractors will also appreciate that the LR213 can lift its 14 tonnes on four falls at a working height of 250 metres."

City Lifting corners the market

New articulating cranes are few and far between. London-based crane distributor and rental company City Lifting has been working in partnership with Swedish crane company Artic Crane since 2009, developing the articulated Raptor 84 models. The articulating crane is ideal for working on congested city sites with the Raptor 84 featuring an out of service dimension of just four metres, a capacity of two tonnes at 32 metres radius or four tonnes at 21 metres.

Artic's new crane is the larger Raptor 184 with a capacity of eight tonnes at 23 metre radius and four tonnes at 36 metres, while the minimum out of service radius is just 4.7 metres. The crane has a 42 metre free standing height with the standard 1.7 metre cross section tower and features a 60kW hoist winch and full auto greasing system with remote monitoring system.

City Lifting has purchased all the Raptor cranes produced by Artic so far and now has two Raptor 184

allows more drum capacity and a reduced out of service radius. Different winch options are available with maximum speeds of up to 178 metres a minute and 1,280 metres drum capacity. The crane is expected to be popular in markets such as Thailand, South Korea and Malaysia where the high-rise construction projects are creating the demand.

Fruits of investment

Raimondi Cranes has also launched two new cranes including a luffer. The company was purchased by SMIE in 2006 but went into administration in 2009 before making a comeback a few months later following a capital injection from the Ramco Group of Qatar. Three years ago, Prince Khaled bin Alwaleed Al Saud - owner of Saudi Arabian investment company KBW Holding - purchased Raimondi and announced plans to spend around \$100 million on expanding its Italian manufacturing facilities as well as building new facilities in Brazil, Saudi Arabia and India. The company said that these changes will allow it to increase production and offer a wider product range together with local presence and service.

This investment is now bearing fruit with the company making solid inroads into new markets, as it appoints new distributors and



Linden Comansa LCL700



Raimondi Cranes LR213 with the Deluxe R16 cabin



Raimondi Cranes MRT159

and 12 of the smaller Raptor 84's currently working in and around London. Two more 184s are on order for delivery in May and June. Plans are also progressing to update the smaller 84 to include the same design features as the 184.

Jaso Tower Cranes

Over the past year or so Spanish manufacturer Jaso has launched several new models including the 45 metre/six tonne J118HPA hydraulic luffer, the 60 metre/18 tonne J265PA, the 65 metre /32 tonne capacity J438PA and the 85 metre/24 tonne capacity J560 with newly developed EC180262VF hoist.

The most recent and interesting new crane however is its largest hydraulic luffer the J168HPA with 50 metre jib which offers a six tonne maximum capacity at 30 metres radius and 2,500kg at its 50 metre jib tip. The HPA series uses a new luffing jib design with the single hydraulic lift cylinder at the rear - rather than more usual front - of the tower which Jaso claims provides a more reliable

luffing mechanism extending the service life of the cylinder, reducing power consumption and gives the crane a compact minimum out-of-service radius of seven metres. According to the company the hoist is located on top of the jib for safer operation and to allow the crane to be transported by a maximum of six trucks.



UK crane distributor and rental company City Lifting has 12 of the smaller Raptor 84's working in and around London



The Jaso HPA hydraulic luffer series uses a new luffing jib design with the single hydraulic lift cylinder at the rear



Terex hammerhead

Terex Cranes has launched the Terex SK 452-20 hammerhead tower crane based on its popular SK 415-20. The crane has a 20 tonne maximum capacity and can handle 2.5 tonnes at the jib tip. Equipped with a new hoist system, the SK 452-20 has a maximum hoist speed of 190 metres a minute and a drum capacity of 990 metres. Angelo Cosmo, product marketing manager at Terex Cranes says: "We have increased winch speeds by 70 percent and the crane's rope capacity by 90 percent - the equivalent of an additional 30 floors of working under hook. We've also

The Jaso J168HPA has a 50 metre jib and a six tonne maximum capacity at 30 metres radius

Jaso has also launched its cloud-based Smartlink system which allows full remote monitoring and reporting of the crane's performance. It includes an alarm system that warns of overloads and wind speed etc.

Jaso has been adapting its cranes to the North American market in partnership with its US dealer Virginia-based Crane Tech Solutions (CTS), which is promoting five top slewers, the J168 hydraulic luffer and three regular luffing jib cranes. The partnership appears to be working with numerous cranes now working across the USA, including a Top Line J560 operating in the Back River wastewater treatment plant project in Baltimore, Maryland. The J560 crane has an 85 metre jib and 2,500kg capacity at the jib tip.



The new Terex SK 452-20 has a 20 tonne maximum capacity and can handle 2.5 tonnes at the jib tip

made structural changes that will make set-up and transportation faster and easier. These enhancements will help contractors lower operating costs while getting a high return-on-investment." The new slewing system consists of three 7.5 kW motors that provide a slewing speed of 0.99 rpm. The design consists of one inverter drive for all three motors and the system is fitted with an automatic lubrication system for easier maintenance.

The ultimate answer to overall efficiency

- ↑ 16 m ↑ 19 m
- ← 2 m →
- IN DOOR
- OUT DOOR
- 750 kg 550 kg

- ELEC TRIC
- DIE SEL
- HY BRID
- 2WD
- 4WD
- SWING AXLE
- ?
- 230V
- EASY LUBE

Holland Lift presents its new smart models: HL-160 and HL-190. The concept is designed for tailored efficiency. A modular system with various options: 16 or 19m high, electric, diesel or hybrid; the base of the machine always remains the same. These scissor lifts have attractive exploitation costs and a high return on investment. And whatever configuration you choose, Holland Lift quality, safety and durability are as always part of the deal.

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The platform on the rear jib has been reconfigured to increase the working area for technicians when erecting/dismantling and performing maintenance and uses built-in ducts to reduce cable clutter. The connection of the hoist unit and counter jib is made using two pins on the back of the unit for quick engagement for transport, while handrails flip down to reduce assembly time and effort along with shipping dimensions.

The Terex SK 452-20 can be erected on two different tower systems with the maximum free standing height in standard configuration is 88.7 metres. The crane uses the Terex EVO15 cabin with improved visibility and a 178 mm (7in) full-colour multi-language display. The crane's trolley and counter-jib can also be fitted with cameras and adjusted from the cab for improved visibility and the crane is factory ready for remote monitoring.

Two new self-erectors

Conexpo saw the launch of the six tonne Liebherr 81 K.1 self-erecting tower crane - or fast-erecting crane in Liebherr speak - the upgraded version of Liebherr's bestselling tower crane the 81 K which was launched a year ago. The new crane is more powerful with the Load-Plus function allowing lifting capacity to be temporarily increased by up to 20 percent, the jib can be extended by three metres to a maximum of 48 metres by bolting on an extension and a new external cab is available. Maximum jib tip capacity is 1,350kg.

Hook heights vary from 17.4 metres with the tower retracted to 26

metres when extended. With a maximum of six tower sections added this increases hook height to 40.4 metres, providing a maximum lift height of 55 metres with the jib luffed to 30 degrees. Prior to launch four units have been delivered to American crane rental company Ideal Crane Rental.

Many of the cranes functions will be the same as on the 81 K such as the pure Speed2Lift 2-line operation, Micromove fine positioning mode and the ABB operating-range limiting system.

The new external cab provides the operator with a much-improved view of the site and can be installed on any new K crane using its own load hook. It features user-friendly controls and more operator space. And to reduce costs, the cab can be used on different Liebherr self-erectors when necessary.



The Hup 40-30 has a 40 metre jib lifting one tonne at the tip



The Liebherr 81 K.1 has a new external cab for more safety and comfort

Potain on the Hup

Potain launched its new four tonne capacity Hup 40-30 self-erector at the company's plant in Neilla Tanaro, Italy in September last year. The Hup 40-30 follows the introduction of the four tonne Hup 32-27 at Bauma earlier in the year which replaced four existing Potain Igo cranes. The Hup 32-27 features a 32 metre jib with an adjustable two-section mast, with a third section contained within the second. With two tower masts extended it has a height of 21 metres, and reaches 27 metres when fully extended. The jib luffs to 10, 20 and 30 degrees above horizontal, to reach up to 40 metres

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under hook. Jib lengths of 11, 23 or 32 metres are available with a 1,000kg jib tip capacity at 32 metres radius.

The Hup 40-30 has a 40 metre jib lifting one tonne at the tip. Like the Hup 32-27, the 40-30 features a telescopic mast with under the hook heights from 25.6 to 30 metres when fully extended. At its maximum 30 degrees the luffing jib has an under hook height of 40 metres. In transport mode the crane is just 14 metres long making it easy to move between job sites.

The remote control features a large, colour screen with easy-to-use navigation. Its new Smart Set Up software delivers on-screen step-by-step information during crane erection and enables automatic folding and unfolding of the crane from the remote. Three selectable operator profiles vary the working speed of the crane to suit the application: Dynamic for quick and easy lifting, Standard for typical lifting applications and High Precision for more delicate load positioning.

Other features include Potain's High Performance Lifting (HPL) and High Performance Slewing (HPS). Also, the Hup 40-30 features a new Power Control function allowing it to operate via a wide range of power inputs, including low-level power supplies. Deliveries of the Hup 40-30 will start in early 2017.

Jean-Pierre Zaffiro, global product director for Potain self-erecting cranes said: "Self-erecting crane development has reached a new level of advancement and our new Hup 40-30 reflects these achievements. Speed, efficiency, versatility and compactness have all been increased over previous generations."

Potain has also launched the 20 tonne

capacity MD 559. The crane has a free-standing height of 81.5 metres and an 80 metre jib with jib tip capacity of 4.4 tonnes.

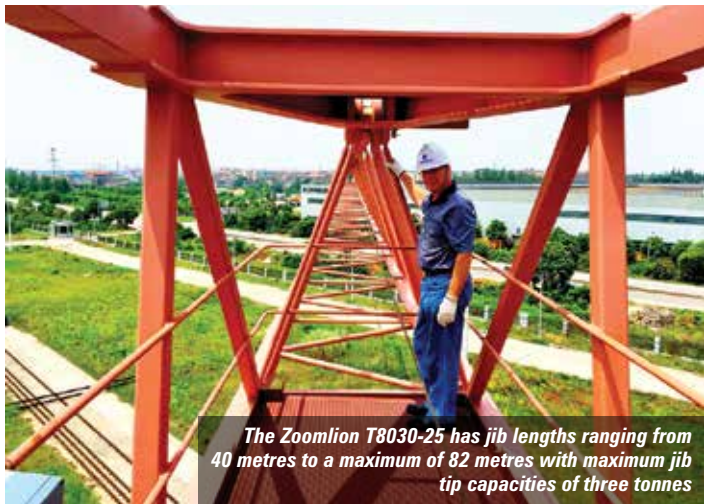
New Zoomlion crane

Zoomlion's latest tower crane aimed at North America is the 25 tonne capacity T8030-25. It is a product of the updated Jost flat-top crane designs originally acquired by Zoomlion in 2011. The T8030-25 has jib lengths ranging from 40 metres to a maximum of 82 metres with maximum jib tip capacities of three tonnes. Safety and stability of the core electrical system have been significantly improved to meet US and international standards. The crane appears popular with Zoomlion's North American dealers who have placed orders for nine T8030-25s to date. Maximum freestanding height is 73.4 metres.

Wolffkran

At Conexpo Wolffkran showed the final production version of its latest and largest flat top tower crane, the 315 tonne/metre class Wolff 7534.16 Clear, unveiled at Bauma last year. Managing director Ulrich Dörzbach said: "The 7534.16 Clear is perfect for inner-city construction sites that require space-saving solutions, up to date assembly concepts and quick turnaround times."

Wolffkran has also launched US versions of its 355 B and 700 B luffers and is now adding flat top models Wolff 6031.12 Clear, 7534.16 Clear and the 8033.20 Cross to meet demand. US versions of the 275B and 1250B luffers will follow shortly. It has been three years since Wolffkran re-entered the US market and it is pleased with the results so far. In New York City it claims to have carved out a market-share of around 20 percent.



The Zoomlion T8030-25 has jib lengths ranging from 40 metres to a maximum of 82 metres with maximum jib tip capacities of three tonnes



At its maximum 30 degrees the Hup 30-40 luffing jib has an under hook height of 40 metres



The 700B is just one of several US versions of models launched by Wolffkran