

Plant Machinery Vehicles

MIDDLE EAST



LIFTING VERSATILITY

KANOO CRANES EXPANDS ITS PRODUCT MIX TO INCLUDE SPIDER CRANES, MOBILE TOWER CRANES, MATERIAL HOISTS AND MAST CLIMBING WORK PLATFORMS.

LIFTING VERSATILITY

Kanoo Cranes expands its product mix to include spider cranes, mobile tower cranes, material hoists and mast climbing work platforms.

In the last six months, Kanoo Cranes, the engineered lifting solutions subsidiary of the UAE-based Kanoo Group, has introduced three brands in the GCC - Maeda, Spierings and Alba - as their exclusive dealer for the UAE, Saudi Arabia, Oman, Kuwait and Bahrain.

The first of these partnerships was announced in December 2019, with Sweden-based Kranlyft Group, the master distributor of Maeda Mini Cranes manufactured by Japan-based Maeda Seisakusho. During April-May 2020, Kanoo Cranes announced two additional partnerships, with Netherlands-based Spierings Mobile Cranes and Spain-based Alba.

This expands Kanoo Cranes' product mix to include five major brands and categories: Jaso Tower Cranes; SMIE anti-collision systems; Maeda Mini Cranes; Spierings mobile tower

cranes; and Alba material hoists and mast climbing work platforms.

Prior to this, Kanoo Cranes's lifting solutions were centered on tower crane sales (3-36 tonnes) and rental (6-100 tonnes) with Jaso Tower Cranes, crane safety and jobsite management with SMIE anti-collision systems, and crane planning, erection, disassembly and maintenance services.

During the last two years, the company has seen increasing demand for compact and versatile lifting equipment, with the bulk of the demand coming from the Dubai EXPO 2020 site.

Ahmad Wraikat, regional manager, Kanoo Cranes, says: "The recent product launches, with the possibility of more in the near future, are a result of our product development strategy to meet all the lifting requirements for building construction and maintenance."





MINI CRANES

Kanoo Cranes initially saw the potential of mini cranes while working on EXPO 2020 projects where small lifting equipment are feasible and preferred by contractors for decor and finishing works at the pavilions.

Maeda mini cranes are suitable for a range of construction works such as glazing, curtain wall installation, and steel erection. They also have applications in factories that don't have overhead cranes. Their small size and manoeuvrability make them versatile for outdoor and indoor applications, particularly narrow and confined spaces.

The Maeda mini crane range comprises ten models of spider cranes and crawler cranes. The six spider crane models (MC series) have lifting capacities ranging from 0.995t to 8.09t and maximum lifting heights ranging from 5.5m to 19.6m (25.5m with fly jib). The knuckle boom model (MK), based on the MC series but



with a hydraulic luffing jib, has a capacity of 0.995t and maximum lifting height of 11.3m. The three crawler crane models (CC series) have lifting capacities ranging from 2.93t to 6t and maximum lifting heights ranging from 9.46m

to 16.7m (22m with fly jib).

On construction sites, Maeda spider cranes can be transported to the upper floors of high-rise buildings via service elevators and then used for installation works of outer walls such as glass frames, by hoisting the wire rope from above in several stages. They can also be placed on rooftops to lift materials from the ground. The spider cranes can be operated via remote control, enabling operators to control them from a distance.

Maeda crawler cranes have a compact working footprint and small tail swing which enables lifting even in confined spaces. The pick and carry function (maximum 2t capacity), enables lifting and travelling with loads over distances.

"In many cases, mini cranes can help avoid the used of expensive tower cranes and mobile cranes. Because they can lift materials directly into a building, from inside the building, it eliminates the need to demolish walls or ceilings to provide access to a mobile crane. They also help avoid unnecessary obstruction of roads and access points," says Ahmad.

All mini cranes come with the following safety features. The 'moment limiter system' helps prevent tipping accidents. When the load reaches 90% of the rated total load, a warning signal is generated with rotary lamps and audible alarm. When the load reaches 100%, the crane will automatically stop to prevent tipping. With a digital display, the operator can continuously check the working status.

The moment limiter (safe load indicator) can set a lifting height limit, working radius limit, and angle limit. The working range of the boom can be set, and the boom will automatically stop at the set point. This function is very useful for narrow places with obstacles or limitations such as power plants and factories.

An alarm is generated in the event of the crane operating at over 3-degree inclination, or over 15-degree inclination when travelling.

For spider cranes, the outrigger interlock system restricts activation of the outriggers if the boom is not stowed and outriggers are not rotated to set position. It detects boom slew and derrick position, and outrigger rotation position. The crane interlock system enables the crane to work if outriggers are grounded correctly. It detects the outrigger rotatory position and grounding condition.

Several Maeda mini cranes are currently in operation at construction sites in the UAE. Kanoo Cranes aims to increase market penetration for mini cranes in indoor installation, refurbishment and maintenance works in malls, hotels and hospitals.



MOBILE TOWER CRANES

As the name suggests, mobile tower cranes combine the benefits of mobile cranes and tower cranes, but without the hassles of assembling, operating and dismantling them.

Spierings mobile tower cranes require only one operator to set up, operate, and dismantle the crane. The cranes can be set up in as little as 11 minutes, do not require extra ballast or boom parts, and can be manoeuvred by remote control.

Ahmad explains the application of mobile tower cranes in building construction and maintenance.

“Consider a building maintenance job that requires the replacement of a chiller on the roof. The building is accessible via one main road, a common challenge faced by contractors to move equipment in and out of the site. Generally, the movement of cranes would be scheduled in the nights or during weekends to avoid disruption of road traffic. If the site is in a congested area, a mobile crane with luffing jib would be required.

The time required to assemble the luffing jib with a mobile crane would be 8-10 hours. Setting up the mobile crane and rigging crane would need at least two operators, one each for the mobile crane and four riggers. The mobile crane alone would need at least one hour for rigging.

The lifting of the chillers may need only 1-2 hours, and after completion of the job, dismantling the crane would need another 8-10 hours. In total, the entire operation would require around 24 hours.

Compared to the abovementioned time-consuming process, a single driver-cum-operator can drive a Spierings mobile tower crane to the site, set it up close to the building

in around 10 minutes, manoeuvre it via remote control, carry out the lifting job, and leave the site within 3-4 hours.”

The Spierings range comprises four models with maximum lifting heights ranging from 55.45m to 64.2m and maximum loads ranging from 7000kg to 18,000kg.

The most compact model - SK487-AT3 or ‘City Boy’ - has a width of 2.5m, length of 13.08m and total ground size of less than 10m. The SK487-AT3 has a 3-in-1 cabin which functions as a truck, lift and crane cabin. In the crane operation, the cabin can be raised to any desired height where the cabin is always in solid connection with the crane. As a result, the operator always retains full control over the crane. The SK487-AT3 has a maximum load of 7,000kg up to a radius of 11.96m. Another model, the SK597-AT4, also has a maximum load of 7,000kg, but at up to a radius of 14.1m.

The largest model, the 6-axis SK1265-AT6 or ‘Mighty Tiny’, has a maximum load of 10,000kg up to a radius of 13.2m. The strongest model, the SK2400-R, has a maximum load of 18,000kg up to a radius of 14.6m; the crane is can be transported on two trailers, one for the crane itself and the other for the ballast and track parts.

For mobile tower cranes, the radius of the crane is often one of the essential factors. To make the radius even larger, Spierings has developed the sliding boom technology. This technique was first applied to the SK1265-AT6 where a radius of 60m is achieved with an associated 1.7 ton maximum point load. With the sliding boom, an extra boom length of 8m is achieved, whereby the boom makes itself wider after extending. This makes the



Ahmad Wraikat, regional manager, Kanoo Cranes.

width of the sliding boom equal to that of the front boom section. This technique has also been applied to the SK2400-R. In a modified form, the SK597-AT4 and the SK487-AT3 also use a sliding boom. An extra boom length of 4m is achieved with this type of crane. The transition of the booms is also seamless here, because two carbon profiles rotate when locking the boom and assume the same dimensions as the rest of the boom. These cranes also achieve a maximum point load of 1.7 tons

Ahmad clarifies a common misconception about mobile tower cranes and their niche market among tower cranes and mobile cranes.

“The Spierings mobile tower crane is not an alternative to a tower crane, but rather a mobile crane. In terms of rental price, the closest competition to the Spierings mobile tower crane, particularly the SK1256-AT6



model, would be a 250-tonne mobile crane. The ease of erecting and operating mobile tower cranes make short-term and daily rentals possible, especially for time-critical jobs and sites with restrictions on crane movements. Currently, Spierings mobile tower cranes are employed at the EXPO 2020 site where contractors move them from one site another without delays," says Ahmad.

CONSTRUCTION HOISTS

As the latest brand to join Kanoo Cranes, Alba is a natural progression to the company's aim to offer a one-stop-shop for lifting and vertical transport solutions. Alba construction hoists are designed to transport people and material on all types of low, medium and tall buildings and structures.

Alba material hoists have load capacities up to 2,000kg, maximum height up to 250m with twin cabin on a single mast, maximum cabin size of 3.2x1.4m, and speed of 20m/min. The hoists also include an updated emergency brake with automatic recovery that saves time in the restarting of the elevator.

Alba mast climbing platforms have load capacities up to 5,000kg, maximum height of 250m, and maximum speed of 10m/min.

Compared to tubular scaffolding, Alba claims its mast climbing work platforms to reduce installation and removal time by 90%, reduce work time by 40%, and improve work

safety, significantly.

"The PEC130 mast climber can carry 2 tonnes up to 13m in the single mast configuration and 4.1 tonnes up to 33.5m in the twin mast configuration, compared to most competitors that offer only up to 11m," says Ahmad.

Alba, like all the other brands in Kanoo Cranes' offering, are market leaders in their segments. This enables the company to offer customised purchase and rental options to reduce the total cost of ownership.

"Customer demand for buying and renting cranes is cyclical. Tower crane sales have been slowing down during the last few years, but it has been compensated by rental demand, which we will see increasing in the coming years as customers remain uncertain about long-term investments. Therefore, we offer flexible financing plans, lease-to-own schemes, and buy-back options," says Ahmad.

Ahmad points out that that in the near future all of Kanoo Cranes' brands could work side by side on a construction site in the UAE.

"We're bidding for a large project that could use all our products; for example, Jaso tower cranes with SMIE anti-collision systems for exterior work, Maeda spider cranes for interior work, Alba hoists and platforms, and Spierings for areas where there are restrictions on installing and operating tower cranes," says Ahmad. **PMV**

