#### spider cranes

# Red, green or orange?

Some companies scour the market to uncover machines that offer that little bit extra rather than following the crowd or mirroring competitors' purchases. Mark Darwin travelled to Hampshire to chat with one UK company that likes doing things a little bit differently.



Specialist crane and access supplier TCA Lifting says it likes buying the best product for the job and as such has a wide variety of equipment from numerous manufacturers. The company was known as Tracked Access until it changed its name in 2013 to Tracked Cranes and Access (hence TCA Lifting) to better reflect its involvement in both mini cranes and spider lifts.

The company was formed in 2005 by partners Phil Lomax and Tony Gettins with three quite diverse machines - a tracked 34 metre Palazanni spider lift, a Maeda MC 285 spider crane and a small Snorkel scissor lift.

"In subsequent years almost every rental company began offering tracked access machines," said Lomax, "coupled with the fact that Palazanni platforms were also available with wheels, rather than tracks, meant that a name change was the right thing."

Growth over the 11 years since has been steady and included several moves to larger premises to cope with company and fleet expansion. Currently the head office is near Basingstoke in Hampshire - with a hire desk in Reading - following a move from Farnborough which followed a couple of moves from its original base in North West London. The TCA rental business is now split equally between spider/crawler cranes and larger spider lifts. It is also the UK Palazanni spider lift dealer, but also supplies other new access equipment for customers as and when needed.

"During the 11 years we have been in business, the spider/mini crane



sector has changed enormously, however the products from the two leading manufacturers, Maeda and Unic have remained very similar," says Lomax. "You would be hard pushed to spot the differences between a brand new and a 10 year old crane. This was one reason why we began looking at the new Jekko cranes and were very impressed with both the quality and performance."

The majority of TCA Lifting's mini cranes are Maeda although the number of Jekko cranes in the fleet is growing. "We considered Jekko soon after we formed the business but build quality and reliability weren't up to scratch at that time," adds Gettins. "We were one of the first rental companies buying Maeda and have probably bought more than 30 of them over the years. All are extremely reliable and just keep on going out on hire without any trouble. The original MC 285 bought in 2005 is still out working happily."

"Selling and renting the larger Palazzani spider lifts opened our minds to alternative products. We are the greatest critics because we use the equipment every day, but Palazzani lifts - particularly at the top end from 25 to more than 50 metres - are well designed and built."

The Italian manufacturer has spider lifts with working heights ranging from 17 to 52 metres and also offers a crane option on all of its models. TCA currently has a 43 metre XTJ 43 with crane attachment which makes it the largest spider crane in the UK. The XTJ 43 is the only platform in the fleet with the crane attachment and is used on about a third of its contracts, particularly on space restricted jobs that would otherwise have required a sizeable All Terrain crane.

"The XTJ 43 recently went out on a job installing 500kg skylights on a very restricted building refurbishment in Shepherds' Market in Mayfair, London, after several other companies were unable to supply a machine to do the job. Nothing else, including mini cranes, trailer cranes, telehandlers etc, was



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#### spider cranes

small enough to get into the lifting position and then lift the skylights to a height of almost 40 metres after negotiating a steep ramp with a tight turn into a courtyard.

"The XTJ 43 recently went on a contract developing a three storey town house with roof terraces in Shepherds Market in the heart of Mayfair," said Gettins. "The unit was primarily used to lift 500kg skylights into position but also to lift a selection of other materials



including steel and scaffold poles onto the roof area. No other equipment - including mini cranes, trailer cranes, telehandlers etc could fit into the very congested and space restricted area which also had low floor loading - and then lift loads to 38 metres high and nine metre radius. As a result of this we decided that in future when we add more Palazzani's - particularly the XTJ models - we will also specify the crane attachment option."



While scouring the market for machines that may have been suitable for that contract it also looked at the Jekko mini cranes.

"I am surprised that there are not more companies willing to look at alternative products. It is almost like the early days of access platform when everyone would only buy Genie or JLG. The Palazzani platforms are a bit out of the ordinary but are very popular, which is why we now look at all the products on the market with a fresh pair of eyes. There is still the mentality in the spider crane market that you can only buy Unic or Maeda - red or green. We looked around and went orange! We

are obsessive about checking out at every machine available - you need to know what is out there."

"There is currently a gap in the Maeda capacity range which until the announcement of the eight tonne MC805 stopped at the 3.83 tonne MC 405," adds Lomax. "We have used a Unic 706 which is a nice crane but we don't want to



just go down the red or green route. The majority of our work is contact hire so we can then look at the job and suggest an alternative/better solution."

#### Jekko making inroads

The TCA rental fleet current includes around 30 mini crawler, spider and pedestrian operated cranes, the majority being Maeda but also Valla, Unic and Jekko. However when it needed a crane of around the six to







eight tonnes it was helped by the introduction of two new models, the 7.5 tonne Jekko SPX1275 and the eight tonne Maeda MC-815. The two had initially looked at the new six tonne Jekko SPK60 crawler crane and has ordered one for delivery this month - but saw the SPX1275 and was impressed with its features, build quality and performance.

The SPX1275 was ordered with a lattice swingaway extension, 3.5 tonne searcher hook and 415 volt electric power pack. It also features 360 degree slew and two tonnes pick & carry capacity with the tracks extended. When the tracks are retracted it still has the same capacity but no slew.

"Its pick and carry capabilities are so impressive we intend to rent it out as a crawler crane," he said. "We believe Jekko products have improved significantly and expect their reliability to be up to Maeda/ Unic standards, but with significant advantages in terms of outrigger positions, removable counterweight and pick & carry duties. I think it is important for Jekko to have a strong



Specification comparison between the Jekko SPX1275 CDH, Unic URW-706 and the Maeda MC815C

	Jekko SPX1275 CDH	Unic URW-706	Maeda MC815C
Capacity with max outrigger position	7.5t or 1.5t @ 10m radius	6.0t or 0.95t @ 10m radius	8.0t or 1.4t @ 10m radius*
Capacity with min. outrigger position	7.5t or 800kg @ 10m radius)	6.0t or 450kg @ 10m radius	N/A
Max lift height	17.7m	19.5m	19.6m
Max height w/jibs	25.7m	22.7m	25.5m
Max radius	16m with 600kg	18.6m with 200kg	18.8m with 300kg
Max pick & carry	2.0t	-	1.0t
L x H x W	5.73 x 2.04 x 1.45-2.05m	5.61 x 2.19 x 1.67m	5.90 x 2.4 x 1.67m
Max outrigger spread	4.067 x 4.067m	6.26 x 6.55m	6.52 x 6.77m
Min outrigger spread	3.36 x 3.36m	4.62 x 5.28m	4.96 x 5.74m
Gradeability	20 degrees	23 degrees	20 degrees
Weight with battery pack	8.3 tonnes	8.1 tonnes	9.3 tonnes
Jib capacity	1,500kg	800kg	1,500kg
Searcher hook capacity	3,500kg	-	1,000kg

\*1.2 tonnes with 360 degree slew

support structure in the UK so we hope the appointment of JT Cranes as the new UK Dealer will prove successful."

## Comparison highlights strengths and weaknesses

Looking through the comparison of the three cranes above, ignoring the obvious differences in maximum rated capacity - Jekko's strong specification stands out. This should perhaps be expected when comparing a 7.5 tonne capacity crane with the six tonne Unic, but the Jekko also more than matches the new eight tonne Maeda.

It has the best capacity at 10 metres - 1.5 tonnes and 800kg with outriggers in both maximum and minimum configurations, in spite of the fact that its maximum outrigger footprint is smaller than both the Unic and Maeda's minimum settings! The Jekko also has the equal best jib capacity (1,500kg) and easily the best capacity on the searcher hook. It is also lower and narrower when in transport mode and yet is only 200kg heavier than the Unic and a full tonne lighter than the Maeda.

The Unic is of course the lightest crane and offers the best gradeability, the Maeda offers the longest boom - the Jekko is almost two metres short but does make up for it with jibs and extensions. The Maeda has the highest maximum capacity as well as the equal best jib capacity. That said, the three cranes are quite similar in many ways with the Jekko standing out for its two tonne pick & carry capacity and perhaps more important, its compact outrigger footprint.

"By not having drop-down spider legs the Jekko has even more of an advantage in that this leg configuration needs half a metre less set-up space," says Lomax. "Also the Jekko can operate in narrow setup mode and has variable position, hydraulically powered outriggers."

The two also rate the Jekko's remote controls and like the removable counterweight feature, very handy for riding an elevator/hoist or being lifted into position

by a tower crane. The Jekko also has a load chart without counterweight, for jobs requiring a lighter overall weight.

TCA has a Maeda MC405 which features a 500kg pick & carry capability but says it is unusable in reality. When it realised the Jekko had a two tonne pick and carry capability it thought it little more than an add-on. However now it has seen the machine in action it realises that it is a genuine pick & carry performer with full duty cycle and full rotation. "It works fantastically well," says Gettins, "and we think we will use this feature to help with the usual problems of carrying materials down reduced width corridors and alleyways etc."

#### Different design

The Jekko uses a different design concept to the Unic or Maeda cranes - both of which feature traditional spider leg outriggers and an off-centre superstructure with a X-type cruciform outrigger arrangement with centrally mounted superstructure. This means that the rest of the chassis does not need cope with the loads imposed during lifting. The reliability of the new Jekko cranes over the longer term is still unknown, the manufacturer's first models while technically ingenious, were notoriously unreliable. However over the past decade or more the cranes have evolved beyond all recognition and gained a much more positive reputation. TCA says that its MPK20 has performed well and been very reliable. It has some exceptional



spider cranes CHA CHA CHA Lifting has a variety of Palazanni's for hire

competition in that both the Unic and the Maeda cranes are 'bullet proof'.

"We bought the Jekko because of its weight and outrigger settings but the pick & carry is a bonus. We also had a close look at the new Maeda MC 815 at Vertikal Days. It has good features and traditional crane-type control systems but it is not available until next March. However, we are still interested in it, because although the Jekko is close in capacity at 7.5 tonnes the two have their own particular strengths. We are also keeping an eye on the new cranes from Italian manufacturer Brennero although we don't think they have something suitable at the moment - but we would never rule anything out." Geographically TCA Lifting predominantly operates on sites around London and the South East, although will take its larger equipment around the country. It specialises in difficult to access, space restricted sites such as new basement construction in London. Its fleet includes Maeda 285s, 305s, 405s, Jekko MPK20, a Maeda LC785 mini crawler, Jekko SPX1275, Palazzani XTJ range with

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the XTJ 43 with crane attachment and one Unic 295. It also has the new Jekko SPK 60 mini crawler on order. The spider lift fleet includes a range of models with working heights from 14 to 43 metres. As such it is one of the few companies in the UK that rents both cranes and aerial lifts. So far this year it has spent around 750,000 on new equipment and it is looking to add a 25 tonne telescopic crawler crane next, either a Marchetti or Sennebogen, along with more 48 and 52 metre spider lifts, and perhaps a Maeda MC815.

# Maeda reaches the parts others cannot reach

When the cladding contractor working on Amegy bank's new 25 storey headquarters in Houston, Texas came to install glass curtain wall panels to the façade of the car park it faced a serious challenge in that the larger, heavier panels could not be handled safely with existing equipment. The installation area was also outside the working radius of the site's tower crane. It solved the problem by using a 2.82 tonne capacity Maeda MC285 spider crane.

The existing equipment was also time consuming in that it could only lift and install one panel at a time before it was relocated. The MC285 can cover a radius of 8.2 metres, allowing it to place up to six panels in sequence without moving the crane, greatly speeding up the installation. Repositioning the MC285 was also quicker and easier.

The MC285 was able to drive to the top deck of the car park structure under its own steam, thanks to its compact dimensions, low weight and low ground bearing pressure, thus avoiding the need to wait for the heavily utilised tower crane. The MC285's load moment limiter combined with its outrigger interlock system made lifting the various weight panels from the floors below safe and efficient.



Unic goes nuclear

A six tonne Unic URW-706 is currently working for nuclear site management contractor Magnox which purchased a unit to assist in its site management projects. Magnox is the management and operations contractor responsible for managing numerous nuclear sites and hydroelectric plants in the UK working for owner The Nuclear Decommissioning Authority.

The first job for the URW-706 was at Torness Power Station where it was used in the decommissioning of the primary containment within the steam generating heavy water reactor. It was put to work removing floors and working in conjunction with another crane, to dismantle high level pipe work, valves and mini platforms.

In order to reach the location to start lifting operations the crane had to be stripped down in order for it to be lowered through a hole in the floor and then rebuilt. The crane was also used on the removal of the East pipe line, where it came into its own working on soft ground conditions and operating under the high voltage cables using its boom height

limiter. The Unic 706 can handle its six tonne capacity at a radius of three metres and at a height of 7.2 metres. An optional searcher hook and a 3.1 metre long jib gives it a maximum hook height of 22.7 metres. It can be controlled from the operator's seat or by a radio remote control. Digital feedback and data logging are also available.

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