

After a slow start, compact telescopic boom crawler cranes are becoming more popular in this country. Phil Bishop tracks their progress and records the recent purchases made by hire companies.

Squeezing in

As with most things compact, small size crawler cranes originated in Japan. The IHI distributor AGD introduced the 3.0 tonne capacity mini crane to the UK. This unit was effectively a zero tail-swing mini excavator equipped with a telescopic crane boom instead of digging equipment. Other Japanese-made compact crawler cranes from Komatsu and Kato subsequently came to the UK in relatively small numbers.

In the 1990s Sandhurst Manufacturing Company (SMC) mounted a home-grown challenge with its Starlifter series of sub 10-tonne crawler cranes. SMC stopped producing the Starlifter series when its main customer, the hire company Groundhog, went out of business around the turn of the century. Sparrow Crane Hire bought Groundhog's crane fleet and, in 2004, bought the Starlifter manufacturing rights from SMC.

Sparrow (☎ 0117 937 6690) has built up a fleet of this type of slewing cab compact crawler crane, with various models from several different manufacturers and is successfully exploiting the niche. Managing Director Tim Sparrow says utilisation is at 85% and orders for new Starlifters are "Really good". Thirteen Starlifters were built last year, under subcontract in Germany, and there are currently outstanding orders for 12 units.

Successful spiders

Sparrow's success notwithstanding, the real growth in compact crawler cranes over the past three or four years has come from sales of the spider style mini crawlers. These small cranes are most easily characterised by the spider-like configuration of their outriggers, on which (in most cases) they must stand for lifting.

These spider style mini crawler cranes originated in Japan. They feature rubber tracks and very compact travel dimensions (aided by fold-up outriggers) so that they can easily access difficult and confined areas. Low ground bearing pressure helps travel on suspended floor slabs and the independently operated outriggers enable the machines to set up on slopes, steps or over voids.

Initially it was the glazing industry that recognised the operational advantages of spider cranes and their ability to be used with vacuum sucker attachments. With models compact enough to squeeze through doorways and ride in a goods lift, they can work below tower cranes either from a building's roof or from intermediate floors, to hoist large glass panels into place.

A pioneer in the use of spider cranes was GGR Glass, run by the brother and sister team of Graeme and Gill Riley. They began by renting out vacuum attachments to glaziers and cladders. In 2001 they bought a 2.9 tonne Japanese-made Maeda mini spider crane as the base for a glazing robot fitted with one of their sucker attachments.

At that time there were fewer than 20 spider cranes in the UK, Gill Riley estimates. It was a largely unknown product. However, GGR's concept worked and, within a year, the company had built up a hire fleet of about 10 Maeda mini crawler cranes serving the glass installation sector.

When GGR subsequently sought a size of crane not then made available in Europe by Maeda, it approached another Japanese producer – Furukawa Unic. Discussions developed and, in 2004, GGR became the Unic mini crane dealer, initially for Europe and latterly for other territories too.

Unic Cranes Europe (☎ 01844 202071) was set up by Graeme and Gill Riley as the distributor. They also created GGR-Unic to be the hire company and today this business operates 86 units. Interestingly, these units are included in the hire catalogues of HSS and Speedy Hire – enquiries are fed through to a special phone line at GGR-Unic and the tool hire company takes a cut.



This Maeda mini spider crane shows how it can operate inside the confines of a building to help install glass panels – an application that has established these versatile machines in the UK.

At about the same time, Maeda's European distributor, Kranlyft (☎ 0117 982 6661), based in the UK and Scandinavia, lost its main revenue stream. After the Japanese mobile crane maker Kato withdrew from the European market, Maeda mini cranes became Kranlyft's core product. It also now runs a hire fleet, with 20 units, alongside the sales operation.

With both the GGR Group and Kranlyft actively marketing the mini spider crane concept, they grew the UK market for these versatile machines. Glazing remains the single biggest application. But these versatile machines are also being effectively deployed for more general lifting duties on both construction and industrial sites where access is difficult and operating space constrained.

Ten-fold growth

Kranlyft says that its annual sales of Maeda cranes have grown 10-fold since 2003. GGR Group revenues, from hire and sales, have risen from £3.8 million in 2004 to close to £20 million expected for 2008. Whilst there are no accurate, independent statistics, it appears that both companies are doing a broadly similar level of business in the UK. It would also seem that the total UK population of mini spider cranes has now reached more than 400 units – boosted by the recent arrival of other brands from Italy.

Early owners of Maeda cranes included the Scottish crane hire company Bernard Hunter. It has found that occasional jobs (like machinery moving) that can only be done by a compact crane, such as its 2.9 tonne capacity MC-305C, yield sufficiently high rates to make the unit well worth having.

Over the past couple of years other crane hire companies have

added spiders to their mobile crane fleets. Emerson Crane Hire of Dagenham bought a Unic URW-376 and URW-295 (both 2.9 tonne capacity machines) last year and has this year added another URW-376 and a 6.0 tonne URW-706. It started out testing the market by re-hiring before deciding to purchase. It is now looking to add another three machines or so over the next year, according to Unic Cranes Europe.

Midi crane

West Midlands-based Dewsbury & Proud has ordered two 2.8 tonne MC-285s as well as an LC-785 from Kranlyft. The latter is a 4.9 tonne capacity 360° slewing telescopic crawler crane which weighs 9.7 tonnes and has a full cab – thereby effectively making it a midi crane. King Lifting has also bought a Maeda LC-785 this year, as has City Lifting to add to its Unic Spider cranes.

The LC-785 has been Maeda's only fully slewing excavator style compact crane available in the UK. But this year Kranlyft is introducing the larger LC-1385, which is likely to be given a capacity rating of around 7.0 tonne, and the smaller LC-383, rated at 2.8 tonnes. Kranlyft is also bringing in a 1.75 tonne capacity spider model to fit in the range between the MC-104 and MC-285.

Maeda's forthcoming spider will be just 580mm wide, says Kranlyft Marketing Manager Alan Gordon, making it the slimmest spider crane to date. Until now, Unic has had the upper hand on compactness. Unic's URW-295, which lifts 2.9 tonne at 1.4m, is 600mm wide. The comparable Maeda model, the MC 285, which lifts 2.8 tonnes at 1.4m, is 750mm wide. Maeda's only previous 600mm model was the little MC 104 which lifts a maximum load of 995kg.

It is not just the established mobile crane hire companies that are getting into spider cranes. John Taylor Crane Services, which has been in the crane repair business in Bedfordshire for more than 25 years, has recently begun building a Unic hire fleet under the JT Mini Cranes brand.

Powered access companies are also increasingly diversifying into mini cranes. Swindon-based access hire company Hi-Reach set up a mini crane hire division last year under the name Eco Lift with a fleet of ten Maeda cranes.



The small size and low ground bearing pressure of this Unic URW-506 allowed it to access the end of Brighton Pier to help erect a new ride.

Height for Hire, Ireland's largest powered access hire company has, through its sister company Easi UpLifts, also expanded into mini cranes. It now has 30 Maedas available for hire from its depots in Ireland and the UK.

Tracked Access (☎ 0845 603 5360) was established in 2005 by Phil Lomax and Tony Gettins. It is the UK dealer for Palazzani, the Italian manufacturer of crawler-mounted spider access platforms. In effect this put it in the crane business immediately, as all Palazzani spider platforms have the option of a 200kg winch that is interchangeable with the basket.



Midi tracked cranes – based on excavator bases – such as this Maeda LC-785 are larger but offer pick-and-carry duties.

The Ragno T06-26 mini-crane is based on the spider access platform XTJ30 which has a 600kg capacity winch option. The basket is removed and the winch fitted in its place, this operation takes less than an hour to complete, says Phil Lomax. While capacities do not match the Japanese cranes, the ability to lift 600kg to 30.0m height surpasses them.

To improve its crane offering, Tracked Access started adding the beefier Maeda compact cranes as a result of customer demand. "Phil Lomax says. "Although the majority of work comes from the cladding & glazing industries, we are finding an increase in demand for this type of equipment in a wide variety of other applications including the construction of timber framed buildings, lifting trees into position, lifting steel plates etc."

Phil Lomax considers that the two product lines, cranes and access, work well together. He says, "Our experience with spider access platforms definitely helps with the cranes and we often find our spider booms working alongside the spider cranes. There are a number of similarities including point load considerations, height/width/length restrictions and often difficult tasks that require detailed site surveys."

Tracked Access currently has 10 Maeda cranes, including a Maeda 3.83 tonne capacity MC-405, MC-305s and MC-285s. "The low point loads and compact dimensions combined with excellent lifting capacities are the most important features of these machines," Phil Lomax says.

Another access specialist moving into spider cranes is Scotland's Caledonian Access, a service company specialising in looking after other people's platforms. Caledonian Cranes was established and, as well as becoming the Scottish dealer for Maeda, it has now built up a hire fleet of 12 compact cranes, including its first Maeda LC-785 midi crawler. Managing Director John Stalker says, "For the first six months of last year we had 100% utilisation. This year we are in the process of doubling the size of the fleet."

Lightweight units

New on the scene in the UK is the Jekko range of compact cranes from Italian manufacturer IMAI. The Jekko range of five spider cranes is generally smaller and lighter than the Japanese models, with the biggest model having a maximum safe working load of 2.0 tonnes.

Jekko UK Ltd (☎ 07977 156396) was set up in Sussex last year by Steve Mayes and seven units are in the hire fleet of Clark Cranes & Access, which was formerly Southern Plant & Transport. Also based in Sussex, Clark has seven Jekko cranes and Managing Director Mick Clark says that their utilisation has been averaging around 60% to 70% so far this year.

The Jekko cranes are all diesel or electric powered. Clark has the Jekko models SPD 265C (rated at 1.2 tonne) and the SPD 360C and SPD 500C (both with 1.8 tonne maximum capacities).

As more marques and suppliers come into the UK market, the use of small tracked telescopic boom cranes should continue to grow. Driven by the implementation of Manual Handling Regulations, small cranes should increasingly take over jobs traditionally carried out by a gang of workers or other, more labour intensive methods. ■