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A mini marketing problem?

Our last mini/spider crane feature identified that the major factor holding back a more rapid uptake of the concept in Europe and the USA was not the product itself, but an on-going lack of awareness of what can be achieved with these little cranes. Apart from Japan - the birthplace of the mini crane - where there are some 10,000 units in operation, few countries around the world have embraced the spider crane with anything like the same passion or numbers. And while we are often quick to criticise the UK for being 'conservative' and reticent to adopt new ideas and developments in construction/civil engineering it is one of the main western countries - along with Germany and Austria - where spider cranes have made any substantial impression.

Given the large populations of both the UK and Germany (about 62 and 88 million) they are not however leaders when viewed on a per capita point of view which is headed by Finland, Austria, Sweden, Denmark, Norway, UAE and Qatar.

Europe was first exposed to the spider crane at the end of the 1990's when crane distributor Kranlyft started importing Maeda units. Kranlyft - being first to recognise the equipment's potential - chose Maeda over the few other Japanese brands - including Unic, Tadano and Toa (now R&B) - because it saw it as the market leader and dominant manufacturer in the sector in Japan. In recent years Maeda has taken over 60 percent of its home market, with Tadano quitting the sector in 2006, leaving Unic with around 25 percent





and R&B, taking the remaining 10 percent. In the mini crane sector (compact crawler cranes without stabilisers) Maeda is thought to have an even more dominant share of the market, which it now shares with Hitachi and Kobelco.

In Europe, Maeda and Unic remain the dominant brands, taking the vast majority of sales (around 700 or so in 2008 – the best year so far) with the balance being supplied by manufacturers such as Jekko and more local producers such as Hoeflon, Reedyke and Reibsamen and Kegiom.

It is perhaps easy to overlook the fact that until seven or eight years ago, Kranlyft and Maeda had the European market to their selves. Then GGR entered the market, having initially operating a rental fleet of Maeda spiders, before CE marking the Unic cranes and becoming the Master Distributor for the greater European region. Unlike Kranlyft, GGR-Unic has always maintained a substantial rental fleet as well as being the manufacturer's master distributor. And while the two companies are rivals trying to sell its products, both have

benefited from each others' presence in the market, promoting the advantages of the spider crane concept in general. A new concept needs more than one protagonist for it to take off.

Last year GGR/Unic Cranes Europe purchased its 1,000th 2.9 tonne Unic URW-295 spider crane having sold its very first URW-295 back in April 2004.

Another Japanese player

Over the past year or so Japan's least known spider crane producer R&B Engineering has been pursuing an export drive, first by showing its machines at international shows such as Conexpo and then more recently completing CE approval for two of its range and in November last year, appointing a European importer/master distributor Elévateur France Germany which has started to market the cranes under the 'Mighty Crane' brand. R&B was founded in 1974 under its name Toa and maintains that it is the pioneer in this sector having produced more than 10,000 cranes.

The R&B brand was launched in 2007 and with continuous product



"With France Elévateur Group, represented by France Elévateur Germany we have a partner to realise our goals for the European market. The company has expertise in design, manufacturing, logistics and service. Our products are complementary, so match the product portfolio of the group and are ideally represented by their sales and service partners in the European countries," said Iwai Naotaka sales manager R&B Engineering

Whether this recently formed German subsidiary of a French access company can emulate the is for certain the more companies promoting the concept, and the greater the product selection, the more likely the market sector is to grow.



Despite what some may think. spider cranes are still a new concept for many contractors and despite more than a decade in the European market, the overall awareness remains at a low level. This is not helped by the fact that the cranes are generally used indoors or 'out of sight'.

Historically, indoor lifting has been difficult mainly due to the lack of accessibility, floor loadings and engine emissions etc. Spider cranes can however gain access through most doorways, even single ones, cross marble floors, track up staircases and are light enough to be craned onto upper floors, thus getting very close up to the work. Bi-energy machines (electric and/or LPG) provide the spider crane with easy flexibility to work either indoors or outdoors.



One of the most popular applications for spider cranes is installing glazing and other types of heavy cladding or panelling and this is highlighted by the enormous number of vacuum lifting attachments now available, whether for use by spider cranes, telehandlers and or specific mini glass machines. For many applications, the spider crane is used because it is the only item of lifting equipment that can access a specific area with the capacity to complete the job.

An excellent, although unrelated example of this is the maintenance or replacement of canal lock gates. With very narrow tow paths and low weight allowances, coupled with access roads often a fair distance away, means that conventional cranes are often unable to get anywhere near the locks and the gates. If the spider crane is too heavy or too wide for the tow path it can be easily transported to the lock on a small barge and if necessary, straddle the lock to carry out the lift. If path loading is not a problem, the spider crane can be delivered to the nearest delivery/access point and then track along the tow path to the lock. The larger models - such as the six tonne capacity Unic URW706 - are then able to straddle the lock (either three or 4.6 metres wide - or position itself nearby, where it has the capacity and reach to lift and replace the gates - some of which weigh more than four

Product improvements are on-going

At the beginning of the article we said that it was not the performance or ability of the spider crane that was limiting its wider uptake, but more it's relatively low profile. However improvements and developments are still being made to both the engineering and accessories. These include longer

successes achieved by Kranlyft and GGR, remains to be seen. One thing



development has resulted in a four

model range, two of which are now

CE marked for the European market.

CR285D, which weighs 1,750kg and

boasts an 8.9 metre main boom and

The CE cranes are the 2.8 tonne

the significantly larger CR335D

tonnes, is significantly larger,

12.5 metre main boom.

and MC305-2 models.

which, although it is rated at 2.98

weighing 3,760kg and featuring a

While the two cranes carry a similar

different beasts - the CR285 is rated

CR335 lifts its maximum rated load

at 2.5 metres. It therefore competes

with the likes of the Maeda MC285

At the moment R&B has no plans

the CR174G and CR235GL -

although this may change if

to CE mark its two smaller models -

nominal capacity, they are totally

at 1.5 metres radius, while the



jibs and longer wire ropes to achieve longer drops from roof top or upper floor positions.

Mid last year Maeda introduced a new 'Dash 2' version of its 2.82 tonne MC285C spider cranes to Europe which had numerous new or improved features over the original, including a new crane and outrigger interlock system, improved winch with faster hoist speeds and disc brakes, new load moment limiter, new four/two fall hook block for faster reeving changes, a new digital feedback remote control system, new data logger system, new voice warning system, new EPA tier 4 compliant Yanmar engine and new searcher hook system.



The MC285C-2 measures just 750mm wide and weighs 2,120kg, yet boasts a maximum tip height of 9.5 metres and can handle 550kg on its fully extended main boom. For a machine such as the new MC285C-2 about 50 percent of its work will be in glazing and a large proportion in panelling/ cladding work. During the construction of the world's tallest building in Dubai, four MC285's were working inside on 24 hour shifts installing all of the glass.

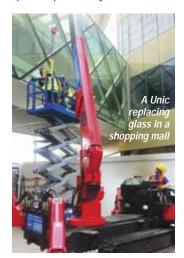
Money savers?

But can compact cranes help companies save money? The initial investment is, of course, much lower than for a small mobile crane and they are more operator friendly. Training usually only requires a course of a couple of day's duration, before operators can confidently and safely start to use them. While there has been some rate cutting in recent years, particularly in the UK, the rates generally provide a far better return than most small mobile cranes. One reason that rates have generally remained good is discipline among the larger rental companies, and the fact that in many cases the supplier helps plan the job and more often than not is saving the

C&a spider cranes

contractor or other client a substantial sum compared to bringing in a larger crane. This is particularly true when a mini crane moves in close and avoids the requirement for a long boomed mobile.

However, like all types of equipment, it is vitally important that once a customer has been convinced of trying the new concept that the machine used is the best for the job, otherwise the speed or profitability will not be





shown correctly and he will often revert back to his usual way of completing the task. For Europe to achieve the same market coverage per capita as Japan, another 57,000 cranes would have to enter the market. Who said this sector is saturated?



Skyhigh Spider cranes C&a Skyhigh Spider

As London's tallest building, the Shard, reaches its pinnacle the contractor needed a more efficient method for lifting the glass cladding panels on the building's 'spire' into position than the tower cranes that straddle the building.

The problem is that as the tower crane jibs soar above 300 metres, too many days are lost through winds gusting above the shot-off speed. Add to this the fact with the steep taper of the 'spire' means that the distance between crane and building is substantial and the contact between operator and installer was always going to be somewhat remote, for what is a high precision task.

The solution - as with all of the other 11,000 glass panels lower down the building - was a spider

Working from its 283 metre eyrie the Unic URW706 will lift and place the glass cladding panels from the 62nd floor up

crane. For the spire, GGR Unic supplied a six tonne capacity Unic URW 706, placed in a secure position on the 87th floor some 283 metres in the air. In order to get there, the crane was lifted by tower crane in two parts, with its boom removed. Once the crane chassis reached the workplace, its outrigger floats were placed directly into four purpose-built support sockets on the rooftop. The boom was then lifted into place and reunited with the base by the GGR installation crew.

The Unic URW-706 has a long track record of rooftop lifting in the UK, thanks to its relatively light weight -7,900kg - and overall width of 1.67 metres. The crane is currently lifting the glass panels from a storage unit on the 62nd floor and placing them into position on the north and west sides of the building. A total of 11,000 angled glass panels will eventually cover The Shard's facade with most of the lower level panels being installed by Valla 20e pick&carry and Unic URW- 295 spider cranes.

The building, designed by Italian architect Renzo Piano and developed by Sellar Property group, will eventually top out at 310 metres and include a hotel, offices, apartments, restaurants and a viewing gallery.

GGR group' managing director, Gill Riley, said: "This iconic landmark is going to make a big impact across the London skyline and we are thrilled that our Unic crane has been involved in this exciting project. It's definitely the highest point we've ever taken a Unic, luckily our operators that are working on site have a good head for heights!"









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The Hird instinct

For crane and access rental, sales and service company Peter Hird & Sons, the past few years have been very eventful. Mark Darwin went to its head office in Hull to meet managing director Philip Hird and learn about the ups and downs and its recent transformation of fortunes.

The last time we featured Peter Hird & Sons in Cranes & Access was nearly three years ago shortly after it had formed a mini crane partnership with East Sussex-based Coppard Plant. Coppard had entered the spider market with a bang and at that time had around 20 Unic spider cranes.

"The main problem we had with renting mini and spider cranes in the south was the transport cost, so partnering with Coppard Plant seemed a logical step as we were getting more work particularly in the London area," said Philip Hird. "Unfortunately it was mainly one way traffic with us supplying Coppard with the majority of their work, so we ended the agreement and expanded our own operation from a base in Surrey. However with Hird undergoing major reorganisation - more on that later and following the retirement of managing director Allan Hemmings at the end of last year we appointed two new directors. John Wilding joined us and was key to our





expansion in the south, while Carl Norfolk runs the contract lifting and machine moving division."

Philip Hird is relatively new to management, but joined the industry in 1997 immediately after leaving school at 15. He is a time served fitter and spent many years operating one of the company's mobile cranes. "I had a choice either start work for the company the Monday after finishing school, or never work for the company... luckily I made the right decision and I have been here ever since," he says. "My father was a perfectionist and this is reflected in the quality of the equipment we supply and in the customer service. We never make promises we cannot deliver.

Perhaps at this point it is worth unravelling the history of the company including Peter Hird & Sons, Peter Hird junior, Compact Lifting Equipment and Valla UK etc?

In the beginning....

After leaving the army in the 1950s Peter Hird senior worked abroad for several years in Europe. He returned to the UK as a drott bulldozer driver for local company Sangwin Ltd in 1963, eventually finding his way into sales and boosting the business considerably. He left and went into a partnership forming Hessle-based Fleet Lifting Services but set up



1983. The company's head office has been on the current site in Hull since the beginning, although the premises themselves have increased considerably as surrounding businesses and buildings were bought up.

With an initial bank loan Hird senior purchased an Iron Fairy crane and a van and started offering machinery removals. He gradually added more cranes from the likes of Hydrocon, Cosmos and Coles. At this time Peter Hird & Sons was predominantly a mobile crane hire company with a sizeable fleet topped by a 30 tonne Coles, but as demand grew for platforms in the late 1980s, it acquired a few Simon Snorkel truck mounted lifts and a Pegasus dumper based platform, which proved popular with the local tree surgeons and painter/ decorators.

"The first self-propelled platform my father bought was the original Simon Boxer then later the Z30/20 and Niftylift HR12s, he then became a Genie authorised dealer," says Hird. "By 2009 we only had a few larger cranes, including two Kato NK250EV and a 50 tonne Grove GMK3050. But in January 2009 the financial crisis brought Hird senior

back into the business and these were sold to raise capital to ensure the company survived and had the capital to grow again. "We no longer have any AT or truck cranes on the fleet, but we still have a thriving contract lifting service, which has allowed us to concentrate on the hire and sales of the Valla range of pick & carry cranes along with access equipment and

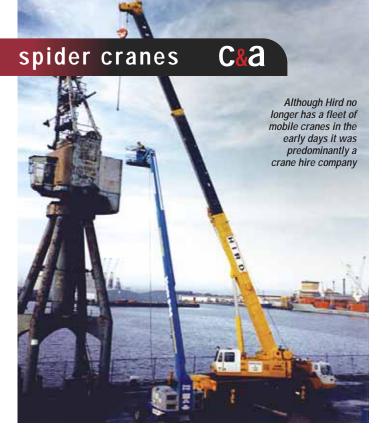
The Valla franchise was added around 1998 when the company bought a 7.5 tonne Valla 75E, which is still working today. The introduction of the smaller two tonne models was driven by early projects in London's docklands including West India Quays and Canary Wharf. The larger 12, 18 and 25 tonne Valla cranes were introduced to supply projects with companies such as British Aerospace.

Hird senior was married twice, so there are two parts to the family. Eldest son Peter junior is from his first marriage, while Philip is from the second. Peter junior worked for the business after leaving school and was managing director for five years up until January 2009, when Hird senior temporarily returned to the company, having retired in 2004.

Troubled times

Not dwelling too much on the past, Peter junior was relieved of his duties shortly afterwards. It was at this time that operations director Allan Hemmings was appointed as managing director.





"In 2008/9 we made a considerable loss on £3.5 million turnover," said Hird. "This year with good solid management we are looking at a healthy profit on revenues of £5 million. In the past three years much has happened, including opening a new depot in Doncaster. With an initial fleet of 50 platforms, new units are currently being added

manufacturer and trailer lifts are very popular with arborists and the local tool hire companies that supply DIY customers. We are looking at potentially adding some spider lifts to the fleet in 12, 15, 18 and 22 metre sizes. I like the Teupen platforms however their 12 metre Leo appears to be the only model priced similarly to other



throughout 2012, including 21 Genie scissor lifts - from GS1932s up to GS5390s - in the first order which have already been delivered. The new additions will help reduce the large number of rehires we do at the moment. The next batch of machines will include updating some of the existing fleet with some new products such as the Niftylift HR15s and 120T trailer mounts which are very popular in the Doncaster area. Because of our long association with Genie everyone in the Hull area asks for Genie machines. However in Doncaster Niftylift is the preferred

manufacturers. We don't mind spending more to get a good machine, but products like the Hinowa 15 metre spiders upwards are better priced and I am sure they would perform equally well. Another new product we are adding to the fleet this year will be the JLG Toucan 10E."

"Our first spider cranes were Jekko - three 360s and three 265s - purchased in April 2008," says Hird. "It was about this time that Peter junior set up Compact lifting (CLE) - a company which Peter Hird & Sons has no association with - as the Jekko distributor for the Middle



East. The comings and goings of 2008/9 have been slightly confusing but to put it simply - anything with the Hird logo is us."

The Jekko machines fitted with vacuum handlers for glass allowed us to get into this sector, initially working with local companies. Unfortunately these cranes have a very sophisticated computer system that can easily shut the crane down and so need expert knowledge. If we were to rent them out they were always sent out with operators however we are now phasing the Jekko cranes out and replacing them with the Unic spider cranes that are very easy to operate and very reliable.

The company added its current fleet of Unics in 2010 and 2011 - a URW 095 and some 295's were purchased new, while the rest were used. "We looked at adding a 376 but went for the larger and only a

slightly more expensive 506," said Hird. "The 506 is the most popular size we have at the moment."

As yet the company does not have the largest Unic crane - the six tonne URW-706 - the one crane the company did not supply for the Shard curtain walling contract. Hird initially won the Shard contract with a number of Valla two tonne pick & carry cranes and a few spiders but it developed into nine spiders and two Valla cranes.

"As the major supplier of cranes to the Shard we had nine 295s on the site at one time, installing the 11,000 or so individual external curtain walling panels ready for the glass. The panels were stored on the floor below and then lifted up by the crane on the floor above and clicked into place. Often two cranes would do the entire floor, other times there would be one at each corner of the building. The contact is





now almost completed and we are down to the last two or three units on site."

"We initially serviced the Shard contract with Coppard Plant's spider cranes, but we replaced its Unics with our own machines over a period of time and this gave us the start we needed for the new London Redhill depot, situated a mile south of the M25, near the A13. We are currently looking to double the size of the depot which has a workshop downstairs and offices upstairs. It currently runs 12, GS1930 scissor lifts, 50 vacuum lifters and around 150 glass accessories, including suction cups, hand cups a large collection of A-frame trolleys as well as 13 two tonne Valla 20Es which are soon to be joined by an 18 tonne Valla."

Hird fleet size

Hird has been the UK distributor for Valla since 1998 - apart from a brief period when Valla UK had the dealership. It also has a rental fleet of around 40 Valla cranes of which a third are two tonners. "Another 25EL was ordered last week, and with customers now specifically asking for them by name more will be added," said Hird.

"The 25 is available in two versions - the 2.5 tonne capacity 25 E and the 2.25 tonne EL. The EL is a lighter version weighing 1,850kg rather than 2,300kg, allowing it to fit into most lifts without removing the

counterweight. It is a fantastic product made better by a few changes Valla have made specifically for UK. The current biggest seller is the 3.5 tonne Valla 35E."

"Spider cranes have been a great asset to the company. Last year we spent £500,000 on Unic cranes and added £60,000 of vacuum lifters in London during December alone. We often supply the vacuum attachment alone which is then installed onto all types of machines including telehandlers. However it is the 500 strong access rental fleet that makes up our 'bread and butter' income. We rarely have much equipment in the yard, even over the past year or two despite the economic climate. Rates could be better but we won't cut rates to get hires. These have gradually risen because we have such a demand for the equipment."

Training

Another major revenue stream for the business is training which Hirds has offered for many years, with now more than 200 courses include IPAF, CPCS, City and Guilds and Appointed Person etc...

Training started way before I joined the business," said Hird. "Originally it was headed by Tony Page and Phillip Peacock and then by Brian Parker - now AFI training manager. The department is now run by Richard Dainty. We have four permanent trainers who carry out courses all over the UK on customers' sites as well as an extensive training facility at our head office near Hull city centre.

And the future?

"We intend to double the size of the spider crane fleet over the next two years, including some Unic 706s. Whatever we do we can't stand still. We are always on the lookout for something new."





