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Renewed focus on City cranes

When Kato Cranes pulled out of Europe around 13 years ago it left a particular gap in the small City-type nose down All Terrain crane market. Surprisingly that gap has only just been filled...by Kato Cranes re-entering the market with a new range of European compliant cranes between 13 and 35 tonnes. Mark Darwin takes a look at the market and catches up with Colin Cleary, managing director of European distributor Rivertek and Kato general manager Hiroshi Ide to find out more.

Japan has always been obsessed with the small and compact - take bonsai for example. Its infatuation with compact equipment however is a result of necessity, due to the lack of space. This led to the production of the first compact or City cranes in the late 1980s - the seven tonne Kobelco RK70M initially labelled as a high-speed Rough Terrain crane. The machine introduced many features that still distinguish the breed - a single cab for both road and job site, multi-section 'drop-nose' boom for greater driver visibility while lowering the centre of gravity for improved roadability. While the Japanese developed and refined this product type, it can be argued that PPM was the first with the idea, with its 14 tonne 14:07 ATT high speed Rough Terrain, which it launched in 1974.

Within a year, Tadano had entered the sector with its eight tonne TR80M, followed by Kato with its

10 tonne MR-1000 along with a seven tonne variant. These new models blended speed and boom length with compact dimensions. To overcome excessive boom bounce when travelling at speed, boom overhang had to be kept to a minimum thus using more boom sections for a given height. This also had the benefit of making the crane shorter, resulting in increased manoeuvrability in tight areas and also made it ideal when lifting in limited headroom environments.

The concept didn't arrive in Europe until 1992 when Swiss-based Compact Truck - established by Franz Lutz - introduced the 35 tonne CT-2 city crane with hydrostatic drive and a boom length and road speed to compete with conventional All Terrain cranes. Back in Japan Komatsu joined the fray with an eight tonne model.

In the 1990s the Japanese market for larger capacity cranes switched from truck to All Terrain and in 1992 Tadano - in co-operation with its newly-acquired German business Faun - produced its first All Terrain. It also continued to develop its

> The first compact or City cranes in the late 1980s such as the Kobelco RK70M were initially labelled as high-speed Rough Terrain cranes





The PPM ATTs were the first City type

RT cranes and in 1995 introduced the Crevo - the name derived from Crane and Evolution - City-type crane. Early models had capacities of 10 and 20 tonnes, followed by a 50 tonner and then the 35 tonne

Crevo 350 with improved roadability arriving in Europe at the end of the 1990s. This came a few years after Kato's popular CR250, which sold around 80 units from 1997 to 2000.

city cranes

The first major European manufacturer to enter the market was Mannesmann Demag, with its 25 tonne AC75 in 1996, further popularising the concept. For many years Terex-Demag was the only major crane manufacturer with a range of City cranes - the AC30, AC40, AC55 and AC75 - although Liebherr did introduce its industrial-



city cranes

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type hydrostatic drive LTC1055-3.1 and in 2009 Grove launched the Kobelco-built 45 tonne GCK3045 City crane with six section 34 metre boom with heavy-duty bi-fold swingaway jib. It would appear however that most of the major manufacturers thought that there was a limited market for such 'City' cranes.

As engine legislation began to make things difficult the Japanese manufacturers stopped exporting truck and City-type cranes to Europe just as Terex began to phase out its models. This left a void and pent-up demand for the smaller City cranes. Some companies looked to source machines through 'grey imports' with others refurbishing older machines. That has all changed with Kato introducing its all-new three model, European City crane range available in the UK and Ireland from its official dealer Rivertek Services. The situation may get even better as Terex has said that it is looking at launching new Demag City class cranes - with the first unit likely to be a 45 tonne AC45? - in the not too distant future.

Kato returns to Europe

Kato ceased exporting and selling cranes into the European market due to the challenges of complying with European engine emission regulations and the knowledge that they would become increasingly challenging as the bar was raised every few years. This and issues with the suppliers of its truck crane chassis. However with the faltering domestic market the company needed to find new areas of demand for its cranes. Where better than Europe - and in particularly the UK and Ireland - where it enjoyed such success over a decade before? Japan still makes up the majority

of its sales but exports of its City

cranes are picking up in countries such as Australia, New Zealand, Malaysia and Singapore. Kato said it is looking to export a minimum of 50 City cranes a year to repay development costs etc.



"Many Asian countries prefer simple or truck mounted cranes however Europeans want more compact and sophisticated cranes," said Ide. "The Japanese market cannot grow much in the future so we have to find new demand to balance our production. If we can market these City cranes in Europe we can address the balance."

Cork, Ireland-based Rivertek Services is the largest crane dealer in the country. Part of the JCD group with revenues of €42.5 million in 2014 it sells used cranes as well as representing IHI crawler cranes and Mitas crane tyres. It has a significant presence in the UK which takes more than 70 percent of its sales - no surprise really given the dire economic state of Ireland for the past seven or eight years. It is also in the process of opening a new depot in the UK near Cannock which will house its sales, service and support for cranes.

"The CR series of machines are

brand new, designed specifically for the European market," says Ide. "Kato has been manufacturing for 130 years and over the past five years we have been the number one crane manufacturer in Japan. We have been in discussions with Rivertek for nearly 10 years and work has been carried out to design and develop this new range for the European market with variations to the machines sold in Japan, as it must include a Safe Load Indicator,



Kobelco-built 45 tonne GCK3045 City crane with six section 34 metre boom

In 2009 Grove launched th

"We are very happy with the initial sales to UK companies," adds Cleary. "Many still love the brand, having previously run Kato cranes over many years. Residual values are excellent with many able to sell them at the same price they bought them. We had one owner-operator customer who purchased his first Kato - a 25 tonner - 13 years ago for €95,000. He sold it last year to the Middle East to make way for a new model, getting the same price he bought it at."

"It is a niche market and there isn't a huge volume, but we think we are filling the gap with a nice range of cranes from 13 to 35 tonnes - below the capacity of other manufacturers. Rivertek was initially appointed for the Irish market with the ability to sell into the UK market if we can provide 'proper' customer support, which is why we are opening a new









depot near Cannock, Staffordshire."

"As well as the new depot which will have service, spare parts and a stock of new cranes, we have been supplying used cranes into the UK and Ireland for 25 years. We would like to think we have built up a good reputation with a lot of customers over that time, treating them the same way that we would like to treated ourselves - that is very important to us."

One possible problem with the cranes is that the 35 tonner weighs in with 14 tonnes axle loadings - too heavy for most European countries. The original engine emissions problem has been solved by fitting Stage IIIB Mitsubishi and Cummins engines. Kato has said that these machines will be available for about three years while it develops another range of cranes for the whole European market."

The smallest crane in the range, the CR-130Ri, has a gross vehicle weight of just under 14 tonnes - less than seven tonnes an axle and is powered by a Stage IIIB Mitsubishi engine. The CR200 is also under 10 tonnes an axle and the crane weighs just under 20 tonnes. The CR350 however weighs in at just over 28 tonnes - 14 tonnes an axle which is ok in the UK and Ireland but not the rest of Europe.

Rivertek started selling the new Kato's almost a year ago and has so far delivered more than 20 units. Customers include Reeds Bray Cranes, City Lifting, NMT, Aba Cranes and John Sutch Crane Hire. John Sutch was the first company in the UK to buy the 20 tonne CR-200Ri and just before Vertikal Days added a 35 tonne CR-350Ri.

"Rental returns on the small AT

cranes simply do not add up, given their high prices. However rental companies are surprised that the CR-130 can earn between £480 and £500 a day, compared to £400 to £420 for a 40 tonne AT. However, the Kato is also about 40 percent cheaper to buy," says Cleary. "The CR-350 has an overall length of 9.76 metres, while the CR-130 is 7.4 metres and can often carry out normal 40 tonne AT work but is also very useful for working in tight situations or inside a building thanks to its compact dimensions. All three cranes have hydraulic telescopic offsetting jibs, and all but the CR-130 are hydraulically extendible, even under full load."

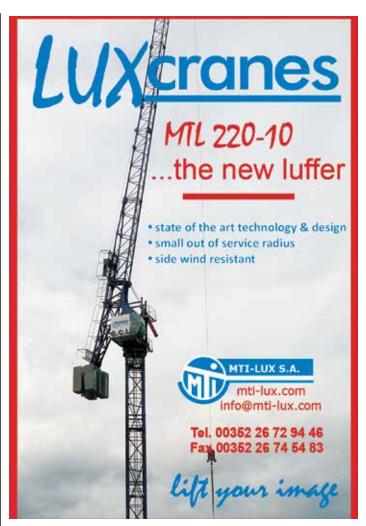
Cleary also claims that the new design CR-200 has an industry leading 28 metre boom, which is the longest on any 20 tonne crane - although there are not that many to compare it with! Kato sells a 16 tonne crane in Japan, but it lacks a hydraulic jib or the new round profile

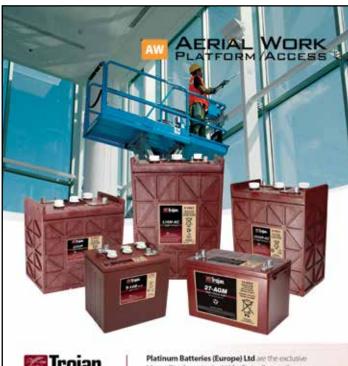
"The main features customers like are the compact size of each crane, combined with the long main boom. These are quality machines, made to an extremely high standard, with good life expectancy and a good resale value. They tick a lot of boxes when buying a new crane.

I don't like the term 'grey imports' -Rivertek has a technical team and every machine we have placed on the market over the past 25 years was converted to a very high standard. Other companies may place cranes from outside Europe without any modifications or technical work - these I would call grey imports, in our opinion there is a difference."

Kato models

Model	CR-130Ri	CR-200Ri	CR-350Ri
Maximum capacity	13 tonnes	20 tonnes	35 tonnes
Maximum boom length	24m	28m	32.5m
Jib length	3.6 to 5.5 m	4.0 to 5.8m	6.5 to 14m
Maximum tip height	31.5m	36.6m	49.1m
Engine	Mitsubishi IIIB	Cummins IIIB	Mitsubishi IIIB











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city cranes

Rivertek also sells a lot of used Liebherr, Grove and Tadano AT cranes which are sourced from all over Europe.

"We have full workshop facilities to carry out painting and refurbishment at our head office in Cork, so have the facility to take trade-ins and give the customer a decent price. This side of the business makes up about 60 to 70 percent of the business with the growth of new Kato sales.

"We will keep these three models for at least the next three years but then hope to introduce other models. Looking at the market research these will probably fall within the existing 13 to 35 tonne capacities," adds Ide. "We have an extensive range of RTs and ATs for the domestic market and we are thinking about producing another range of cranes for export. It all

depends on market demand. The economy in Japan means that we will need to increase our crane exports in the future. The crane market is very specialised with different regulations for different countries. So far we have focussed on Asia, the next market is the Middle East and Europe. If we want to expand we will need European All Terrain cranes."

Interesting concept?

Something slightly different from Tadano Faun is the new ATF 60G-3. While not a City crane, the three axle 60 tonner has several interesting features. It has a 48 metre main boom and can comply with 10 or 12 tonne axle loads which Tadano says is possible because of the new 'revolutionary' drive concept which puts the engine and gearbox not in the carrier but

superstructure not in the carrie in the rear of the superstructure which allows the carrier to be more rigid and lighter with the drive components working like an additional counterweight.

ano Faun's new 60 tonne ATF 60G-3

has its engine and gearbox in the

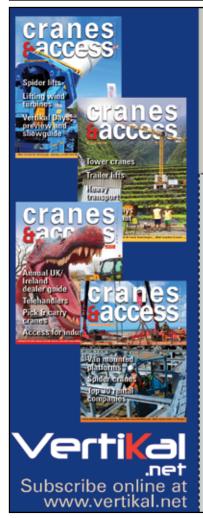
The design also includes a compact boom giving an overall length of 11.18 metres. Width is 2.66 metres and height 3.68 metres. As a comparison, Liebherr's latest 60 tonner the LTM 1060-3.1 has a length just a touch longer at 11.53 metres, height of 3.75 metres and slightly narrow width of 2.55 metres as well as a 48 metre boom and 63 metre maximum hoist height (more than the Tadano's 58.4 metres).

The second cab is positioned more forward than the more conventional layout cranes such as the Liebherr. Tadano says benefits when travelling on the road include

reduced noise in the cab as the engine is further away from the carrier cab. During crane operation the engine and exhaust are always behind the superstructure cab making a more pleasant environment. An interesting concept but whether the benefits are enough to attract buyers remains to be







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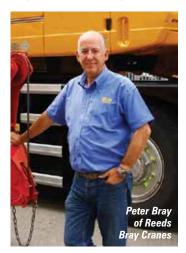
The City specialist

For many years C&A has been highlighting the lack of return on investment for small All Terrain cranes up to 40 tonnes capacity. Relatively high purchase prices and low rental rates make these cranes some of the most unprofitable units in the fleet. Surprisingly older smaller cranes up to 25 tonnes such as the Iron Fairy and Kato City cranes often command premium rates, reflecting the growing and profitable niche for this particular type of crane. Mark Darwin went to the North East of **England to chat with Peter Bray of Reeds Bray Cranes.**

One company which specialises in small AT and City-type cranes is Gateshead-based Reeds Bray Cranes which claims to be the oldest crane rental company in the North East. Established in the early 1950's by 'Mr Reed' as he was known. Reeds Cranes and Plant grew by using ex-army equipment ranging from cranes to generators. The company was well-known in the region and in its heyday operated from four depots and employed around 250. The company tended to attract and retain older cranes and over the years the depots increasingly looked like scrapyards than crane rental facilities.

In the 1990s the company was purchased by a larger North East company O' Donnell Bros, which was more interested in the land than the cranes. After keeping the business ticking over for several years, in 2001 it took on ex-Baldwins employee Peter Bray to run this side of the business.

"The company didn't have the best reputation at that time but I took



a chance," says Bray. After a few years John O'Donnell decided to sell the cranes, and although other companies enquired he sold it to Bray in 2004 for a 'good price'. In those days its 80 tonne Krupp All Terrain had more than enough capacity to satisfy the needs of its extensive customer-base in the North East. Other cranes in the fleet included a 25 tonne Krupp, 25 tonne PPM, 35 tonne PPM and an Iron

"All the cranes were old and not the



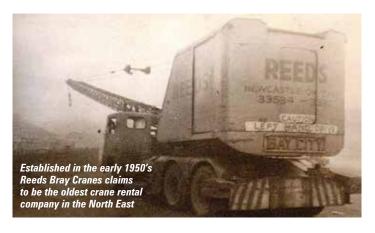


best maintained," he said. "Reeds cranes were known for the clouds of black smoke from the exhaust and for dropping oil - but they were a start and the company had an excellent customer base across many different sectors. And with the name being so well known in the area we kept it hence the name Reeds Bray Cranes."

"Operating a fleet of small capacity City/AT cranes is not easy, and it took time to upgrade the fleet. We could not afford new cranes but added newer, better quality models when we needed to replace. The first to go was the Krupp 25, and the PPMs, adding a younger 30 tonne Tadano. We also purchased two 25

tonne Kato CR250 and these proved very popular as there weren't many about and customers particularly liked its twin hooks. The only other similar cranes around at that time were the Demag City cranes but I was never very impressed. The Kato had better features for our requirements, even though it was limited to 30 mph on the road, but we always worked locally so that wasn't a problem."

The 80 tonne Krupp was replaced by an 80 tonne Liebherr but when it came up for replacement he was in a dilemma, thinking that a 100 tonner would be the way to go, but was undecided between four or five axles. In the end he opted for a 130





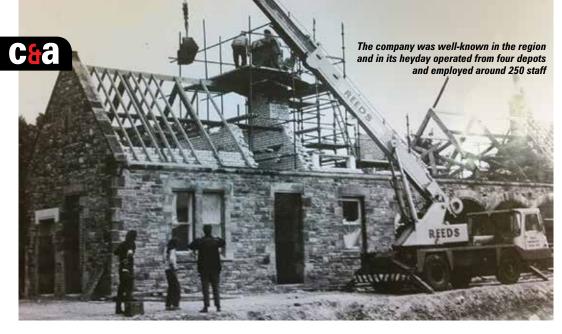
city cranes

tonne Liebherr, as it gave the best of both worlds - five axles with a long boom and extra ballast option if needed. The crane is often used as a 100 tonner but has that extra capacity when required.

The LTM 1130-5.1 is currently the largest capacity crane in the 11 strong fleet which also includes a 60 tonne ATF60-3 Tadano, a 55 tonne Liebherr LTM 1055-3.2, a Terex AC55, one Liebherr 40 tonner and two Liebherr 30 tonners and an older 22 tonne Kato KR22-H2. And just a few months ago the company added a full set of three new Kato City cranes including the 13 tonne CR-130RI, the 20 tonne CR-200RI and the 35 tonne CR-350RI - its first ever new city cranes. "When I took over I thought a fleet of 10 was optimum - we currently have 11 - however I do like the look of the Liebherr LTC 1045 and may add one of those at some point."

"It has taken about three or four replacement cycles to get to the point of looking at new cranes," he said. "The purchase price coupled with weak rental rates means there is not a lot of room to reinvest in equipment. The Kato's are a good price but more importantly they are very reliable and just need the regular maintenance. Over the 12 years since taking over the business we have built up a reputation for quality cranes and a good service, but I won't reduce rates to uneconomic levels."

"Rental rates are still low - for example I would say that the current day crane rate should be at least a £100 more - but by careful management of overheads, including minimal office staff we are now in a position to look at adding more modern cranes to the fleet. Our best cranes for return on investment are the 55/60 tonners however if I was to buy another



crane today it would be the 13 tonne Kato City which can still lift 500kg at 20 metres, more than enough for jobs such as roof trusses etc. The Kato's also have five variable outrigger points and can still slew within its width even when short rigged."

The company also benefits from a loyal workforce with very little staff turnover which helps with building relationships, and often results in customers asking for a specific crane and driver. Over the years the company has increasingly focused on Liebherr All Terrains and Kato City cranes.

"I am quite happy with buying used cranes from Liebherr, as the equipment is fully checked and like new," he said. "At the end of last year we added a used Liebherr 40 tonner and they assigned a fitter for six weeks to sort out any problems - the end result was it is like a new crane."

Buying a selling cranes is a funny business and can throw up a few surprises. "About eight years ago I purchased a 25 tonne XCMG 25 truck crane with 38 metre boom, it was the best crane I had ever had but other crane guys said it



would be a waste of money and have no residual value when sold. But it never broke down only going through a few clutches as it had a manual gearbox. I saved £100,000 on the initial purchase price compared to mainstream marques and got half of my money back when I sold it at the end of last year. Although it was a great crane I don't want any more truck mounts because of their size, the compact Kato City cranes are ideal for general site work, not taking up much space on a site."

"Normally we try and only use fly jibs when two people are available - I think it is unsafe for one person to install them. However, the Kato cranes have a fly jib that can be erected safely by one person and all have hydraulic luffing and on the 35

tonner it extends hydraulically. It is also underslung so easier to erect in tight situations."

"We rarely get asked for pick & carry cranes, however the Kato's do have a pick & carry capability. The CR 350RI for example has a maximum pick & carry capacity of 9.5 tonnes at three metres. It can also handle half a tonne at 13 metres with a travel speed of two kilometres. Several companies in this area previously went for the Franna articulated crane if they needed this feature."

But has much changed with the smaller cranes over the years?

"The basics are still the same, but they now include features such as touch screens rather than buttons. One thing the Kato cranes do not have at the moment is tackle boxes. To fit them we have had to relocate the outrigger pads storage from the front of the crane to the rear in a specially designed carrier fabricated by ourselves so that there is space for the box at the front and although aluminium outrigger mats looked nice we replaced them with Nylacast plastics to reduce weight. But overall the Kato's are a well thought out cranes with excellent features, reliable and good resale values. What more could you wish for in a small capacity City crane."





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