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Last year in Cranes & Access we featured All Terrain cranes in two separate issues concentrating on the smaller City cranes in July/August and the mid-range cranes earlier in the year, when many manufacturers had geared product development and launches to coincide with Bauma. With so many new products developed around a Bauma launch, the year or so following the show tends to be rather guiet. And sure enough we have seen few new product launches since then as most manufacturers concentrate on getting the raft of newly launched products to market.

With this in mind, we think of Tadano's largest and most revolutionary All Terrain to date, the 600 tonne ATF600G-8 which was unveiled a whole year before Bauma in June 2015. Since then Tadano has been very quiet regarding its flagship model, even though six units were in production just after the launch, with sales due to start last year. In recent years several companies got their fingers burnt over premature product launches - the Terex AC1000 springs to mind.

Introducing a machine too early can have devastating consequences and cripple a new product permanently. However, delaying a launch also indicates that there have been development problems, design changes or production issues. Let's hope that the ATF600 - with its unusual 56 metre triple boom design - sees the light of day soon. We hear the first cranes will be rolling off the production line sometime this year. Terex certainly appears to have learnt its lesson on releasing products before they are marketready the hard way and is currently in the process of massive product and manufacturing changes under new Terex Cranes president Steve



Filipov. Many were looking forward to the launch of the new 300 tonne Terex LC300 crawler crane at Conexpo, but this has now been delayed, when the product fell foul of the company's tougher stance on not launching products until they are fully proven and ready.

The policy was spelt out by Filipov in his interview with Cranes & Access soon after his appointment when he said: "In the past, we have had a very bad experience by bringing products out too early and much as I want to push for new products, they have to work. be competitive, reliable and top quality. Unless they meet these requirements they will not be launched."

The LC300 obviously has some way to go.

The big news for Terex over the past year has been the revival of the Demag brand but changing the name to one with a better image and pedigree does not of course immediately produce a better crane. The Demag name is now being applied to the AC All Terrains over 100 tonnes capacity and CC lattice crawler cranes over 400 tonnes - cranes that are currently being manufactured at its Zweibrucken plant in Germany although the

The appointment of Filipov to replace Ken Lousberg after just a year in the job was an early sign that the company had some serious work to do to restore both the Terex and Demag brands to their glory

Filipov openly admitted that the company had to sort out a number of product issues that were severely affecting several models. Terex has lost All Terrain market share as a result and will need to work hard to revive its previous success - in the past month or two we have seen some possible early signs of increased customer confidence in the once loved brand. Filipov said that a new six axle AT would be 'unveiled soon'. Perhaps it will be a surprise launch at Conexpo - but only if it is 100 percent ready. He admits that the range also needs a good 80 tonne AT and it recently introduced a new 220 tonne Demag AC 220-5 and 250 tonne AC 250-5 while a new City-type All Terrain crane is on the cards.

The Demag brand was traditionally all about quality, reliability and innovation. Filipov and the team are determined to re-establish those values but the proof of course will be in the eating.



all terrains

The first three Demag All Terrains launched at Bauma were the 130 tonne five axle AC130-5, the AC220-5 and the 250 tonne AC250-5. At Conexpo next month there will be 'information' on the new six axle 300 tonner - the AC300-6? - but while this will not physically be on display, we understand that visitors will be able to see a 'virtual reality' presentation on the crane. To help with reducing its axle loadings Terex will also show it with a two and three axle boom trailer aimed at the American market. The rumoured six axle 250 tonner is apparently not yet ready to be unveiled.

City crane developments

The Terex - or should it be Demag? - City crane re-entry will be catered for at Conexpo with a first glimpse of a 45 tonner with another virtual reality presentation.

With Terex pulling out of the market pent-up demand for small City cranes has only recently been satisfied with the reintroduction of the Kato City crane range. Congested roads and increasingly cramped construction sites have led to an increase in the demand for smaller, more compact cranes of all lifting capacities. Kato is doing very well at the smaller end of the market with its three model range which runs from 13 to 35 tonnes. Launched in 2015 numerous cranes have already been delivered to customers in Ireland, the UK, Spain, Germany and the Netherlands with very positive feedback so far.

The sales have all been made by Kato distributor Rivertek Services, which is headquartered in Ireland. While it acknowledges that the City crane sector is a niche market crane rental companies have been more than willing to invest

One of the Terex City cranes before the range was dropped.

in them and are developing their local markets, with indications that there is more potential than some thought.

Rivertek's Ivan Bolster says: "Every company that has purchased a crane so far has invested the time and effort to develop a niche City crane focused customer-base. The capital cost of a City crane is much lower than a conventional All Terrain crane so from an investment point they make sense."

When Terex re-enters the market it is likely to find that the Kato brand is not only back in Europe to stay, but that it has a strong market position. It may well pay therefore for Terex to come in at the top end of the current market with a 45 tonner, before tackling the smaller models.

Kato says that the short-term intention is to continue to promote the current CR range of cranes, that have been designed specifically for the European market and stay with these three models at least until 2018 after which it hopes to introduce other cranes, most likely with capacities within the existing 13 to 35 tonne range. It already has an extensive range of RTs and ATs which it manufactures for its Japanese home market and is thinking of producing another range - European All Terrain cranes - purely for export, depending on market demand to bolster sales in Japan.

Improved roadability

Another trend creeping into the All Terrain market is the ability to configure cranes with axle loadings



as low as 10 tonnes. Liebherr for example is set to launch a new 90 tonner - the LTM 1090 - at Conexpo next month. No official details have been released yet but the crane was spotted at the docks heading for the USA and this year's big show. The LTM 1090 - the first of which has been sold to Philadelphia-based Sautter Crane Rental - features the new VarioBallast variable counterweight system and can be configured with either 10 or 12 tonne axle weights.

The chassis is slightly longer than the previous model with the front outriggers now positioned between axles one and two, rather than just behind the chassis cab. Although

the chassis is longer than its predecessor the turning circle is apparently the same. The company is also releasing production versions of its new 450 tonne eight axle LTM 1450-8.1 first seen at Bauma last year.

Tadano brings back the ATF110G-5

At the same time Tadano is planning to reintroduce its 110 tonne ATF110-G5 which has been upgraded to include multiple counterweight configurations making it easier to configure it for road travel in regions where lower axle weights are essential. It also features the new AML-F load moment system with full on-board







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all terrains





The 110 tonne ATF110-G5 has been upgraded to include multiple counterweight configurations making it easier to configure for road travel.

diagnostics. The crane has a 13 to 52 metre five section main boom with a 32 metre extension.

The previous ATF110-G-5 was one of Tadano's most popular cranes and the new model retains the twin engine concept at a time when single is becoming the norm for this size of crane. It now includes variable outrigger set-up, Tadano's Lift Adjuster system which automatically compensates for boom deflection when lifting a load off the ground and closed circuit cameras on both hoist drums and around the crane.

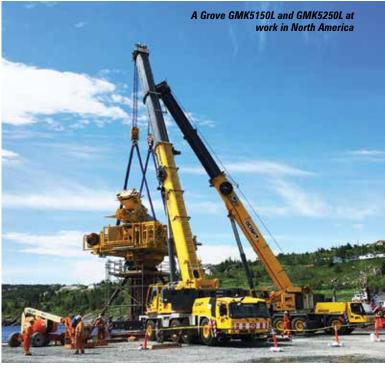
Another new Tadano to meet 10 tonne axle loadings is 60 tonne three axle ATF 60G-3 with a 'compact' 48 metre main boom. which is just completing the test and final development phase. The ATF 60G-3 also features a new drive concept with the single engine and gearbox mounted not in the chassis but in the rear part of the superstructure, allowing the chassis to be made both more rigid and lighter with the drive components acting as an additional counterweight.

The combination of the main boom and overall design of the crane means that the ATF60 is particularly suited for operations with height limitations such as inside buildings, tunnels or under bridges. Because of the distance of the engine from the chassis cab, the operator benefits from lower noise levels, with exhaust heat and gasses always well out of the way, both when driving on the road and during crane operations.

Latest Groves

Over the past two years Grove has updated its 150 to 250 tonne capacity All Terrains and launched two mid-range ATs at Bauma the new compact five axle 150 tonne GMK5150 and GMK5150L - which replace the GMK5110-1 and GMK5130-2 respectively. The GMK5150L has the longer 60 metre boom compared to 51 metres on the GMK5150. The new cranes are now coming off the production line.

Maximum counterweight for both is 45 tonnes providing a 20 percent increase in the overall load chart over the GMK5130-2. Up to 10.2 tonnes of counterweight can be carried by the GMK5150 in its 12 tonne per axle taxi crane set-up, while the GMK5150L manages 7.9 tonnes. The longer boom model can lift 11.6 tonnes on its fully extended 60 metre boom making it ideal for tower crane assembly. An 18 to 34 metre bi-fold swingaway extension is available on both models, with up to 50 degrees of offset. Both cranes are powered by a single engine (Tier 4 Final) - a concept



recently pioneered by Grove on its 400 tonne GMK6400 - which it says saves weight and reduces fuel consumption. Other features include a new Mercedes carrier cab, Twin-Lock boom pinning system and Megatrak independent active suspension.

In 2015 Grove released its five-axle 200 tonne Grove GMK5200-1 with VIAB turbo clutch module - first seen on its bigger brother the 250 tonne GMK5250L. The system is said to eliminate overheating and clutch burning and improve fuel economy. The VIAB module also works in tandem with the crane's integrated retarder, resulting in wear-free braking and starting. Other features on the GMK5200-1 include interchangeable counterweight slabs, a self-rigging auxiliary hoist and 64 metre main boom.

Grove launched its 250 tonne five axle GMK5250L All Terrain crane just before the GMK5150-1 with the bold claim that it had the strongest reach and load chart of any five-axle crane. The crane has a 70 metre,

seven section main boom and a 12 to 21 metre hydraulic bi-fold swingaway, which can offset from five to 50 degrees. The swingaway can be extended further with two eight metre inserts for a total of 37 metres and a maximum tip height of 110 metres. The crane has been well received with the 100th unit delivered a few months ago to German rental company Armbruster Autokran-Vermietunghas.

The GMK5250L has the regular 12 tonne axle loadings, but special attention was given to the axlegroup spacing and specifically exceeds 2.4 metres - a strict requirement for roading larger cranes in North America.

Although Conexpo is a major international equipment show, there will be few new All Terrain crane launches. Instead many manufacturers will finalise products already unveiled, while adding product line infill models and upgrades, while working on the next major new product launches for Bauma 2019.





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A family affair

The demise of any crane rental company is a sad day for the industry. When that company is the second largest in the UK with a fleet of 140 cranes then the effects are felt throughout the country. However, as the saying goes... every cloud has a silver lining... and the difficulty for one company has resulted in other crane companies around the UK making the most of a rare influx of vastly experienced and qualified people, to fill existing vacancies and in some cases taking the opportunity to expand.

One such company is Ellis Crane Hire based between Stroud and Gloucester in south west England and run by father and son team Bill - now the 'semi-retired chairman' - and managing director Simon Ellis.

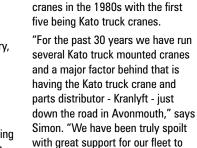
"We have been very lucky following the misfortune of Hewden Crane Hire, which was a total shock as it is one of the companies that has been synonymous with crane hire since I started in the business in 1986," says Simon. "We were approached by several ex-Hewden employees and this allowed us to fill several vacancies within the company. We were already short of a driver and wanted to move one of ours into a more supervisory role so we ended up taking two new drivers as well as an Appointed Person and a manager, all with a wealth of experience. Four new employees

a small crane company like ours is huge, considering we only had 15 added an experienced fitter and a trainee operator in January taking the total to 21."

The addition of the new manager has meant that Simon - who would often start work early in the morning, finish late in the evening and fill in where necessary. including not only managing the company but operating cranes, acting as an A/P or banksman and ensuring things were running smoothly - is now less pressured and can spend more time on running the business and on the long-term strategy of the company rather than day to day problems.

Ellis Crane Hire runs a fleet of nine cranes with capacities from 25 to 80 tonnes. It purchased its first

started on the same day which for employees before the additions. We



the point that we have never had to employ our own fitter. However with Kranlyft now occupied with Böcker and Maeda products it is finding it more difficult to support us on the older cranes so we really pushed the boat out and took on a fitter! Both

the new manager and Appointed

Person have already brought in

our current level of work we have had a really strong start to the year."



The company is a typical family affair started by Bill and his wife Irene (now a retired director) in 1982 as a subcontract concrete frame erection company - Ellis Erection Services - working all over the UK. Simon joined the company in 1986 after finishing his carpentry apprenticeship and this was the year that the company bought its first crane - a 15 tonne Kato NK140. Simon ran the erection side of the business while his father ran the crane operations, renting the cranes out when not erecting concrete frames.











"We were spending around £35,000 a year on crane hire to erect the concrete frames and at a cost of £64,000 for a new Kato NK 140 it seemed the obvious time to purchase our own," says Bill. "That first crane stayed in the fleet for 25 years before being sold and it was a sad day for both of us when it finally went."

A second crane - a 25 tonne Kato NK 250 - was added in 1989 making the most of the increasing crane rental opportunities. Unfortunately with the economic recession of the early 1990s the market for concrete

frame buildings almost evaporated overnight, but fortunately Simon managed to secure an 18 month pipeline contract which kept the business busy through the difficult period. When this contract ended the pair decided to concentrate solely on crane rental, adding another 25 tonne Kato in 1994 followed by a fourth in 1997 and a fifth two years later.

Each time a new crane was ordered it was decided to trade in an older model but with demand continuing to grow this never happened. As with a number of other UK crane

rental companies Ellis still runs three of the aging Kato truck cranes, but with Kranlyft having stopped importing new Kato cranes in 2001, these have been fully refurbished to 'as new condition' with Crowland Cranes carrying out the work on the most recent one to be rejuvenated.

"The Kato cranes performed well and were totally reliable and if we had any problems we had Kranlyft on our doorstep," says Bill. "At that time the 25 tonne truck cranes were very popular on general construction sites lifting in roof trusses, erecting steelwork and general site work. Whether refurbishing cranes rather than buying new is the best way forward is difficult to say. You can spend a lot of money on the refurb but the crane's market value doesn't change much, and it is now getting more and more difficult to get the parts. Kato entered the All Terrain market with a 40, 80 and 90 tonner but they didn't really catch on as,



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all terrains





although no doubt of excellent quality, they were quite a bit more expensive and had shorter booms than the competition."

Looking at new ATs

Having to look for another manufacturer for new cranes, Ellis dipped its toe into the AT market and purchased a 55 tonne Grove in 2005 - a major departure for the small company, although it was regularly cross-hiring 50 and 80 tonne ATs and was offering the usual contract lifts and package deals etc. The Grove was a good crane but All Terrain crane reliability was not the same as the Kato truck cranes, with very different technical and electronic breakdown problems.

"It is a shame the truck crane was overtaken by the All Terrain," he says. "I think it was just a trend towards ATs which happened almost overnight - not helped by the unavailability of truck cranes. A 55 tonne All Terrain with all wheel steer and long boom could get into places a 25 tonne truck-mount would

struggle to and still have a similar foot print. The two axle 40 tonne ATs have taken over from the three axle 25 tonne truck cranes, but younger people manning hire desks do not know what a 25 tonne truck crane can do and probably would not be looking at them as an option. People are conditioned now to have a 40 tonne AT as a standard."

"The 25 tonne truck-mount was the bread and butter crane of its day at a time when many companies thought a 50 tonner was the ultimate," says Simon. "We almost bought one of the early Kato City cranes, following their European launch in the 90's but found it to be a bit too niche for our general fleet at the time."

Today Ellis has a fleet of nine cranes which includes the fully refurbished Kato's, three 40 tonners - two Tadano ATF 40G-2s and one Terex AC40-2L, a 50 tonne Tadano ATF50G-3, a 60 tonne Grove GMK3060 and an 80 tonne GMK4080-1.



"We are also looking at another 40 tonner which will probably replace one of the older Katos or take our fleet to ten!" says Simon. "If we replace the 80 tonner I think we may look for something a bit bigger, a 90 or 100 tonner?"

With its head office in Brookthorpe just outside of Gloucester it generally serves the market within a 50 mile radius, which takes it into South Wales, down into the South West and up to the Midlands. Even though its compact head office facility is one of the most picturesque (and very easy to miss from the road because of a high privet hedge) with careful planning - individual bays with reversing stops etc - it houses six of the nine cranes. The remaining three are kept at its second yard in Stroud.

"Our yard works so long as everything moves," says Simon.
"We do have problems if clients want us to store equipment in our Brookthorpe yard, but if it can move it works. Our Stroud yard however gives us a bit more scope to accommodate this."

Family future?

Unfortunately the crane company will not be passed on to Simon's two sons - one is now a blacksmith and the other a professional

musician - and although interested in the business, they do not appear to want to be part of its future. "It is a shame Bill's grandsons won't take over the business one day, but as long as I enjoy doing it I will continue for as long as I can."

Simon and Bill are both avid readers of Cranes & Access and www. vertikal.net and are always willing to share an opinion on the current state of the industry.

In the November 2016 issue Simon had his letter - 'Wrong type of Medical' - printed in the readers' Letters (page 67) which outlined the stupidity of doubling up on full medical examinations both to renew a HGV Class 2 license when aged over 45 and then to undergo a second medical just to comply with certain construction companies' site requirements. One of his previous letters regarding some contractor's intentions not to allow cranes over ten years old on site was also printed.

"Unfortunately the sector has several anomalies, the doubling up of the full medical is just one of many," he says. "Another recent one which was just as annoying involved one of our trainees on site. The trainee in question had just started with us and for him to gain experience we took him out with a very experienced crew just to observe and get a feel for how things work. When we arrived on site the contractors asked for the trainees CPCS card. We explained that he did not have one as he had only just joined us, and that he would just be observing - so surely this would be acceptable? He was not even allowed on the site. How are we to train youngsters when there are so many barriers put up that make it almost impossible? These people are the desperately needed future of the industry and we need to do everything in our power to give them the hands-on training and experience needed. There are just too many contractors which just don't see it that way, their tick-box mentality needs to change!"



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14 crane tandem lift

Construction, crane and transport company Aertssen Kranen used 14 Grove All Terrain cranes to tandem lift a 14 section length of pipeline at an industrial plant in Antwerp, Belgium. The pipeline will be used temporarily to carry sludge to the plant at the Port of Antwerp. Each crane lifted a 6.1 tonne section of the pipe positioned on its own pontoon, located adjacent to the quay. Eight supervisors monitored the lift to ensure the project went smoothly. The cranes included seven 30 tonne GMK3055s, three 80 tonne GMK4080s, two 100 tonne GMK5095s and two 130 tonne GMK5130-2s.

"We have previously organised multi-lift operations with up to 11 cranes that involved pipelines up to 250 metres, but lifting a 14 section pipe with joints was new to us," said Yves Smets of Aertessen Kranen. "Nevertheless, the preparatory work of our engineering team and the professionalism of the crane operators made it a success story. We are glad to have taken part in this project and are always looking forward to new record-breaking challenges."



Each crane lifted a 6.1 tonne section of pipe.



Demag duo take on TBM



German crane rental and heavy haulage company MSG Krandienst used two of its cranes - a 500 tonne Demag AC 500-8 and a 700 tonne AC 700-9 - to lift a 200 tonne drive system for a Herrenknecht tunnel boring machine from a 12 axle trailer.

In perfect weather conditions MSG's four-man team needed only two hours to set-up each crane for the tandem lift. The nine axle AC 700 used 25.5 metres of main boom, 100 tonnes of counterweight with the X-type outriggers extended to 12 metres. It was set

up in-line behind the eight axle AC 500 with 24 metres of main boom and 140 tonnes of counterweight and a 9.6 metre outrigger spread.

Working together the two cranes lifted the load off the trailer to a height of three metres before slewing through almost 180 degrees with the load over-sailing the crane chassis and passing between the cranes before being lowered onto the ship at a radius of 14 metres.

MSG runs a fleet of cranes from 200 to 750 tonnes from facilities in Kehl, Kappel-Grafenhausen, and Teningen-Freiburg, with a branch office in Alsace, France, operating primarily in the area between Karlsruhe and Weil am Rhein in Germany.



Challenging indoor tandem lift

Levage Manutention of Strasbourg, France used a 50 tonne Grove GMK3050-1 and a 250 tonne GMK5250L for a tricky internal lift at a local industrial plant. Both cranes were configured with fully retracted booms working at a low angle due to the low headroom in the building.

The cranes' anti-two-block systems were bypassed in order to reduce the height below the boom nose, hoist speeds were limited and an additional supervisor employed to monitor the distance between the boom nose and hook blocks. The load - a 50 tonne zinc tray - was then moved into place mostly with the boom telescope function.



Gaudi tower crane relocation

Construction of Barcelona's famous cathedral Basílica i Temple Expiatori de la Sagrada Família - by Catalan architect Antoni Gaudí - began in 1882 with current plans to finish the structure in 2026 to mark the 100th anniversary of Gaudi's death. At that point it will be 172.5 metres high topping the Ulm Minster in Germany currently the tallest church in the world - by

Spanish crane rental company Grúas Rigar was called in last November to relocate one of three

11 metres.

tower cranes working on the iconic building. Rigar needed one of its largest telescopic cranes - a 500 tonne Liebherr LTM 1500-8.1 with 84 metre main boom and 70 metre luffing jib - to reach and remove the tower crane. There were also several challenging logistical issues, such as the minimal space available to position and set-up the eight-axle All Terrain in Y-Guy superlift configuration with maximum 165 tonnes of ballast. However once erected the crane was able to fully dismantle the tower crane and then reassemble it in a new location on the building.

Grúas Rigar is based in Valencia and operates 40 cranes from seven locations along the Mediterranean coast. The LTM 1500-8.1 has been the most successful big AT of all time. Launched at Bauma 1998, the 500th unit rolled off the production line in 2015.



