# INTERNATIONAL

# AND SPECIALIZED TRANSPORT

Volume 29 Number 2 NOVEMBER 2020

A KHL Group publication www.craneworld.com



**BRAND NEW:** 

# Demag AC 450-7



ROUGH TERRAIN CRANES - BELOW THE HOOK EQUIPMENT - SPMT





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# INTERNATIONAL AND SPECIALIZED TRANSPORT

VOLUME 29 NUMBER 2 NOVEMBER 2020



Chosen as the officia magazine of the SC&RA (Specialized Carriers & Rigging Association)

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s you will already have seen from the front cover, there is big news in the wheeled mobile crane sector this month with our exclusive launch story on the Demag AC 450-7, a brand new 450 tonne capacity all terrain crane on a seven axle carrier. For full details see our product news special starting on page 15.

Not content with just the one new wheeled mobile crane this month we have news of four more. Liebherr has announced its LTM 1150-5.3, a 150 tonne capacity wheeled mobile telescopic crane on five axles. Then there is the 300 tonne capacity Kato KA-3000RX all terrain crane on six axles. And Manitowoc has announced its National Crane NBT60XL boom truck. See all these in the News starting on page 7.

The fourth new one is another from Japanese manufacturer Kato. The SR-300LX is a 30 tonne capacity rough terrain crane. See the feature on RT cranes starting on page 19 for news on this and other developments in the sector.

So, yes, the manufacturers are busy and it is great to see so many new products. Despite the virus several more new cranes are in development and I look forward to reporting them. Before that, also in this issue (page 32) we have our annual ICM20 table of the world's largest crane manufacturers by revenue from crane-related sales. The ICm20 has been running for longer than even I can remember and this year it is exceptional in its level of growth and shifts in position.

Recent acquisition and merger activity is making itself felt in the ICm20 and there is more to come plus, of course, the inevitable impact of that virus which will show in next year's table. While there is unlikely to be much in the way of positive news from that, there will doubtless also be more big change, especially with completion of the Cargotec-Konecranes merger announced last month (IC October news).

Just when you thought we were heading for a quiet end to the year, especially with the return of a lockdown to many parts of the world, there are all these exciting product developments. Now I am already looking forward to what will be in store for the final issue of the year and then to the new year.

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# **KHL CRANES**













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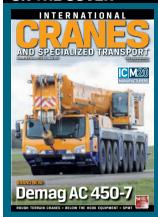




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# ON THE COVER



The brand new 450 tonne capacity Demag AC 450-7 is a real eye-catcher. Find out its features and technical specification in our exclusive feature starting on page 15.

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19

# **FEATURES**

#### **NEWS SPECIAL**

Demag says its brand new 450 tonne capacity all terrain crane sets new standards on seven axles. Alex Dahm reports.

### **ROUGH TERRAIN CRANES**

The market might be tough, but rough terrain cranes are built to withstand harsh conditions. Christian Shelton reports.



#### **BELOW** 28 THE HOOK

When it comes to below the hook, some claim customisation is key while others assert that automation is the future. Can the two approaches co-exist? Christian Shelton reports.

# **REGULARS**

NEWS	6
BUSINESS	13
SPECIALIZED TRANSPORT NEWS	27
EQUIPMENT AND ACCESSORIES	47
BACK PAGE	49
MARKETPLACE  ■ PRODUCTS, PARTS & ACCESSORIES	52

■ CRANES AND EQUIPMENT FOR SALE OR RENT **52** 

15

## **ICM20**

For the third time in a row the ICM20 ranking of the world's largest

crane manufacturers has shown an increase, this time even bigger than last year. ICST reports.



## **SPMT**

35

The flexibility and combined power of self propelled modular transporter is key to its success. Christian Shelton reports.

#### **STS PREVIEW**

41

The 2021 SC&RA Specialized Transportation Symposium is coming up in February. ICST previews the annual event for the specialized transport industry worldwide.

# SCRA

# SC&RA

# **SC&RA COMMENT**

43

Joel Dandrea, SC&RA chief executive officer.

# **SC&RA NEWS**

44

The Association is planning to return to holding live events in 2021, right from the off, with the Board and Committee meetings in January. Mike Chalmers reports.

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# **HIGHLIGHTS**

■ Two of the world's largest construction industry publishers, KHL Group and Route One Publishing, have agreed to merge their respective Latin American construction magazines. Route One's Construcción Pan-Americana (CPA) magazine - in its 50th year of publication - will join forces with KHL's Construction Latin America (CLA) to provide the construction industry with a single magazine covering the entire Latin American construction market. The new combined title - to be called CLA, incorporating CPA - will be published by KHL Group, and the first issue will appear in October 2020. CLA will continue to be published in both Spanish and Portuguese.

■ The Swiss division of tower crane manufacturer Wolffkran International, Wolffkran Schweiz, is relocating to Elsau. The new headquarters will be 40 kilometres further east. Around 45 employees are expected to move into the new facilities in early summer.

# Liebherr launches 150 tonne mobile crane

As a 150 tonner, the new LTM 1150-5.3 wheeled mobile telescopic crane joins the Liebherr range above the alsonew 120 tonne capacity LTM 1120-4.1 introduced in April.

In the range immediately above the latest one is the 180 tonne capacity LTM 1160-5.2.

The new LTM 1150-5.3 replaces the 130 tonne capacity LTM 1130-5.1 of which Liebherr built 1,500 units. The first version of the five axle 150 tonner, the LTM 1150-5.1, was replaced in 2006 by the LTM 1150-5.2 but it was immediately renamed LTM 1160-5.1.

The latest crane's 66 metre boom is 10 percent (6 metres) longer than the outgoing 130 and capacity is given as being 15 % higher on average. Interesting to note that the improved performance is achieved from a vehicle with the same gross weight as its predecessor. At 12 tonnes per axle, the new five axle model travels with 9 tonnes of counterweight.



Commenting on the new crane Christoph Kleiner, sales director, explains "the jewel in your fleet" as "a flexible all-rounder, the LTM 1150-5.3 will enhance any crane fleet like a jewel – it has the longest boom in this crane class at 66 metres and can compete with crane models in the 200 tonne lifting capacity class."

It carries nine tonnes of ballast for a gross weight of 60 tonnes so it can do a lot of jobs without needing separate ballast trucks which saves money.

Extending the new crane's boom to 60 metres (the same as the outgoing model's maximum) the LTM 1150-5.3 lifts 12 tonnes, which is 1.5 tonnes more than the old one, Liebherr said. Capacity at the full 66 metres is more than 9 tonnes, good for tower crane assembly and radio masts.

Adding the lattice extensions gives a maximum hook height of 92 metres and a radius up to 72 metres. For this, a 7 metre lattice section as a boom extension and the 10.8 to 19 metre double folding jib are required. Hydraulic adjustment of the jib is possible between 0 and 40 degrees. Also available are a 2.9 metre erection jib and a runner, which can be swung to the side. The lattice extensions can be used on several other Liebherr models between 100 and 180 tonnes capacity.

Power for the whole crane is from a 400 kW (544 hp) six-cylinder Liebherr diesel in the carrier. It is a Stage V exhaust emission engine and can be configured to comply with other regulations, for example, Tier 4 for the USA or stage IIIA for less regulated countries.

It is driven via a ZF-TraXon gearbox and includes Ecodrive for travel and Eco mode for crane operation, both to save fuel and reduce emissions.

# TNT EMERGES FROM CHAPTER 11 BANKRUPTCY PROTECTION



In just over five weeks TNT Crane & Rigging has emerged from Chapter 11 bankruptcy protection. The US crane rental company said it completed a transaction that has strengthened the company's balance sheet and positioned it for future success.

"This turning point marks the implementation of the company's pre-packaged plan of reorganisation, which was confirmed by the U.S. Bankruptcy Court for the

District of Delaware on September 30, 2020," the press release said.

TNT emerges from its restructuring as a private company with a new ownership group, recapitalised with a new US\$225 million term loan. TNT completed its restructuring in just over five weeks.

"Following the successful completion of our restructuring, we look forward to working with our new ownership group to build the next chapter of TNT's growth – one grounded by a stronger financial position and recapitalised balance sheet," said Michael Appling, TNT chief executive officer.

"We are pleased to report that this process was seamlessly executed faster than anticipated and has provided us with a newly revitalised foundation to continue as North America's leader in providing safe, reliable lifting services to our customers."

A pair of Kobelco crawler cranes has been specially prepared and put to work in the extreme cold of Russia's Arctic region on a gas project.

On Siberia's remote Gyda Peninsula, in the Kara Sea, it is inhospitable, and very cold – winter temperatures average just -30 °C and it is dark from mid-November until late February. Mezhregiontruboprovodstroy (MRTS) is part of a team of experienced specialist contractors tasked with delivering a series of pipelines, quays, and wharfs to facilitate operation of the Arctic 2 LNG. MRTS acquired a pair of 250 tonne capacity CKS2500 crawler cranes from Kobelco Cranes dealer in Russia, FKR Machinery. Both machines were retrofitted with Webasto's Arctic Kit, including heaters, which allows the machine to work in the extremely hostile environment.

Mobile crane manufacturer Kato has launched a 300 tonne capacity all terrain crane on a six axle carrier.

The KA-3000RX is a global market crane with a 55 metre boom in five sections. Maximum working height is 110.7 metres. Jib options include the 35 metre Super Luffing (SL) and a 54 metre Heavy Lift (HL). Working height with the luffing jib is 92 metres and capacity is 24 tonnes. The longer jib can be assembled vertically to help where available space on the ground is at a minimum.

Full counterweight is 105 tonnes - four 10 tonne slabs, eight at 6 tonnes and the base. Rear swing radius with counterweight is 5.5 metres.

In the carrier there is a 405 kW Daimler 0M502LA diesel engine with selective catalytic reduction (SCR) while the crane functions are powered from a 205 kW Daimler OM906LA diesel in the upper structure. All wheels have disc brakes and there is a rear-steer function for stability and manoeuvring in tight spaces.



# Tadano initiates restructuring

Crane manufacturer Tadano has started a programme to restructure Tadano Demag and Tadano Faun in Germany.

Consultations led to the filing for Protective Shield Proceedings (Schutzschirmverfahren). It is similar to Chapter 11 bankruptcy protection in the USA.

Schutzschirmverfahren can only be applied to solvent companies for which a successful restructuring is likely - as it is for both Tadano Demag and Tadano Faun, the company said.

In a letter to customers. Jens Ennen, Tadano Demag and Tadano Faun CEO, said, "Tadano Demag and Tadano Faun have been confronted with shrinking markets and mounting competitive pressure for some time. The resulting economic challenges have escalated considerably in recent months due to the Covid-19 crisis and cannot be sufficiently mitigated. despite short-time work and other measures taken.

"A reorganisation of Tadano

Demag and Tadano Faun is essential to ensure the future viability of the companies."

Tadano said, "This will maximise Tadano Demag's and Tadano Faun's value for the Tadano Group as a whole, create stronger 'One Tadano' group synergies, and make further contributions toward achieving the Tadano Group's goal of becoming a global leader in the lifting equipment industry."

Within three months of the proceedings being granted (8 October), the company submits a plan of reorganisation on which creditors vote to accept or not. The company continues to operate and management stays in charge. A court appointed person will act as a supervisor.

"Production at Tadano Demag in Zweibrücken and at Tadano Faun in Lauf an der Pegnitz is ongoing, all existing and new orders are being fulfilled under the prerequisite of the protective shield proceedings," Ennen continued.

# MAXIM ANNOUNCES BUY-BACK RESULTS

Results have been announced for the Maxim Crane Works Holdings Capital tender offer to purchase outstanding 10.125 percent Second-**Priority Senior Secured Notes** due 2024, for cash. The tender offer from the US company expired on 13 October 2020. Maxim had been advised by its agent for the tender offer, that \$184.7 million in aggregate principal amount, or approximately 33.89 percent of the outstanding notes had been validly tendered. As a result, the company accepted for purchase \$132.39 million aggregate principal amount of the notes, resulting in all notes tendered at or below the clearing price being accepted for purchase. Holders will receive \$1,027.50 per \$1,000 principal amount of the notes that the company accepts for purchase plus interest.



Eric Salvi, left, and

Alexandre Vernazza

# Mediaco acquires **SE Levage in France**

Crane rental group SE Levage has been acquired by Mediaco, the largest crane rental business

SE Levage, based in Haute-Savoie in the Rhône-Alpes region of France, has a turnover of €22 million and a fleet of 45 mobile cranes in capacities. These and another 100 or so machines, including specialized transport equipment and hydraulic loader cranes, work from five depots.

The five cranes from the SE Levage heavy lift division, from 500 to 1,200 tonnes capacity, will become part of the Mediaco Maxilift heavy lifting subsidiary. With these new additions, Mediaco now has 15 heavy lift cranes (3 at 450 tonnes, 2 at 500. 2 x 700 tonners. 3 x 750s. 4 x Liebherr LG 1750s and one Liebherr LR 1600 lattice boom crawler crane).

Add to this Mediaco's 13 units of 400 tonnes capacity at its regional depots gives a total of 28 cranes with 400 tonnes and higher capacity. Mediaco now has 80 depots, more than 15 of which are in the Rhône-Alpes region. As a first move into Switzerland. Mediaco will rename SE Levage Swiss as Mediaco Swiss.

Mediaco said it welcomes the 115 SE Levage employees joining the 2,000-strong Mediaco group. SE Levage founder Eric Salvi, will help with the integration.



# **HIGHLIGHT**

■ Manitex International has launched its new TC65159 truck mounted crane. The TC65159 has a 60 tonne base rating and five-section 48 metre full power, proportionally extended boom with 51 metre tip height, increasing to 63 metres with the one piece, 12 metre offset lattice jib.

The new longer boom wiith relative stiffness in long reach applications will be attractive to steel erectors and other duty cycle applications where production is key, the company said.

The TC65159 will offer asymmetrical outrigger positioning, and increased ground penetration allowing more flexibility to set up in confined spaces and uneven terrain. "Manitex is pleased to launch a 65 ton [60 tonne] high reach truck mounted crane with asymmetric outriggers," said Jeff Long, general manager, Manitex. "At the same time, Manitex is pleased to announce the TC60131 will be upgraded to 65 ton [60 tonne] base rating beginning with new deliveries effective January of 2021."



# LaPrairie buys Entrec divisions

Rental and transport businesses
Entrec Alberta Ltd and Capstan
Hauling have joined the
LaPrairie Group of Companies in
Canada. They will be LaPrairie
subsidiaries run separately.
Retaining management and
bringing the team of more than
65 drivers will help ensure
continuity, LaPrairie said.

Commenting on the deal Scott LaPrairie, LaPrairie Group of Companies president and CEO, said, "We look forward to the added value that these acquisitions will bring. Through the offering of jack and slide services, additional transport trucks and a modern fleet of platform heavy haul trailers, we will be in a position to offer a one stop solution to existing and new customers in these

complimentary industries.

"These additions will allow us a total load haul and place of oversized Alberta-manufactured oil and gas plant modules, contributing significantly to the transport effectiveness in the oil and gas sectors in Western Canada," LaPrairie continued.

In mid-May Entrec
Corporation filed for protection
under the Companies' Creditors
Arrangement Act (CCAA)
in Canada. As part of this
restructuring Entrec put its
businesses up for sale. Entrec
acquired Capstan in 2018.
LaPrairie said its acquisition will
expand its offer in Fort McMurray
and Grande Prairie.

Western Canada-based LaPrairie was started in 1982 as a one-crane, two-man operation.

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Crane rental confidence survey 2021: call for entries.

In these unprecedented times of Covid-19 and its massively disruptive effect on the world, not least crane rental, market information is more valuable than ever.

To this end and to help provide a clear picture of the global crane rental market, each year we put together a short questionnaire to survey people in the crane rental industry worldwide.

We will collate and analyse the results anonymously and publish the results in the January 2021 issue of the International Cranes and Specialized Transport magazine.

By completing the survey you can help us build a comprehensive picture of the global market as it stands and where it is heading next year. It can help with planning future activities. Entering the survey also helps you benchmark your company against others in the industry. The more entries we get the better the resulting data will be.

To participate please complete the online survey at khl.com. It will take less than four minutes to do it and all entries will be entered into a draw with a chance to win crane-related prizes.

# **National Crane announces NBT60XL**

Manitowoc has expanded its boom truck range with the National Crane NBT60XL.

"The NBT60XL is set to take on all competitors in the 60 [US] ton market," said Bob Ritter, product manager for boom trucks at Manitowoc.

The NBT60XL has a 46 metre five-section, full-power boom. It is designed to give good

reach while remaining easily roadable. Overall vehicle length is under 13.7 metres. With the optional 11 metre offsetable lattice jib, reach can be increased to 59.7 metres.

To increase versatility

Like its forerunner, the NBT60L, the updated boom truck offers a 46 metre boom

there is up to 7.3 tonnes of hydraulically removeable counterweight, allowing it to take on heavier picks, Manitowoc said.

"To get even more capacity and maintain overall agility, these truck crane-style counterweights offer many combinations allowing operators to take what is needed for the job and still meet any roading regulations," added Ritter.

A new Demag AC 500-8 wheeled mobile telescopic crane has found a place in the fleet of Société Réunionnaise de Transports Incana (S.R.T.I.), a crane and transportation service provider on the French island of Réunion in the Indian Ocean, east of Madagascar. Among 20 other units, the AC 500-8 stands out as both the largest crane in the company's fleet as well as the entire island. It has the maximum level of equipment available.





# SEC settles charges against Manitex and former executives

The Securities and Exchange Commission (SEC) in the USA settled charges against Manitex International and three of its former senior executives for two accounting fraud schemes that resulted in the issuance of materially mis-stated financial statements.

According to the SEC orders, Manitex improperly accounted for and misled its outside auditor about inventory that didn't exist. In 2014, Andrew Rooke, the company's former chief operating officer, and Stephen Harrison, the former general manager at a Manitex subsidiary, created false inventory lists and shipping documents to cover up a US\$ 1.39 million inventory shortfall at a Manitex subsidiary, according to the SEC.

Further, Manitex later provided the fabricated documents to its outside auditor. contributed the non-existent inventory to a joint venture, and recorded the non-existent inventory on its books. As a result, the orders find, Manitex

# HIGHLIGHT

SC&RA's Tower Crane Committee has completed a new document, Tower Crane Signage Guidelines, to address best practices for placing signage on tower cranes. "As always, the manufacturer's instructions must be followed, but the committee felt there were other areas that needed to be addressed to ensure signs mounted on tower cranes meet certain requirements and do not create a hazard for personnel working on or around the crane," said Peter Juhren, president and COO at Morrow Equipment in the USA and chair of the SC&RA **Tower Crane Committee.** 

materially overstated its 2014 operating and pre-tax income.

According to the orders, Manitex also improperly recognised revenue from and misled its outside auditor about approximately \$12 million in purported "bill and hold" crane sales. According to the orders. during a downturn in the oil and gas services industry, Manitex entered into an agreement to sell cranes to a dormant company with no operations. The orders find that, because the company had no ability to obtain financing, Harrison, at Rooke's direction, secured and, on behalf of Manitex, guaranteed the financing for the purchases.

The orders found that in consultation with Rooke, Harrison also created a purported financing subsidiary for the company and prepared fraudulent invoices to conceal Manitex's role. As set forth in the orders Michael Schneider Manitex's former controller and CFO, approved the fraudulent invoices despite knowing they were not genuine. As a result, Manitex materially overstated its 2016 net revenues and gross profits.

"The securities laws require public companies and their executives to make truthful disclosures of material information about a company's financial condition," said



Liebherr "delivered" the first unit of its new 700 tonne capacity LTM 1650-8.1 mobile crane to Mammoet. Built in Ehingen, Germany, it was handed over to its Netherlands-headquartered owner via a virtual handover as a result of Covid-19. Speaking during the online exchange, Jan Kleiin. Mammoet COO, said, "We are delighted to take delivery of the first ever LTM 1650-8.1 from Liebherr. The performance, mobility and economy of this new crane will enrich our fleet, giving Mammoet the flexibility to gradually replace our 500- and 700-tonners with this new Liebherr 8-axle crane."

Pictured, from left to right, are: Manuel Grab, Dieter Walz, Christoph Kleiner (all Liebherr-Werk Ehingen), Han Rekers (Liebherr Nederland), Jan Kleijn, Peter van Oostrom and Corné Woestenberg (all Mammoet).

Kathrvn Pvszka, an associate director in the SEC's Division of Enforcement. "The SEC's orders find that Manitex and these executives misled investors by providing false information concerning the company's operations and financial condition."

The SEC charged that Manitex, Rooke, Schneider and Harrison violated certain antifraud, reporting, books and records, and internal accounting controls provisions of the

federal securities laws. Without admitting or denying the orders' findings, they agreed to cease and desist from future violations of the charged provisions and Manitex. Rooke and Schneider agreed to pay civil penalties totaling \$485,000. Rooke, Schneider and Harrison are barred from serving as officers or directors of public companies, and Rooke and Schneider agreed to suspensions from appearing or practising before the SEC as accountants.

# Damaged Orion crane under repair

Preparations are underway for the repair of the 5,000 tonne capacity Liebherr crane damaged during testing on the new build Orion offshore installation vessel.

In May testing was under way with the super heavy lift HLC 295000 twin lattice boom crane on the Orion vessel. It suddenly stopped, however, when the

crane's hook broke, sending the crane's boom over backwards. See the full details in our earlier story at khl.com.

Repairs to be carried out at the Port of Rostock, Germany, will be completed in 2021, Liebherr said. To start off with, international heavy lifting specialist Sarens was called in to salvage the damaged

components of the HLC 295000. At first the damaged crane will be secured on the vessel to allow its movement to a different berth.

Components will then be recovered prior to the dismantling of the crane. Both the 145 metre lattice booms and parts of the A-frame will be completely replaced with new components, Liebherr said.



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IEBHERR

# The Covid-19 crisis continues, affecting different countries at different times. ICST tracks the resulting fortunes of businesses over the past month.

# **Going viral**

racking month-on-month share price change, there are mixed fortunes for the companies in our index as the ongoing challenges of Covid-19 take their toll.

Analysing any direct effect of Covid-19 becomes highly complex as the virus continues to strike at different times and locations around the world.

At the positive end of the monthly share index we have Terex; the company's share price is up 40 percent on where it was last month. Investor confidence may be boosted by improved utilisation levels of equipment for Q3 2020. According to Terex Corp. chairman and CEO John Garrison, this reflects a gradual sequential

improvement in business activity. "In addition, both Genie and Terex Utilities are seeing improved utilisation levels of their equipment," he added.

In the company's crane division, a number of new dealership appointments for its rough terrains may have further buoyed investor confidence.

Terex Corp also reported, however, that nine month revenue was 34 percent lower than for the same period last year at US\$2.29 billion; this drop is reflected by the percentage change in share price 12 months ago, where the data shows it's 35.4 % down.

Conversely, Hitachi **Construction Machinery**  demonstrated the largest share price fall compared to last month, although it is up 36 % on where its share price was last year. The company reacted quickly to Covid-19, reducing production at its four Japanese plants in April and May. Hitachi Construction Machinery. however, says the impact of Covid-19 and fluctuations in the exchange rate account for revenues and profit decreasing in the first half of 2020.

The Far East's robust response to Covid-19 saw rapid economic recovery once infection rates fell, with market demand returning to near pre-virus levels. The expansion of Far Eastern companies into overseas markets, however, has been affected by the global reach of Covid-19.

XCMG, which shows a decline of 13 percent on last month, has been actively developing its overseas markets. "We are increasingly focused on the developed markets of Europe and North America," said Mr Liu, vice president of XCMG and general manager at XCMG overseas.

Liu said he hopes for an increase in sales in China by the end of the year compared to 2019 but that, regarding the rest of the world, he would be happy if they could keep sales at a similar level to 2019, "In the first three months of the year sales were down 10 % for all XCMG brands and about 7 to 8 % across the whole of the industry," Liu added. "However, looking at it from January to April there was growth of 32 % for XCMG products for export."

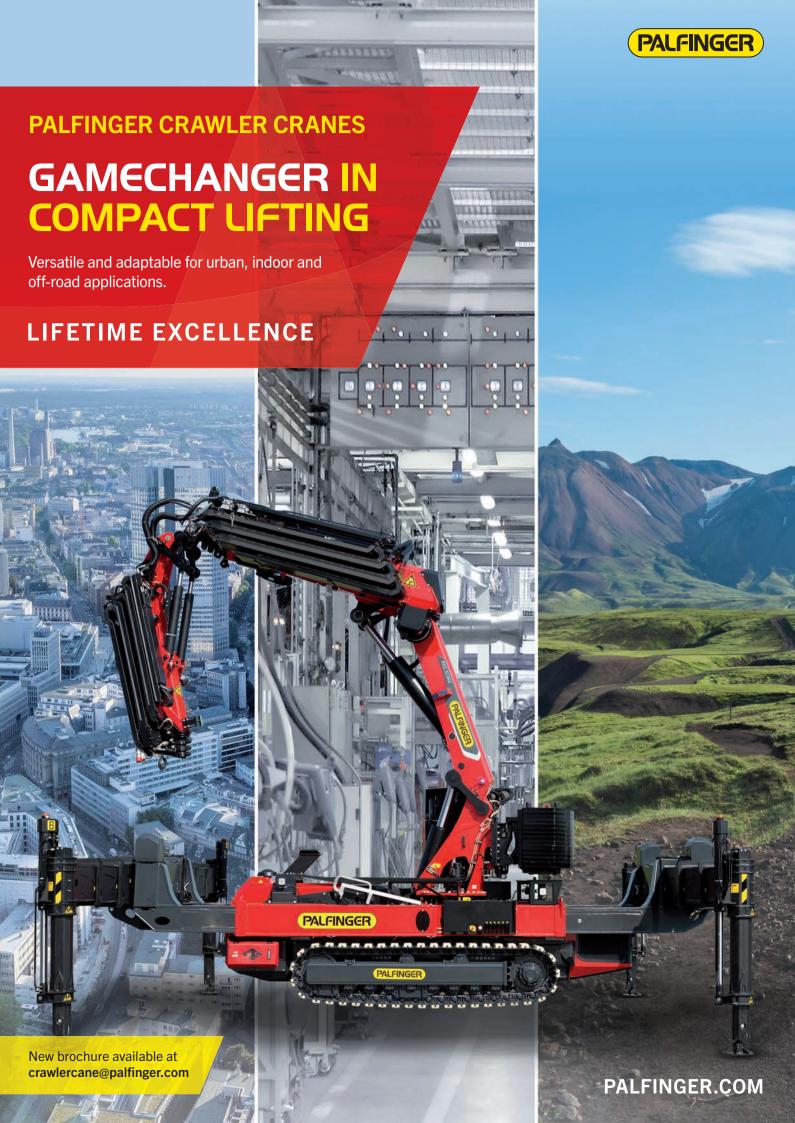
	N	IOV	EM	BER	<i>IC</i> SH	ARE	IN	DEX	
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STOCK	CURRENCY	PRICE AT START	PRICE AT END	PRICE CHANGE	% CHANGE	PRICE 12 MTHS AGO	12 MTH % CHANGE
IC Share Index*		93.66	93.00	-0.66	-0.71	64.79	44.55
Legacy IC Share Index**		257.70	227.72	-29.98	-11.63	230.57	11.77
Dow Jones Industrial Average	9	27,174	26,910	-263.54	-0.97	27,347	-0.63
FTSE 100		5,843	5,656	-187.01	-3.20	7,302	-19.99
Nikkei 225		23,205	23,295	90.86	0.39	22,851	1.55
Hitachi Construction Machine	ry YEN	3,745	2,595	-1150.00	-30.71	2,753	36.03
Konecranes	€	25.22	26.78	1.56	6.19	28.45	-11.35
Kobe Steel	YEN	398	425	27.00	6.78	581	-31.50
Liugong	CNY	7.18	6.91	-0.27	-3.76	6.30	13.97
Manitowoc	US\$	8.09	7.81	-0.28	-3.46	13.16	-38.53
Palfinger	€	22.10	19.60	-2.50	-11.31	25.45	-13.16
Sany Heavy Industry	CNY	24.28	26.20	1.92	7.91	13.90	74.68
Tadano	YEN	853	779	-74.00	-8.68	990	-13.84
Terex	US\$	18.45	26.00	7.55	40.92	28.40	-35.04
XCMG	CNY	5.73	4.97	-0.76	-13.26	4.50	27.33
Yongmao Holding	SGD	0.71	0.70	-0.01	-1.41	0.85	-16.47
Zoomlion	CNY	8.12	7.24	-0.88	-10.84	5.94	36.70
				0 ( 1.45)	400		

\*\*Legacy IC Share Index, end April 2002 (week 17) = 100



EXCHANGE RA	TES – VALUI	E OF US\$				
CURRENCY	VALUE AT START	VALUE AT END	VALUE CHANGE	% CHANGE	VALUE 12 MTHS AGO	12 MTH % Change
CNY	6.823	6.691	-0.13	-1.94	7.04	-3.04
€	0.860	0.860	0.00	0.00	0.90	-4.10
Yen	105.552	104.800	-0.75	-0.71	108.00	-2.27
UK£	0.785	0.775	-0.01	-1.26	0.77	1.55
Period: Weeks 39 to 44						





hen designing the new Demag AC 450-7 all terrain crane the engineering team was focused on setting new standards for a crane in the seven axle segment.

It is said to be as compact as a six-axle crane but with significantly better performance. The basic idea, according to the company, was to build a more powerful alternative to existing six-axle cranes. The objective was to keep it as compact as a six-axle crane, even with its additional, seventh, axle in place.

The carrier is 15.99 metres long, the outrigger base is 8.45 metres and total overall length is 17.62 metres. Michael Klein, product marketing manager, explained, "In other words, it doesn't need more space than a six-axle crane at a work site, and yet it offers significantly better lifting capacities."

# New on 7

It needed a seventh axle to be street legal with a longer boom and the required higher capacity, Klein said. That longer main boom is 80 metres and the maximum it will lift at the full extent is 25 tonnes. A luffing jib of up to 81 metres long can be added and the maximum system length is 132 metres.

The luffing jib can be extended in 3 metre increments from 24 metres. Its quick set up system is shared with the smaller 300 and 350 tonne models and also with the range-topping 1,200 tonne class AC 1000-9. Transporting the luffing jib

is made easier by using two section sizes.

These allow the pieces with the smaller dimensions to be slid inside the larger ones.

A fixed jib configuration is also available, with offset, as is a short runner type jib.

#### **New SSL**

Another feature is a new SSL Sideways Superlift design. The Superlift arms are now mounted at the front of the boom, on the head of the base section. It means they are longer and better suited to larger lifting capacity. Capacity is 73.5 tonnes at a radius of 9 metres on a 60 metre boom with SSL. At a 13 metre radius with the boom at 80 metres, capacity is 37.9 tonnes. Moving the radius out to 50 metres gives 12.8 tonnes.

The new Sideways Superlift is also easier to handle. Only one wire rope line is needed to connect between the main boom head and the SSL arm. The SSL arms are pinned hydraulically on the main boom so there is less work at height.

The reduced swing radius of 5.6 metres is the result of an improved counterweight design. Maximum counterweight is 150 tonnes, consisting of a 20 tonne base plate and a combination of five and ten tonne slabs according to logistics requirements.



# **WIESBAUER TO GET THE FIRST DEMAG AC 450-7**



Thomas Wiesbauer at German crane rental house Wiesbauer has secured the first unit of the new Demag AC 450-7.

He signed the letter of intent in September 2019 and then signed the purchase agreement in May 2020, on a visit to the factory in Zweibrückebn, Germany. At the same time Wiesbauer took a close look at a prototype with the new crane's project manager Jürgen Schröder. "And what was quite clear was that the AC 450-7 didn't just look good on paper, but in real life too," Thomas Wiesbauer said.

"The AC 450-7 fills a niche that has not been served yet," he continued. He said he can barely wait for the crane to be delivered next year and his family feels the same: brother Jochen, son Florian, daughter Sissi, and his wife Sabine are all equally enamoured with it.

Further to the news (in ICST November) that Tadano Demag has filed for protective shield proceedings in Germany changes nothing from Wiesbauer's perspective, "We think that it was the right decision and the best possible option under the circumstances. And this, of course, means that our partnership with Tadano Demag remains as important as ever," he said. The company has added several Tadano and Demag cranes to its fleet over the years and Wiesbauer said he is confident that this will continue and that Tadano Demag will be able to do everything it takes under the protective shield proceedings to make it happen.

Pictured, from left to right, are: Michael Zieger, Tadano Demag sales manager; Frank Schröder Tadano Demag product management director; Sabine Wiesbauer; Thomas Wiesbauer; Jens Ennen, Tadano Demag CEO; and Matthias Roth, senior manager, concept design, Tadano Demag.

### More capacity

A counterweight frame is available that can increase swing radius and give more

capacity, especially in SSL configuration. Adapters are also available to allow use of slabs from other large Demag cranes customers may already have in their fleets.

The manufacturer said the 8.45 metre outrigger base is at the level of a 6-axle crane. There are five outrigger width positions to give choices on sites with little space.

A new assistance system is available called Demag Surround View to help with crane positioning on site. It uses six onboard crane cameras to show the possible outreach of the outriggers and the tail swing radius at the current position of the crane. On a display in the carrier cabin the driver can also see the different outrigger

widths to best place the crane. "This reduces time-consuming measuring and trial and error when



location, so that the crane can be ready for operation more quickly," explained product marketing manager Michael Klein.

Demag Surround View helps on the road too, helping to draw the driver's attention to hazards and obstructions.

With the crane set up and operating, the IC-1 Plus control system gives the maximum available capacity for all boom positions and slewing angles taking into account the outrigger configuration. IC-1 Remote can also be specified to read and diagnose all important crane data.

## **Carrier choice**

Two carrier variants are available. The standard one allows travel at 12 or 16.5 tonnes per axle with the boom on. Removing the boom reduces the axle load to just over 9 tonnes. The second carrier version has a removable rear outrigger box. "With this solution we provide our customers another possibility to reduce gross vehicle weight," said Michael Klein. "The quick connections allow our customers to remove the outrigger box very quickly," Klein added.

Power for the new crane is from a 480 kW (625 HP) Mercedes-Benz diesel. It complies with EU Stage V and Tier 4 Final emissions requirements and is compatible with Tier 3. The Mercedes-Benz transmission has a turbo retarder clutch, for smooth starts from rest without slipping a dry clutch, and an integrated retarder. All seven axles are steered and four are driven.

Demag said its new AC 450-7 is powerful like an 8-axle crane and compact like a

looking for a 6-axle crane. The carrier is 15.99 metres long and the total overall length is 17.62 metres

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# The strong survive

The market might be tough but rough terrain cranes are built to withstand harsh conditions. CHRISTIAN SHELTON reports

hen we last looked at the rough terrain (RT) crane sector, 12 months ago, the market was decidedly depressed with Link-Belt being the only large manufacturer to launch a new RT at the year's biggest trade show, Bauma. This year, there's good and bad news. The bad, you've guessed it, is Covid-19 which has disrupted all crane markets globally. The good news? There are still signs of positivity with new crane orders being fulfilled globally, new dealership announcements, range updates, and at least one new model launch.

The first units of US manufacturer Link-Belt's new RT, the 110 tonne (120 US ton) capacity 120 RT, were delivered domestically and internationally in fourth quarter 2019.



Kato has launched the 30 tonne capacity SR-300LX for the global market

International shipments went to Jaidah Motors and Trading Co. in Doha, Qatar, and Civilia S.A. in Bogotá, Colombia.

The 120|RT, with its six-section 11.6 metre to 50 metre pin and latch formed boom, aims to meet demand for larger capacity rough terrain cranes. "The trend is growing towards larger capacity cranes," says Kelly Fiechter, product manager rough terrain cranes at Link-Belt. "The 100 to 110 ton class is the most popular. Demand to work at radius, as well as up and over, continues to require higher capacity cranes."

#### **New model**

At the other end of the market, Japanese crane manufacturer Kato Works has launched a 30 tonne capacity rough terrain crane, the SR-300LX, for the global market. The SR-300LX has a four-section hydraulic round boom that extends from 9.35 to 30.5 metres and a 13 metre super long luffing jib. Its 30 tonne capacity is available at a three metre radius. The maximum boom lifting height is 31.2 metres. The jib's maximum lifting capacity is 3.5 tonnes at 75 degrees and the crane uses a Mitsubishi 6M60-TL engine.

Kato says the operator's cab has an ergonomic design with a joystick lever, an



armrest, seat suspension, and an adjustable sunshade. An ACS (Automatic Crane System) includes an automatic safety control that responds to any unexpected changes in operating configurations, while a range of limiting functions are designed to increase safety during operation. The ACS has a colour LCD and illustrated key switches for fast identification of operation functions.

The crane can be specified with a winch view camera, ACS outside indicator, a slewing warning buzzer, a fan, an AM/FM radio, a fire extinguisher, a Kato Crane Operation Recorder (K-COR), and an anemometer.

The carrier can be specified with a spark arrester, a rear-view camera, and a right-hand side view camera.

# **ROUGH TERRAIN CRANES**

Kato Works has also made its 51 tonne capacity SR-500LX (left hand drive) rough terrain crane available for the global market. First launched in October 2019, the model has a 42 metre boom and 13.7 metre super long luffing jib (EJIB). It is equipped with high resolution display ACS moment limiter with a K-COR data logger.

One of the first SR-500LX units was sold to Singapore-based construction and integrated maintenance solution provider Mun Siong Engineering by heavy lifting service provider and crane rental and sales firm Sin Heng Heavy Machinery. This was the first SR-500LX in Singapore.

#### Wheeler dealer

Terex Cranes has a new dealer for its rough terrain cranes covering Portugal and the islands of Cape Verde and São Tomé and Principe. Terex has appointed Portuguese company Auto Mecânica Alvorgense (AMA) as its RT dealer for these areas. The two companies have worked together previously. "AMA has a long history with the Terex



portfolio," said Guillaume Bertrand, Terex sales manager RT cranes. "We are confident their knowledge about these markets will reinforce our market share and bring us new opportunities."

Terex Cranes is also working with Mauritius-based machinery dealer Leal Equipements Cie (LEC) to provide the Mauritius, Madagascar and Seychelles markets with Terex rough terrain cranes, service support and parts. LEC has recently reinforced its market positioning, with additional business segments namely port, energy, crushing and screening, handling and warehousing with the aim of becoming a 'onestop shop solution provider'.

Terex Cranes has also welcomed Romania-based RET Utilaje to its growing dealer network. RET will offer Terex RTs across Romania.

Zoomlion says it has North American dealership opportunities as its ZRT850 will have arrived in the region by the end of the year. Zoomlion enjoyed success with the ZRT850 in the Middle East following its display at Bauma 2019, selling 47 ZRT850s worth nearly US\$14 million to one buyer.

The ZRT850 has a capacity of 85 tonnes and a five-section U-shaped boom that extends from 12 to 47 metres. It comes with two trussed fly jibs. The main boom offers a 49.8 metre maximum lifting height while the fly jibs give a 67.1 metre maximum lifting height and a 65.7 metre tip height. The crane has a new boom head and end structure with optimised boom connections designed to provide stronger load bearing capacities.

For crane rental companies looking to minimise transportation costs Switzerland-headquartered crane manufacturer Liebherr says its range of 90 and 100 tonne rough terrain cranes are in demand from the construction, oil and gas, mining, and wind energy sectors – with its busiest markets

# **OIL, GAS AND URBAN CONSTRUCTION SECTORS TARGETED**



Johnson Arabia displays some of its ten new Grove RT550Es, which can each lift up to 45 tonnes

Middle East crane and access equipment company Johnson Arabia has added ten new Grove RT550Es, manufactured by Wisconsin, United States-headquartered crane manufacturer Manitowoc, to its fleet in a move designed to target the oil, gas and urban construction sectors.

Johnson Arabia says, despite a slump in the first quarter of 2020, the longer-term fortune of the oil and gas sector in the UAE looks promising due to new exploration efforts to unearth resources. Natural gas has become a key strategic priority in the UAE, it says, and a string of new investments are planned to further develop its large gas resources and to meet rising domestic consumption.

"The Grove RT 550E fits our needs for this market perfectly," says Martin Kirby, Johnson Arabia managing director. "Its compact design, higher lifting capabilities and manoeuvrability in tight spaces makes it a versatile crane for the UAE market for oil and gas projects and urban development where space is limited."

The Grove RT550E can lift up to 45 tonnes and measures 11.7 metres long, 2.53 metres wide and has a six metre footprint. Johnson Arabia also points out that, being under 29 tonnes in weight, it meets heavy machinery regulations for suitable offshore work.



Zoomlion's ZRT850

**>>** 

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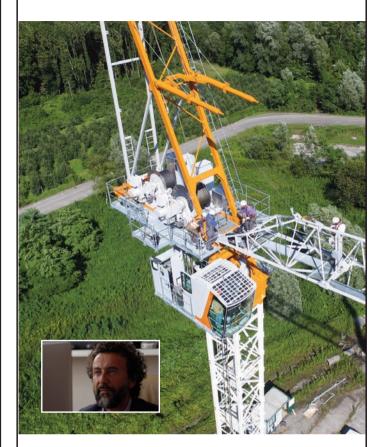
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quality of the drum is as important as the quality of the rope," says Mariano Moritsch, managing director of Moritsch Cranes,

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Goldhofer



A cab tilting mechanism is now available for Tadano rough terrains

being North America and the Middle East. Liebherr also reports increased demand from customers in Russia and Europe.

Liebherr says it generally prefers making two-axle RT cranes instead of three-axles, as this makes the machine more manoeuvrable. For improved transportation logistics in some US states it offers an 80 US ton version of the LRT 1090-2.1 which can operate with only one transportation unit.

Japanese crane manufacturer Tadano reports that, despite the global decline in demand for cranes due to the effects of coronavirus, demand for its RTs remains strong. In North America, it has seen increased demand for RTs with larger lifting capacities. One reason for this, it

with the requirements of ISO 9001 - ISO 14001 - OHSAS 1800

# **MAMMOET AND ITS RT FLEET**

Heavy lifting and transport services provider Mammoet has around 340 RT cranes in its fleet around the world. The bulk of these are in the 75 tonne and 100 tonne capacities, although Mammoet notes that its larger 130 tonne and 160 tonne class rough terrains are becoming more popular.

Mammoet's RT fleet is distributed globally, with hubs in North America, the Middle East, and Africa. "We don't really move these cranes around the world," explains Peter van Oostrom, director global projects and assets, Mammoet. "They are a commodity and moving

them around is expensive, especially if this is done for shorter term projects."

Van Oostrom attributes the popularity of rough terrains in some regions compared to others down to a range of factors including the type of work, such as on project sites, environmental conditions and even road regulations.

Mammoet has around 340 rough terrains

believes, is because of the increased size of suspended loads in factories combined with users looking to improve safety by ensuring performance margins.

Tadano's latest rough terrain models are the GR-1000XLL-4, GR-1000XL-4, and GR-800XL-4 for the North American market. For other markets, it has the GR-1000EX-4, GR-900EX-4, and GR-700EX-4 – which,



including the GR-1000XL-4, are the first Tadano products to be equipped with the new 'Smart Counterweight' feature.

Moving the counterweight further to the rear can increase the lifting capacity by up to about 20 percent, the company claims.

**>>** 



Tadano RTs also have a new crane cab with a colour touch panel display and a cab tilting mechanism. A new 'Automatic Pump Disconnect' function stops the hydraulic pump when the crane isn't being operated which helps to reduce fuel consumption.

A winch drum camera for checking the state of the wire rope during crane operation now comes as standard. The GR-1000XLL-4, GR-1000XL-4, and GR-800XL-4 for the North American market have a right-front camera and a rear camera to enhance safety during travel operation.

These models are the first to come with Clearance Sonar which detects obstacles behind the vehicle and notifies the operator with a buzzer.

# Oil and gas revival

The revival of the oil and gas sector in Brazil is identified by crane manufacturer Manitowoc as boosting demand for RTs. The company has just sold one unit of its largest capacity RT, the Grove GRT9165, to Brazilian company Transdata Engenharia e Movimentação (TEM) - which specialises in complex handling and lifting operations for some of the country's largest industrial segments, including refineries,

wind farms, hydroelectric plants, steel mills. and mining operations.

The crane is the first of its kind to go to Brazil and it will be used for supply and maintenance operations to support offshore oil platforms in the state of Rio de Janeiro. It was delivered directly to an offshore support base in Niterói in February 2020, where it will remain for two years. It will be used exclusively by a TEM customer that specialises in supply and maintenance support for offshore platforms and other oil and gas infrastructure.

Manitowoc has also announced that, due to the popularity of its Maxbase outrigger positioning system on its other crane types,

it is extending the technology into its

Grove rough terrain cranes. Maxbase is designed to allow positioning of outriggers in many

The first **Grove GRT9165** in Brazil goes to TEM

configurations, including asymmetric layouts, so the operator can maximise capacity in the space available.

Testing is underway to equip the Grove GRT8120 as the first RT crane model to feature Maxbase. "With Maxbase, users know they are lifting to the maximum possible capability of the crane in that configuration," says John Bair, Manitowoc product manager for RT cranes. "This allows users to increase utilisation and lower overall project costs.

"With rough terrain cranes serving so many different types of applications and being used all over the world in various climates and conditions, it's important to provide customers with the highest quality so they can feel comfortable knowing their crane will be reliable in the field under any condition," concludes Bair.

This inherent toughness and the consequent versatility of RTs will always be sought after by particular industries and for use in certain locations.

> A revival in existing oil and gas markets combined with manufacturers actively working to expand their sales territories, means the sector looks likely to remain strong, no matter how tough the global market conditions become.

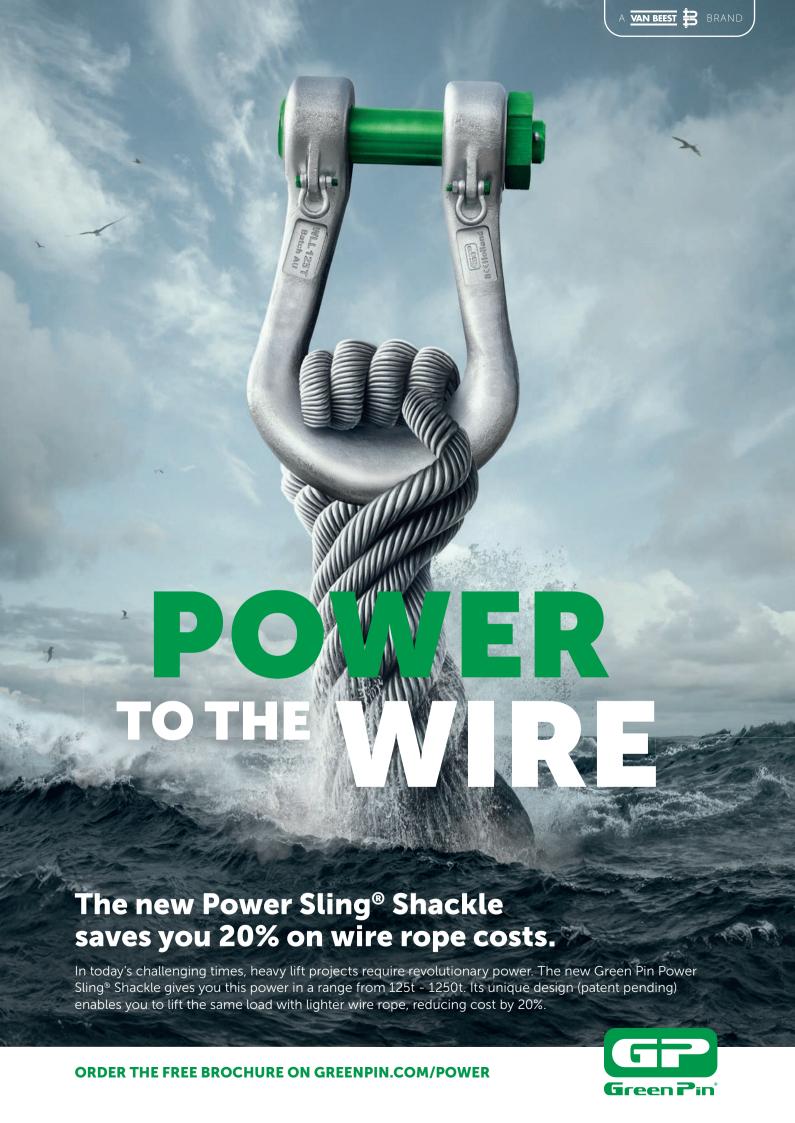


operator ever more important and central.

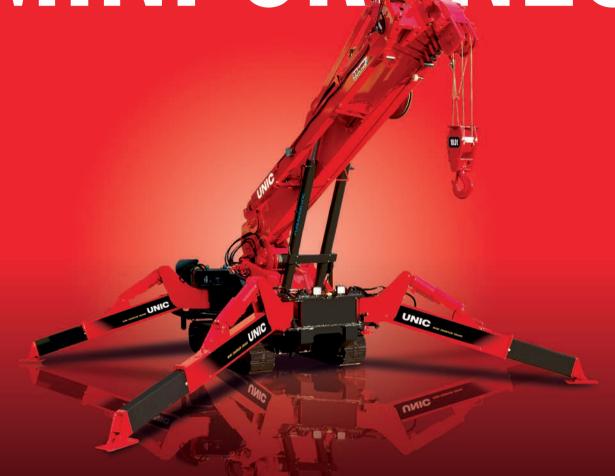
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# Allelys lands historic naval relocation job

Moving a 220 tonne, 57.4 metre long Second World War landing craft was all in a day's work for UK-based specialist Allelys.

The company completed the transportation, offloading and positioning of the vessel, which is the last one in the UK and one of the last in the world. It was a campaign veteran of the D-Day landings on 6 June 1944.

Allely's used 24 axle lines of self propelled modular transporter (SPMT) in a 2 x 4 file configuration. The craft was moved 100

# PENDULAR AXLES FOR



Luxembourg-based trailer and semitrailer brand Max Trailer, owned by trailer and semi-trailer manufacturer Faymonville, is now offering its Max510 low bed series with pendular axles.

The pendular axles are designed for use in difficult track and terrain conditions. According to Max Trailer a total stroke of 600 mm, combined with the pendulum movement of the axles, means any uneveness in the terrain is absorbed and the vehicle remains stable and balanced.

Each axle of the Cometto ETL 5/4E is rated to carry 34.3 tonnes for a total of 140 tonnes

metres from where it was restored, at Portsmouth Naval Base on the UK's south coast, to the barge location. It was rolled onto the barge, transported the short distance to Southsea, and rolled off the barge.

After its 800 metre journey to Clarence Esplanade Allelys jacked it down using eight synchronised climbing jacks. A 200 tonne capacity wheeled mobile crane loaded the landing craft with a Churchill tank and a Sherman tank, both also from the Second World War. The now much heavier load was then moved into its final position. Four lines of heavy duty skidding equipment did the job.

Allelys was also contracted to provide the full scope of engineering and project management, including transport studies, stability calculations, load calculations and offloading methodology from the beached barge to the land.

# **SILO MOVE FOR AIRLAND**



Denmark-headquartered international freight forwarding and project logistics solutions provider Airland Logistics was responsible for unloading operations, stevedoring, clearance, and delivery of 15 silos for a dairy factory in Southern Jutland region of Denmark.

Airland Logistics took charge of the silos at Esbjerg port and then used specialized trucks to transport them 70 km to the factory. The silos measured up to 25 metres long and 5.32 metres in diameter. The total weight of all 15 silos was 380 tonnes. Due to their size and weight, route surveying was required.

The silos will be used for the expansion of the dairy factory to cater for an increased demand for mozzarella cheese.



Allelys skidding the landing craft into position

# **Self-loading Cometto for Rave**

Industrial vehicle leasing specialist Rave Group in France has expanded its fleet with a self-propelled self loading transporter from Cometto.

The five axle ETL 5/4E has a capacity of 140 tonnes. Its load platform is 14.1 metres long by 2.99 metres wide. Industrial applications for the new ETL include carrying long loads such as bar and pipe at factories,

stock yards and construction sites.

The ETL 5/4E has electronically controlled steering and its hydraulic suspension is designed to raise and lower the loading platform. Each suspension unit has a pendular axle and a capacity of 34.3 tonnes. The maximum steering angle for this electronic version is 135 degrees and all wheels are steered.

Its low profile cabin is under the deck at the front and includes features such as reversing cameras to make driving easier and safer. Rave Group, based in Torcy, specializes in the management of transport and logistics services.



When it comes to below the hook, some claim customisation is key while others assert that automation is the future. Can these two approaches coexist? **CHRISTIAN SHELTON reports** 

# ogneni

**Enerpac SyncHoists** working at ITER

odular design spreader beam and specialist engineering company Modulift reports that, since the start of 2020, orders for custom-designed lifting solutions have increased substantially, with no sign of demand slowing. "In September we



achieved our highest revenue growth since 2016," says Sarah Spivey, Modulift managing director. "Our team of engineers and our factory specialists have been designing and building a large number of complex custom lifting solutions. Many of them have been designed, manufactured and delivered in less than a month, including the initial detailed discussion to fully understand the lifting requirements. This is made possible as our sales, engineering and manufacturing departments are now under one roof, since we moved to our new state-of-the-art manufacturing facility last summer."

# Adjustable solutions

"Our custom design solutions are being used across the whole spectrum of the lifting industry for a wide variety of complex lifts," adds Harshal Kulkarni, engineering manager at Modulift. "We have also seen

an increased amount of lifts requiring a low height frame solution requiring adjustability biaxially and performing as multifunctional lifting tools in lifting and spreader configurations... We have found that custom designed products can often be the best solution for lifts like these. We have also been engaged in customising our standard products to suit customer requirements in the most cost-effective manner, too."

Adjustability is also at the heart of the Adjustable Modular Lifting Frame (ADLF160) from heavy lifting and transport specialist Mammoet. According to Mammoet, it makes fast adjustment of rigging possible, enabling the installation of multiple modules per day. The frame is 33 metres long and up to 14 adjustable lifting points. It is four metres wide and this can be extended to 7 metres, in increments of 150 mm.

A centre of gravity compensation system



means the frame can be adjusted in both longitudinal and transversal directions. This, Mammoet says, increases its versatility, making it usable in a wider range than conventional rigging. The frame can be transported in a 40-foot open-top container. A video of the Adjustable Modular Lifting Frame can be seen here: www.shorturl.at/xJLQS.

Mammoet has also partnered with Verton Australia to introduce Verton's load control equipment to its network of clients. Mammoet believes that Verton's lifting spreader bars have the potential to help increase safety and raise safety standards in crane operations around the world.

"Verton lifting spreader bars are fully equipped to remotely orientate any suitable load using angular momentum stored in our revolutionary gyroscopic modules to precisely rotate loads in either direction," explains Trevor Bourne, Verton managing

director, "This completely removes the need for taglines or for anyone to be near the landing area of loads, making jobs safer, faster and smarter. When an international heavy lifting authority such as Mammoet embraces new safer lifting devices in this way, it shows great trust and understanding of the technology and the importance to reinvent lifting operations."

"At Mammoet, our first priority is to ensure that all of our colleagues come home safe each day," adds Joery van Vlierden, global SHE-Q director at Mammoet. "We constantly seek innovations that will enhance the safety of our operations, and so are happy to use Verton's load spreading solutions as part of future crane lifting projects."

Responding to variations in the centre of gravity is a key ability of the SyncHoist system from Wisconsin, USA-headquartered manufacturer Enerpac. The SyncHoist is an hydraulically operated below the hook manoeuvring system for large or unbalanced loads. It comprises four, double-acting, pushpull cylinders connected to lifting points. The cylinders can be suspended directly on ropes or under an auxiliary frame from a crane. They are computer-controlled and allow a crane to accurately hoist and position a load, especially where space is limited.

## **Accuracy for fusion**

Enerpac's SyncHoist is being used on a high profile job at ITER, the world's largest fusion experiment, in Southern France. According to Enerpac, millimetre lifting accuracy is required to lift vacuum vessel sectors weighing 500 tonnes into an up-ending tool for vessel assembly by the ITER Sector Sub-Assembly Tool.

The vacuum vessel comprises nine sectors made of special grade stainless steel. Each sector is 13 metres high, 6.5 metres wide and 6.3 metres deep.

A SyncHoist is connected to four lifting points on a platform for each vacuum vessel sector. "It is essential that we hold the vacuum vessel sector in the plane during lifting. SyncHoist allows us to know the load at each lifting point and control the lift precisely with a 1 mm accuracy," explains Jarl Buskop, assembly engineer, Sector Modules Delivery & Assembly Division, ITER. "Another benefit of using SyncHoist to cope with variations in the centre of gravity is the ability to lift the vacuum vessel sector clear of its surrounding transportation frame where there is only 15 to 30 mm clearance for the rigging platform."

> A 19 x 3 metre custom-designed beam from specialist engineering company Modulift

# **ELEBIA GOES BIGGER**

Spanish crane hook manufacturer Elebia has extended the lifting capacity of its Automatic Lifting Clamps with the addition of the C6. It extends the clamp's maximum lifting capacity from five tonnes to six with a 3:1 safety factor.

Automatic horizontal lifting clamps have been designed for lifting and transferring steel plates, beams and pipes in a secure and safe manner. Once the automatic clamps are fixed to the load that is being lifted, the automated process takes over. The crane driver/operator ensures by using the eMax remote control that the lifting clamps are all in the same position before every lift.

This information is relayed in real time and should there be any difference in the clamp's states, the remote control informs the crane operator immediately.

Once all clamps are confirmed ready, the lifting operation can commence. An LED indicates the Lifting Clamp's status. The C5 can be seen in action here: www.shorturl.at/bvGQ9

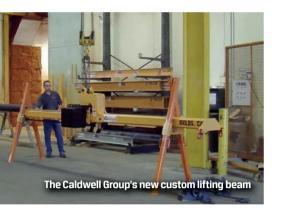
> The C6 has a load capacity of six tonnes

To meet the ITER project requirements, each 1000 mm stroke SyncHoist hydraulic lifting systems was made leakproof. In addition to the vacuum vessel sectors, the SyncHoist lifting system will be used to lift





(Right) Crosby|Straightpoint's Insight system



toroidal magnet field coils for insertion in the vacuum vessel.

# In the range

The Enerpac SyncHoist range includes lifting cylinders with 100 and 204 tonne (110 and 225 ton) lifting capacities, plunger strokes of 1 and 1.5 metres and have a high precision lifting accuracy of +/- 1 mm over the full stroke. A single operator controls and oversees the entire hoisting job, using a portable wireless control unit for remote control of all cylinders.

In addition to synchronous lifting and lowering, the operator is able to lift and lower each cylinder independently for balancing, tilting and positioning loads. For repetitive hoisting tasks, the controller can also be pre-programmed for positioning, tilting and aligning of loads. The wireless controller allows the operator to work at a safe



distance. No cables are needed, so there is no risk of entanglement or tripping hazards.

Auto-levelling technology is a key feature of Illinois, USA-based The Caldwell Group's new custom lifting beam for applications where a crane cannot be positioned over a load due to limited travel or obstructions.

The overhang lifting beam has a counterweight that can move or be fixed; movement is powered or manual – although Caldwell recommends using a powered trolley if several lifts a day are required.

"There are a multitude of applications, such as lifting components during equipment maintenance; placing a load onto, say, the third floor of a building in a construction environment; or lifting a partial width roll of material where a monorail crane is centred for full rolls," says Dan Mongan, senior sales engineer at Caldwell. "We anticipate finding other uses for the beam once word spreads."

Each system is made for a specific application. The largest has been 4.5 tonnes capacity. Customers can request the auto-

leveller feature, taken from Caldwell's Posi-Turner, designed to rotate bulky and awkward objects.

The auto-leveller version senses when a load is out of level, informs the control system and energises the motor to move the trolley, enabling the operator to focus on crane operation. The auto-leveller can be turned off if required.

#### On balance

Another centre of gravity tool is the new Insight software from force measurement equipment specialist Crosby|Straightpoint. It allows users to monitor up to 126 load cells from up to 700 metres away, before and during a lift.

Crosby|Straightpoint claims the Insight system is revolutionary and can be used as an all-round load monitoring product, specialising in four main areas: multichannel display and data logging; load visualisation; proof load testing; and centre of gravity. Included is an SW-D USB wireless dongle so that the product can be used with a laptop, tablet, or other device using Windows.

Using the multi-channel display and data logging mode, users can view and log load data from connected individual and multiple load cells, live on screen and directly into a .csv file for later analysis at speeds of up to 200Hz. The visualisation mode is designed for more complicated lifts. It allows a photo of the lift to be imported in addition to drag and drop load cell displays, making the screen look like the lift. Proof load testing capability allows real-time graphing of load tests and auto-generates test certificates. Finally, Insight can be used to weigh and calculate the centre of gravity for large items.

Considering how fast technology has permeated all aspects of our lives, it is little surprise automation is becoming prevalent in all aspects of lifting, including the below the hook sector. Yet, as we all know, every lift is unique so customisation will always be required. The examples above suggest the future will be where customisation and automation not only co-exist in harmony but complement each other.

# REMOTE CONTROL TOOLING

Belgium-headquartered global heavy lift and transportation specialist Sarens used various items of below the hook rigging gear to monitor the weight of seven 85 tonne Christmas trees (an assembly of valves, spools and fittings used to regulate the flow of pipes in an oil well) for an oil and gas company.

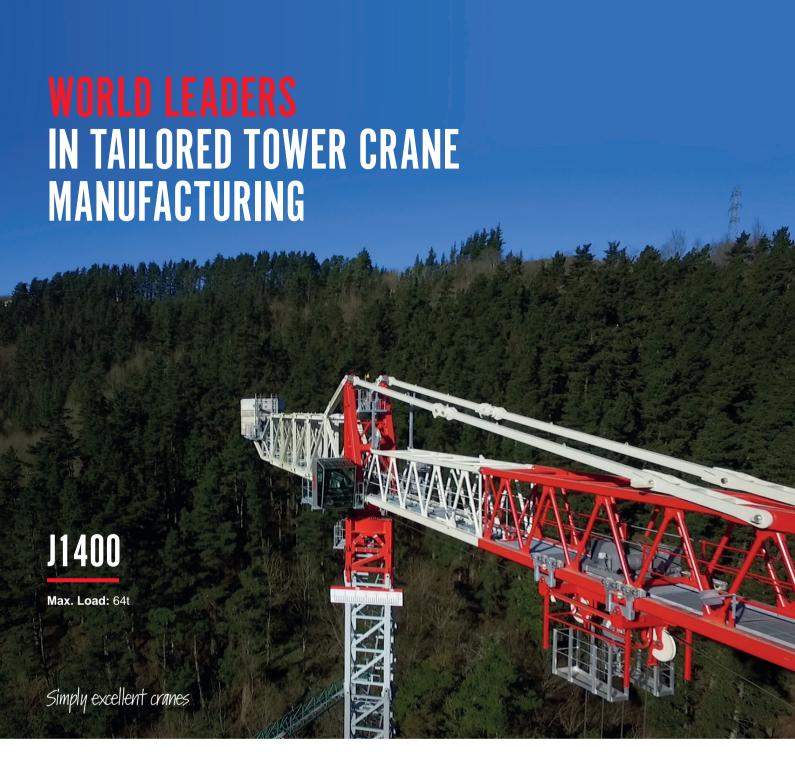
The equipment included chains, slings and shackles, sourced from Sarens' local stock, plus a 100 tonne capacity Radiolink Plus load cell from UK-based load monitoring manufacturer Straightpoint, part of Texas-based lifting, rigging, and material handling hardware company The Crosby Group.

Sarens also used a Straightpoint 1,000 metre range SW-HHP handheld reading



Sarens used a 100 tonne capacity Radiolink Plus load cell from UK-based load monitoring manufacturer Straightpoint

device. "Speed and efficiency of service is paramount to delivery of our services," explains Julio Paco, lifting operations supervisor at Sarens. "Knowing the weight of items as they follow their supply chain to the point of use is a necessary component of that work. With the Radiolink Plus we were able to take readings at a safe distance using the [handheld] device."





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ast year's rise in the ICM20 was impressive enough at 12.5 per cent but It has now done even better with 18.6 % growth over the 2019 table.

It should be noted that of course the 2020 ICM20 is based on figures for all cranerelated sales from the full year 2019 and the 12 month financial year to the end of March 2020. Next year's table will likely show a very different picture as the unprecedented impact of the coronavirus Covid-19 will have hit the annual figures by then.

Back to this year's table, the total combined sales for all 20 companies was US\$ 33.03 billion, against the \$ 27.85 billion of the 2019 table. Like last year a large proportion of the increase was from Chinese manufacturers which had another bumper year in 2019 thanks to a second year of strong demand in the domestic market.

Most notable was Zoomlion's four position rise, from seventh to third in the table, with an astonishing 77.57 % increase in sales. Increases at the other Chinese manufacturers were 49 % for Sanv. 32 % for XCMG, and 10 % for port crane maker ZPMC.

# **NOTES ON THE ICM20**

Figures used in this ICM20 table for November 2019 are from calendar year 2018 or the 12 month financial year to 31 March 2019. The year-on-year percentage change figures for revenue mentioned in the article are normally calculated in the reporting currencies of the manufacturers or are supplied by the manufacturers. In some cases, where stated, they are calculated from the figures given in the table which are conversions to US dollars from the various reporting currencies. For the figures in this year's table the exchange rates from the reporting currencies into US dollars were as follows:

Euro 1.00 = US\$ 1.6508 US\$1.00 = JPY 104.660 1 CNY (RMB) = US\$0.14947 US\$1.00 = CNY 6.68989 US\$1.00 = RM (MYR) 4.15758

Exchange rates on 02 November 2020 from xe.com (Table does not account for exchange rate fluctuations from year to year)

# More leaps

For the third time in a row the ICM20 ranking of the world's largest crane manufacturers has shown an increase, this time even bigger than last year. ICST reports

Zoomlion's increase was enough to put it one place in front of fellow Chinese manufacturer XCMG. Sany moves up two places from 10 to 8, XCMG holds fourth and ZPMC drops one place at sixth.

# **Heading up**

At the top of the table Liebherr has pulled away even more than last year from its nearest competitor in the table. Konecranes. almost doubling its lead from last year. It is not just the Chinese manufacturers with double digit sales rises either. Liebherr was up more than 15 % at \$4.7 billion, while Konecranes at \$3.8 billion, was up 4.4 %.

Last year's third place company Cargotec, now fifth, was displaced by Zoomlion, even though it showed a strong 13 % (\$463million) rise to \$2.93 billion. Interesting to note, assuming the recently announced merger of Cargotec and Konecranes goes ahead, this will create a combined total of some \$6.7 billion and put it straight out in front way above all others. The plan is to merge Konecranes into Cargotec.

Talking of mergers and acquisitions, Tadano at seventh place is up two from last year. Its figures include the contribution of Demag cranes from August 2019 to the end of its period (31 March 2020). Tadano acquired

Rank 2020         Company         Sales in US\$           1         1         Liebherr         4,733,295,000         3,907,089,490           2         2         Konecranes         3,844,648,000         3,501,532,272           3         7         Zoomlion         3,310,151,440         1,765,538,210           4         4         Xuzhou Heavy Machinery (XCMG)         3,113,485,613         2,229,185,396           5         3         Cargotec         2,930,681,000         2,467,612,178           6         5         ZPMC         2,459,840,037         2,114,795,595           7         8         Tadano         2,130,000,000         1,720,000,000           8         10         Sany         2,089,363,290         1,323,173,208           9         6         Manitowoc Cranes         1,834,000,000         1,850,000,000           10         9         Palfinger         1,685,140,000         1,550,595,636           11         12         Columbus McKinnon         876,282,000         839,419,000           12         13         Kato Works, inc IHI cranes         744,256,000         783,972,255           13         15         Sennebogen         672,000,000         462,000,000						
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2       2       Konecranes       3,844,648,000       3,501,532,272         3       7       Zoomlion       3,310,151,440       1,765,538,210         4       4       Xuzhou Heavy Machinery (XCMG)       3,113,485,613       2,229,185,396         5       3       Cargotec       2,930,681,000       2,467,612,178         6       5       ZPMC       2,459,840,037       2,114,795,595         7       8       Tadano       2,130,000,000       1,720,000,000         8       10       Sany       2,089,363,290       1,323,173,208         9       6       Manitowoc Cranes       1,834,000,000       1,850,000,000         10       9       Palfinger       1,685,140,000       1,550,595,636         11       12       Columbus McKinnon       876,282,000       839,419,000         12       13       Kato Works, inc IHI cranes       744,256,000       783,972,255         13       15       Sennebogen       672,000,000       462,000,000         14       11       Terex Cranes (est)       599,000,000       1,300,000,000         15       14       Link-Belt       486,999,078       522,531,200         16       16       Kobelco Cranes Co		2019	· · ·			
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11       12       Columbus McKinnon       876,282,000       839,419,000         12       13       Kato Works, inc IHI cranes       744,256,000       783,972,255         13       15       Sennebogen       672,000,000       462,000,000         14       11       Terex Cranes (est)       599,000,000       1,300,000,000         15       14       Link-Belt       486,999,078       522,531,200         16       16       Kobelco Cranes Co       436,015,293       458,963,466         17       17       Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)       330,751,953       330,751,953         18       18       Furukawa Unic Corporation       303,766,000       268,374,297         19       20       Fassi       226,490,000       213,000,000	9	6	Manitowoc Cranes	1,834,000,000	1,850,000,000	
12       13       Kato Works, inc IHI cranes       744,256,000       783,972,255         13       15       Sennebogen       672,000,000       462,000,000         14       11       Terex Cranes (est)       599,000,000       1,300,000,000         15       14       Link-Belt       486,999,078       522,531,200         16       16       Kobelco Cranes Co       436,015,293       458,963,466         17       17       Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)       330,751,953       330,751,953         18       18       Furukawa Unic Corporation       303,766,000       268,374,297         19       20       Fassi       226,490,000       213,000,000	10	9	Palfinger	1,685,140,000	1,550,595,636	
13       15       Sennebogen       672,000,000       462,000,000         14       11       Terex Cranes (est)       599,000,000       1,300,000,000         15       14       Link-Belt       486,999,078       522,531,200         16       16       Kobelco Cranes Co       436,015,293       458,963,466         17       17       Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)       330,751,953       330,751,953         18       18       Furukawa Unic Corporation       303,766,000       268,374,297         19       20       Fassi       226,490,000       213,000,000	11	12	Columbus McKinnon	876,282,000	839,419,000	
14       11       Terex Cranes (est)       599,000,000       1,300,000,000         15       14       Link-Belt       486,999,078       522,531,200         16       16       Kobelco Cranes Co       436,015,293       458,963,466         17       17       Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)       330,751,953       330,751,953         18       18       Furukawa Unic Corporation       303,766,000       268,374,297         19       20       Fassi       226,490,000       213,000,000	12	13	Kato Works, inc IHI cranes	744,256,000	783,972,255	
15       14       Link-Belt       486,999,078       522,531,200         16       16       Kobelco Cranes Co       436,015,293       458,963,466         17       17       Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)       330,751,953       330,751,953         18       18       Furukawa Unic Corporation       303,766,000       268,374,297         19       20       Fassi       226,490,000       213,000,000	13	15	Sennebogen	672,000,000	462,000,000	
16       16       Kobelco Cranes Co       436,015,293       458,963,466         17       17       Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)       330,751,953       330,751,953         18       18       Furukawa Unic Corporation       303,766,000       268,374,297         19       20       Fassi       226,490,000       213,000,000	14	11	Terex Cranes (est)	599,000,000	1,300,000,000	
17       Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)       330,751,953       330,751,953         18       18       Furukawa Unic Corporation       303,766,000       268,374,297         19       20       Fassi       226,490,000       213,000,000	15	14	Link-Belt	486,999,078	522,531,200	
Cranes Co (Formerly Hitachi Sumitomo)  18	16	16	Kobelco Cranes Co	436,015,293	458,963,466	
19 20 Fassi 226,490,000 213,000,000	17	17	_	330,751,953	330,751,953	
	18	18	Furukawa Unic Corporation	303,766,000	268,374,297	
20 19 Manitex 224,800,000 242,000,000	19	20	Fassi	226,490,000	213,000,000	
	20	19	Manitex	224,800,000	242,000,000	

the Demag wheeled mobile and crawler mobile crane business from Terex. As is to be expected, Terex Cranes has dropped a further three places to 14th from 11th.

Former second place Terex Cranes had its biggest drop (from 2nd to 9th place) about three years ago when it sold its Materials Handling and Port Solutions business to Konecranes, which jumped from 5th to 2nd place as a result. In the absence of separately broken out figures for Terex Cranes it is an estimate for annual sales of rough terrain, tower and Franna pick and carry cranes.

Back to Tadano, the addition of Demag helped increase overall sales and Tadano crane sales were also up, helping the company towards its stated aim of once again becoming the world's largest crane manufacturer, a position it held about 20 years ago. The aforementioned merger of Cargotec and Konecranes won't help it in this regard, however.

Moving down the table, Manitowoc at 9th has dropped three places. It is the first company we come to showing a decline in sales, albeit just 0.7 %, from \$ 1.85 to \$ 1.83 billion. Most of that drop can be attributed

to the rise of the Chinese manufacturers although it has moved down the table for the last five years when it was in 4th place. In such illustrious company (in terms of growth), double digit rises are needed just to maintain position.

Next in the table is Palfinger which, despite celebrating just such a robust run of constant annual growth, not least of which is this year's 12.6 % increase, is back down in tenth place, where it was in 2015. Moving into the second half of the top ten there is less influence from the Chinese manufacturers.

# Into the second half

Industrial crane manufacturer Columbus McKinnon is up one place at 11 with an increase in sales of more than 4 %. The USA-based company added nearly \$37 million in sales in 2019. Also up one place is Kato at 12th. Interestingly, this Japanese manufacturer bucks the trend of needing to grow just to maintain position in that its sales were down 8.8 %.

An exceptional performance from Sennebogen at 13th, up two places, is on the back of its 45 % increase in sales, which was

the German company's best year ever. It moved ahead of Link-Belt which dropped one place with lower sales than last year. That was a smaller drop than Japanese crawler crane maker Kobelco, however, which nevertheless managed to hold onto its 16th place.

The next two companies, also Japanese, Sumitomo's HSC and Furukawa, both held on to their 17th and 18th places, respectively. Sales at the former company were flat while the second one was up nearly 9 %.

Rounding out the ICM20 for 2020, Fassi managed to gain a place at 19th, with a 6 % increase in sales, swapping places with Manitex, which dropped 7 % or \$17 million, to put it into 20th. Hovering just outside the top 20 are Favelle Favco, which includes the Krøll tower crane business, and Chines tower crane maker Yongmao. Both showed strong increases over last year, the former up by \$ 40 million, or 30.78 %, the latter by almost \$20 million, or nearly 9 %.

Presumably this overall bumper year will translate into a more bumpy or at least flat one in the 2021 ICM20 table as the 2020 results will make themselves felt.

Website	Wheeled mobile	Crawler	Tower	Loader	EOT	Dockside	Offshore	Industrial
www.liebherr.com	V	V	V			<b>V</b>	V	V
www.konecranes.com					<b>V</b>	<b>V</b>	<b>V</b>	
www.zoomlion.com	<b>V</b>	<b>V</b>	<b>V</b>	<b>~</b>				
www.xcmg.com	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>				
www.cargotec.com				<b>~</b>		<b>V</b>	<b>V</b>	
www.zpmc.eu						<b>~</b>	<b>V</b>	
www.tadano.com	<b>V</b>	<b>~</b>		<b>V</b>				
www.sanygroup.com	V	V	~			<b>~</b>		
www.manitowoc.com	<b>V</b>	<b>V</b>	V	<b>~</b>				<b>~</b>
www.palfinger.com	V	V		<b>~</b>			~	
www.cmworks.com					~	~	~	
www.kato-works.co.jp	<b>V</b>	<b>V</b>						
www.sennebogen.de	V	V				<b>V</b>		V
www.terex-cranes.com	<b>V</b>		V					
www.link-belt.com	V	V						
www.kobelco-cranes.com	V	<b>V</b>						
www.hsc-cranes.com		<b>V</b>				<b>V</b>		
www.uniccrane-global.com	V	V		<b>V</b>			V	
www.fassi.com				<b>~</b>			<b>V</b>	
www.manitexinternational.com	<b>~</b>			<b>~</b>				<b>V</b>





# The flexibility and combined power of SPMT is key to its success, with end users using it to move increasingly large loads. CHRISTIAN SHELTON reports

# Strength in numbers

elf propelled modular transporter when viewed in isolation, could be described as, well, petite; when axle lines are combined, however, these petite powerhouses sure pack a punch. And as the number of SPMT combinations and configurations available expands, there has been increased demand across a range of industries to move ever larger and heavier items and further too.

SPMT manufacturer Scheuerle, owned by heavy duty and special vehicle manufacturer Transporter Industry International Group (TII Group), says that the expansion of the renewable energy industry around the world is creating demand for its SPMT. This, it says, is particularly evident in the wind power sector, especially in North America, where tax advantages and government procurement goals have accelerated demand.

Part of the SPMT's popularity comes from its versatility, Scheuerle says. Modules can be flexibly scaled in terms of their payload and coupling configurations. This means they are suitable for moving a wide range of wind turbine components. Onshore these components include rotor blades, star assemblies, hubs, tower segments, machinery housings and nacelles. For offshore, components also include anchoring equipment, transition pieces, concrete foundations, tripods and monopiles.

SPMT is also a safe way to transport cantilevered components and items with complex geometries or high centres of gravity, Scheuerle says, while its SPMT range can be coupled with axle lines from Tii sister company Kamaq for further options.

The development of SPMT has seen the payload of heavy goods transport rapidly increase, Scheuerle states, with potentially unlimited payloads being possible. The company points to its record lift of more than 17,000 tonnes as evidence of the possibilities available. Their ability to operate in extreme climates is another plus-point adding to the popularity of SPMT around the world, Scheuerle adds.

Another factor in its popularity is its availability, Scheuerle says. The wide distribution of SPMT axle lines means procurement of the axle lines via its worldwide sales network is problem-free, the company claims.

Due to the widespread use across other fleets, axle lines can also be rented at short notice (cross-hire rental) in order to cover peak demands, it explains.

#### **SPMT updates**

In response to current market demand, Scheuerle has updated its SPMT range with new features. These include a redesigned, more compact remote control (RC) that weighs half that of its predecessor. Despite the reduced size, the new RC maintains full functionality with the same range (100 metres without obstructions). Instant radio signal provides precise positioning, says Scheuerle. Battery life has been increased from ten to 18 hours and the radio remote control doubles as a full cable remote control, so can be used in areas where radio is not permitted. In addition to Scheuerle's SPMT, it can also be used to control the Tij Group's self-propelled InterCombi SP/SPE and K25 SP/SPE series vehicles.

LED lighting has been incorporated into the RC's safety guard to provide a good view of the device »

# HAREKET MOVES HEAVIEST LOAD TO-DATE

Turkish heavy lifting and transportation service provider Hareket Heavy Lifting & Project Transportation moved two 6,200 tonne passenger ships over a distance of 250 metres to a floating dock at the Tersan Shipyard, Yalova, Turkey.

To move the ships Hareket used a total of 200 heavy duty axle lines with 1,600 wheels. The equipment included 56 Goldhofer PST/SL-E heavy duty modules with hydrostatic drive and electronic multiway steering, plus 36 Goldhofer conventional THP/SL heavy duty modules. It took Hareket four days to relocate the two ships in the floating dock with a space of just 1.5 metres between them.

200 axle lines with 1.600 wheels were used to move the ships

when working at night. A visual display in the remote control is available, providing function information and operating status.

The control system and electronics of the Power Pack Unit (PPU) have also been modernised. A 12 inch (300 mm) display shows more information, including the operating status of the drive, engine, cooler and the hydraulic oil level, says Scheuerle.

An additional measuring device for an input-output diagnosis is no longer required.

# In-plant applications

The company is also expanding its PowerHoss SPMT series. The PowerHoss is a compact SPMT aimed at applications such as in-plant heavy goods logistics.

Until now the PowerHoss series has comprised vehicles with either two or four axle lines. A new version with six will soon be available to order, increasing payload capabilities up to 360 tonnes (when using polyfill tyres).

Individual PowerHoss modules can be operated either mechanically or electronically in a loose coupling mode as well as coupled to one another laterally or longitudinally. This, Scheuerle says, means it is well-suited to moving large and heavy machinery, equipment, components and other goods. The additional axle lines also mean even greater stability. PowerHoss SPMT is available with diesel or electric drive at

short notice, Scheuerle adds.

Another company making SPMT designed for in-plant applications is Cometto, part of the Faymonville Group. Its Eco1000 is the company's latest SPMT. It is electronically steered and has an integrated Power Pack Unit for in-plant transport tasks up to a payload of 1,000 tonnes. The vehicle is easy and fast to configure, says Cometto. Three different power pack technologies are available: diesel; hybrid; or electric. According to Cometto, the SPMT can be configured as: 2-axle with two driven axle lines: 4-axle with two or four driven axle lines: 4-axle with two or four driven axle lines and long frame; or, 6-axle with four driven axle lines.

A steering angle of +135/-135° is for maximum manoeuvrability and precision using remote control. The hydrostatic drive system means the Eco1000 modules can

be moved step-by-step and smoothly in all directions, says Cometto.

# **Larger loads**

According to Scheuerle, the increase in payload capacity offered by the latest generation of SPMT is allowing industry to pre-produce and then move ever larger plant and installations. The advantage of

> this for hauliers and shippers is increasingly greater economic efficiency. Scheuerle claims.

To accommodate ever larger loads Netherlandsheadquartered heavy lifting and transport specialist Mammoet, which has more than 3,200 SPMT axle lines in its fleet, has developed a widening adaptor that expands the width of its of split SPMT trailers from all 10 to 21 feet. It has also developed

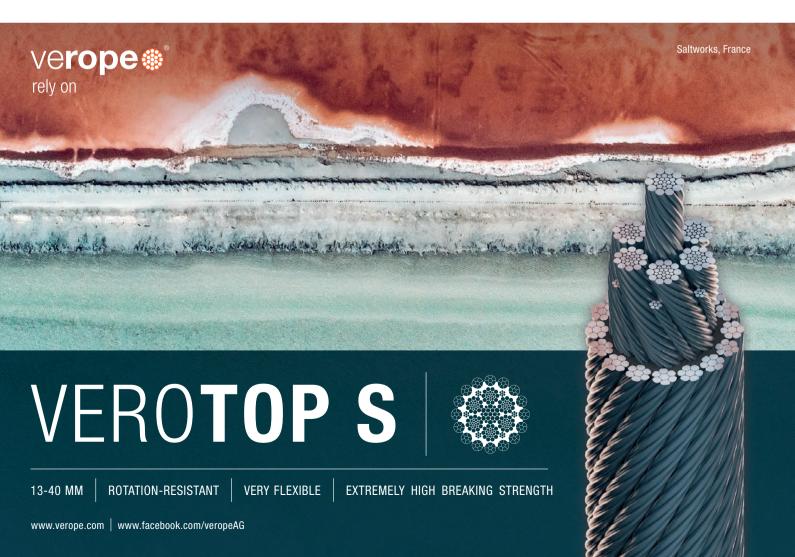
the TPA powered trailer system designed to improve transport efficiency and lower the carbon footprint of long haul projects.

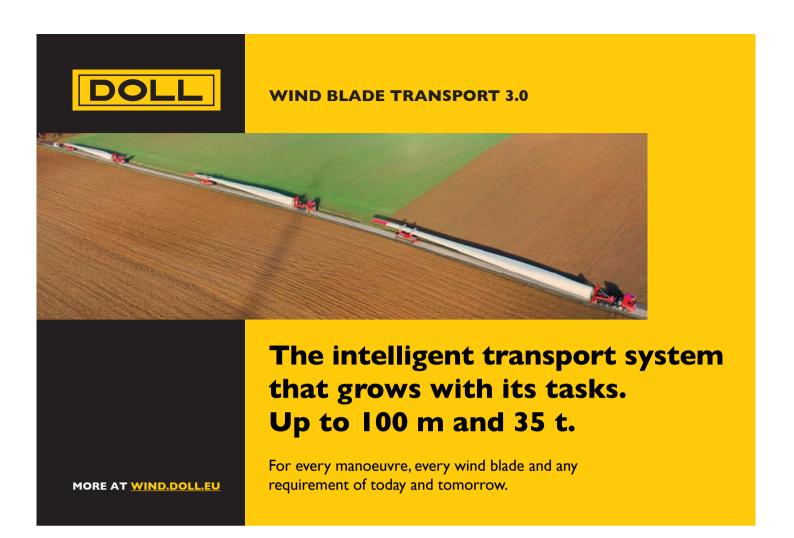
Mammoet's Piet Nooren (VP technical director) and Ludo Mous (operations director), however, say there is a limit to demand for higher capacity axles for transports and load outs of super heavy offshore structures and super heavy lift cargo. "The roads and barges are not yet set up for these capacities," they explain. "Typical barges can handle 10 tonnes per square metre. When handling higher loads, the tyres need to be foam filled and special rims are needed on the axles. 90 percent of these transport jobs go over gravel roads, and these roads don't like hard tyres."

Mammoet also points out the importance of accurately calculating the dynamic stability of loads. If, for commercial reasons, operators are forced to use their equipment at full capacity, Mammoet warns that, if not calculated correctly, it can result in unstable load positions. Because of the trend towards using higher trailer loads, Mammoet decided to examine the current calculation method, which has been used over the last 50 years. "We found that no dynamic force was considered in this calculation," Nooren











and Mous both state. "Because of this, we developed our own in-house EZTrailer programme which considers the dynamic force and can be changed to accommodate any specific trailer arrangement. This ensures that the calculation will be tailormade. With the industry asking to maximise the capacity of the trailers, an accurate calculation which considers all factors is increasingly important." The accuracy of Mammoet's EZTrailer calculation has been confirmed by independent body DNV GL.

Mammoet is also working with DNV on the issue of SPMT maintenance. The company is concerned that SPMT more than 30 years old (where the state of maintenance is not known) are still allowed to be used at full capacity. Plus, there are no guidelines regarding how to maintain a safe trailer. "Mammoet is working with DNV in Europe in hope of developing stability regulations to increase safety across all industries and locations where SPMT is used," Nooren and Mous say.

#### Offshore demand

To meet increased demand for heavy applications Cometto offers MSPE Evo3, which has a 70 tonne axle load capacity. Cometto reports demand in offshore plants in the oil and gas industries and shipyards.

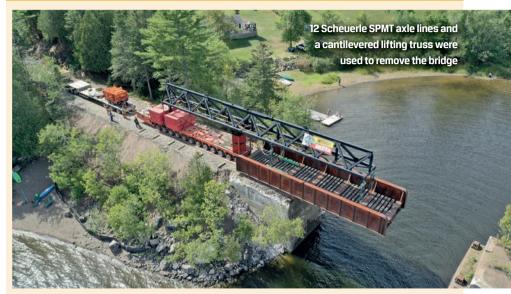
The MSPE Evo3 was used by Russian company Spetstyazhavtotrans, which specialises in shipping oversized cargo, to move a 300 tonne de-isobutaniser column. The column was 70.4 metres long and had a diameter of almost 5 metres. Two turntables and two simultaneously moving Cometto MSPE EV02 SPMT with corresponding PPUs were used to move the column along a route that included curves up to 90 degrees, longitudinal slopes up to 12 percent and lateral slopes up to five percent.

From the above examples, we see the flexibility of the SPMT has led to demand for its capabilities from shipping, offshore, oil and gas, in-plant, and renewables sectors, amongst others. With such a spread of applications, the future of the SPMT mirrors that of its abilities: secure and stable.



Mammoet used 24 SPMT axle lines to move a 235 tonne desalter vessel in Alabama. A video of the move can be seen here: www.shorturl.at/pu]17

#### BRIDGE REMOVAL IN NEW BRUNSWICK, CANADA, WITH SPMT



Canada-based provider of heavy lifting and specialized transport services, Irving Equipment, was contracted by a Canadian telecommunications company to lift and move the Jones Creek bridge that crossed a tributary to the Saint John River in New Brunswick, Canada. The decommissioned rail bridge had become a liability to the telecommunications company, which decided to remove it.

Space to use a large crane was unavailable and a waterborne approach was ruled out due to insufficient water depth. Irving Equipment chose 12 lines of Scheuerle SPMT and a cantilevered lifting truss to remove the bridge, utilising the rail bed leading up to it.

Irving repurposed an existing 100 foot (30 metre) lifting truss as a cantilevered arm extending past the front of 12 lines of SPMT. Some structural modifications were required to allow the truss to be supported in this configuration. A pair of 2.75 inch (70 mm) Crosby turnbuckles along with two 55 tonne Straightpoint load cells located at the rear end of the truss allowed monitoring and adjustment of loads to stay within the design constraints. Four 25 tonne JD Neuhaus air hoists were suspended from the underside of the cantilevered portion above specific pick points on the bridge being removed.

The air lines and hoist controls were routed internally down the length of the truss to keep the operator a safe distance from the equipment. 120 tonnes of counterweight was used in strategic locations to maintain the stability of the hydraulic suspension of the SPMT.

Irving assembled the components at its yard where it performed transport and load tests to 125 percent of the estimated load weight. With a green light from a third party inspector, the components were disassembled and trucked to the bridge site 25 miles (40 km) away.

The laydown area for reconstructing the SPMT assembly was 325 yards away, and at an elevation 35 feet higher than the bridge site in a farmer's field. Irving's sister company, Gulf Operators, performed the civil work and constructed a ramp with a 14 percent grade down to the rail bed. With the majority of the components installed on the SPMT, half of the counterweight was placed toward the front of the deck to aid stability in a three-point suspension configuration as the assembly was moved down the steep slope.

Once at the bottom, the air hoists were attached to the underside of the truss and the front stack of counterweights were moved back toward the rear of the deck to act as ballast to counter the weight of the bridge during the lift.

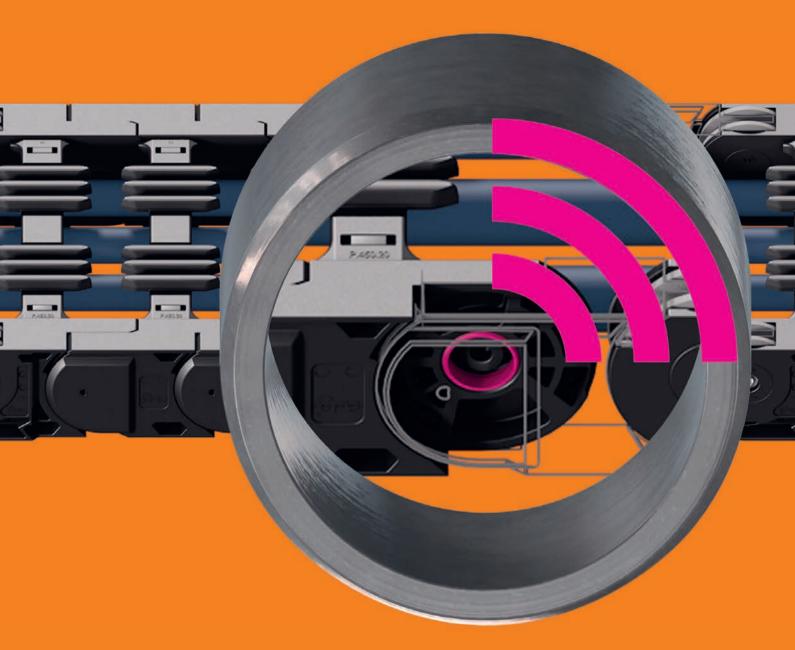
The SPMT suspension was then changed to a four-point suspension configuration. At this point the SPMT were ready for lifting and positioned at the abutment of the bridge, with the cantilevered truss and air hoists above the bridge.

Once the hoists were connected to the bridge, Irving followed a communication plan between the SPMT operator (tasked with monitoring suspension field pressure gauges), hoist operators, and lift director that monitored load cells connected at each pick point, in a coordinated effort to stay within design parameters. As the bridge was lifted clear of the bearings and surrounding terrain, the whole assembly was rolled backward until the bridge was able to be safely lowered onto awaiting cribbing.

In total, the job took three days from arriving on site to leaving.

A video of the project can be seen here: www.vimeo.com/459413104

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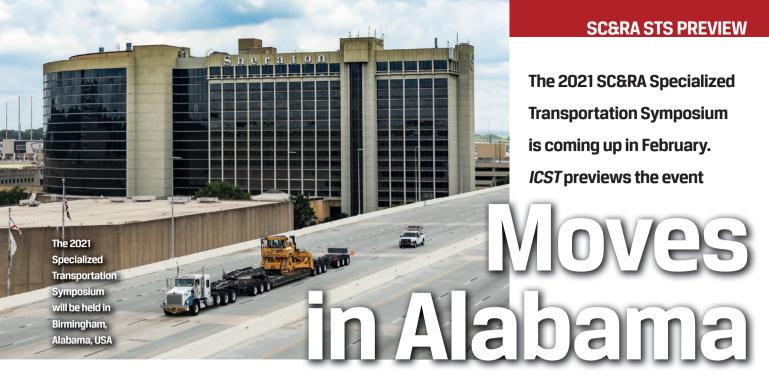


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irmingham, Alabama, USA, will be home to the 2021 SC&RA Specialized Transportation Symposium from 16 to 18 February.

The Symposium brings together industry professionals in the field of oversize and overweight transportation and permitting. Officials discuss permitting harmonisation and safety.

In addition to a busy programme of education sessions, the meeting includes an exhibit centre. Networking is a key feature.

At the time of writing, the intention is to hold this and all other 2021 SC&RA meetings as live events. The 2021 STS will be at the

Sheraton Birmingham Alabama Hotel. Around 500 people typically attend the STS.

#### **Government quidelines**

All live SCRA events in 2021 will follow CDC as well as local and state guidelines, including social distancing, mandatory masks, hand-sanitising stations, a no-handshake policy and using as many outdoor spaces as possible for activities.

As part of this effort, the Association has developed SC&RA Safe Protocol - a set of measures to align with the Centers for Disease Control and Prevention: state and local jurisdiction health guidelines;

and hotel biosafety measures. Some of the other events may have slightly different biosafety precautions because each city and jurisdiction has a different approach. SC&RA Safe Protocols are designed to enhance health and safety measures to reassure attendees and increase confidence in attending in-person events.

Another change in the transportation group at SCRA is incoming vice president, transportation, Chris Smith, who replaces Steven Todd. See the SCRA news for more.

Registration for the 2021 Specialized Transportation Symposium is open at: www.scranet.org/Symposium2021

#### PRELIMINARY PROGRAMME

The first day, Tuesday 16 February, is State and regional meetings, the Pilot car committee and the NAPVSA DVP.

Day two starts with meetings, on AASHTO CTSO freight operations, the Safety committee, followed by the Leadership forum and then the Permit committee. Event sessions then get under way as follows.

- 13.15 14.15 ESTABLISHING SAFETY CULTURE WITHIN YOUR SPECIALIZED CARRIER COMPANY
- Speaker: Brian Fielkow CEO Jetco Delivery and EVP at the GTI Group.
- **14.15 15.15 TIPS FOR WINNING** CONTRACTS WITH THE WIND ENERGY MARKET
- **MANUFACTURERS & SHIPPERS** ■ Speaker: Jamie France (GE Renewable
- Energy); and representatives from Siemens Gamesa Renewable Energy and Vestas.
- 15.15 15.45 BREAK
- **15.45 16.30 MEMBER CARRIER**

#### PERSPECTIVE: ACME TRUCKING

■ Speaker: David Pritchett, VP and area manager at ACME Truck Line; and president, Mike Coatney.

- 16.30 17.15 BILLION DOLLAR BRIDGES: TRB AND FHWA STUDY BRIDGE HITS AND SOLUTIONS
- Speakers to be confirmed.
- 16.45 17.30 BEST PRACTICES AND PERSPECTIVE ON SPECIALIZED TRANSPORTATION BETWEEN NORTH AMERICAN BORDERS
- Speaker: Ernesto Guytan, president and GM at Super Transport International (STI).
- **18.30 19.30 WELCOME RECEPTION**

Thursday 18 February

- 07.30 08.30 BREAKFAST OF CHAMPIONS JOBS OF THE YEAR
- 08.30 09.00 SC&RA TRANSPORTATION ADVOCACY AND WASHINGTON DC UPDATE
- Speaker: Chris Smith, vice president, transportation, SC&RA.
- **09.00 10.00**

Motivational speaker to be confirmed.

- 10.00 10.15 BREAK
- 10.15- 12.00 SC&RA INSURANCE PARTNER PANEL(S). Sessions are 15 to 20 minutes. **NBIS: DATA DRAMA?**
- Bill Hebron NBIS specialized transportation programme manager

#### INSURANCE BEYOND THE POLICY

■ National Interstate, Dan Keenan

#### **ALLIED INSURANCE**

Details to be confirmed.

TRUE NORTH: THE INSURANCE LANDSCAPE WITH REINSURANCE AS A DRIVER IN 2021 AND BEYOND.

■ Speaker: Dan Cook, Details to be confirmed. **USI INSURANCE: MITIGATING RISING INSURANCE COSTS: WHAT GOES INTO A SPECIALIZED** TRANSPORTATION INSURANCE SUBMISSION AND WHAT YOU AND YOUR AGENT SHOULD BE DOING TO PREPARE FOR YOUR NEXT INSURANCE RENEWAL.

- Speaker: James Stovall
- **12.00-15.00 EXHIBIT CENTER**
- 15.00 16.30 BEST PRACTICES FOR SPECIALIZED CARRIERS IN THE COURTROOM.
- Speakers: Bill Kanasky, PH.D., senior vice president, Courtroom Sciences (CSI) Fred Marcinak, partner, Moseley Marcinak Law Group
- 16.30 16.45 BREAK
- 16.45 17.30 PERMITTING PRACTICES 2021: WHAT'S WORKING BEST?
- Moderator and panellists to be confirmed.



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## Hire technology

hen most people think of tech jobs, their first instinct isn't construction but, within the burgeoning field of contech, the demand for skilled-trade workers who possess a comprehensive understanding of the principles of good construction, project management and computer coding, is continuing

Around the world, the fairly recent emergence of the computational engineer position within construction comprises a skill set that's less boots-on-the-ground and more data interrogation. Nonetheless, industry leaders understand that, as the construction industry gets more tech-heavy, there will only be more demand for tech-savvy workers to comfortably navigate the technology stack and comprehend how the built environment works - to identify potential pain points and help those workers in the field perform more efficiently, productively and safely.

In coming years, industry leaders will need an additional type of worker - one who possesses a keen mix of computational. construction tech and building knowledge. But finding tech workers who understand construction isn't always easy.



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Nonetheless, as construction tech continues to flood the market, companies will find themselves endeavouring to keep up with it all, and employees that can organise, comprehend and efficiently apply this tech stack to dayto-day operational productivity will become ever-more vital to success.

#### **New reality**

Where once a construction worker only needed to understand and focus on the traditional jobsite requirements within a project, he or she might now have to juggle several technological and-or datadriven applications connected to the work. Essentially, new skills are being added beneath the skilled-trades umbrella.

Moreover, as construction leans further into the IoT (Internet of Things) era, it will be incumbent on industry leaders to accept and understand that different parts of their workforce will be responsible for different parts of a company's overall success. To that end, what might have once been unthinkable has fast become a reality: the necessity for companies to onboard employees with the ability to tie all the different field technologies together - while processing data on site, and articulating a cohesive message to those in the field.

As a result, small and mid-sized contractors are now looking at filling these roles as much as larger companies. And it isn't really about taking the office IT person and trying to upskill them on construction. That's not enough. An IT department in today's average construction company typically handles the day-to-day hardware and software administration of the company. While you might think it's an intentional and upfront part of the job description, many companies toss IT workers the job of important decision making almost as an afterthought. That leaves those overtasked IT professionals vulnerable to making on-the-spot decisions with limited information and resources.

In fact, this is a new type of employee altogether - one with topto-bottom understanding of the ever-changing world of construction tech, the principles of good construction and project management, and computer coding, all wrapped into one.

By not adapting to this ongoing reality, companies will find it increasingly more challenging to implement new technology and, ultimately, compete for new business.

Obviously, it has to make sense across multiple organisational levels. In the case that it does, in order to complement IT and put the focus on getting the right tech in the hands of staff, companies should consider hiring for this new role, or at least appointing a task force.

While it might take a while to headhunt the right professionals for the job and integrate them into their new roles, it could very well be worth the time. As construction moves more towards tech, successful companies won't wait to find out the hard way how vital these new roles can be.



#### **CHIEF EXECUTIVE OFFICER**

JOEL DANDREA 5870 Trinity Parkway Suite 200 Centreville, VA 20120, USA Tel: +1703-698-0291 Fax: +1703-698-0297



The Association is planning to return to holding live events in 2021, right from the off, with the Board and Committee meetings in January. **MIKE CHALMERS reports** 

# fond van 20)

ost Americans can agree that 2021 will be a reset year. SC&RA will take the first step towards productively pushing the reset button by moving back to live meetings in 2021 - starting with the January Board and Committee Meetings, planned for 6 to 9 January, at the Sun Valley Resort in Sun Valley, Idaho, USA.

Recognising that it's ultimately a balancing act, but nonetheless keeping health and safety as a top priority, the Association is continuously listening to reputable resources and following government and private guidelines to responsibly maintain operations through Covid.

Each live event in 2021 will follow Centers for Disease Control as well as local and state guidelines, including social distancing, mandatory masks, hand-sanitising stations, a no-handshake policy and using as many outdoor spaces as possible for activities.

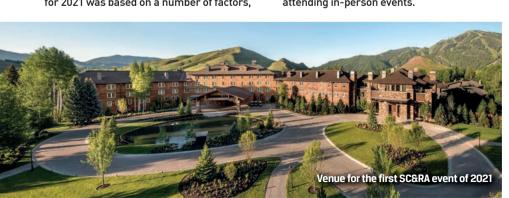
"SC&RA's final decision to go in-person for 2021 was based on a number of factors, including member feedback, internal discussions, news and reports on the decrease of workforce in our industry," said Surian Choi, SC&RA meetings director. "We see the need for our industry to bring back employees and to have face-to-face networking in order to boost sales - and we believe it's possible to host events with the proper precautions in place."

#### SC&RA Safe Protocol

As part of this effort, the Association has developed SC&RA Safe Protocol - a set of measures that align with the Centers for Disease Control and Prevention, state and local jurisdiction health guidelines and hotel biosafety measures. Not all events will feature the same biosafety precautions, as each city and jurisdiction is approaching Covid-19 measures differently. SC&RA Safe Protocols, however, are designed to enhance health and safety measures to reassure attendees and increase confidence in attending in-person events.

Joel Dandrea, SC&RA CEO, pointed out that national trends indicate venues in the meetings business are beginning to open up again, but confirmed that the Association is moving forward with both caution and appreciation. "We recognise that we have to respond to all of our members in different ways," he explained. "That said, we'll be one hundred percent respectful and understanding of those members that can't or won't travel. But for the others who can, we're responding accordingly."

Dandrea is also aware that 2021 meetings likely won't boast record-setting attendance numbers, but he's okay with that. "Again, we're responding to all members and doing the absolute best that we can given the challenges and the circumstances." he said. "We're working hard to make this as familiar and productive as possible while considering the complexities."







He added, "We took some risks in September with the Workshop and some folks were very satisfied and some weren't, and we get it. We tried to do things beyond what other groups were doing in order to reach higher and try harder. One key takeaway was that the mass of members still recognise that there's no substitute for live events, and that's why we're going back in that direction - as safely as possible."

Dandrea also emphasised that for board and committee members who have prescribed attendance requirements, those will be waived for 2021. "We will also consider options for those who seek professional development and education opportunities, but who cannot travel, by utilising the SC&RA Training Center," Dandrea said.

For more information on live events in 2021, see: www.scranet.org



#### SC&RA WELCOMES NEW VP, TRANSPORTATION

Change being what it is, live events won't be the only transition at SC&RA in 2021. Members will notice a new face on the leadership side, as incoming vice president, transportation, Chris Smith, replaces Steven Todd - who spent nearly eight years at the helm of all-things transportation at SC&RA. Smith officially takes over for Todd this month.

Born and raised in Tampa, Florida, Smith earned his undergraduate, as well as his master's degree in public administration, from Florida State University. "Being in Tallahassee, I had a summer stint in graduate school actually working in the Florida DOT permit office," he remembered. "Leaving that job, I thought to myself, that was interesting, but I don't know if I'll ever do that again."

He landed a professional position as vice president of public policy at the Greater Tampa Chamber of Commerce. "That was my first exposure in advocating for businesses, economic development and transportation - which ultimately set the course for my career."

In 2008 Smith took a job at AASHTO (American Association of State Highway and Transportation Officials) in Washington, D.C., first supporting, then managing, the freight programme for its members, including the Committee on Highway Transport (COHT). "Through that work, I was involved with rail transportation, maritime transportation and trucking," he said. "It was COHT where I got my second stint in doing permitting, heavy load issues, economic development and transportation."

The AASHTO position allowed Smith to immerse himself in the world of permitting, over-size and over-weight, logistics, freight transportation and more - all the while juggling similar responsibilities in maritime and rail.

#### Working closely

In 2016, he relocated to Richmond, Virginia, and took a position with the Virginia Department of Rail and Public Transportation (DRPT). "I took my rail experience from AASHTO and brought it to Richmond," he noted, "and since then, I've been the director of policy and communications for DRPT, which involves federal and state legislative advocacy, media and marketing, but exclusively, passenger rail, freight rail and public transportation issues."

Through his career, Smith became familiar with SC&RA. "In fact, I worked closely with Steven Todd and Doug Ball prior," he indicated. "I met Doug years ago, when he routinely attended the trucking committee at AASHTO, and that's how I learned about SC&RA and how engaged they were with state departments of transportation. And Steven was a member of mine with Illinois DOT, so I worked with him there, as well as on the industry task force with SC&RA."

When Todd made SC&RA aware that he'd be moving on, CEO Joel Dandrea reached out. "We had a great conversation," said Smith. "I explained that I felt I'd done all I could do in rail and transit here in Richmond, but I was interested in doing more in advocacy and policy. It brings my career full-circle, merging transportation, economic development and policy."

Smith looks forward to both representing and enhancing the legacy that Todd leaves behind. "Absolutely," he stressed. "I like to think of myself as a translator; I've worked in the private sector as well as government. I speak the various languages, and I really enjoy being able to move in and out of both worlds and support the needs of both - which don't always align. One of my passions is the belief that transportation is a huge driver of

the economy – a huge opportunity for so many people all over the country. UPT2021 for example - I believe my background and network will allow me to convince more states to push more towards full automation of permits, continuing to build on the great work that Steven Todd was able to initiate."

As a message for members, Smith keeps it simple. "We often want to land in a career that doesn't feel like work. I think about each step along my journey, and how I can bring everything I've gained along the way to support SC&RA members' needs. I love what I do; I'm passionate about understanding how government and companies are motivated, what their needs and constraints are. I want to problem solve. I'm really looking forward to being an effective voice and having a long-term positive impact on both the Association and the industry at large."

Chris Smith is the Association's new vice president



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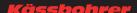
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### Remote control load handling

Danish wind turbine manufacturer MHI Vestas and Verton, the Australian company behind a remote control load orientation device, have partnered to produce new tooling to handle loads during offshore lifting operations, including wind turbines.

Trevor Bourne, Verton managing director, said there would be significant benefits in integrating its technology in MHI Vestas lifting operations, "Working on offshore sites is difficult enough and is further

complicated using taglines to control loads during lifting.

"Our Columbus 7.5 SpinPod will be capable of precisely controlling the orientation of the custom lifting yoke and its load, including setting and holding a desired orientation, even under the most challenging conditions.

"[The system] completely removes the need for taglines and for workers to be near the landing area of loads, greatly improving safety and reducing the number of workers required. The precise orientation control



will also enable lifting operations to be completed faster, which is very important in an environment where every minute saved is highly valuable."

For more information see: www.verton.com.au

National Oilwell Varco Norway filed a patent in 2016 on an offshore crane for deep sea hoisting incorporating the winch drum and spooling device in the crane's boom.

The system would mean lighter fibre ropes can be used because it removes the need to use very large winch drums required for such ropes. The design also eliminates the need for drum storage space.

As reported in The Journal of Engineering, "By arranging the winch drum substantially vertically, the potentially large footprint of a long winch drum may be significantly reduced." The new design also allows pre-testing of the crane winch system onshore before installing the crane offshore.

For more information see: www.nov.com



Brigade offers the Backeve 360°

#### ITI-COVID WHISTLE ALTERNATIVE

With site managers around the world looking to minimise the continued threat of Covid 19, the BlokAlert from **UK-headquartered company** BlokCorp offers a hygienic alternative to construction workers having to physically blow whistles, or to using air horns with their associated waste and ongoing costs.

BlokAlert is a wireless. audio-visual warning system that can be quickly and easily deployed to the hook block of a crane.

When activated by the lifting crew, the BlokAlert receiver gives out a recognisable audiovisual signal that can be seen and heard by site personnel in proximity to the hook block or load.

For more information see: www.blokcorp.com

### Blind spot camera

The Backeye 360° from UK-based vehicle and mobile machinery safety solutions specialist Brigade Electronics is a camera system designed to eliminate vehicle blind spots and assist low-speed manoeuvrability by providing the driver with a 360 degree view of their machine in a single image.

Live images from four wideangle cameras are streamed directly to the driver. These cover the front, rear and each full side of the vehicle. It can also have warning alarms, which sound an alert should a person or vehicle move into a blind spot, or if the driver is getting close to an object while manoeuvring at low speed.

The blending and stitching of the camera views can be configured to meet the requirements of the user and the settings can be saved to upload to identical vehicles in a fleet.

Backeye 360° will work on virtually any rigid vehicle or machine, large or small, said Brigade Electronics.

It works with Brigade's Mobile digital recording (MDR) systemfor evidence.

A video of how the Blackeye 360° works can be seen here: www.vimeo.com/418828282

For more information see: www.brigade-electronics.com



Huisman and Jan De Nul Group have joined in developing technology for two offshore cranes for Jan De Nul's next generation offshore installation vessels. Les Alizés and Voltaire.

Huisman has developed the Universal Quick Connector (UQC), drawing on the expertise of Jan De Nul Group's operations and engineering. The UQC is a modular clamp mounted inside the crane's lower block

which allows lifts via a direct connection. The connector attaches and detaches loads and tools directly to the crane's lower block without rigging, and it is hands-free and fully automatic. The complex task of (de)rigging, typically a manual operation, can be prepared outside the critical path of the lifting operation.

The UQC has an active rotation device to increase control when attaching the load.



The Universal Ouick Connector (UOC)

It allows rotation of the load to fine-tune its orientation without additional taglines. This enables accurate positioning of heavy components with strict bolt pattern tolerances.

For more information see: www.huismanequipment.com www.iandenul.com



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#### **EVENTS DIARY**

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#### 23 November 2020

Shanghai, China www.khl-irc.com

#### **BALIMA CHINA**

24 to 27 November 2020

Shanghai, China www.bauma-china.com

#### **SC&RA JANUARY BOARD & COMMITTEE MEETINGS**

#### 6 to 9 January 2021

Sun Valley, Idaho, USA www.scranet.org

#### **SC&RA SPECIALIZED TRANSPORTATION SYMPOSIUM**

#### 16 to 18 February 2021

Birmingham, Alabama, USA www.scranet.org

#### **BAUMA CONEXPO INDIA**

#### 23 to 26 February 2021

New Delhi, India www.bcindia.com/en/

#### **SC&RA ANNUAL CONFERENCE**

#### 12 to 16 April 2021

San Antonio, Texas, USA www.scranet.org

#### **IPAF SUMMIT** (INTERNATIONAL POWERED **ACCESS FEDERATION**)

#### 18 March 2021

London, UK www.iapa-summit.info

#### IAPA AWARDS -INTERNATIONAL AWARDS **FOR POWERED ACCESS**

#### 18 March 2021

London, UK www.iapa-summit.info

#### **SC&RA CRANE & RIGGING WORKSHOP**

#### 15 to 17 September 2021

Chicago, Illinois, USA www.scranet.org

#### INTERNATIONAL OFFSHORE **CRANE & LIFTING CONFERENCE**

#### 19 to 21 October 2021

Aberdeen (TECA), Scotland, UK www.liftingoffshore.com

#### **BAUMA (MUNICH)**

#### 4 to 10 April 2022

Munich, Germany www.bauma.de

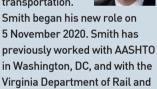
### **PICTURE OF THE MONT**



Jelke de Jong, marketing and communication manager at Dutch trailer manufacturer Broshuis sent us this photo of a Broshuis PL2 pendular semi low loaders with eight-axle lines being used by the US Army. In 2019 the company won a €50 million (US\$56 million) order to supply the US Army with 170 of these low loaders and Broshuis is celebrating having already delivered half the order.

#### **PEOPLE NEWS**

SC&RA has announced CHRIS **SMITH** as the new vice president of transportation.



Smith takes on the role following the departure of

Public Transportation.



**STEVEN TODD** who had been with the association for more than eight years. Todd left

his position at the SC&RA to become president at nationwide pilot car company Pit Row

Transportation Solutions, based in Pell City, Alabama, USA.

■ UK-based company Lifting Gear UK (LG UK), which hires, sells and services a range of lifting products and equipment, has named COLIN NAYLOR as sales and marketing director. Naylor's experience includes 12 years in directorial roles at Speedy Hire. "I am thrilled to be joining the business at this stage of its growth," Naylor said. "I have been most impressed with the ownership of the business; they are hard-working and committed to growing their business in spite of the challenges we see. They're lifting people and demonstrate

a passion and confidence I have not seen in recent years. Refreshingly they are clearly dedicated to serving the UK market and this was the key ingredient in me accepting the opportunity to be part of their story."

#### ■ KARL HAEUSGEN.

chairman of the supervisory board and co-owner of Hawe Hydraulik



the German mechanical engineering industry association. Haeusgen succeeds Carl Martin Welcker of Alfred H. Schütte, who has held the office since 2016. VDMA has also announced the election of two vice presidents, Henrik Schunk and Bertram Kawlath.

Left to right: Lifting Gear UK's Andy Stafford, commercial director; Marina Turner, managing director; Chris Turner, operations director; and Colin Naylor, sales and marketing director



■ Please send picture of the month entries and all other back page-related information to International Cranes and Specialized Transport, KHL Group, Southfields, Southview Road, Wadhurst, East Sussex TN5 6TP, United Kingdom, or by e-mail to alex.dahm@khl.com. Entries for Picture of the month should include: the month and year taken, the place, type of crane, owner and project, plus any other relevant information.



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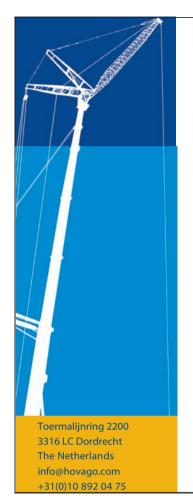


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35 t PPM ATT 400	1998	4x4x4	30,40m + 15,00m	
35 t Liebherr LTM 1030-2.1	2006	4x4x4	30,00m + 15,00m	
45 t Faun ATF 45-3	2006	6x6x6	34,00m + 15,00m	
45 t Faun ATF 45-3	2005	6x6x6	34,00m + 15,00m	
50 t Grove GMK 3050	2003	6x6x6	38,10m + 15,00m	
50 t Terex-Demag AC 50-1	2007	6x6x6	40,00m + 17,60m	
50 t Terex-Demag AC 50-1	2003	6x6x6	40,00m + 9,20m	
50 t Terex-Demag AC 50-1	2003	6x4x2	40,00m + 17,60m	
55 t Liebherr LTM 1055/1	2004	6x6x6	40,00m + 16,00m+2,50m	4
55 t Liebherr LTM 1055-3.1	2005	6x6x6	40,00m + 16,00m	port
55 t Liebherr LTM 1055-3.1	2005	6x6x6	40,00m + 16,00m	Ö
60 t Faun ATF 60-3	2004	6x6x6	40,00m + 16,00m	×
60 t Liebherr LTM 1060/2	2004	8x6x8	42,00m + 17,00m	Ш
65 t Tadano Faun ATF 65G-4	2006	8x6x8	44,00m + 16,00m	
80 t Terex-Demag AC 80-2	2007	8x8x8	50,00m + 17,60m	port
80 t Grove GMK 4080-1	2006	8x6x8	51,00m + 15,00m	0
90 t Liebherr LTM 1090-4.1	2007	8x8x8	50,00m + 19,00m	Q
90 t Liebherr LTM 1090-4.1	2010	8x8x8	50,00m + 19,00m	Ε
100 tLiebherr LTM 1100-4.1	2004	8x8x8	52,00m + 19,00m	_
100 tTerex-Demag AC 100	2005	10x8x8	50,00m + 17,00m	
100 tTerex-Demag AC 100-4	2009	8x8x8	50,00m + 18,00m	
100 tTerex-Demag AC 100-4	2008	8x8x8	50,20m + 1,50m	
110 t Tadano Faun ATF 110G-5	2008	10x6x8	52,00m	
130 tGrove GMK 5130-1	2007	10x8x10	60,00m + 18,00m	
140 tTerex-Demag AC 140	2006	10x8x10	60,00m + 2,50m	

2007

2008

2008

2009

10x8x10

10x8x10

10x8x10

10x8x10

12x8x10

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160 tLiebherr LTM 1160-5.1

200 tTerex-Demag AC 200-1

220 tGrove GMK 5220

220 tGrove GMK 5220

250 tLiebherr LTM 1250/1

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62,00m + 22,00m 68,00m + 17,00m+2,20m

68,00m + 21,00m

68,00m

### **Used Cranes**

#### Demag AC 500-2

 Year
 2010

 Capacity
 500 t

 Main boom
 14.7 - 56 m

 Luffer
 24 - 90 m

 Kilometers
 54,000 km

 Upper hours
 8,200 h

 Counterweight
 180 t



#### Demag AC 100

 Year
 2008

 Capacity
 100 t

 Main boom
 12,5 - 50 m

 Boom extension
 9,2 - 17 m

 Winches
 H1, H2

 Upper hours
 14,057 h

 Counterweight
 25 t + 7 t





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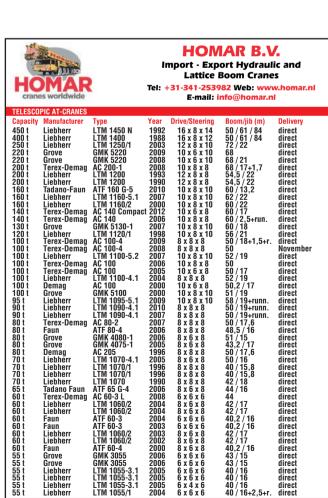
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AC 80-2 ATF 80-4

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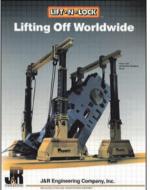






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