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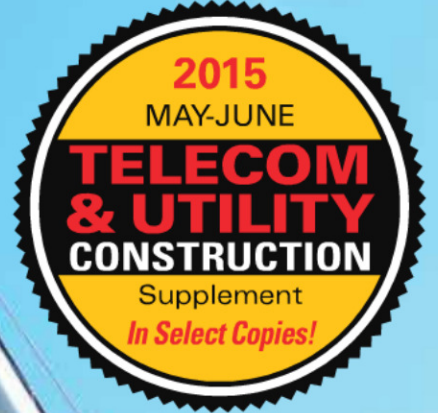
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AT Cranes on Tap

End Users Target Taller
Projects with Longer Booms,
Higher Capacities



When it comes to assigning all-terrain cranes, A-Quick Pick Crane Service chooses capacity over crane type. As on this bridge installment project, larger-capacity machines are being tapped for bigger and larger jobs, explains Chris Schrade, safety director. “[The crane’s] being an AT is the cherry on top when we’re looking for boom length and capacity,” he adds. Photo provided by A-Quick Pick Crane.



Have Boom, Will Travel

Higher capacities and longer reach have AT end users eyeing bigger jobs

Several crane companies in Europe took delivery of all-terrain cranes this spring. In the United Kingdom alone, some 16 new ATs were purchased in a broad range of capacities. Back home here in North America, we tracked orders for at least that many new machines since last summer. If the pace of domestic AT sales is any indication, the work is there despite transportation challenges.

“We like the fact that our ATs offer eight-wheel drive with the boom length we need

and tonnage we need. They don’t make truck cranes with that boom length anymore,” explains Kevin Franke of Fesco, Ltd., Alice, Texas. “And we don’t use rough-terrain cranes because we’d have to haul them on a truck,” added the oilfield service company crane manager. Fesco recently purchased two ATF 180G-5 cranes from Tadano America, Houston.

With a capacity of 200 tons and a maximum lift height of 324 ft., the ATs went right to work holding up E-line and coil tubing

to complete well operations, Franke said. Fracking jobs, typical work for Fesco crews, last about two to three weeks. At press time, one of the cranes was already back in the yard, waiting for its next assignment.

Chasing the work

Last fall, Southern Crane, Raleigh, N.C., took delivery of a Tadano ATF 90G-4 all-terrain crane. Purchased specifically for work on cellular towers, modular homes, HVAC projects, and other taxi rental jobs in the Carolinas, the crane earned it stripes unloading a 48,000-lb. communication building. At the cell site, the crane then set the structure. Though a simple job, it required the crane’s full counterweight—49,163 lbs.

“This crane [was selected because it] only requires three separate picks off our trailer to install maximum counterweights,” Earl Johnson III, Southern Crane president, says. Other cranes in its class require five picks off the trailer for maximum counterweight, he added. Like Fesco, another feature that caught Johnson’s eye was the Tadano AT’s 168-ft. main boom and 59-ft. jib length. The combination allows for quick setup and tear down, even in conditions where there is not a lot of room.

Part of a company-wide planned fleet expansion, the four Terex, two Tadano, four Link-Belt, and two Grove all-terrain cranes that the ALL Family of Companies has closed deals on over the last eight months have already been assigned throughout the company’s 37 branches. ALL’s claim to the industry’s broadest and most modern fleet now includes two each of Terex’s 140-ton capacity Explorer 5500 and 120-ton AC100/4L ATs; two 450-ton Tadano ATF 400G-6 hydraulic ATs; four 210-ton Link-Belt ATC-3210 ATs; and one each of Grove’s 550-ton GMK7550 and 350-ton GMK6300L all-terrains.

Michael Liptak, ALL president, says falling fuel prices were affecting the crane business well beyond just a reduction in travel expenses. “We are expecting to see lots of infrastructure projects like bridges, road work, and commercial construction that the 450-ton AT can easily get after,” he explained in the announcement about the Tadano acquisitions. “Lots of long-planned-for, though stalled, projects are finding their funding.”

The purchase speaks to the surging demand in certain core markets, particularly road and

Manitowoc Unveils Long-Boom AT Model



At press time, **Manitowoc** launched a 275-ton capacity long-boom Grove all-terrain crane for the global market. The company is marketing the Wilhelmshaven, Germany-built Grove GMK5250L globally, and claims the crane offers the strongest reach and load chart of any five-axle crane in its class, as well as the best maneuverability and class-leading driver comfort, which it delivers thanks to its inclusion of a VIAB turbo clutch and integrated retarder.

Manitowoc reports the VIAB clutch module is the first ever on a mobile crane. Eliminating fluid overheating and clutch burning, the component enables wear-free starting and braking. It also contributes to fuel savings and on the GMK5250L fuel consumption is estimated at approximately 30% below that of its predecessor, the GMK5220.

The main boom of the long-boom AT is 230 ft., and includes Grove's Megaform shape. A 69-ft. hydraulic swing-away jib can be extended with a 26-ft. boom extension, two 26-ft. jib inserts, or a combination of both for a total possible jib length of 121 ft. The full jib can also be operated while the main boom is fully extended. The jib offers increased offset of up to 50°, compared to a typical 40° on other Grove cranes in its class. Plus, an optional integrated heavy-duty jib is available.

The GMK5250L is powered by a single engine, a concept pioneered by Grove's Model GMK6400. On the GMK5250L, the engine is a Tier 4 F/EUROMOT 4 Mercedes-Benz OM471LA, a six-cylinder diesel engine with a 520 hp rating and a maximum torque of 2,460 Nm. The engine drives the carrier and powers the superstructure via one angular gear box.

bridge work and power generation. In fact, crane rental demand is increasing in all sectors as the economy continues to improve, he said.

The cherry on top of the fleet

With that demand from core markets in mind, boom length and crane capacity still sit high on AT buyers' list of must-haves. Chris Schrade, safety director for A-Quick Pick Crane Service, says typically a crane buyer looks at the types of machines that suit a certain market sector that company currently serves or wants to break into. But the Derby, Conn., company he works for doesn't view its AT cranes in that way. "We aren't using ATs for that purpose as much as for capacity. Larger-capacity machines built on the AT model are what we're using for bigger and larger jobs. [The crane's] being an AT is the cherry on top when we're looking for boom length and capacity," he explains.

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Product Focus

A-Quick Pick runs an all-Grove AT fleet, and its highest-capacity machine is 275 tons, says Schrade—but the company's 120-ton machines “are out every single day.” He says because the 275-ton AT can be configured differently with counterweights, it's priced as a 180-, 210- and 275-ton capacity machine. “We're basing [that rate] off what's needed for the job, and depending on what the charts tell us, that's how we'll price it out,” he adds.

The GMK5275, purchased in 2007, is tapped for a lot of precast work, whether that's walls on new buildings or drainage systems, vaults, tanks, or the mechanicals on larger office buildings/residential buildings where capacity and boom length are needed. The company will also use it to move large electrical equipment at substations, place generators at office buildings, and even assemble tower cranes on large high-rise buildings. “We did receive word we will probably see more tower-crane action, as there are more coming to our area,” says Schrade.



Photo provided by Link-Belt Cranes

U.S. transport laws place tremendous burdens not only on end users to move their AT cranes from job to job, but also on manufacturers, such as Link-Belt, to produce cranes that are roadable across the country.

Utilization of the company's 120-tonners has been steady, he reported, and is on the rise for the 275-ton machine over the past three to four years. “Back then, we had 40% utilization; last year, we saw 70% utilization, the same as some of our boom trucks. I think it will continue that way, as long as the

economy stays good and construction continues,” he says, adding that hopefulness has the company eyeing new machines in the 350- and 400-ton range with the thought of adding to the fleet.

In Roanoke, Va., W.O. Grubb Crane Rental has captured the AT market via branch

Liebherr Cranes at Work on a Tall Project



Photo provided by Stark Ingenieure

The largest bronze horse statue in the world, a Pegasus, along with a dragon measuring 108 ft. high and 207 ft. long, was being created to spiff up Florida's Gulfstream Park in Hallandale Beach last year. A 400-ton capacity Liebherr LTM 1400-7.1 mobile crane, from the fleet of Pompano Beach-based Allegiance Crane, showed off its wide-ranging functionality on the project.

The order for the statue was awarded to German art foundry Strassacker. Stark Ingenieure, an engineering firm based in Ludwigsburg and Miami which specializes in special support structures and one-off engineering projects, was charged with developing the technical design, planning the erection work, and producing the wide-ranging complex engineering solutions required for the statue.

With the help of the LTM 1400-7.1, a crew from Allegiance Crane took on the installation of the various bronze components in Florida. “Adam Cote, the manager of engineering at Allegiance Crane, and his team were extremely professional on the site,” reported Michael Stark, owner of Stark Ingenieure, and Günter Czasny, deputy CEO. “We worked extremely well and closely with each other. And the crane produced an absolutely amazing performance. It has a compact design, coupled with enormous load capacities, which meant we didn't even have to move it between the various hoists. This saved us around half the time, which was very important to us.”

The LTM 1400-7.1 was equipped with Y-guying and full ballast for this job. The crane setup was completed entirely by self-assembly. The left wing of the Pegasus was the heaviest single component, weighing in at a massive 64 tons. The Liebherr crane had to move this component to a radius of 73 ft., and displayed excellent load capacity for a crane of this class, reported Stark.

He and his team were able to simulate all the processes in advance using the 3D data for the LTM 1400-7.1 so they could find the best way of proceeding. They managed to bypass or eliminate problems in advance so that there were no nasty surprises onsite.

The oldest attraction in Gulfstream Park is a horse racing track, which was built in 1939. A number of investments have been made over the last few years in the spaces around the track to make it more attractive, including retail and entertainment facilities to bring both locals and tourists into the park.

The massive “Pegasus and Dragon” statue is now complete, and completion of the theme park is planned for this summer. The new statue will then become a magnet for visitors and an eye-catching symbol for a new equestrian sports park which will provide a range of entertainment and leisure facilities. A four-dimensional experience theatre will be installed in the lower section of the statue.

expansion and the acquisition of new customers. Like Schrade in Connecticut, Scott McDougle, vice president of operations for W.O. Grubb, believes the mid-size AT sector, in the 120- to 200-ton range, is relatively strong. He reports that larger AT utilization is good, "but with most things, a lot of those jobs are affected by the weather. We anticipate this year to be strong. January and February have been good months, and the outlook looks good," says McDougle.

Like ALL's Liptak, McDougle sees a comeback for road construction. In fact, larger W.O. Grubb ATs have been involved in bridge work, he says. "On the commercial side, things are picking up as well. When that starts to come back, you know the market's starting to turn a little." Specifically, he says, multi-story buildings are going up.

W.O. Grubb has found success in serving the crane rental needs of a broad customer base. The goal is to avoid limiting equipment utilization should one market sector drop off. "To be honest, after what we've been through [with the latest recession], we're too gunshy to be bullish on what the market's going to do, but we think it's going to be relatively strong. We can see an uptick in the industry provided something doesn't happen outside everybody's control," says McDougle.

Rocky roads ahead?

When high-AT-utilization construction sectors are discussed, road and bridge construction is targeted by more than one hopeful crane owner as a source for jobs. Ironically, roads and bridges are also frustrating AT utilization, both in North America and Europe. While AT cranes are attractive because they can be driven on the highway, here, crane weights and the lack of uniform U.S. transport laws hamstring both crane rental companies and end users.

"It's no different than in the past," says McDougle, whose company is based in Virginia. "Roading laws are different in each state [where] we conduct business, and it's always a challenge to legally travel in each state." The situation places tremendous burdens on manufacturers to produce cranes that are roadable across the country, he continues, adding, "It seems to be tougher in our region because the laws are stricter."

European AT crane manufacturers concern themselves more with width than total weight. If a machine is more than 3 meters (10 ft.) wide it becomes expensive to move,

so European factories will do whatever they can to stay within the 3m width. But overseas, if a machine is extra heavy, a manufacturer will just put more axles under it so the per-axle load stays low. In the United States, the federal and state DOTs also worry about the machine's total weight, so sticking more axles under the crane doesn't always solve the weight problem, especially with 80,000-lb. weight limits in many states.

Schrade of A-Quick Pick believes the transportation issue is a critical one for users of all types of cranes, but hits AT users hard.

"We operate in Connecticut, New York, Massachusetts, and Rhode Island, and all those state DOT laws vary. We go across an imaginary border and we're not allowed in with these configurations sometimes," he laments.

Smaller three-axle ATs cannot be used in Connecticut, because of the state's strict axle-spacing laws, says Schrade. Add to that fairly new types of machines that are still considered unique because state DOTs haven't seen a lot of them on the road yet. "It would certainly be easier to do business if states had uniform laws in place," he says. ■

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