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Up and over optimism

Continually gaining popularity across North American jobsites, self erecting tower cranes prove their prowess in a variety of settings



A Potain Igo T 70 self-erecting crane works on a multi-residence building in Seattle, Washington. The crane is being rented by general contractor RAFN Company from Coast Crane Company



This Potain HDT 80 self-erecting crane is building a five-story, 142-unit assisted living retirement complex in Portland, Oregon. The crane was rented to general contractor Yorke & Curtis by Coast Crane Company

They're smaller than their tower crane cousins, can be operated with a remote control and theoretically can kill two birds with one stone on a jobsite. Self erecting tower cranes, a new kid on the block to many contractors, are seeing a steady boom in business after penetrating the North American market within the last decade.

"Self erecting tower cranes have a rapid and simple setup process in comparison to other tower cranes," says Dennis Piatek, branch manager of Coast Crane Company, located in Hawaii. "For instance, these smaller models can be erected in as little as 30 minutes, while the bigger models take about six hours." Hammerhead cranes, also known as flat tops or tower cranes, can take at least a full day to erect, and putting the equipment together usually calls for a large mobile crane. Towers, Piatek says, also can cost more to erect and dismantle than self erecting tower cranes, which is why they are gaining traction in various sectors.

"The market for self erectors has definitely improved over the past few years," Piatek says. "As more and more customers experience the benefits of self erecting tower cranes, they become repeat customers of these cranes."

Electric motors that keep noise virtually at bay, as well as wireless remotes that allow the crane operator to operate the crane from anywhere on the jobsite, including the cab if the model has one, are just a few of the benefits of these tiny towers.

More prevalent

"It's pretty evident that over the past eight years there has been a huge growth in the market share and the use in the market of self erecting cranes," says Matthew Dobbs, North American sales manager for Linden Comansa America. Linden manufactures both tower cranes and self erecting cranes amongst other products. "We're talking about a completely new market that's edging out other types of equipment."

Traditionally, Dobbs explains, a jobsite for a smaller project of about four to 10 stories would call for forklifts, telehandlers, and truck cranes. "Well, all of a sudden you're starting to see self erectors on these sites. As you ride around different cities, you see a

lot more. You used to not see any, and now you see a lot more of these cranes being used."

David Harvard, global product manager for tower cranes and self erecting cranes for Manitowoc, says he notices self erectors typically being used on residential jobsites. "Apart from the 'mobile' versions on permanent axles, you typically need to last at least a week or two to amortize the setup and dismantling time, so that rules out very short jobs," he says. "The product really comes into its own on more congested jobsites, where you can't drive around the whole perimeter of the structure in a forklift. That's when customers really see and appreciate the difference – moving loads around in three dimensions from a fixed point gets you to all corners of the jobsite and is very efficient."

While the main application for self erectors is residential housing, that does not necessarily mean the two-bath, three-bedroom ranch on four acres. "We see (self erectors) on projects elsewhere," says Dobbs. "We are talking about the housing market and how they aren't building as nearly as many condos or single-family homes. With the banks being more restrictive with their loaning processes, what is happening is that more people are renting. There are more people out there who have lost their home, can't but another one or can't get a loan for the house they want. So, you have a lot of apartment building, and that's not going to go away."

While self erectors have experienced growth within the wood framed mixed-use building sector, they also have advantages over other product lines because city growth. "Jobsites are becoming tighter and tighter and less easy to move around in," Piatek with Coast Crane says. "Customers appreciate the benefit of having a small footing design, with large capacity and long reach." The base of a Potain HDT80, Piatek explains, including the wood mats for outriggers,



An IGO MA21 from Coast Crane Company builds Coast Crane's new shop

takes up roughly 20 feet by 20 feet of area.

"The benefit of being able to reach up and over buildings and obstructions makes self erecting tower cranes more versatile versus other lifting equipment that is going to be 'boom bound,'" Piatek says.

Harvard agrees that while the main application is housing, but points out that since the self erecting tower crane itself is a relatively new product on the market and on jobsites, it is still a very small part of the overall equipment market. "We're actually optimistic because to get a customer to be enthusiastic about the crane he or she has already got to be open to doing things in a new way and be prepared to give a new concept a try. When everyone's busy and making money," Harvard says, "there's little incentive to do [try something new]. However, when every dollar counts, customers start looking for better and cheaper methods of doing their work."

What's new?

According to Piatek, Coast Crane enjoys the recent addition of self erectors from Potain, the Igo T series. "These self erectors have lattice masts and longer jib and height under hook lengths than the traditional IGO series," he says. "Coast Crane took delivery of the first Igo T85 in North America. The crane is currently building student housing at the University of British Columbia in Canada."

Potain's IGO T85 has a height under hook of 115 feet and 148 feet of jib. The maximum capacity is 13,228 pounds and

Coast Crane used a self erector to construct one of its own facilities



A Coast Crane Company IGO MA21 self erects

the tip capacity at 148 feet is 2,756 pounds.

Harvard with Manitowoc says some of the developments he has noticed includes 'soft-start' frequency converter mechanisms and self-erectors being mounted on permanent axles for increased mobility. "We have two such models in our range, the Igo MA13 and the Igo MA21," he says.

During ConExpo in Vegas Manitowoc launched its Igo T85, as discussed earlier. "[It's] a relatively light-weight [self erector]," Harvard says, "which suits North American roading requirements, and which has our latest mechanics and control technology for improved safety and operation."

Steve Freckmann, general manager of Dawes Rigging Crane Rental, which is a member of the ALL Family of Companies, says Dawes is a dealer and end-user for Potain self erectors sees a need for large self erecting cranes in excess of what is currently available today. "The market need driving the development includes the need for increased capacity to move larger cranes as well as multiple loads. Our customers and us as a rental house need a self-erecting crane with greater capacities, increased hook height and extended reach relative to what is available today."

Freckmann says that Potain is looking into the prospect of developing a self-erector that is stronger in every sense. "Our customers are clamoring for a larger portable tower/self-erector crane. Not only for the anticipated increased height and reach; but also to



Innovation Place project

Westridge Construction Ltd. was under contract to build a \$12 million, three story office complex with each floor being 20,000 square feet plus a partial basement of 9,500 square feet.

Westridge called upon Eagle West Tower Cranes to supply a San Marco SMH420 hydraulic self erecting crane. The crane has a hook service height elevation of 77 feet and a jib length of 136 feet, 9 inches providing a total service range of up to 273 feet, 6 inches. The crane has a maximum lifting capacity of 8,820 pounds and can lift 2,205 pounds at its jib tip.

According to Eagle West the crane does not require any concrete footings or foundations and has a foot print of 14 feet 9 inches by 14 feet 9 inches. The SMH420 can operate inside 324 square feet of yard space. Another key feature of this crane is that it can be set up set up and operational in just three to four hours.

According to Dave Labbie, the project superintendant, the use of the self erecting crane was able to increase the on-site service area by at least 50 percent while on-site production increased at a minimum of 45 percent.



Eagle West supplied Westridge Construction Ltd. a San Marco SMH420 hydraulic self erecting crane to build a \$12 million, three storey complex



The crane features a service height elevation of 77 feet and a jib length of 136 feet, 9 inches, providing a total service range of up to 273 feet, 6 inches. The crane has a maximum lifting capacity of 8,820 pounds and can lift 2,205 pounds at its jib tip

gain the ability to move self erectors into shorter term rentals, cost effectively versus a conventional tower crane," he says.

Eagle West Equipment, formed in 2005, and located in Abbotsford, British Columbia, is the exclusive dealer in North America for Koenig self erectors, San Marco International S.R.L. hydraulic self erectors, as well as Wilbert tower cranes. Gerry Wiebe, Eagle West's vice president of sales and business development, sees a strong positive growth trend for self erectors in all areas of business and discussed a handful of developments from San Marco's newest self erector.

"The SMH 421 is now the industry's largest, fully hydraulic, self erecting crane," Wiebe says. "This new crane provides hook service heights up to 85 feet, a maximum jib length of 137 feet and a maximum jib capacity of 8,818 pounds. It also features two hydraulically controlled intermediate jib operating positions. Position one at 50 feet, 10 inches with jib tip capacity at 6,614 pounds, position two at 101 feet, 2 inches with jib tip capacity of 3,086 pounds."

Wiebe says the SMH 421 is quickly becoming well know for its speed of set up due to an on board computer that assists, fast line speeds and ease of use.

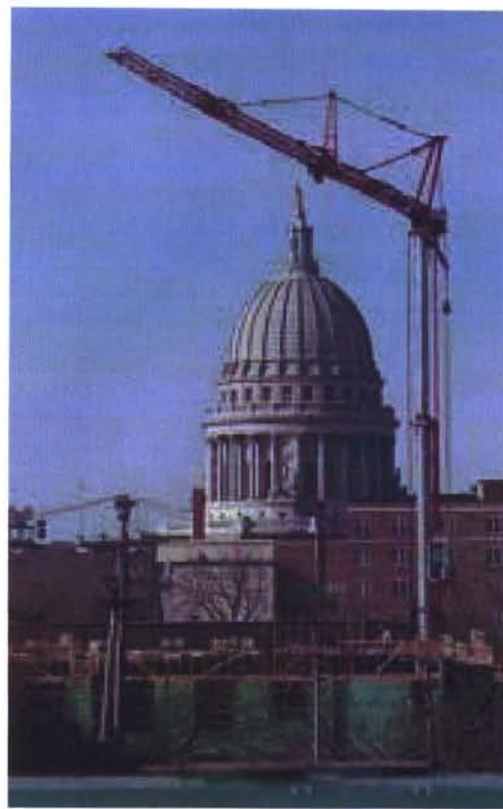
Newcomer: City cranes

Dobbs spoke to *American Cranes & Transport* at length about a new addition to the tower crane family, city cranes. City cranes, which are almost identical to tower cranes, are smaller versions of their bigger counterparts, but have many similarities to a self erecting tower cranes. "The city crane and the self erector both give you the same thing on a jobsite," he says, "they give you small, easy-to-erect cranes that provide you with the advantages of a tower crane, up and over, horizontal travel of a load in a 360 degree direction."

The differences between the two, Dobbs says, is that a city crane acts and really is just like a tower crane but is very much smaller. Also, a self erecting tower crane is a bottom slewing machine and a city crane is a top slewing machine. "In the end, you have less moving parts and pieces on the ground (with a city crane), which makes it safer to be around, not to say that self erectors aren't safe, but there are less materials to walk around."

City cranes, Dobbs says, also have no height limitations, whereas self erectors have a limit. "A city crane can grow with the project, it can be tied to the building. It really acts more and really is just like a traditional tower crane but on a very small scale." These little fellas can be operated from the ground, like self erectors, with a remote control, as well.

"There's a market for both," Dobbs says,



At this 5-story townhouse complex near the Madison, WI, Dawes Rigging & Crane Rental, a used the stand-alone Potain to lift panelized wood frame sections

"but we see a big, big future for small tower cranes."

Not a niche

The markets for small cranes, while growing, are still emerging, according to many sources *ACT* spoke with. There are certain pockets across America where self erecting tower cranes are common, but then there are also areas where they have barely been heard of.

"It's an education process that's going on right now," Dobbs says. "What it is on top of that is these types of machines have had great success in other parts of the world, so the manufacturer says, 'You're making 300 to 400 of these and selling them like hotcakes over in Europe, well, North America's huge, so, these have to work. Let's introduce them to our customers, let's bring these in and erect them and have your contractors come by and get an idea of it and how it works.'"

For now, while the self erecting tower crane grows in popularity, it stays as a strong player in Spain, Italy, France and Germany where tight roads and limited access are the norm. "You'll see thousands of these small cranes being used [in Europe]," Dobbs says.

Give it time and, Dobbs says, "this market will continue to grow as there are many types of projects for use and this tool is not being utilized as it could." **act**