EQUIPMENT FEATURE

LIFT/ACCESS

REACHING NEW HEIGHTS

The world's tallest rotating telehandler arrives in Canada

The world's tallest rotating telehandler has arrived at a jobsite in Scarborough, Ontario.

Allstar Carpentry purchased a Magni 6.46 SH rotating telehandler to help build Daniels FirstHome Markham Sheppard, a townhouse complex that includes a six-story prefabricated wood townhome structure.

The Magni 6.46 SH is one of five rotating telehandlers recently purchased by Allstar. The machine has a maximum lifting height of 46 metres, a maximum reach of 32 metres and a maximum lifting capacity of 6,000 kg.

"That 46 metre machine is the first one in Canada," said Ryan Nash, the Ontario business development manager for Magni telescopic handlers at Stanmore Equipment. "It's a total game changer. It's pretty incredible."

Unveiled at ConExpo in 2017, the 6.46 is designed to work as a telehandler, rough-terrain crane or access platform.

Continuous rotation

The machine's continuous 360-degree rotating upper structure allows the telehandler to sit stationary while it lifts and places loads, which reduces the need for the machine to move during operation.

For operator safety, the automatic leveller and double-armed scissor stabilizers have a wide support base in order to provide stability on various types of terrain.

As well, the rotating telehandler is equipped with a 231 hp Mercedes Tier 4 Final diesel engine with a single, load-sensing piston pump, and an electronically-controlled hydrostatic transmission.

Operators are able to use the 6.46 in strength mode, which operates with a limited boom length, but supports large loads, or in stability mode, which allows for a longer boom range with a lower capacity.

Allstar, based in Maple, Ontario, took possession of its new machines in mid-January. Including the new additions to its fleet, Allstar now owns nine Magni rotational telehandlers, all purchased from Stanmore Equipment.

"This would make Allstar the largest end user of rotational telehandlers in Ontario and possibly Canada. He works exclusively in home building construction," Nash said.

The jobsite

Daniels FirstHome Markham Sheppard sits on a 3.6-acre site purchased from Build Toronto. The project includes three, six-storey mid-rise buildings and four, three-storey stacked townhome blocks.

The condominium complex will include up to 100 affordable housing units mixed in with market rate mid-rise condos and townhomes.

To construct the homes, Allstar prefabricates wooden wall and floor panels at an off-site factory. The Magni 6.46 SH rotating telehandler as well as a Magni RTH 6.39, will be used to lift the prefabricated panels into place.

"It's like a big Lego set or modular construction. They purchased these machines to do that job in place of boom trucks or smaller cranes," Nash said.

In Ontario, Allstar is a pioneer in the prefabricated construction method, Nash said.

"They're light years ahead of other carpenters in Canada. There's quite a few other contractors in the GTA using the machines in this manner because of Allstar," Nash said. "It's really changed the carpentry market."

While the 6.46 is the first of its kind in Canada, the Daniels development is also the first time Allstar has tackled a wooded structure that's six-stories tall.

"This is my first go at six. The government just recently allowed wood framing to build six stories high," said John Angaran, a foreman at Allstar Carpentry. "It's a new thing here in Ontario, but B.C. has been doing it for a while. I think we're on the cutting edge of building technology."

The advantage

After the panels are built at the factory, they are transported to the jobsite on flatbed trucks and offloaded using a forklift. Allstar then uses the Magni rotating telehandlers to lift the panels into place.

"The Magnis are great. They'll go house-to-house. We'll place four or five pieces of a floor section. Once they're put on, the crane comes back and puts the walls on," Angaran said. "One telehandler can handle quite a few crews."

Compared to conventional stick framing, the prefabricated method allows Allstar to dramatically reduce construction time.

"You're cutting down the time on site by at least a third, if not a half," Angaran said. "A regular 2,500 square foot house, I can get up in five days. It's pretty neat to see."

The prefab method also improves upon safety at the jobsite.

"Safety is a big factor. You're not walking on joists on the second floor. Everything is a little more stable," Angaran said.

Furthermore, prefabrication of the panels at a factory helps to ensure accuracy during construction.

"The panel comes out exactly the way it's supposed to because it's made in a controlled environment," Angaran said. "You're not battling the weather; all your doing is putting the panels together."

The future

Although Allstar's workload includes a mix of both the prefabrication and stick framing method, Angaran predicts a shift in home construction.

Although prefab may be met with some hesitation, he explained prefabricated roof trusses were also once met with similar reluctance.

"Now, no one even thinks of conventionally framing a roof," Angaran said. "The marketplace is going away from the conventional stick framer. "Prefabrication is catching on. You save on time, money and material; everything." EJ