

CZM Introduces its Most Powerful Rig



By Barrett C. Rahn, U.S. Sales Manager

CZM Foundation Equipment, a leading manufacturer of American-made foundation drilling equipment continues its commitment to building the toughest line of drilling rigs in the industry by introducing the all new EK300. It is the only machine of its size designed and built in the USA.

The largest, most powerful model ever produced by CZM, the EK300 is manufactured to meet customer demands which exceed the already powerful capabilities of the company's EK250 model. The new EK300 incorporates a CAT 349 base with a fully integrated undercarriage, and delivers greater horse power, higher maximum torque and increased main winch pull-force. In keeping with CZM's customer-focused philosophy, each machine is supported by the extensive Caterpillar® service network – the largest in the nation.

"CZM's drill rigs are the primary asset of many foundation contractors. This EK300 was built using the same concept we use for all our machines – to help ensure the success of every project that uses one of our machines, to minimize downtime on the job site, and to maximize each contractor's return on investment," said Barrett Rahn. "This machine is massive, and more powerful than its predecessors, but it's also designed for ease-of-use, and simple conversion for numerous applications."

Operating at approximately 200,000 pounds and 432hp of gross power, the EK300 has a transport weight of only 123,112 pounds. This machine also features a maximum drilling depth of 200 feet, maximum torque of 252,300 foot-pounds, main winch pull force

of 81,385 pounds, and 87,600 pounds of crowd force with 21.3 feet of stroke.

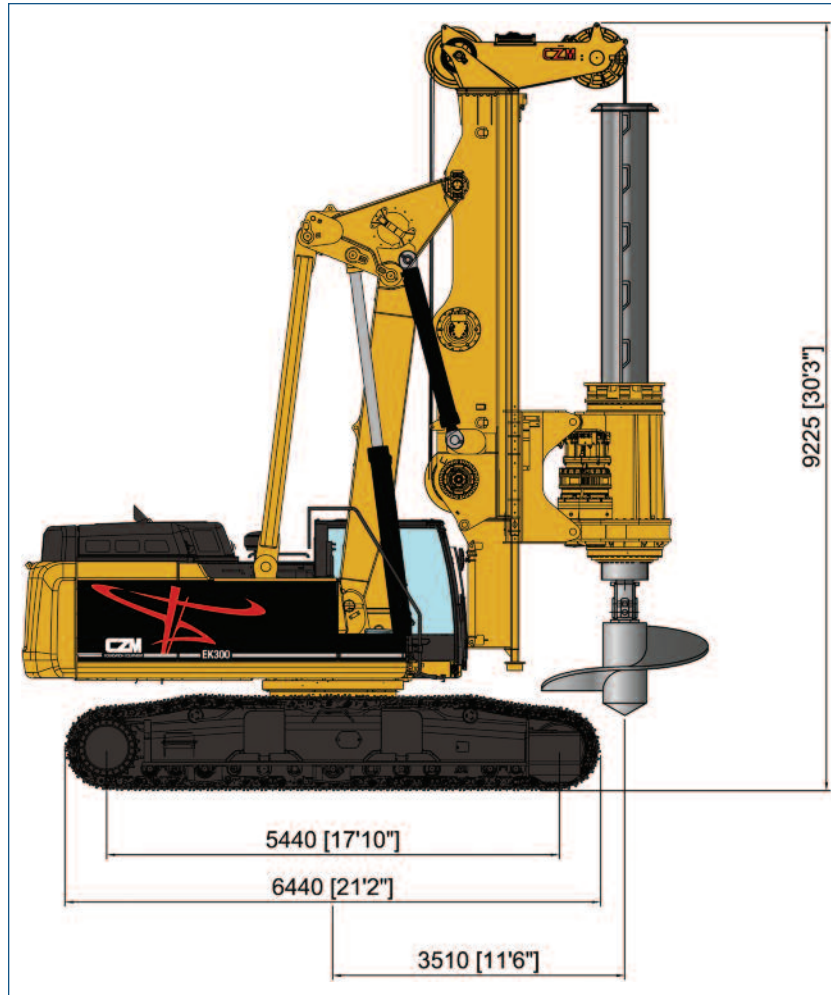
In the short mast (SM) version CZM's EK300SM can work under a minimum working height of 30 feet at its tallest position, and still drill down to 60 feet with a five-element interlocking Kelly bar capable of handling full torque. With the mast boomed forward and down, it is possible to work under as few as 25 feet overhead clearance, making it the shortest low-clearance machine in the industry.

"We're part of a very competitive market and understand the importance of listening to our customers in order to keep producing innovative solutions and better products. We responded to market demands for increased power and reduced transport cost with the EK300," said Giuliano Clo, President, CZM USA Corporation. "This new line of more powerful and versatile equipment opens new doors in terms of its versatility across a wide range of applications, including large diameter Kelly bar, short mast Kelly bar, Secant Piles, Soil Mixing, Displacement Piles, and deep CFA."

Power line contractors requested a larger diameter foundation as a result of changes in power line design. Many are now being built as a single pole, as oppose to lattice structures. CZM designed the EK300 with the capability to drill up to 15 feet in diameter and 60 feet deep on the short mast version. This machine is engineered for simple conversion from the standard mast version to a short mast version with an overhead working height of less than 30 feet.

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Due to the large inner passage in the rotary, the Kelly bar can be built extremely heavy duty, with large diameter tubes and thick keys, what is crucial for the strength and extended life of the Kelly bar at this level of torque and crowd.

The mast of the EK300 is built with high strength steel, increasing the strength of the machine, while keeping it lighter for more efficient travelling, with a reduced transport weight.

Featuring the new CZM Canbus control system, the EK300 is easy to operate. This system has automatic functions that help the operator increase its production. It features auto-level, as well as automatic gear shifting, and it displays all the parameters (depth, torque, pulling force, crowd force, etc.) that the operator needs to get the job done faster, and more efficiently.

The new control system is also accompanied by maintenance information that makes it easy for the operator or mechanic to keep track of all maintenance records. Data transfer by GSM sim cards allows off-site managers to keep track of the location and performance of the machine and maintenance records.

"It's not enough to produce the finest machines in the business. It's equally as important to have the knowledge, technology and the manpower to keep those machines running," said Rahn. "To widen the scope of our sales and service capabilities, and to ensure continued customer satisfaction, optimal rig performance, and minimal down time, we've added sales and service centers in California and Canada."

In addition to the EK300, CZM has also introduced the EK90M. This multifunctional rig is uniquely designed for micropile, jet grouting, segmented flight auger, interlocking Kelly bar, and tie backs.

For nearly 40 years, CZM has been a leader in the foundation drilling industry, offering a comprehensive line of machines engineered for a variety of foundation applications. Our team of highly skilled engineers offers intelligent solutions for development and improvement of the finest product line made in the USA.

CZM products are recognized for their high quality and superior after-sales service, as well as innovative design which incorporates the CAT base, along with first line components of American vendors. Our customer-oriented philosophy relies on qualified professionals to provide services which include corrective and preventative maintenance, commissioning, parts, tools and accessories sales, and more.

For more information call 912-200-7659, or visit CZM-us.com to view the full line of CZM machines.

The information that appears in the Spotlight on Equipment department is provided by ADSC Associate Members through the association's Associates Committee. Submittals should be sent to Committee Chairman, Roy Kern at: akern@ecanet.com. (Managing Editor)



The EK300 is also the answer to numerous requests for a machine strong enough to build Secant Pile walls, installing European style casing deeper than 100 feet and with diameters of more than 4 feet. Its weight, torque and pulling force make the EK300 the ideal machine for this application. Its 21.3 feet of crowd/pull-up stroke allows the contractor to work with 20-foot casing sections, significantly increasing job productivity.

In addition, the machine's 432hp of power means it's well suited for applications that demand high torque simultaneously with high rpm. With that in mind, CZM engineered the EK300 to work optimally for deep soil mixing applications, deep CFA, full displacement piles, and double head CFA for shallower secant piles.

For full displacement piles, CZM created an innovative new design with a Bottom Drive system (patent pending), which will allow the EK300 to reach more extensive depths than standard top drive machines.

Mechanically speaking the EK300 has the longest undercarriage of any machines in its class. This extended undercarriage translates to maximized stability while drilling and moving the machine on the job site. It also results in greater crowd force due to increased reaction force applied to the tool.

The rotary has a large inner passage and three hydraulic motors – planetary gear groups. At 252,300 foot-pounds, the EK300 has higher torque than any other machine of its class in the market.