

CZM
FOUNDATION EQUIPMENT



ES20



Savannah • Georgia • USA

THE COMPANY

CZM has 50 years of experience in manufacturing foundation equipment, offering a wide range of models for the most diverse applications, including bored piles, continuous flight auger (CFA) piles, hydraulic hammer driven piles, secant piles, micropiles, tiebecks, and others.

CZM operates three manufacturing facilities: the USA factory in Savannah, Georgia; the Brazilian factory in the Belo Horizonte area, MG; and the Italian factory in the Ravenna area, Italy. We are leader in the USA and Brazil, and have made over 2,500 rigs, working in more than 30 countries. Our rigs are mounted on Caterpillar Bases.





Belo Horizonte • Minas Gerais • Brazil



Service Centers in USA, Brazil and Italy



Alfonsine • Ravenna • Italy

ES20



ES20

- With a drilling capacity of 20 m depth and 500 mm diameter, this light, easy to transport rig is designed for fast in and out of jobsite application.
- The versatility, combined with low operating and transport costs, makes the rig a highly profitable investment.
- The ES20 is transported complete, with no need to dismantle any component including the Kelly extension.
- Its upper mast folds, allowing an easy and quick set-up on site.
- The high performance CAT 316 base carrier is backed by technical support across the entire Caterpillar network. This ensures fast and affordable availability of parts and service worldwide.
- Likewise, after-sales support for the rig is provided by one of the CZM factories out of Brazil, USA or Italy.
- The CAT Next Generation engine and hydraulics, digitally controlled system gives the ES20 impressive fuel economy.
- This efficiency of the diesel-hydraulic system also translates into superior performance.
- Digital technology also assists maintenance, allowing online diagnostics and corrective action, often without the need for a CZM technician onsite.
- Access to operating and maintenance data is in real time, making management, diagnosis and supervision easier.
- The ES20 stands out as a robust and efficient solution for everyday CFA jobs, combining advanced technology and practicality to maximise efficiency.
- A friction Kelly Bar kit for bored piles is an optional.

ES20

TECHNICAL SPECIFICATIONS

DRILLING

Max. Diameter	300, 400, 500 mm
Max. Depth with Extension	20 m
Extension Usable Length	5.5 m
Max. Depth without Extension	14.5 m
Max. Torque	5,600 kgf.m
Max. Rotation — 1st Speed	30 rpm
Max. Rotation — 2nd Speed	60 rpm
Extraction Force	24,000 kgf
Ground Pressure	0.50 kgf/cm ²

CAT 316 BASE — ENGINE

Power	83 kW / 110 hp
Displacement	3.6 l
Fuel Tank	237 l

MAST INCLINATION

Forward Inclination	3.3 degrees
Side Inclination	1.5 / 1.9 degrees

MAIN HYDRAULIC SYSTEM

Main Circuit Pressure (max.)	350 bar
Main Circuit Flow (max.)	268 lpm

MAIN WINCH

Line Pull	12,000 kgf
Line Speed (1st Layer)	97 m/min
Rope Diameter	19 mm
Drum Diameter	391 mm

AUXILIARY WINCH

Line Pull, 1st Layer	3,000 kgf
Rope Diameter	13 mm

UNDERCARRIAGE

Overall Length	3,750 mm
Length between Rollers	3,040 mm
Overall Track Width	2,760 mm
Track Shoe Width	770 mm

TRANSPORT

Transport Height	3,365 mm
Transport Length	11,500 mm
Transport Width	2,760 mm
Transport Weight	22,000 kg

OPTIONAL DRILLED SHAFT (KELLY) KIT:

Max. Depth	27 m
Max. Diameter	1,500 mm
Winch	12,000 kgf
Machine Weight in Kelly Configuration	26,000 kg

CZM OPERATING COMPUTER

CZM DIGITAL COMMAND AND CONTROL SYSTEM

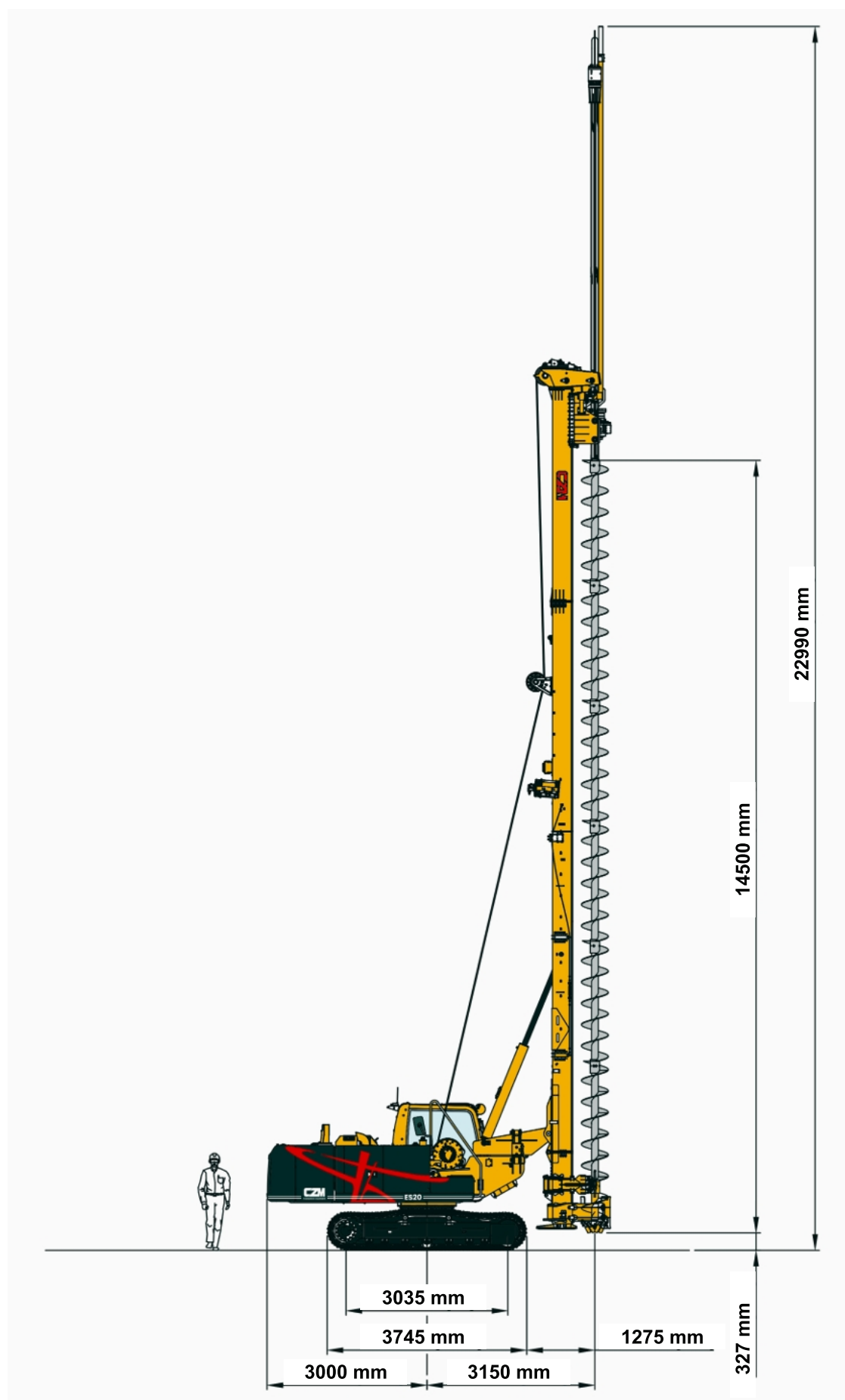
- Automatic gear shifting for the rotary head (3 gears) and the main winch (2 speeds).
- Display with key information: torque measurement, line pull measurement (main and auxiliary winch), rotary head speed (rpm), mast inclination and remote access to the machine by the CZM aftersales team.

And more:

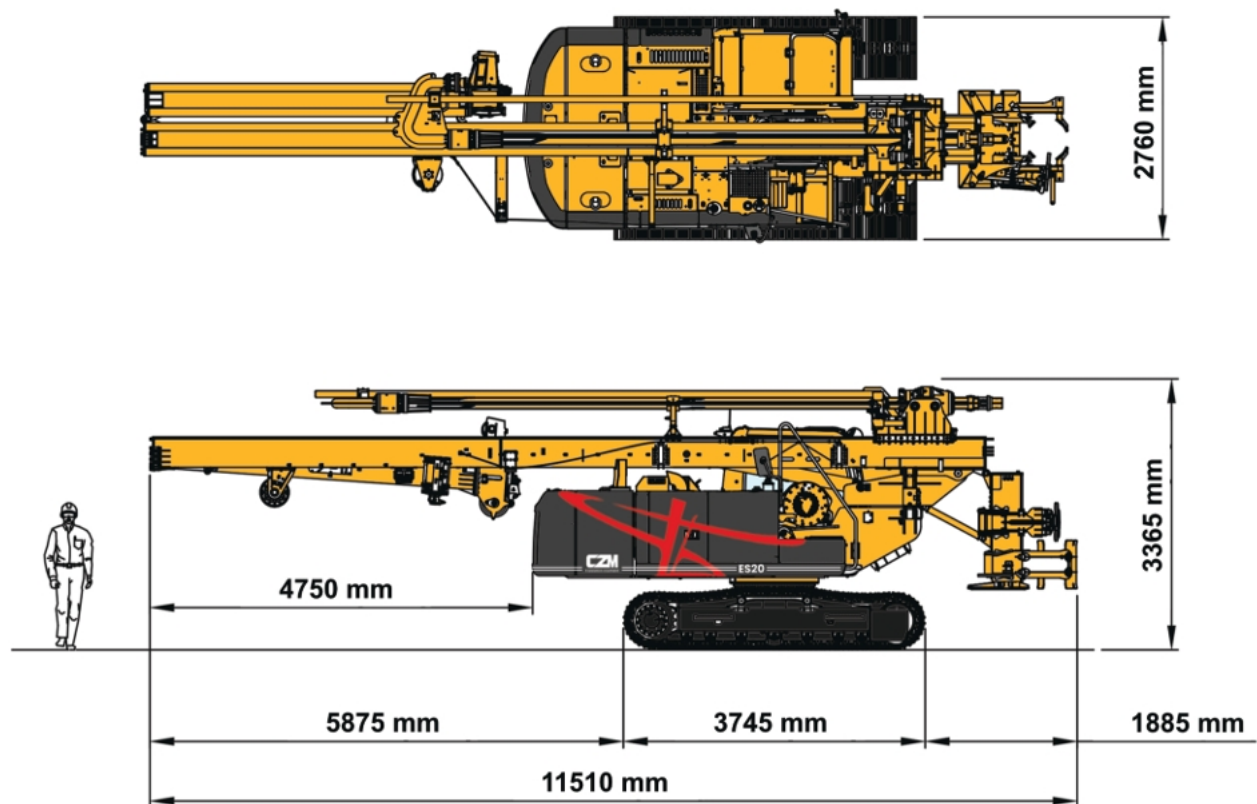
- Up to 15% better fuel efficiency and 15% savings in maintenance costs with the new generation of Caterpillar base carriers.
- Three power modes: Power, Smart and Eco, which automatically match engine and hydraulic power to the drilling conditions.
- Telemetry system.
- The new-generation Caterpillars also come with PRODUCT LINK as standard, which provides: location, machine hours, fuel consumption, monitoring of productivity, idle time and diagnostic codes.



GENERAL DIMENSIONS



TRANSPORT POSITION





Optional: drilled shaft (Kelly) kit







FOUNDATION EQUIPMENT



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