

CZM

FOUNDATION EQUIPMENT



CR18

Micropile Drilling Rig

DESCRIPTION

Reliability; Robustness and Productivity

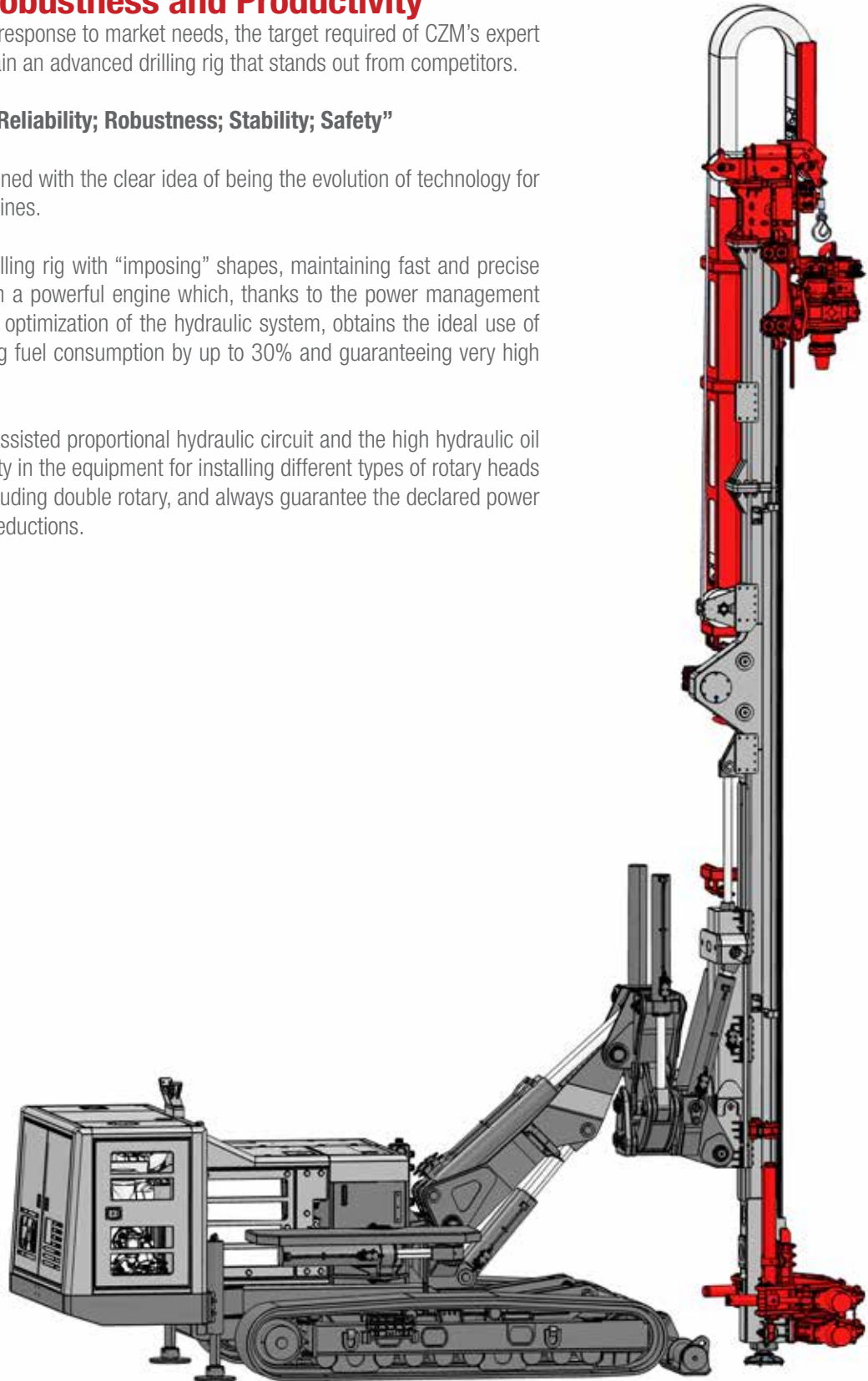
The CR18 is the ideal response to market needs, the target required of CZM's expert designers were to obtain an advanced drilling rig that stands out from competitors.

FOCUS ON: "Power; Reliability; Robustness; Stability; Safety"

Therefore, it was designed with the clear idea of being the evolution of technology for micropile drilling machines.

It turns out to be a drilling rig with "imposing" shapes, maintaining fast and precise mobility, equipped with a powerful engine which, thanks to the power management system (PMS) and the optimization of the hydraulic system, obtains the ideal use of engine power, reducing fuel consumption by up to 30% and guaranteeing very high productivity.

The innovative servo-assisted proportional hydraulic circuit and the high hydraulic oil flow guarantee flexibility in the equipment for installing different types of rotary heads and rotary drifters, including double rotary, and always guarantee the declared power without performance reductions.



TECHNICAL DESCRIPTION

ARTICULATION

- In addition to its larger dimensions, all parts are made in high-yield strength Weldom steel.
- Double boom cylinders ensure safety and efficiency also in more challenging articulation positions.
- The Front of the Wall guarantees a continuous movement of +/- 93°.

MAST

The Mast is modular and built with high-yield strength Weldom steel, guaranteeing extreme safety in all working positions.

- Easy to modulate, crowd-pull-back system is integrated into the base mast and has a maximum pull-back force of 12t (27,000 lbs).
- Sliding Clamps with 1000mm (3ft 3in) stroke and pull-back force of 15t (33,700 lbs) can install double or triple clamps with a maximum diameter of 18.”

ENGINE

310HP engine equipped with PMS for reducing fuel consumption and emissions.

- Full Load Sensing power system operates the hydraulic system according to the drilling requirements to decrease maximum consumption by maximizing system efficiency.
- 11” touch screen for all machine setting operations.

HIGH STABILITY

In the design phase, particular attention was paid to the machine's stability both during translation and during the drilling phase, above all during the execution of tie-backs with the mast transversal to the undercarriage.

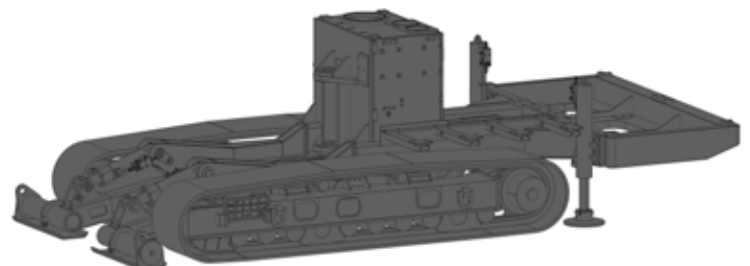
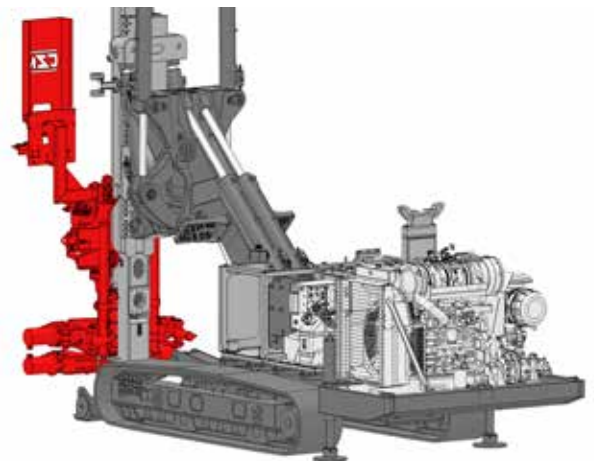
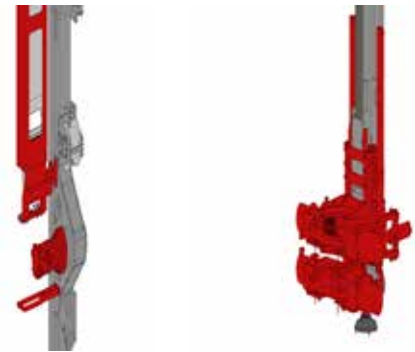
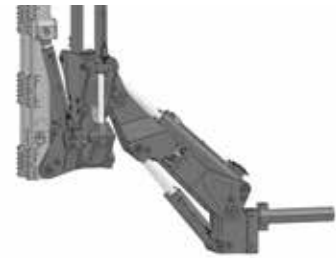
A generous over-dimensioning of the structural parts and telescopic expandable track guarantee safety and maneuverability during translation, positioning and operation movements (including the lattice extensions for the execution of Jet Grouting injections for useful depths of 22m (72 ft)).

HIGH TECH

The electronic system allows you to manage the entire control of the machine itself, for example:

- General telematics
- Fault diagnosis
- Maneuvering speed customization
- Active security
- Passive safety
- Remote real-time control
- Remote control management

The machine is managed entirely by the latest generation Radio Command with a color display.



TECHNICAL SPECIFICATIONS

UNDERCARRIAGE

Wheel base	9 ft 6 in	2,900 mm
Length	11 ft 4 in	3,496 mm
Width (retracted)	7 ft 8 in	2,400 mm
Work position width (extended)	11 ft 6 in	3,400 mm
Shoes width	19.7 in	500 mm
Max. Travel speed	0.93 - 1.5 mph	1.5 - 2.4 km/h

HYDRAULIC WINCH

Pulling force	4,496 lbf	2,000 daN
Drum capacity	150 ft	46 m
Rope speed	196 ft/min	60 m/min

DIESEL ENGINE Cummins B6.7

Net Power	310 hp	231 kW
Diesel Tank	47 gal	180 L
DEF tank capacity	11.9 gal	45 L
Hydraulic Oil Tank	132 gal	500 L

MAST

Modular type	BM5200		ME7200	
	Mast length without winch	24 ft 3 in	7,400 mm	30 ft 3 in
Rotary stroke	17 ft	5,200 mm	23 ft 6 in	7,200 mm
Extraction/crowd force	27,000 lbf	12,000 daN	27,000 lbf	12,000 daN
Extraction/crowd speed	170 ft/min	52 m/min	170 ft/min	52 m/min
Mast slide	49.22 in	1,250 mm	49.22 in	1,250 mm

TRANSPORT DIMENSIONS

Mast type	BM5200		ME7200	
	Length	26 ft 3 in	8,010 mm	35 ft 9 in
Width	7 ft 8 in	2,400 mm	7 ft 8 in	2,400 mm
Height	10 ft 1 in	3,063 mm	10 ft 1 in	3,036 mm
Weight	51,808 lb	23,500 kg	53,131 lb	24,100 kg

CLAMPS SET

	M240		M355		M470		M620	
	Nominal diameter	9.44 in	240 mm	14 in	355 mm	18.5 in	470 mm	24.4 in
Operation range	1.5-9 in	38-230 mm	1.9-13.3 in	48-340 mm	3-18 in	76-460 mm	3.5-23.6 in	90-558 mm
Clamping force	51,700 lbf	230 kN	51,700 lbf	230 kN	51,700 lbf	230 kN	51,700 lbf	230 kN
Breaking torque	28,764 ft.lb	39 kNm	35,400 ft.lb	48 kNm	68,500 ft.lb	93 kNm	49,416 ft.lb	67 kNm

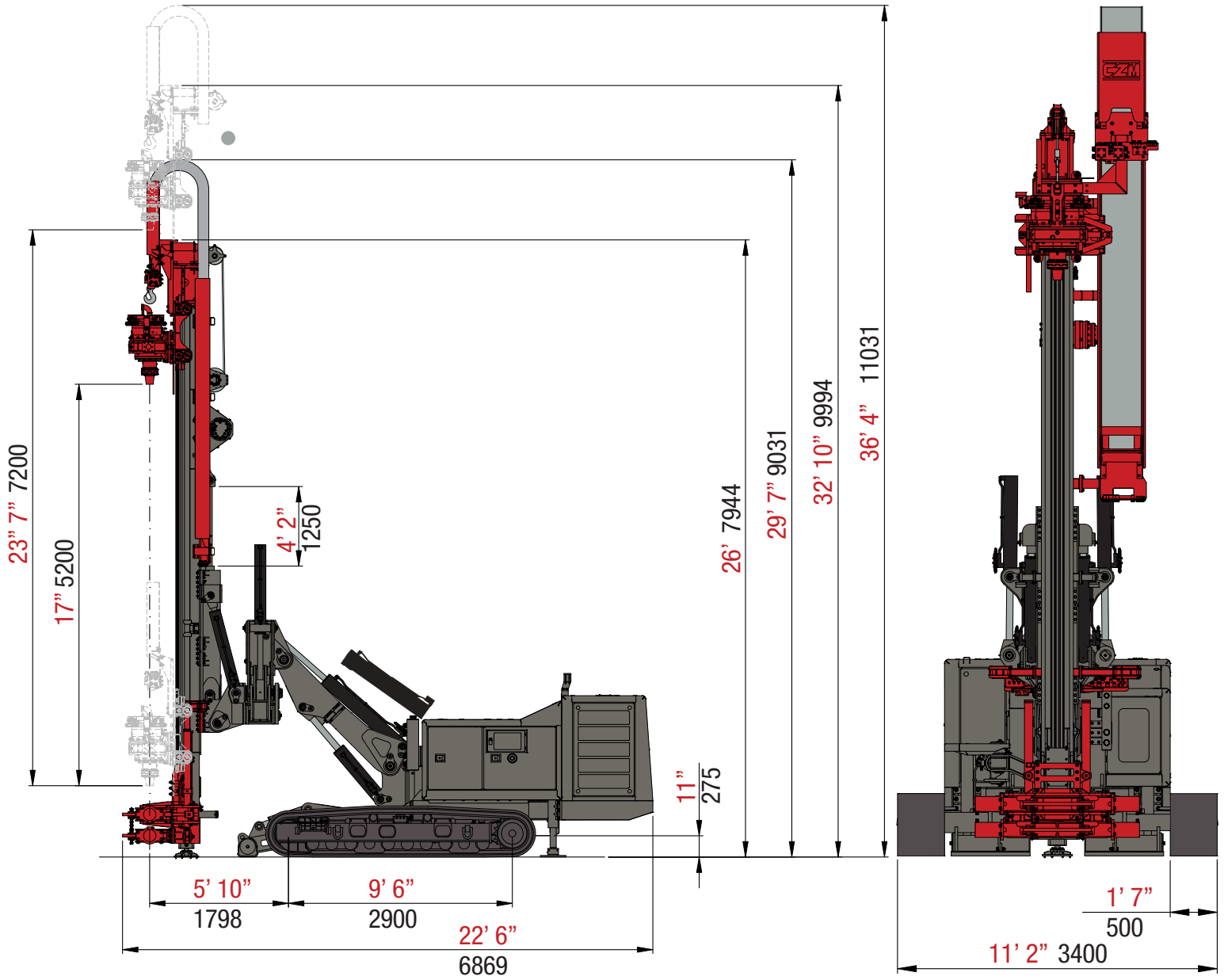
ROTARY HEAD

	R15/2		R23/3		R32/4		R45/42	
	Max. nominal torque	11,063 ft.lb	1,500 daNm	16,963 ft.lb	2,300 daNm	23,600 ft.lb	3,200 daNm	33,200 ft.lb
Max speed	186 rpm		168 rpm		168 rpm		120 rpm	
Stub shaft thread	3*1/2 API		4*1/2 API		4*1/2 API		4*1/2 API	

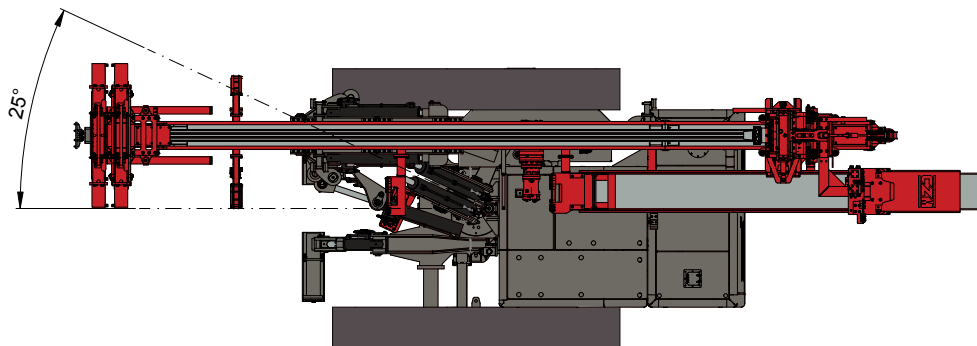
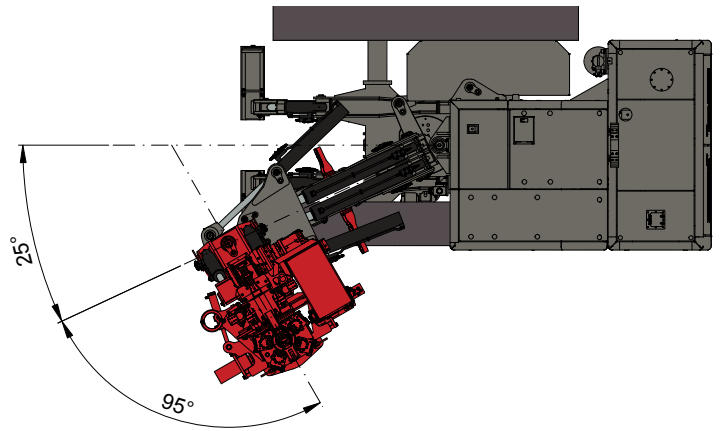
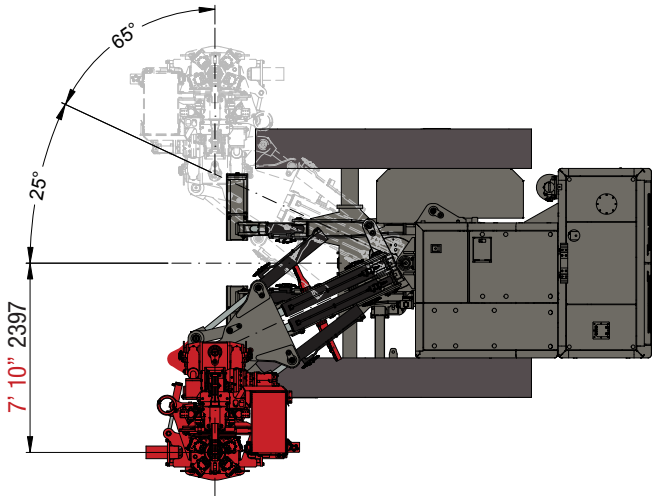
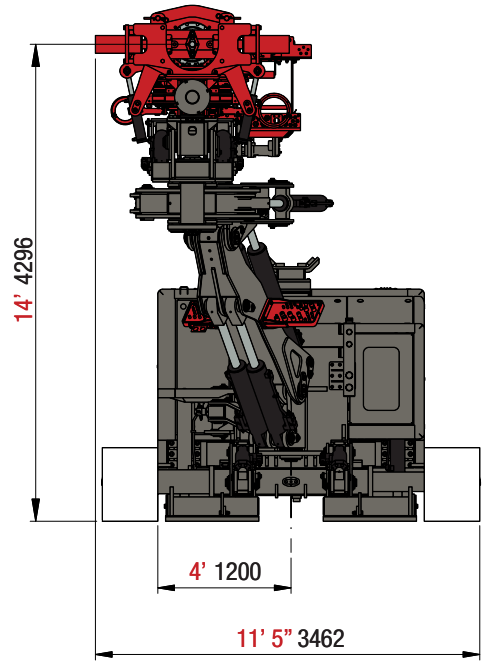
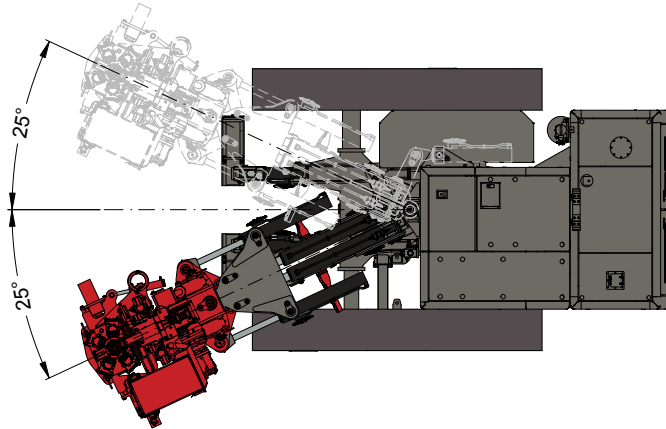
OPTIONS

Jet grouting kit, 22 m single pass	Rotary heads	Hydraulic extra connection	Different clamps set
Auxiliary cathead winch	Double head system	High pressure cleaner	Rods carousel
Data recorder	Roto percussion units	Foam pump	2 rods loader
Tunnel kit	Single and double head	Mud/air valve	Mast extension for 7,2 m
Air prefilter	Electronic inclinometer	Line oiler	Safeguard according EN
Screw pump up to 550 l/min	Removable rubber pads	Clamp force limiter	Sliding clamp
Triplex piston pump	600 mm track pad	Big foot	Front the wall articulation

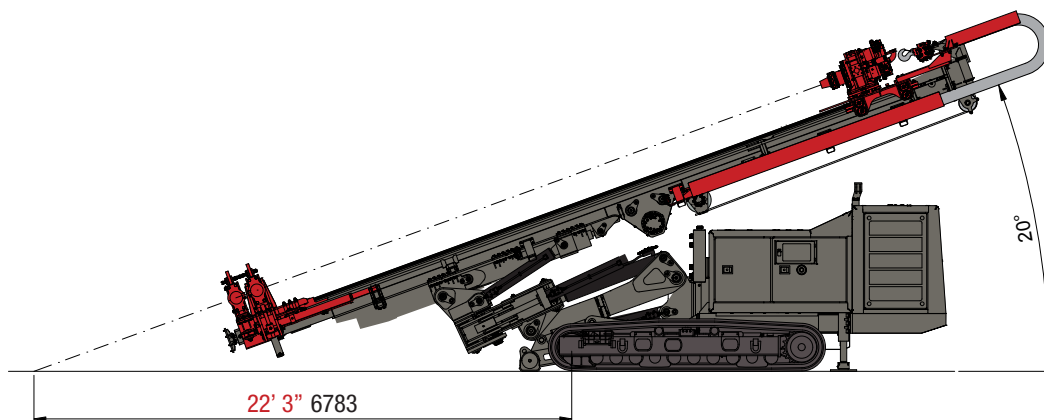
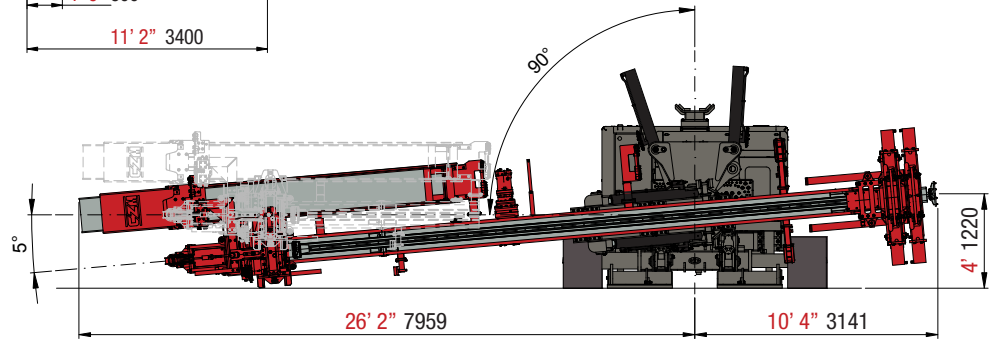
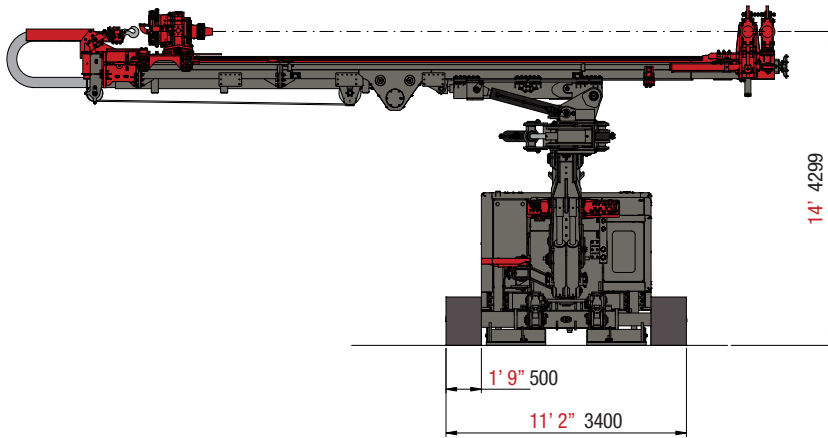
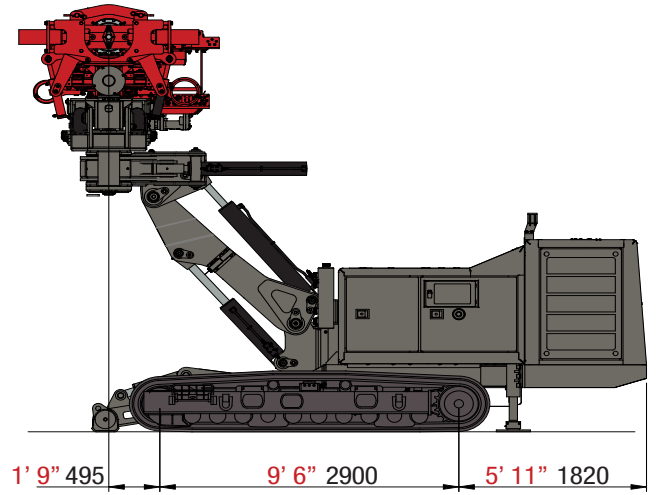
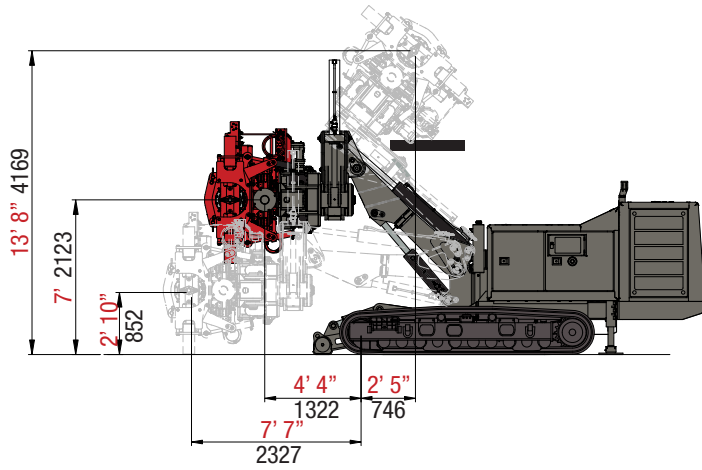
WORKING DIMENSIONS



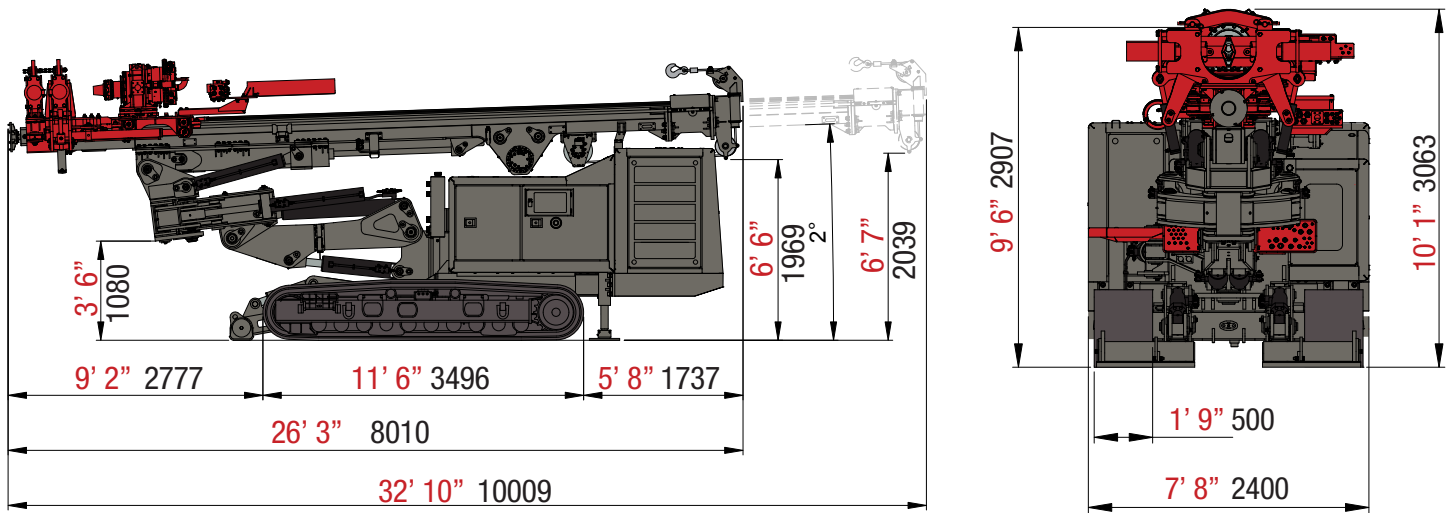
WORKING POSITIONS



WORKING POSITIONS



TRANSPORT POSITIONS



FOUNDATION EQUIPMENT

THE COMPANY

CZM is headquartered in Savannah, Georgia, USA. For over 40 years, we have specialized in manufacturing foundation equipment. We design and customize models for many different drilling applications including Drill shafts, CFA/cased CFA, Micropile and anchoring, driven pile and hydraulic hammers and soil improvements. We are a Caterpillar OEM (Original Equipment Manufacturer).

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