

# CHF 500

Self-Erecting hydraulic piling rig for CFA



**COMACCHIO**

# CHF 500

## DEDICATED RIG FOR CFA DRILLING

The CHF 500 is a dedicated (CFA) rig with an operating weight of 46 tons (101,500 lbs). It allows for the construction of CFA piles up to 27 m (89') depth and the ability to drill up to 1.000 mm (3' 3") diameter.

The CHF 500 is designed to be robust and reliable, due to the use of special high-resistance steels that translates into lighter weight, increased capacities and improved reliability.

The CHF 500 includes several design features developed to deliver the best possible performance:

- Fully self-erecting system, to facilitate a fast rig-up and rig-down.
- Easy to transport in one piece.
- Mast support frame allowing for the mast to be easily erected to working position.
- Hydraulic operation of the folding top mast section and cathead, simplifying the rig-up and rig-down and reducing the possibility of damage to the mast.
- Auger extension for drilling depth up to 27 m (89').
- Star type or hydraulic roller type auger cleaner.
- Extended undercarriage and improved footprint for greater stability and extremely low ground pressure during operation.

The CHF 500 can be equipped with data logger systems that allows for the control and monitoring of the drilling and concreting parameters, recording the data for subsequent analysis. The safety features of the CHF 500 are fully compliant with EN16228 standards for drilling and foundation equipment.



<b>Undercarriage</b>		m.s.	i.s.				
Type	-	Variable gauge, telescoping side frames					
Track shoe width	mm	ft-in	600	23" 5/8	800	31" 1/2	
Track shoe type	-	Triple grouser					
Overall width (retracted side frames)	mm	ft-in	2.550	8' 4" 1/2	2.950	9' 8" 1/4	
Overall width (extended side frames)	mm	ft-in	4.000	13' 1" 1/2	4.200	13' 9" 1/4	
Overall length	mm	ft-in		5.300	17' 5"		
Centre idler to centre sprocket	mm	ft-in		4.480	14' 8" 1/2		

<b>Upperframe</b>							
Width	mm	ft-in	2.550	8' 4" 1/2			
Operators' cabin	-	TOPS & FOPS-1 certified, 980 mm (3' 3") wide					
Control system type	-	CAN-BUS					
User interface	-	12" Touch Screen					
Tail swing radius	mm	ft-in	3.865	12' 8"			

<b>Diesel Engine</b>		<i>High Tech Line</i>					
Make and model	-	Cummins B6.7			Cummins QSB6.7		
Emission certification	-	EU stage V / US EPA Tier 4f			EU stage IIIA / US EPA Tier 3		
Aspiration	-	Turbocharged and charge air cooled					
Power rating (2000 rpm)	kW	HP	231	310	201	270	
Displacement	cc	in <sup>3</sup>	6.700		408		
Fuel tank	l	gal	500		135		
Sound pressure level in cabin (EN 16228-1, Annex B)	-	LP <sub>A</sub> 82 dB (A)					
Sound Power level (2000/14/EC - EN 16228-1, Annex B)	-	LW <sub>A</sub> 108 dB (A)					

<b>Hydraulic System</b>							
Main pumps flow	l/min	gal/min	2 x 214		2 x 56.5		
Service pump flow	l/min	gal/min	142		37		
Hydraulic oil tank capacity	l	gal	600		158		

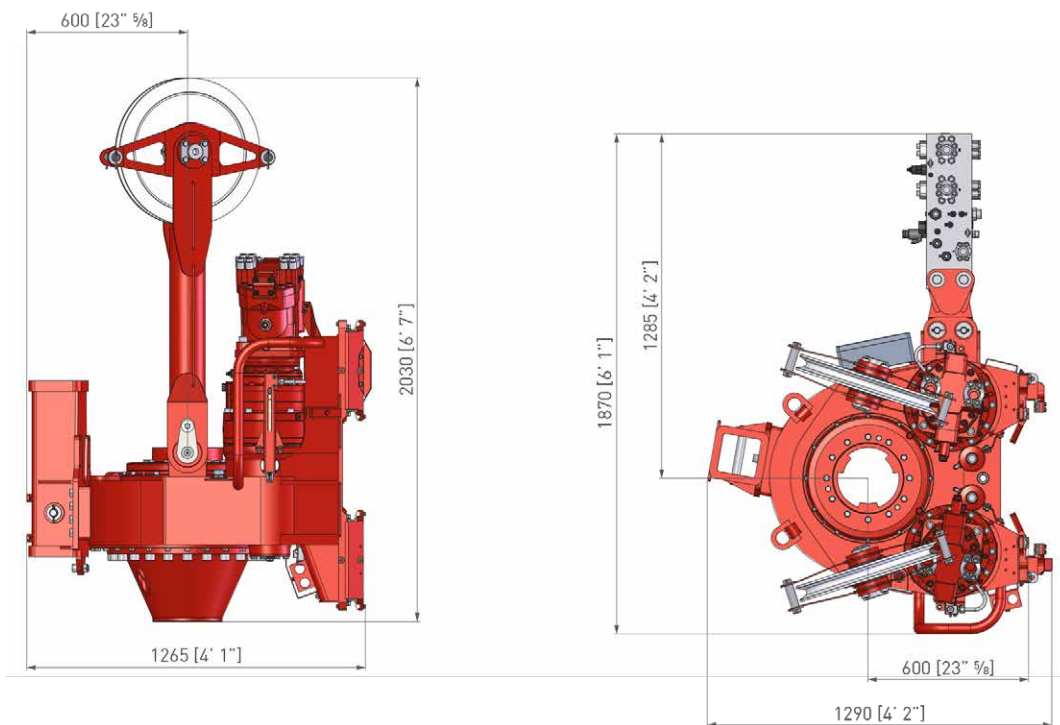
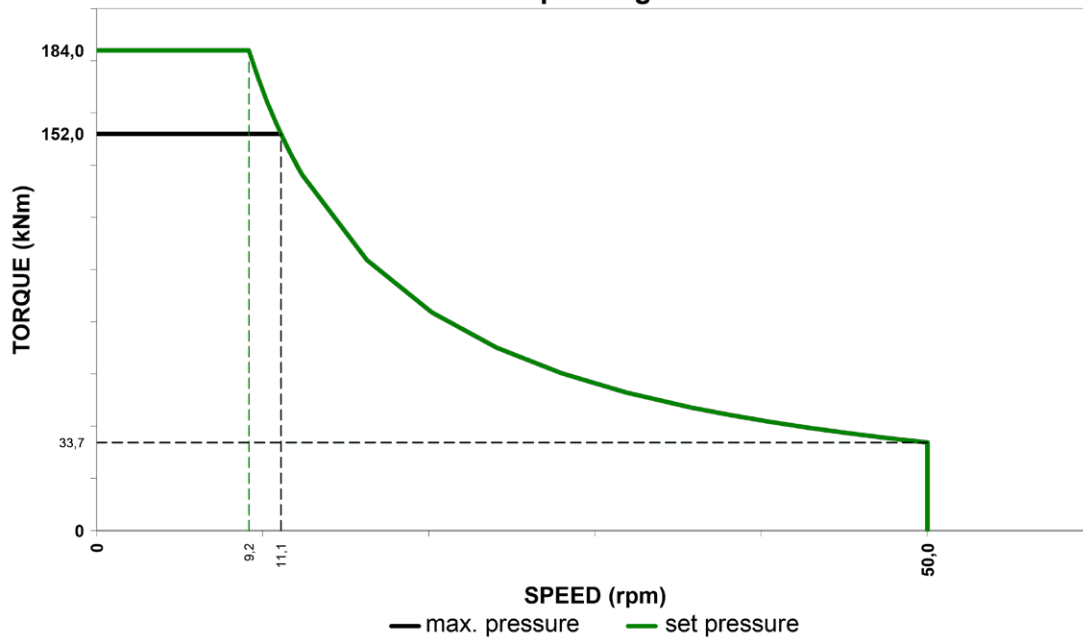
<b>Main Winch</b>							
Type	-	Controlled descent					
1 <sup>st</sup> layer line pull	kN	lbs	135		30,350		
1 <sup>st</sup> layer rope speed	m/min	ft/min	74		243		
Rope diameter	mm	ft-in	22		7/8"		
Rope layers	-	2					
FEM classification	-	M5-L2-T5					

<b>Service Winch</b>							
Type	-	Controlled descent					
1 <sup>st</sup> layer line pull	kN	lbs	72		16,200		
1 <sup>st</sup> layer rope speed	m/min	ft/min	55		180' 5"		
Rope diameter	mm	ft-in	18		11/16"		
Rope layers	-	3					
FEM classification	-	M5-L2-T5					

# CHF 500

## Rotary Head

Torque Diagram



Rotary Head	m.s.	i.s.	CR 15	
Nominal max. torque	kNm	lbf-ft	184 at 35 MPa	135,700 at 5,080 psi
Max. torque	kNm	lbf-ft	152 at 29 MPa	112,000 at 4,200 psi
Max. drilling speed	rpm		50	
Hydraulic power	kW	HP	177	237
Hex joint passage			4" or 5"	



### Standard equipment

Hoist and lowering limit switches on main and service ropes	Work lights
Service rope parking point	Diagnostic panel for hydraulic, electrical and electronic functions
Mast inclination measurement on X & Y axes (digital and analog display)	Electric refuelling pump and hydraulic oil refilling
Automatic vertical mast alignment	Front and top cabin protective grate (FOPS-1 certified)
Depth measuring device on main winch	TOPS certified cabin
Rpm measuring device on rotary	Radio CD player
Air conditioning system	Phone charger
Emergency mode of operation for engine	CCS Comacchio Controlling System
Engine diagnostic panel	Rotary auto speed management & interactive multiple gear
Transport securing lugs on crawler unit	Tool box

### Optional equipment

Biodegradable oil	Vibrator for reinforcement cage
Pull down winch on rotary (50 kN or 100 kN)	Washing kit
Central lubrication system	Welding equipment & generator
Swivel for auxiliary rope	Automatic lubrication kit for rotary sliding guides
Main and aux winch load cells	Data logger
CFA cleaner (star or hydraulic type)	ComNect system
Rubber skirt on auger guide	

### CE conformity kit

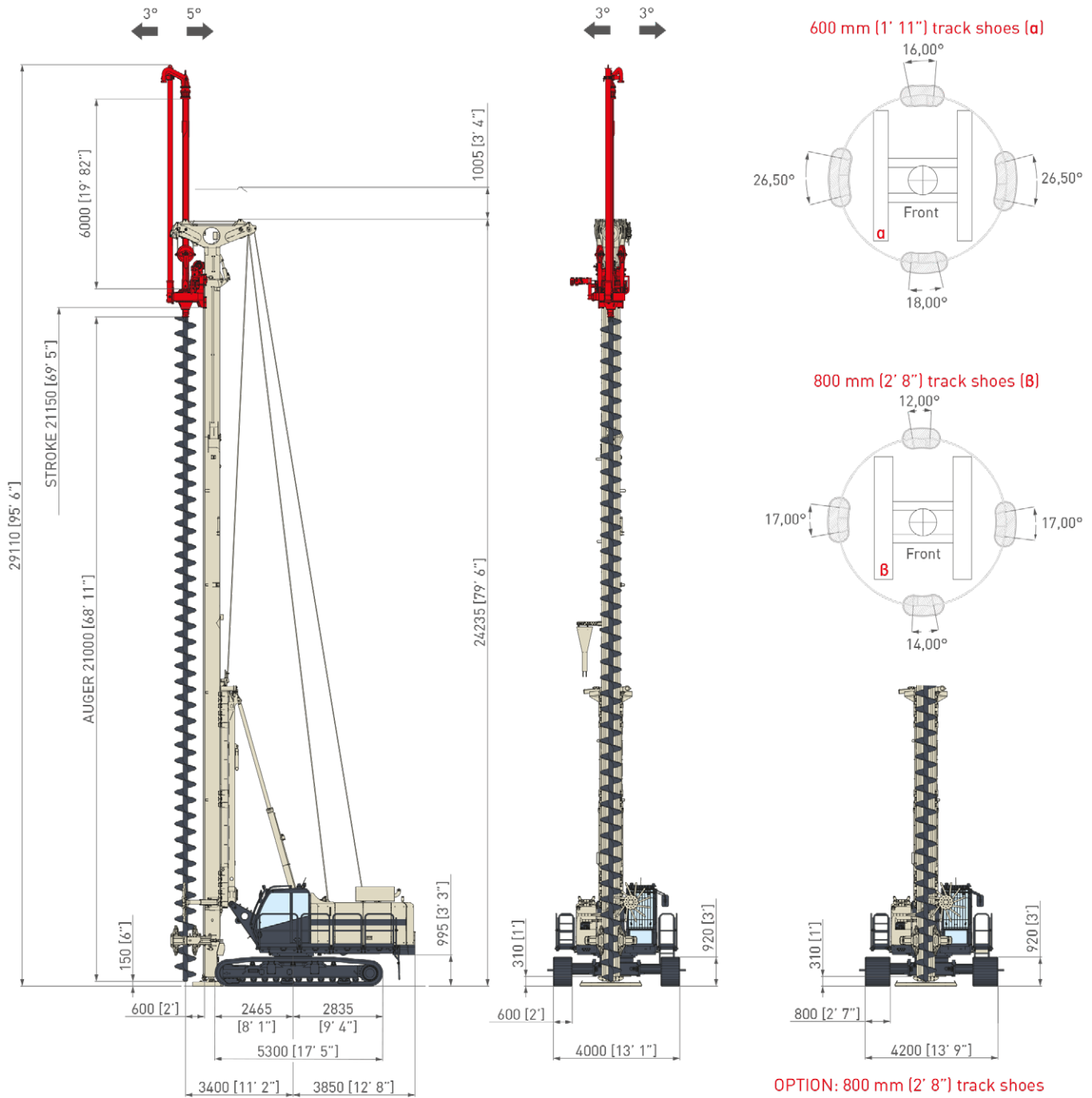
Machine travel remote radio control	Video cameras set
Main and aux winch load cells	CFA cleaner
Side walkways w/handrails	Rubber skirt on auger guide

### TOPS & FOPS cabin



# CHF 500

## Overall dimensions

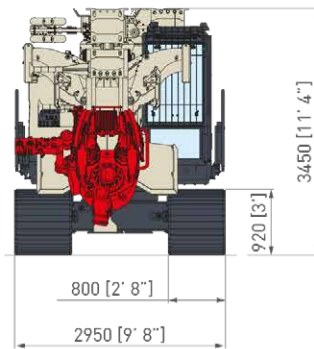
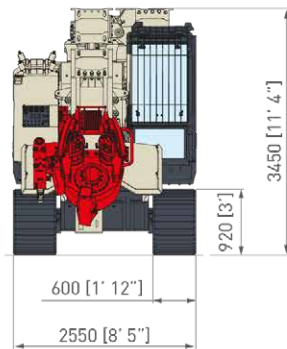
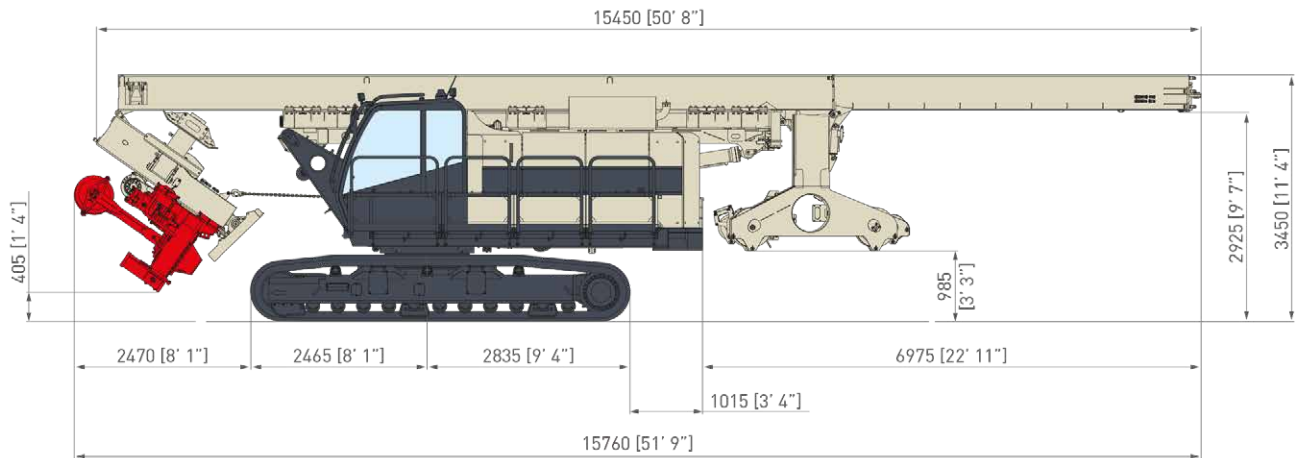


### CFA (Pali ad elica continua)

	m.s.	i.s.		
Max. pile diameter	mm	ft-in	1.000	3' 3"
Max. length of augers	m	ft-in	21	69'
Max. length of auger extension	m	ft-in	6	19' 8"
Max. pile depth	m	ft-in	21 + 6 = 27	69' + 19' 8" = 89'
Extraction force	kN	lbs	540	121,400
Crowd force on auger (optional)	kN	lbs	45	10,120
Operating weight w/o tool	kg	lbs	46.000	101,420

# CHF 500

## Transport dimensions



OPTION: 800 mm [2' 8"] track shoes

### Weights and dimensions

	m.s.	i.s.		
1 Transport weight	kg	lbs	43.700 <sup>(2)</sup>	96,350 <sup>(2)</sup>
2 Transport weight	kg	lbs	37.350 <sup>(3)</sup>	82,350 <sup>(3)</sup>
Operating weight approx.	kg	lbs	46.000 <sup>(4)</sup>	101,420 <sup>(4)</sup>

### Notes

(2) auger extension, star cleaner and auger guide removed.

(3) same as Transport weight 1 but rotary and counterweight also removed.

(4) with 6 m [20"] auger extn, bottom gate & star cleaner; without auger.



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