

CH 300

Self-Erecting Hydraulic Piling Rig



High Tech Line



COMACCHIO

DRILLING HI-TECH

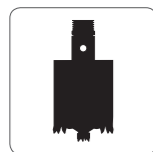
The winning solution for job sites of short duration that require frequent operations of transport, setting up and dismantling.

Truly self-erecting. The machine is entirely autonomous and self-erecting, and can be transported in one piece/fully assembled with the rotary head and kelly bar installed. Once on site, the machine is easily off loaded from the truck and set up without the need for crane service.

Wide range of drilling technologies. The CH 300 allows for the use of the following drilling technologies:

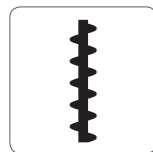
- BP (Bored Piles)** uncased bored piles excavated by dry method or stabilized by fluid overpressure;
- CBP (Cased Bored Piles)** bored piles with casing installation by rotary drive;
- CFA (Continuous Flight Auger)** piles that are drilled uncased by the use of a continuous hollow auger stem.

Performance

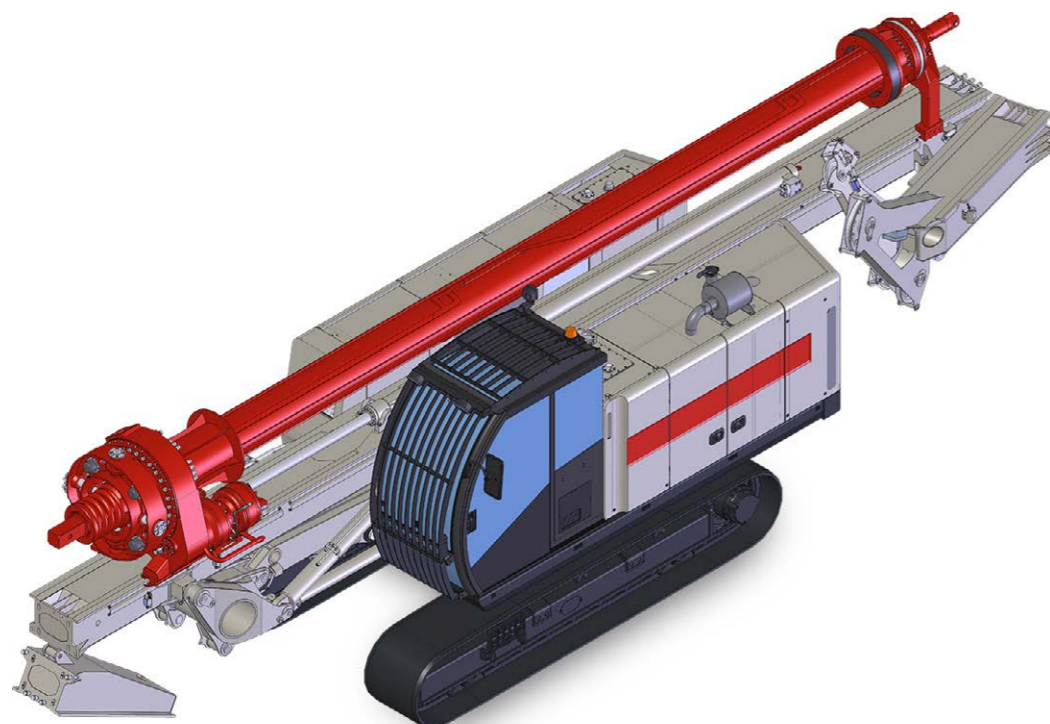


	m.s.		i.s.		BP (Bored Piles)		CBP (Cased Bored Piles)	
Max pile diameter	mm	ft-in	1.300/ 1.500 ⁽¹⁾	4' 3" / 4' 11" ⁽¹⁾	1.000	3' 3"		
Max pile depth	m	ft-in	48,5 ⁽²⁾	159' 1" ⁽²⁾				

(1) tool below mast
(2) using self mounting 5-elements kelly bar



	m.s.		i.s.		CFA (Continuous Flight Auger)	
Max pile diameter	mm	ft-in	800	2' 7"		
Max pile depth	m	ft-in	13 + 6 = 19	42' 8" + 19' 8" = 62' 4"		



Undercarriage		m.s.		i.s.	
Type	-	Variable gauge, telescoping side frames			
Track shoe width	mm	ft-in	600	23" 5/8	
Track shoe type	-	Triple grouser			
Overall width (retracted side frames)	mm	ft-in	2.550	8' 4" 1/2	
Overall width (extended side frames)	mm	ft-in	3.750	12' 3" 1/2	
Overall length	mm	ft-in	4.280	14' 0" 1/2	
Centre idler to centre sprocket	mm	ft-in	3.550	11' 7" 3/4	
Upperframe		m.s.		i.s.	
Width	mm	ft-in	2.550	8' 4" 1/2	
Operators' cabin	-	TOPS & FOPS-1 certified, 970 mm (3' 2") wide			
Control system type	-	CAN-BUS			
User interface	-	7" Touch Screen			
Tail swing radius	mm	ft-in	3.100	10' 2"	
Diesel Engine		m.s.		i.s.	
		High Tech Line			
Make and model	-	Cummins B4.5		Cummins QSB4.5	
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	142	190	123 165
Displacement	cc	in³	4.500	275	
Fuel consumption rate (100% power, rated speed)	g/kWh	lb/hp-hr	203	0.334	227 0.373
Average fuel consumption approx.	l/hr	gal/hr	22	5.8	22 5.8
Fuel tank	l	gal	300	80	
Hydraulic System		m.s.		i.s.	
Main pumps flow	l/min	gal/min	2 x 160	2 x 42.3	
Hydraulic oil tank capacity	l	gal	400	105	
Main Winch		m.s.		i.s.	
Type	-	Controlled descent			
1 st layer line pull	kN	lbs	120	26,980	
1 st layer rope speed	m/min	ft/min	70	230	
Rope diameter	mm	ft-in	21	13/16"	
Rope layers	-	2			
FEM classification	-	M5-L2-T5			
Service Winch		m.s.		i.s.	
Type	-	Controlled descent			
1 st layer line pull	kN	lbs	61	13,700	
1 st layer rope speed	m/min	ft/min	58	190' 3"	
Rope diameter	mm	ft-in	15	9/16"	
Rope layers	-	4			
FEM classification	-	M5-L2-T5			
Rotary Head		m.s.		i.s.	
		CR 12			
Nominal max torque	kNm	lbf-ft	132 at 35 MPa	97,300 at 5,076 psi	
Max drilling speed	rpm		41		
Spin-off speed	rpm		103		

Standard equipment

Main winch with special grooving	Engine diagnostic panel
Hoist and lowering limit switches on main and service ropes	Transport securing lugs on crawler unit
Swivel for main rope	Work lights
Service rope parking point	Refuelling and hydraulic oil refilling pumps
Mast inclination measurement on X & Y axes (digital and analog display)	Diagnostic panel for hydraulic, electrical and electronic functions
Automatic vertical mast alignment	Front and top cabin protective grate (FOPS-1 level)
Depth measuring device on main winch	Radio c/w bluetooth
Rpm measuring device on rotary	Phone charger
Crowd pressure setting on the tool	CCS Comacchio Controlling System - 7" Touch Screen
Cabin air conditioning & heating	Spinoff and Shaker tool dump systems
Emergency mode of operation for engine	Rotary auto speed management & interactive multiple gear
Fire extinguisher in the cabin	Tool box

Optional equipment

Biodegradable oil	Flange for casing driving
Main and aux winch load cells	Welding equipment & generator
Swivel for auxiliary rope	Washing kit
Central lubrication system	Videocamera set
Automatic lubrication kit for rotary sliding guides	Vibratory equipment for steel cage
CFA auger cleaner (star or hydraulic type)	CE conformity kit
Flange for bucket opening	ComNect system
Cardan joint	Hydraulic PTO
Side walkways c/w handrail	Tools shelf on cabin
Machine travel remote radio control	Air compressor kit
Kelly bar quill with replaceable drive keys	CCS Comacchio Controlling System - 12" Touch Screen

Comacchio Innovative Kelly bar system

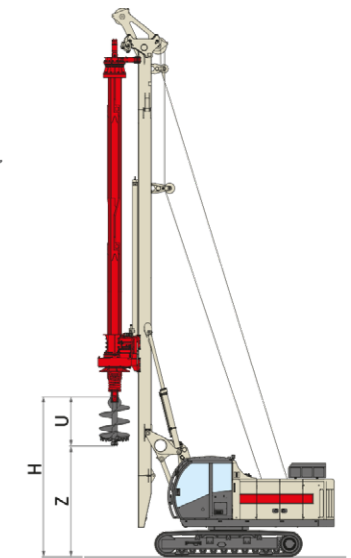
Kelly bar sizes	m.s.	i.s.	Outer diameter	
L (standard)	mm	ft-in	355	14"

Note

Different sizes upon request

$$U \text{ (approx.) } \begin{array}{|c|c|c|} \hline \text{mm} & \text{ft-in} & 1500 \quad | \quad 4' \quad 11'' \\ \hline \end{array}$$

$$Z = H - U$$



Kelly Bars

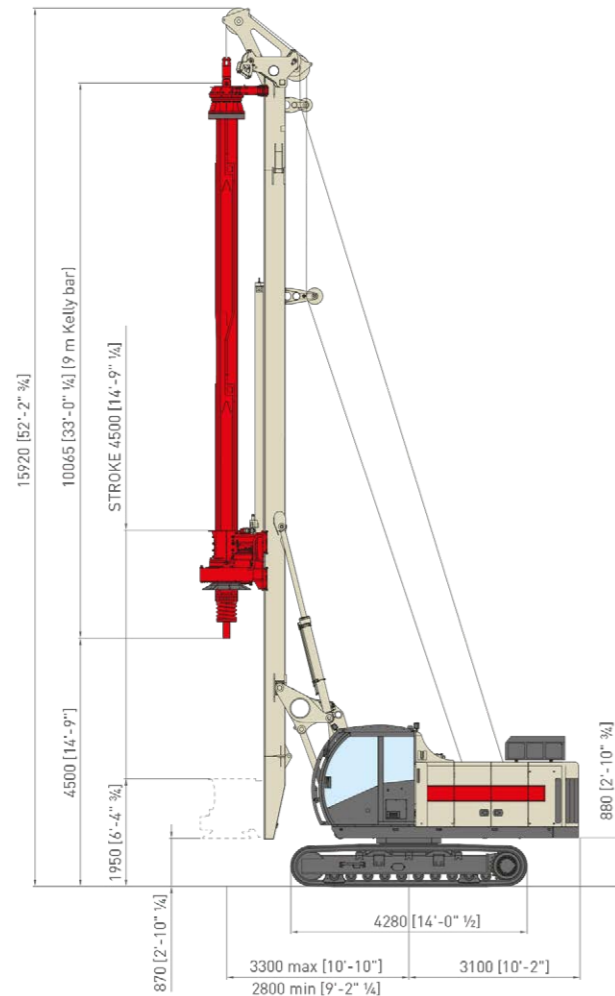
CPD

	N.	Length		Weight		Depth		H ⁽¹⁾	
		(m)	(ft-in)	(kg)	(lbs)	(m)	(ft-in)	(m)	(ft-in)
Locking or friction	4	6	19' 8"	2.500	5,500	21	68' 11"	4,60	15' 1"
	4	8	26' 3"	3.150	6,950	29	95' 2"	4,60	15' 1"
	4	9	29' 6"	3.500	7,700	33	108' 3"	4,60	15' 1"
	4	10,5	34' 5"	4.000	8,800	39	127' 11"	3,10	10' 2"
Friction	5	6	19' 8"	3.100	6,850	26	85' 4"	4,60	15' 1"
	5	8	26' 3"	3.900	8,600	36	118' 1"	4,60	15' 1"
	5	9	29' 6"	4.300	9,500	41	134' 6"	4,60	15' 1"
	5	10,5	34' 5"	4.900	10,800	48,5	159' 1"	3,10	10' 2"

(1) Max height of bottom kelly pin above ground

CH 300 - CPD

Overall dimensions



CPD (Cylinder Pull Down)	m.s.	i.s.		
Stroke	mm	ft-in	4.500	14' 9"
Max pull up force	kN	lbs	148	33,270
Max pull down force	kN	lbs	95	21,350
Crowd speed (hoist-lowering)	m/min	ft/min	22 - 25	72' 2" - 82'
Max pile diameter	mm	ft	1.300 ⁽¹⁾ - 1.500 ⁽²⁾	4' 3" ⁽¹⁾ - 4' 11" ⁽²⁾
Operating weight w/o tool	kg	lbs	29.400 ⁽³⁾	64,800 ⁽³⁾

Notes

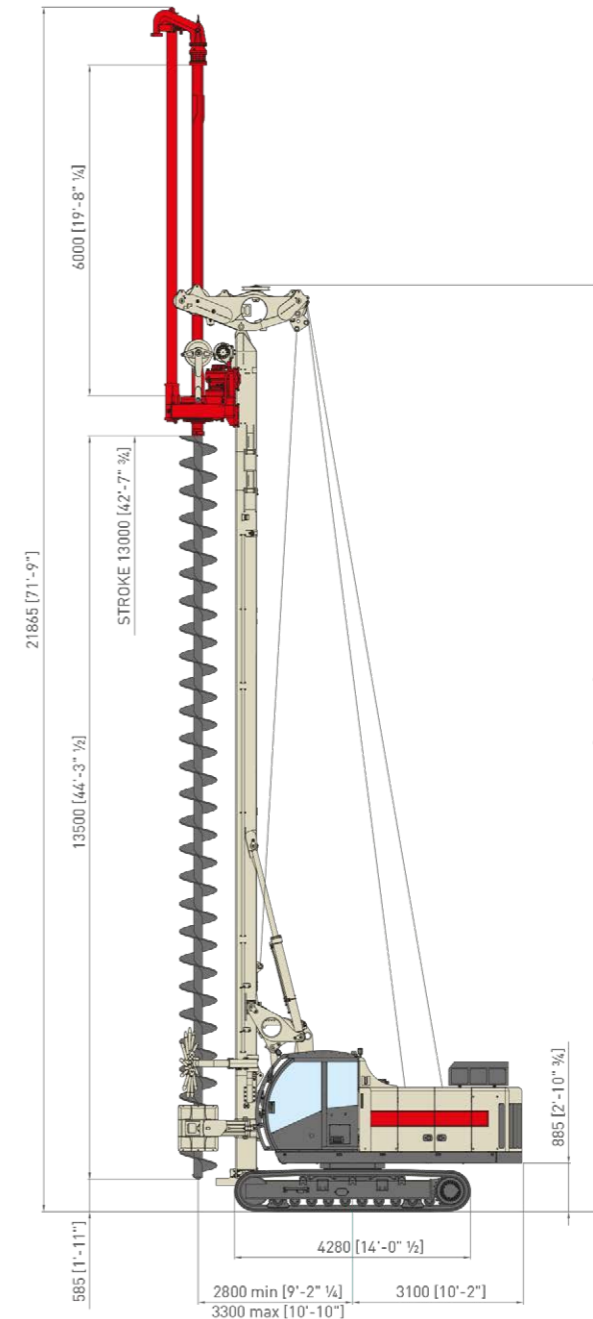
(1) tool in front of mast

(2) tool below mast

(3) c/w 4 x 9 m [4 x 29' 6"] long 355 mm [14"] dia. Kelly bar; rotary c/w bucket opening flange

CH 300 - CFA

Overall dimensions



CFA	m.s.	i.s.		T4
Max pile diameter	mm	ft-in	800	2' 7"
Max length of augers	m	ft-in	13,5	44' 3"
Max length of auger extension	m	ft-in	6	19' 8"
Max pile depth	m	ft-in	13 + 6 = 19	42' 8" + 19' 8" = 62' 4"
Extraction force	kN	lbs	320	71,900
Crowd force on auger (optional)	kN	lbs	45	10,000
Operating weight w/o tool	kg	lbs	29.100 ⁽¹⁾	64,150 ⁽¹⁾

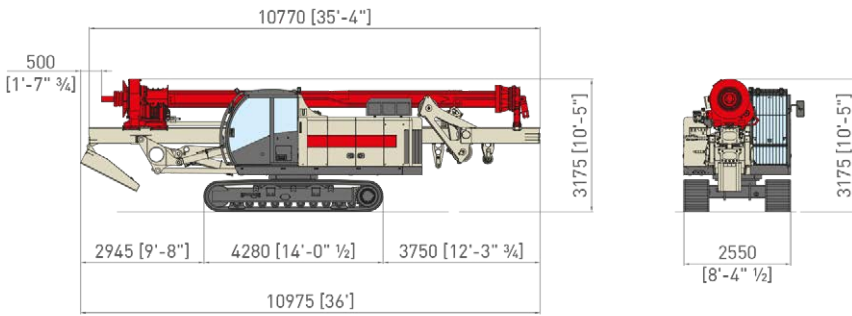
Note

(1) with 6 m [19' 8"] auger extension & star cleaner

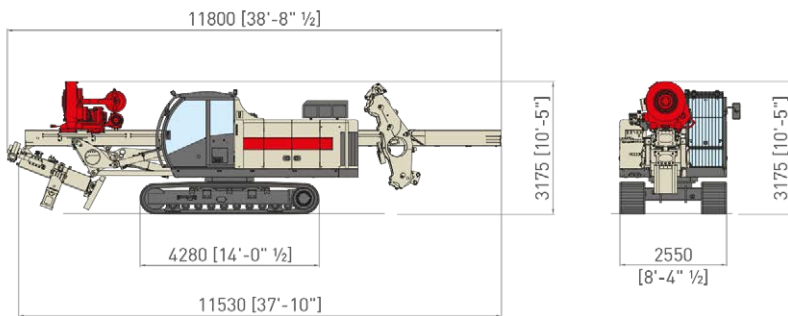
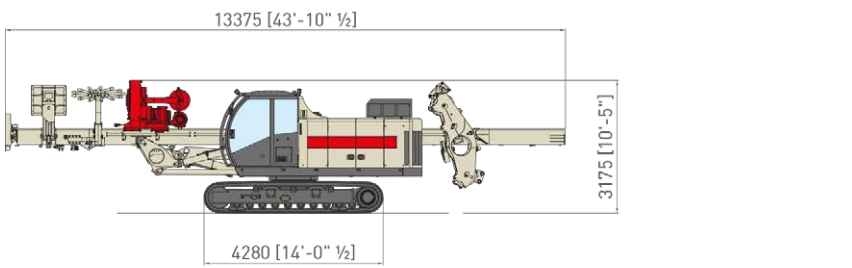
CH 300

Overall dimensions

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	m.s.	i.s.	CPD	
Transport weight ⁽¹⁾	kg	lbs	29,400	64,800



	m.s.	i.s.	CFA T4	
Transport weight ⁽²⁾	kg	lbs	28,200	62,200

Notes

(1) c/w 4x9 m (4 x 29' 6") long Kelly bar; rotary c/w bucket opening flange

(2) augers & extensions removed; c/w auger guide

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Specifications shown are only indicative and subjected to change without prior notice