



EK110

MULTI-PURPOSE PILING RIG

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The GEAX EK110 is a multi-purpose piling rig designed to achieve the highest levels of versatility, manoeuvrability, ease of use, transportation, production and reliability. It is configured to operate in various different piling modes.

For each drilling mode a special kit is designed to optimize the performances. However, the modularity of the components makes the conversion among the different kits extremely easy, fast and low-cost.

The GEAX EK110's outstanding production capability is comparable to machines of a much larger size. Its excellent stability allows easy manoeuvrability on job sites and ensures fast and safe operating movements. Its compactness and low weight allows easy transportation without special permits.

The Hitachi Zaxis 210 or JCB JS210 base carrier, constructed to GEAX specifications, ensures excellent reliability and maintenance with operator cabin comfort not available on proprietary machines.

The GEAX EK110 (in common with other GEAX machines) has an articulation structure similar

to a normal excavator with a long boom supporting the mast. This allows a wide range of mast positioning and independent adjustment of the vertical position of the mast. Wire rope positions are not dependent on the position of the mast as the winches are mounted on the mast itself. This design, compared to other machines, usually with parallelogram type mast supports, ensures the following:

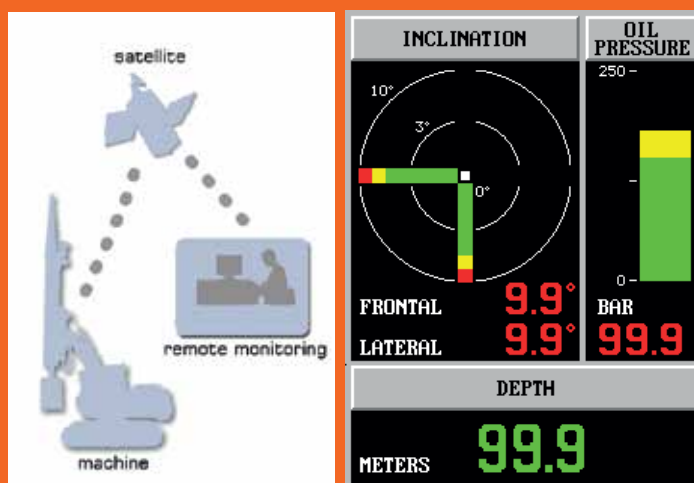
- Excellent rigidity and lightness
- More precise movements
- Fast setup time
- Wide range of tool positioning
- Simpler maintenance
- Better visibility for the operator

Electronic devices

EK series machines are equipped with an electronic system which controls and displays several functions and parameters.

- Automatic alignment of the mast
- Mast inclination display
- Depth measuring device
- Pressure gauge for an auxiliary input

A GPS system enables GEAX owners to monitor and manage their machines remotely by a PC connected to the Internet



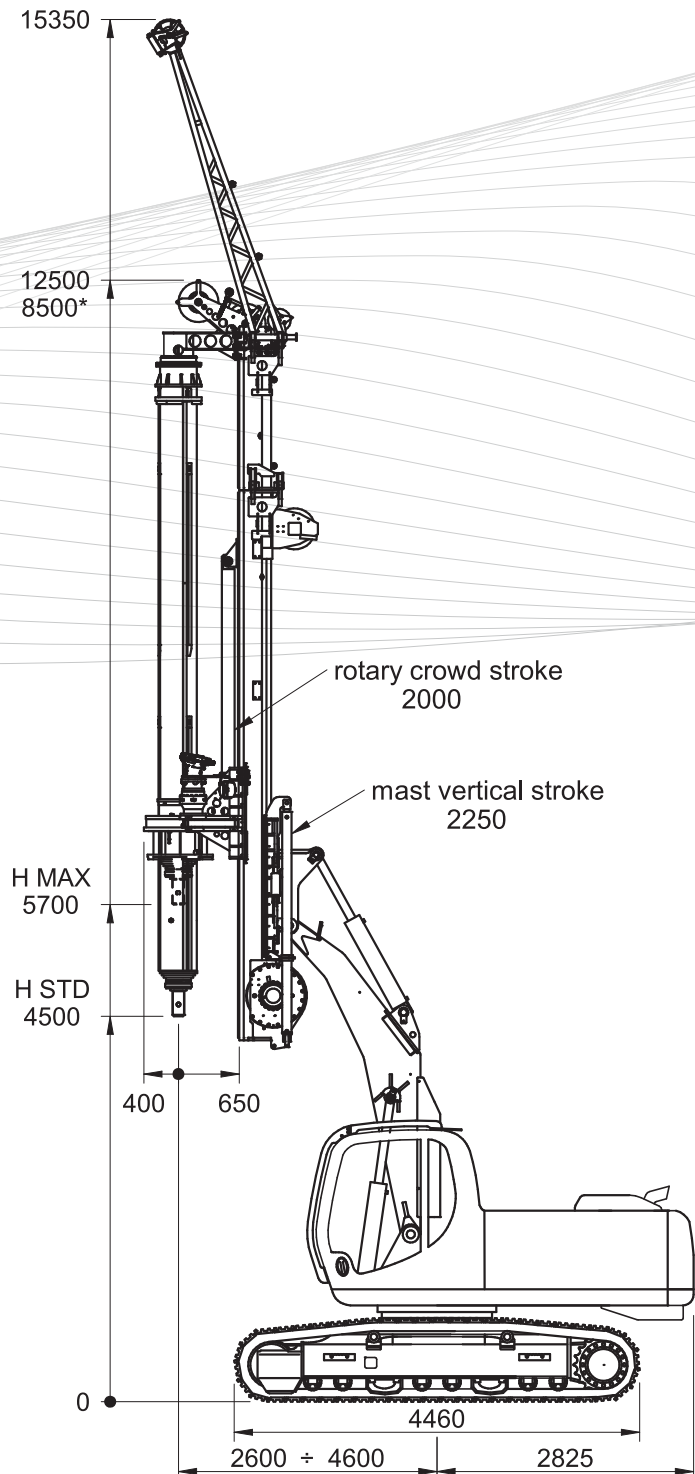
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LARGE DIAMETER PILES

Pull down force	150 kN - 33.750 lbf
Extraction force	180 kN - 40.470 lbf
Mast vertical stroke	2.250 mm - 7.4 ft
Total rotary stroke	4.250 mm - 14 ft
Max pile diameter	1.800 mm - 70 in
Max pile depth	up to 40 m - 131 ft
Min working height	8500* mm - 27.9ft
Weight (w/o tool)	30.000 kg - 66.090 lb

KELLY BAR OPTIONS	Depth	H
5 x 5.4m	25 m	5700 mm
5 x 6.6m Standard	30 m	4500 mm
6 x 6.6m	36 m	4500 mm
6 x 7.2m	40 m	

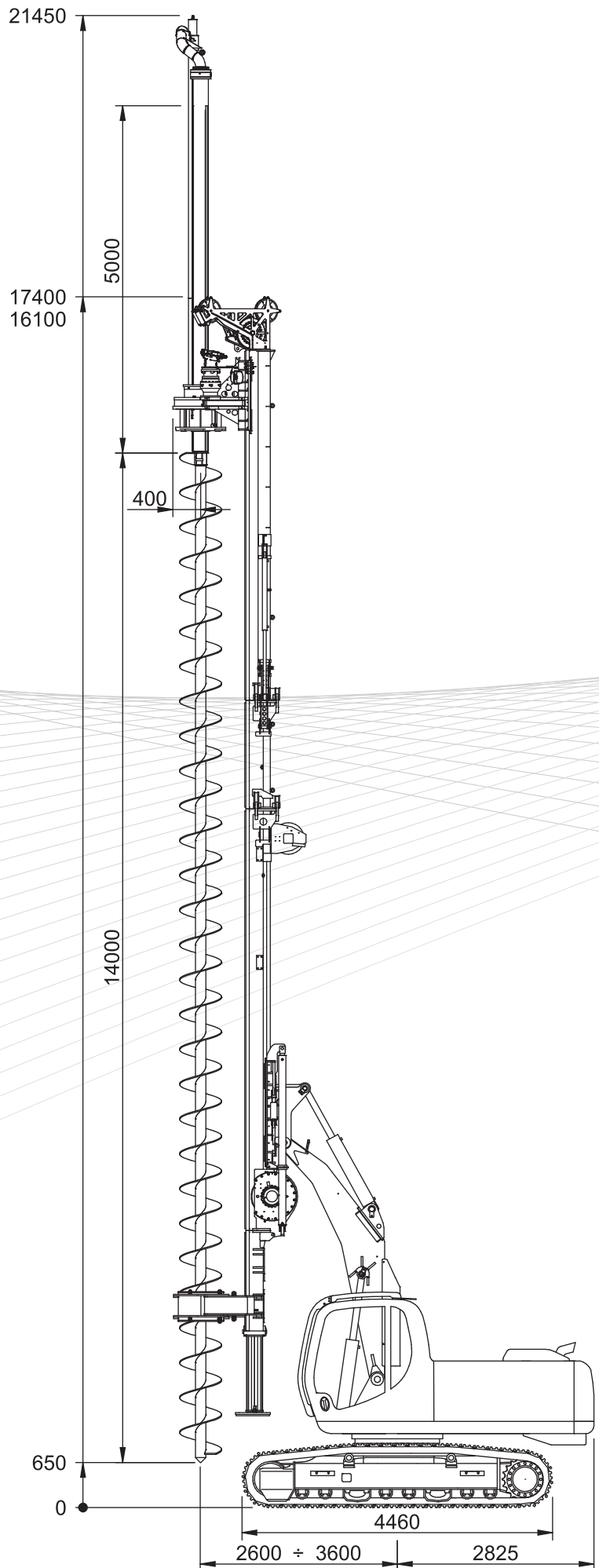
All the kelly bars are round interlocking
Custom measures available upon request



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CFA

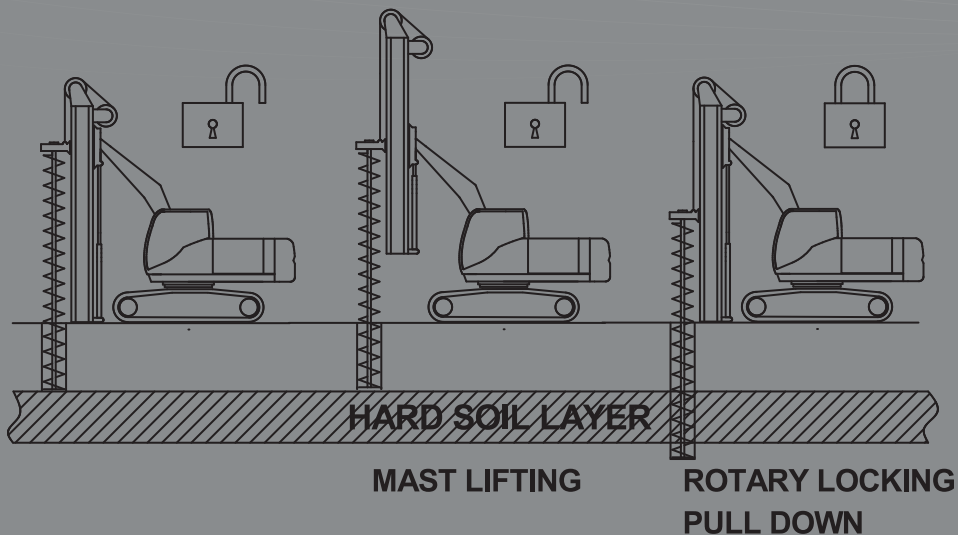
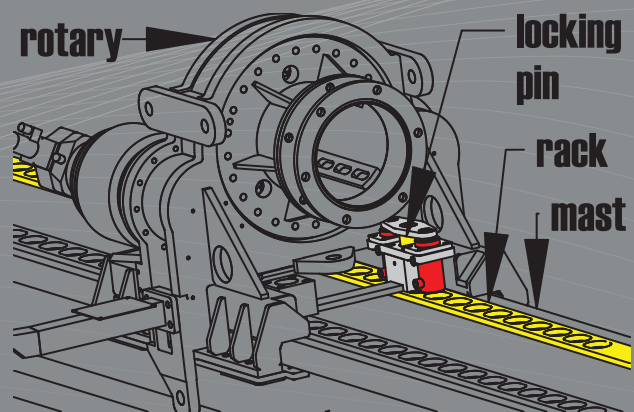
Pull down force	150 kN - 33.750 lbf
Extraction force	360 kN - 80.940 lbf
Mast vertical stroke	2.250 mm - 7.4 ft
Total rotary stroke	14.000 mm - 45.9 ft
Max pile diameter	800 mm - 32 in
Max pile depth	up to 20 m - 65.6 ft
Min working height	16100 mm - 52.8 ft
Weight (w/o tool)	29.000 kg - 63.930 lb



BPS patented crowd system for CFA piles

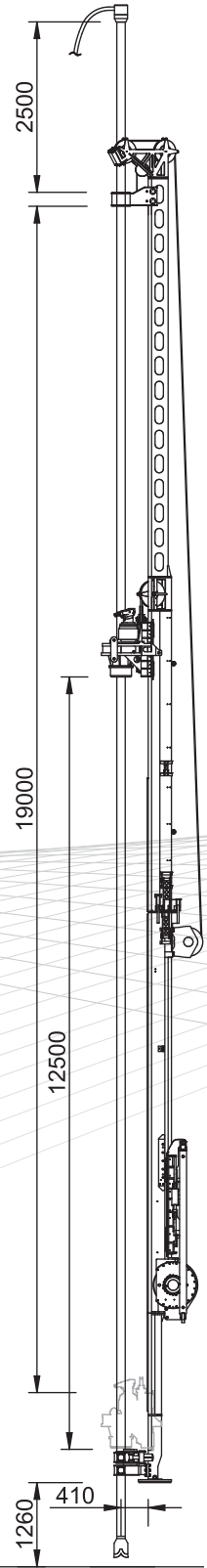
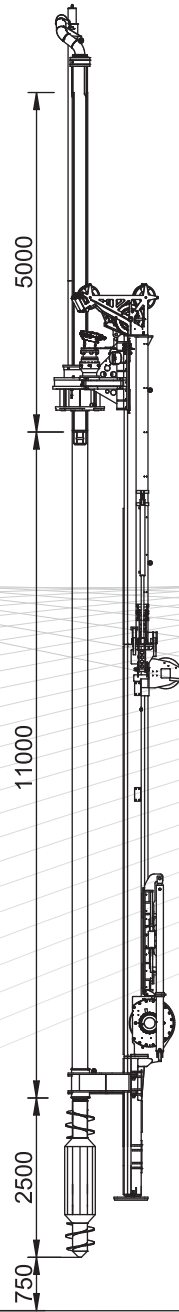
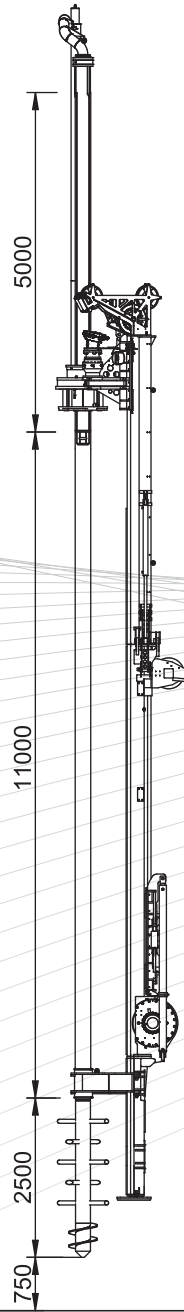
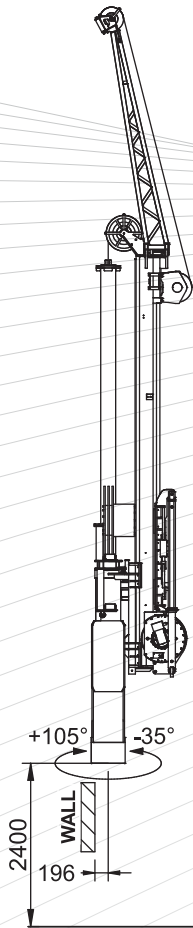
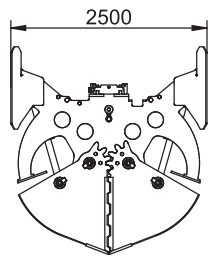
The pull-down system type BPS is GEAX's patented crowd system for CFA piling, providing a mechanical locking system between the rotary head and the mast which creates a crowd force on the auger and the crowd force is available along the entire length of the mast.

The pull-down system is activated only when needed by the operator and requires no pulleys or ropes.



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DRILLING KITS



Diaphragm wall

Max Depth 16 m
Trench width 300 ÷ 600 mm
Trench length 2500 mm
Grab closing force 200 kN
Grab rotation +105° ÷ -35°

Soil Mixing

Max depth 18 m
Max diameter 750 mm
Rotary speed 80 rpm

Soil Displacement

Max depth 18 m
Max diameter 600 mm
Pull down force 100 kN
Extraction force 360 kN

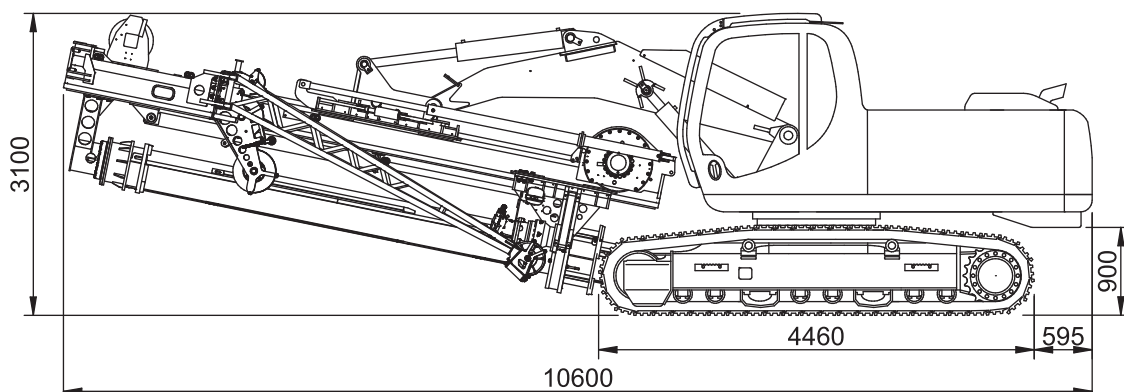
Jet Grouting

Max depth 22.5 m
Max torque 12 kNm
Rotary speed 60÷180 rpm
Pull down force 100 kN
Extraction force 240 kN
Rev. clamps 60÷360 mm
Mandrel 60÷140 mm

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TECHNICAL DATA SHEET

BASE		HITACHI ZX210 / JCB JS210	
Engine	<i>type</i>	ISUZU AM-4HK1X / JCB ECOmax 448	
Engine power	<i>kW (hp)</i>	122 (164) / 126 (172)	
Undercarriage length	<i>mm - ft</i>	4504 - 14.8 / 4460 - 14.6	
Width over tracks	<i>mm - ft</i>	2490÷3490 - 8.2÷11.4	
Shoe width	<i>mm - in</i>	600 - 23.6 / 500 - 19.7	
HYDRAULIC SYSTEM			
Main pumps	<i>l/min</i>	2x212 / 2x214	
Auxiliary pump	<i>l/min</i>	2x33.6 / 2x20.5	
Hydraulic pressure	<i>bar</i>	320	
MAST			
Forward inclination	<i>deg</i>	20	
Backward inclination	<i>deg</i>	20	
Lateral inclination	<i>deg</i>	5	
Mast vertical stroke	<i>mm - ft</i>	2250 - 7.4	
ROTARY			
Nominal torque	<i>kNm - lbf ft</i>	110 - 81.130	
Drilling speed	<i>rpm</i>	10 ÷ 80	
Spin off speed	<i>rpm</i>	80	
WINCHES		KELLY	CFA
Main winch line pull	<i>kN - lbf</i>	120 - 26.980	120x3 - 26.980x3
Aux winch line pull	<i>kN - lbf</i>	37 - 8.320	37 - 8.320
CROWD SYSTEM			
Pull down force	<i>kN - lbf</i>	150 - 33.750	150 - 33.750
Extraction force	<i>kN - lbf</i>	180 - 40.450	360 - 80.900
Total rotary stroke	<i>mm - ft</i>	4.250 - 14	14.000 - 45.9
EXCAVATION			
Max pile diameter	<i>mm - in</i>	1.800 - 70	800 - 32
Max pile depth	<i>m - ft</i>	up to 40 - 131	up to 20 - 65.6
Min working height	<i>mm - ft</i>	8.500* - 27.9	16.100 - 52.8
TRANSPORT			
Length	<i>mm - ft</i>	10.600 - 34.8	10.600 - 34.8
Width	<i>mm - ft</i>	2.490 - 8.2	2.490 - 8.2
Height	<i>mm - ft</i>	3.100 - 10.2	3.100 - 10.2
Weight	<i>kg - lbs</i>	30.000 - 66.090	29.000 - 63.930





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