

# EK90

HYDRAULIC PILING RIG

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# GEAX EK90 NO COMPROMISE

## HIGH PRODUCTIVITY

Thanks to an efficiently engineered hydraulics with high quality components and a powerful last generation engine, the EK90 offers superior performance relative to the size, while keeping very low running costs.

## UNIQUE ARCHITECTURE

Like all Geax machines, the EK90 has a long supporting boom and a sliding mast. This allows a great variety of tool positioning for drilling like: long reach drilling, low headroom and maximized tool height for casing.

## MANEUVERABILITY

With its compact architecture and a proverbial stability, the EK90 can drill in any site including slopes, uneven terrains and tight spaces. The higher maneuverability allows fast movements compared to a traditional rig.

## VERSATILITY

The EK90 can easily be converted in other drilling modes with modular kits. Common set-ups are kelly drilling and CFA, but many others are possible like diaphragm walls, soil mixing, soil displacement hydraulic hammer and customized set-up.

# LARGE DIAMETER PILES



## KELLY DRILLING

Max pile diameter <sup>1</sup>	mm - in	1500 - 60
Pull down force	kN - lbf	145 - 32.600
Extraction force	kN - lbf	165 - 37.100
Mast stroke	mm - ft	2.250 - 7.4
Rotary stroke on mast	mm - ft	2.000 - 6.6
Total rotary stroke	mm - ft	4.250 - 14
Min working height <sup>2</sup>	mm - ft	6.900 - 22.6

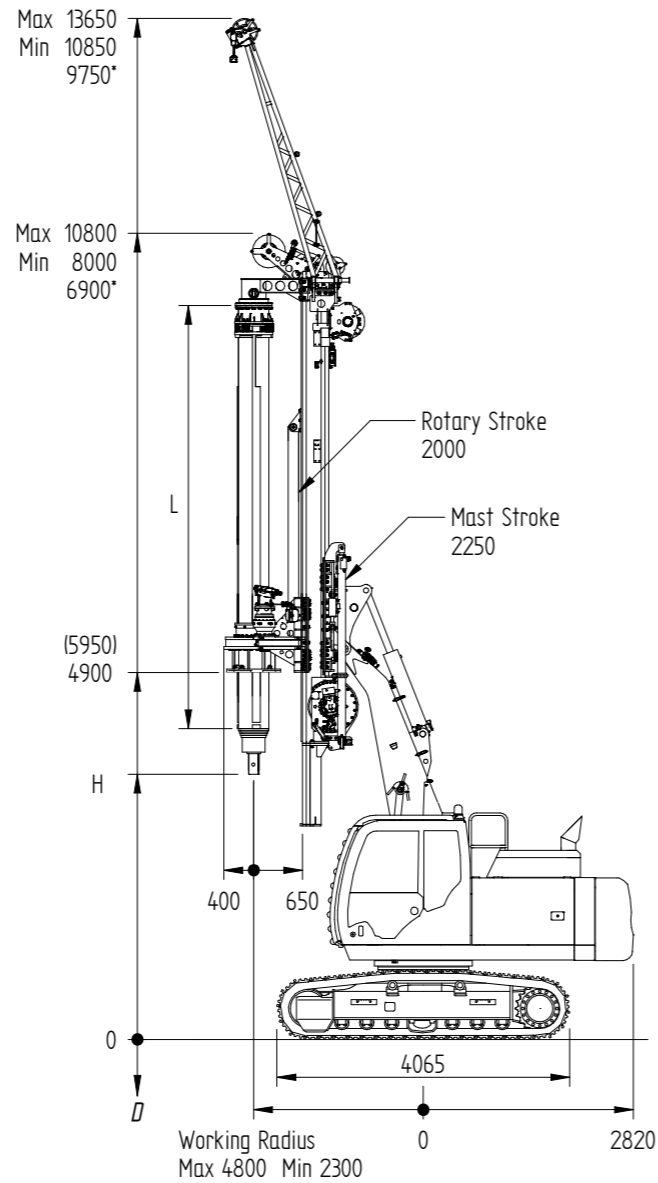
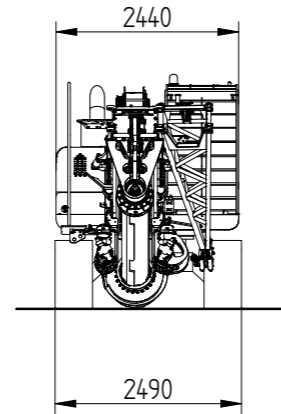
NOTES: 1. Recommended  
2. With a short kelly bar



## KELLY BAR OPTIONS

n° elements x m	Depth	H
5 x 5.6 (standard)	m - ft	25 - 82
6 x 5.6	m - ft	30 - 100
6 x 4.8	m - ft	25 - 82

All kelly bars are round interlocking  
Friction kelly and custom measures available upon request



\* removing the lower mast extension and with a short kelly bar  
( ) moving the mounting position of the rotary on the mast

# CONTINUOUS FLIGHT AUGER



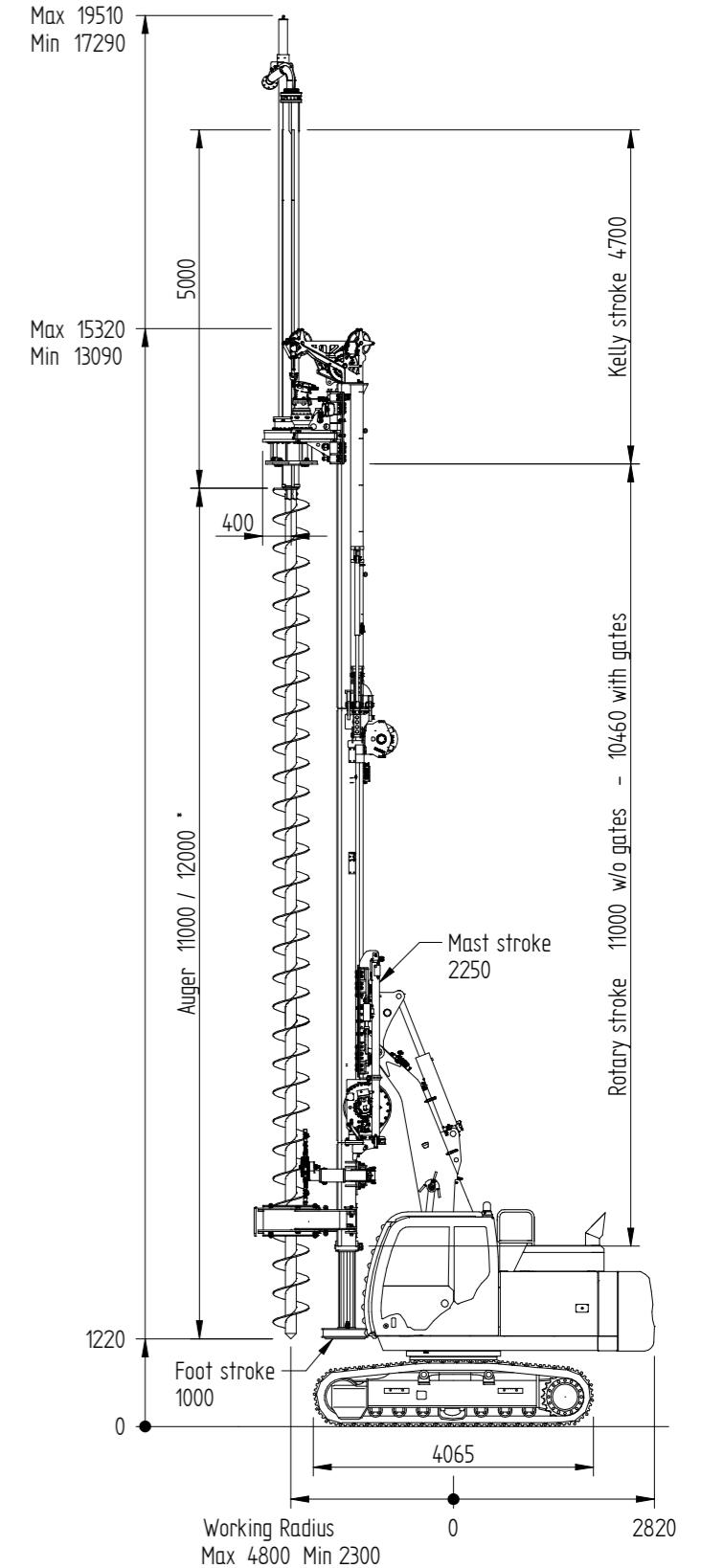
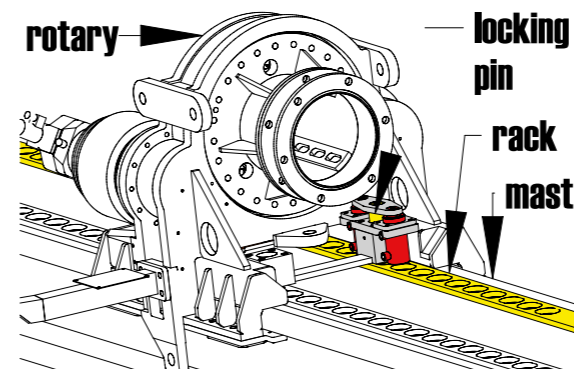
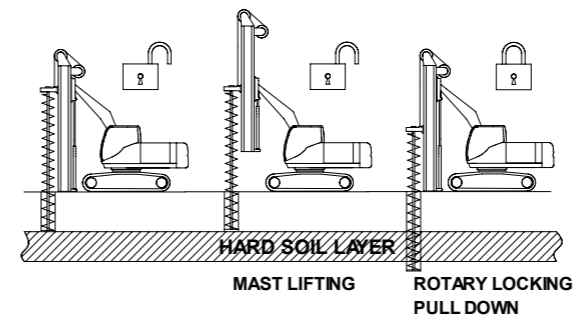
## CFA DRILLING

Max pile diameter <sup>1</sup>	mm - in	750 - 30
Pull down force	kN - lbf	165 - 37.100
Extraction force	kN - lbf	290 - 65.200
Mast stroke	mm - ft	2.250 - 7.4
Max pile depth	m - ft	16.5 - 54
Rotary stroke on mast	mm - ft	11.000 - 36
Total rotary stroke	mm - ft	13.250 - 43.5
Max auger length	mm - ft	12.000 - 39.4

NOTES: 1. Recommended

## BPS Patented Crowd System

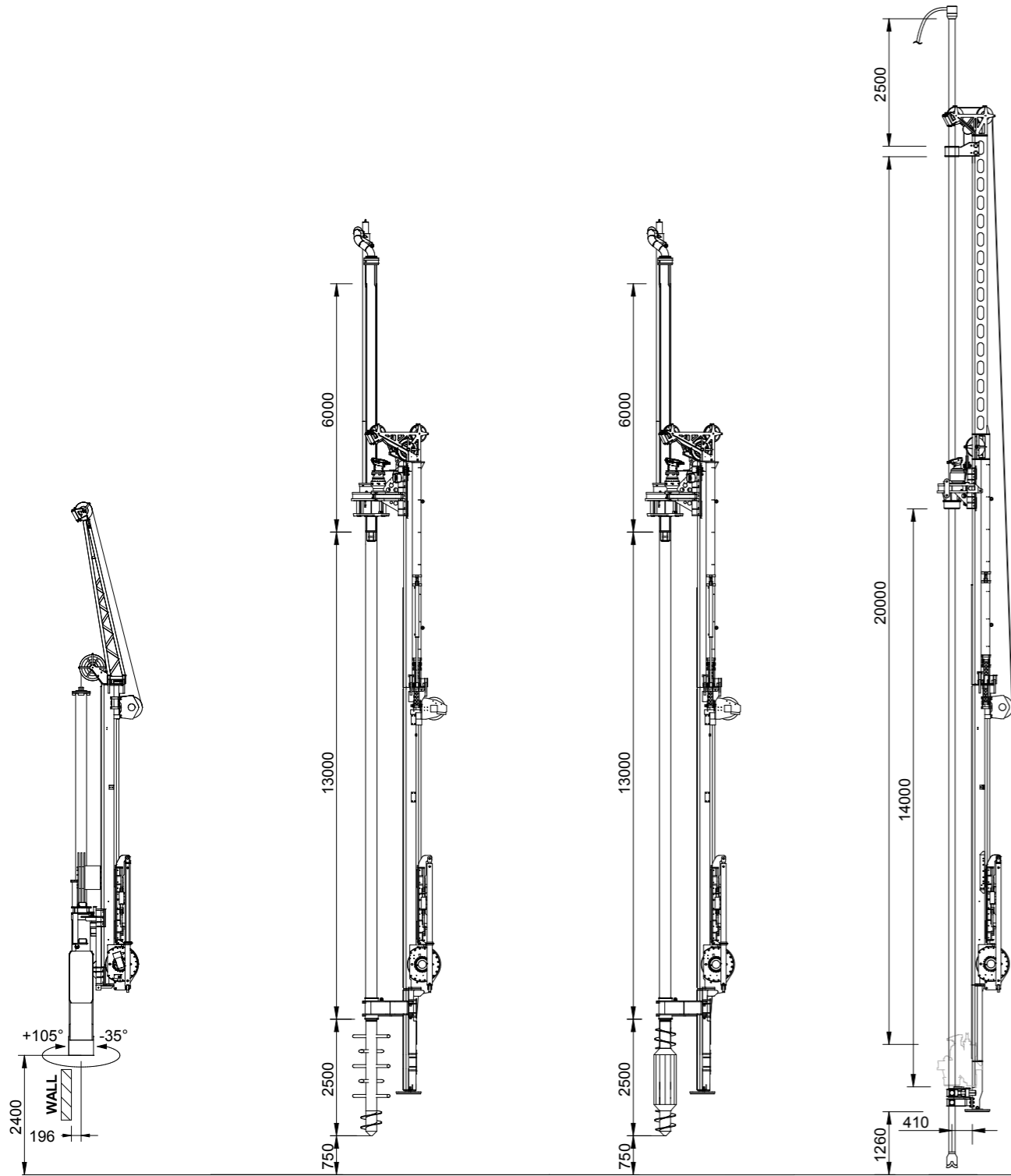
BPS is the Geax patented crowd system for CFA piling providing a mechanical locking system between the rotary head and the mast which creates a crowd force on the auger available along the entire length of the mast.  
The system is activated only when needed by the operator and requires no pulleys or rope



\* Max Length with open foot

# DRILLING KITS

# TECHNICAL DATA SHEET



## DIAPHRAGM WALL

Max depth 16 m  
Trench width 300-600 mm  
Trench length 2500 mm  
Closing force 200 kN

## SOIL MIXING

Max depth 16.5 m  
Max diameter 600 mm  
Rotary speed 70 rpm

## SOIL DISPLACEMENT

Max depth 16.5 m  
Max diameter 450 mm  
Pull down force 165 kN  
Extraction force 290 kN

## JET GROUTING

Max depth 21 m  
Max torque 12 kNm  
Rotary speed 60 : 180 rpm  
Pull down force 150 kN  
Extraction force 220 kN  
Rev clamps 60 : 360 mm  
Mandrel 60 : 140 mm

## BASE CARRIER

Engine	type	1204F - DL06
Exhaust emission	EU	-
	EPA	Tier4f - 3
Engine power	kW (hp)	97.4 (131) - 88 (120)
Main pumps	l/min	2x152
Hydraulic pressure	bar	330

## MAST

Forward tilt	deg	>10
Backward tilt	deg	>10
Lateral tilt	deg	± 5.5
Mast vertical stroke	mm - ft	2.250 - 7.4

## WINCHES

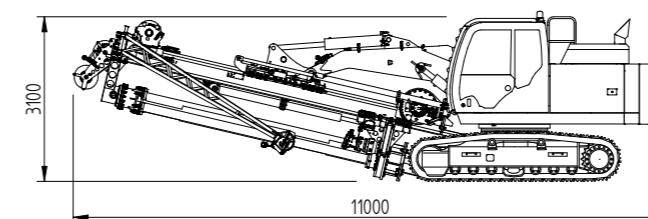
		KELLY	CFA
Main winch line pull (1st layer)	kN - lbf	110 - 24.730	110x3 - 24.730
Aux winch line pull (1st layer)	kN - lbf	50 - 11.240	50 - 11.240

## DRILLING

		KELLY	CFA
Max pile diameter <sup>1</sup>	mm - in	1.500 - 60	750 - 30
Std pile depth	m - ft	25 - 82	16.5 - 54
Max pile depth	m - ft	30 - 100	16.5 - 54
Rotary stroke on mast	mm - ft	2.000 - 6.6	11.000 - 36
Total rotary stroke	mm - ft	4.250 - 14	13.250 - 43.5
Min working headroom <sup>2</sup>	mm - ft	6.900 - 22.6	8.650 - 28.3

## TRANSPORT

### KELLY



## UNDERCARRIAGE

Tracks width	mm - ft	2.490 - 8.2
Tracks length	mm - ft	4.065 - 13.3
Track shoes	mm - ft	500 - 1.64
Tail radius	mm - ft	2.820 - 9.25

## ROTARY HEAD

Torque (nominal)	kNm - lbf ft	87 - 64.170
Drilling speed	rpm	10 - 30
Spin-off speed	rpm	65

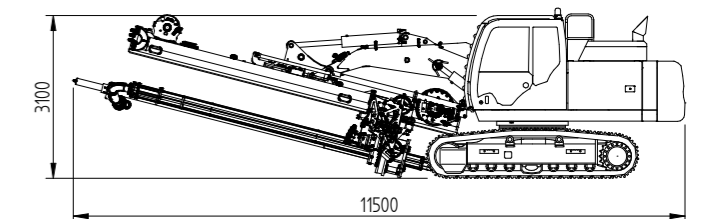
## CROWD SYSTEM

		KELLY	CFA
Pull down force	kN - lbf	145 - 32.600	165 - 37.100
Extraction force	kN - lbf	165 - 37.100	290 - 65.200

## TRANSPORT

		KELLY	CFA
Length	mm - ft	11.000 - 36	11.500 - 37.7
Width	mm - ft	2.490 - 8.2	2.490 - 8.2
Height	mm - ft	3.150 - 10.3	3.150 - 10.3
Weight	kg - lbs	28.000 - 61.700	28.500 - 62.800

### CFA



- Values are effective except where otherwise specified.
- Technical data are provided as indicative information only, they are subject to change without prior notice.

- NOTES:
1. Recommended
  2. Removing the mast extensions and/or with a short kelly bar



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