STATIC PILE DRIVER

Series #1

OLIVIER

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NEW ERA TECHNOLOGIES

Hydraulic static pile driver

NEW ERA

NEW ERA TECHNOLOGIES

Company profile

- Hunan NEW ERA Technologies Co. Ltd. is a high-tech civil enterprise located in the famous historic city, Changsha. NEW ERA has been developing by leaps and bounds since 2000. Now our company become one of the leading of manufacturing and selling the construction engineering machinery in Changsha.
- There is an excellent team in NEW ERA. It gathers high-class workers and professionals in technology, production, quality control, sale, service, and maintenance of engineering machinery industry.
- We have enjoyed a long reputation in the market and our products are popular in South-east Asia, Subcontinent of South Asia, Africa and Europe.
- Our products are durable in use, reasonable in price, and secure with after-sales service. NEW ERA welcomes all the customers to our company to select and purchase the various products of high quality, and you will have the best services!

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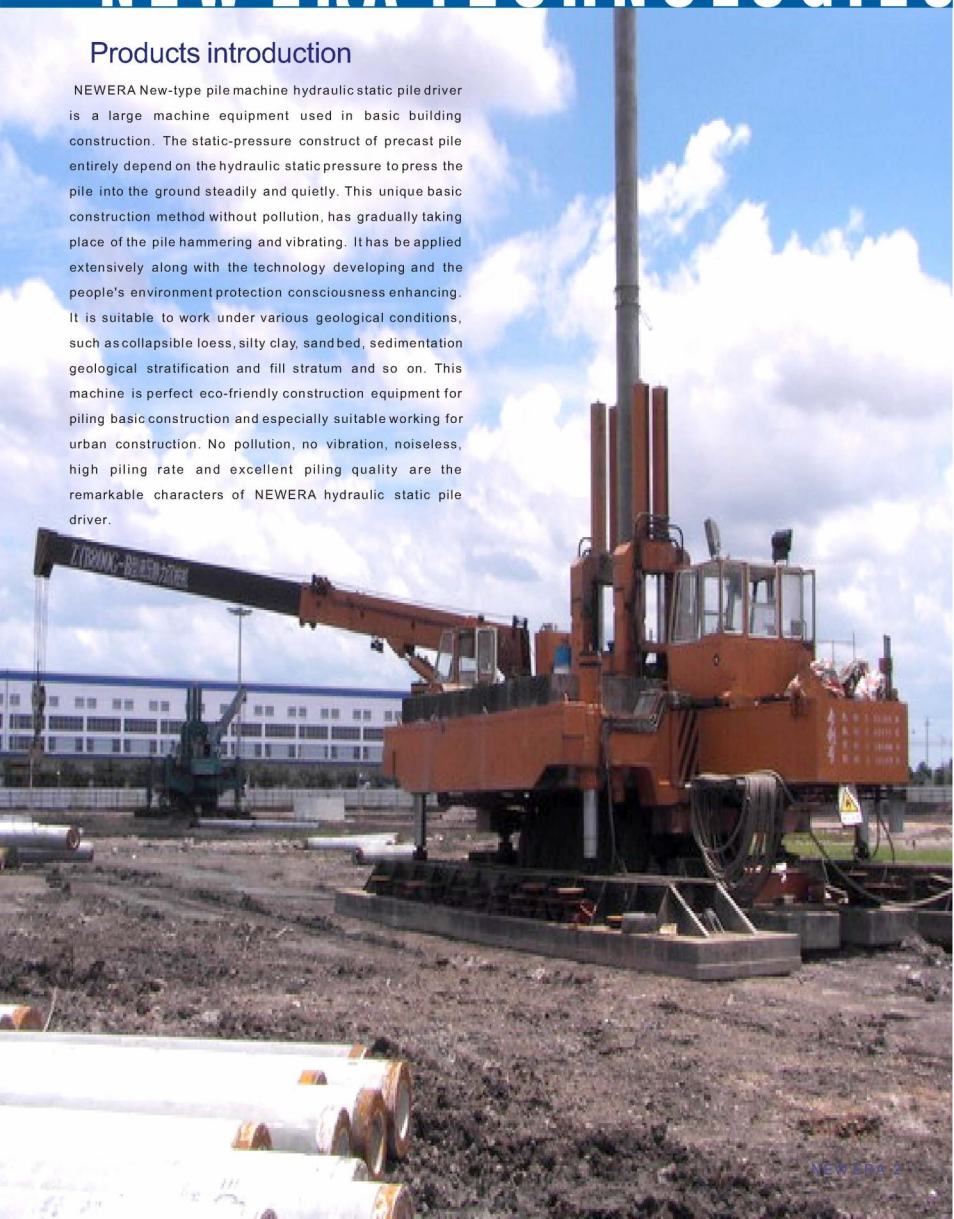
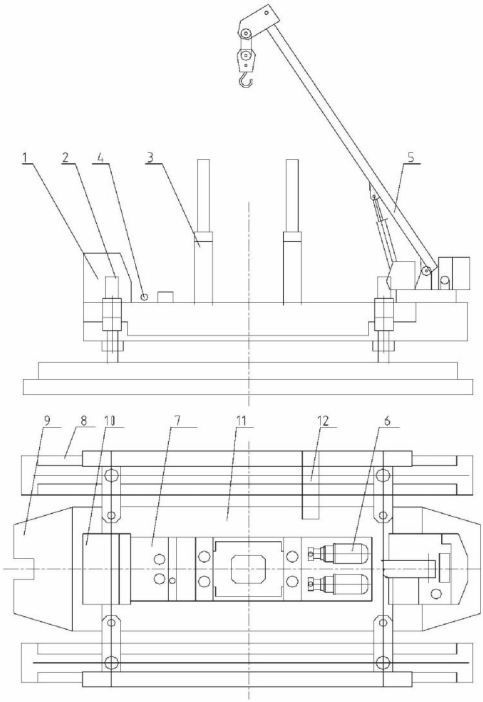
Products introduction

NEWERA New-type pile machine hydraulic static pile driver is a large machine equipment used in basic building construction. The static-pressure construct of precast pile entirely depend on the hydraulic static pressure to press the pile into the ground steadily and quietly. This unique basic construction method without pollution, has gradually taking place of the pile hammering and vibrating. It has be applied extensively along with the technology developing and the people's environment protection consciousness enhancing. It is suitable to work under various geological conditions, such as collapsible loess, silty clay, sand bed, sedimentation geological stratification and fill stratum and so on. This machine is perfect eco-friendly construction equipment for piling basic construction and especially suitable working for urban construction. No pollution, no vibration, noiseless, high piling rate and excellent piling quality are the remarkable characters of NEWERA hydraulic static pile driver.



Structure drawing of ZYB series Hydraulic static pile driver



1 --控制室
2 --升降机构
3 --压桩机构
4 --液压系统
5 --起重机
6 --泵站
7 --油箱
8 --纵移机构
9 -- 回转横移机构
10--电气系统
11--机身
12--配重

1 --Control Room
2 --Lift and down system
3 --Pile pressure
4 --Hydraulic system
5 --Crane
6 --Pump station
7 --Tank
8 --Longitudinal space structure
9 --Horizontal space gyrus structure
10--Electrical system
11--Fuselage
12--Counter weight

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The patents of ZYB series Hydraulic static pile driver

- The patented pile clamping mechanism and its control system makes pile clamping reliable keeps pile from being damaged,and therefore allow thin-wall-pile be drived easily.
- The patented long-feet-moving mechanism with directly driven double carts prevents the lifting mechanism from enduring sectional forces.
- The patented supporting platform articulating mechanism has the rigidity and strength 30% higher than traditional ones, making the rig more stable to operate and more convenient to transport.
- The patented lifting mechanism presents its cylinders from enduring sectional forces and consequently brings them longer operating life.
- The patented tech of multi grade control of pile driving velocity doubles the velocity
- The patented auto-replacement mechanism of traverse and rotary motion automatically keeps the rails of the short feet being parallel all the time and protects the rig from being damaged.

The structure and performance characteristics

- ZYB can drive piles more than 1200 meters a day with low noise.
- The unique design of hydraulic system leads to less energy loss and lower temperature rise during operation.

  Compared with traditional-piling mechanism, ZYB side-piling mechanism increases its driving capacity by 30%-50%.
- Minimum feet contact area pressure ratio decreases by more than 15%, which makes ZYB unlikely to be caved into the earth.
- The functions of pressure-maintaining and oil-compensating ensure that the oil pressure of clamping hydraulic system constant and avoid the event that the jaw sliding on the surface of the pile in the course of driving pile.
- Pile-driving forces from the clamping box are directly transferred to the clampers, avoiding the damage from the pile-driving forces to clamping hydraulic cylinders.
- Because of being able to swing to be automatically adapted to the diameter and shape of pile, the clamping jaw and the pile can automatically keep full touch in the surface; as a result, the damage of pile is fully eliminated.
- Because of monoblack clamping jaw and two clamping jaw which can only swing but can not move being used to locate and guide piling, the pile can be kept fully parallel with the guide rail, as a result, the problem that the pile is slopingly derived and is easily sheared by traditional clamping mechanism has fully solved.
- The oil filling system inlet in the hydraulic system makes oil tiling and filtering very convenient and free of pollution.

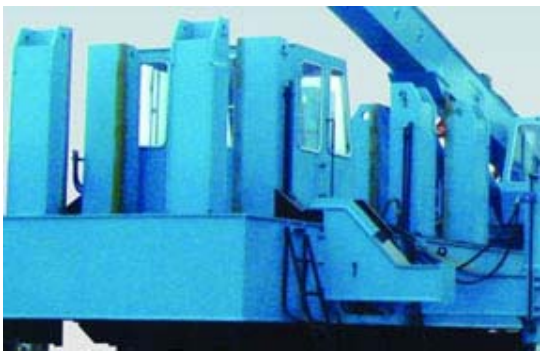
Main parameters of ZYB series Hydraulic static pile driver

Model / parameter		ZYB120	ZYB180	ZYB240	ZYB320	ZYB420	ZYB500	ZYB600	ZYB700	ZYB800	ZYB1000
Max pile driving force (tf)		120	180	240	320	420	500	600	700	800	1000
Max oil pressure of the hydraulic system (Mpa)		20	19.5	20.7	20.7	21	25	24	24.5	24.5	25.5
Max theoretic piling speed (m/min)		3.7	9.4	9.4	8.6	9.2	9.2	11.5	9.4	7.7	7.2
Grades of pile driving		2	4	4	4	4	4	4	4	4	4
Pile driving stroke (m)		2.0	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Longitudinal pace (m)		2	2.5	2.5	3.0	3.0	3.5	3.5	3.5	3.5	3.5
Horizontal pace (m)		0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
One angle range (°)		11	14	14	14	14	14	12	12	11.4	10
Lifting stroke (m)		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Pile standard	Min quare pile	F200	F200	F200	F300	F300	F300	F300	F300	F300	F300
	Max quare pile	F300	F400	F400	F400	F500	F500	F500	F500	F500	F500
	Min tube pile		¢ 300	¢ 300	¢ 300	¢ 300	¢ 300	¢ 300	¢ 300	¢ 300	¢ 300
	Max tube pile		¢ 400	¢ 400	¢ 400	¢ 500	¢ 500	¢ 600	¢ 600	¢ 600	¢ 700
Min side piling space (m)		0.7	0.7	0.7	0.8	1.0	1.0	1.1	1.1	1.1	1.2
Side and corner pile driving force (tf)		60	90	120	180	210	250	300	350	400	400
Max lift weight (t)		5	8	8	12	12	16	16	16	16	20
Contact area pressure ratio of long feet (t/m2)		10	10	11	11.1	11.6	12.8	12.5	13.7	14.9	17
Contact area pressure ratio of short feet (t/m2)		10	10	11	11.1	12.8	14.1	15.2	17.2	17.8	19.3
Piling power (KW)		30	44	44	67	67	74	104	104	104	111
Crane power (KW)		18.5	22	22	30	30	30	30	30	30	37
Dimension and weight of transportation	Length (m)	9.5	12.2	12.2	13	13	11.2	12	12	12.6	13.4
	Width (m)	3.2	3.0	3.0	3.2	3.4	3.4	3.4	3.4	3.4	3.4
	Height (m)	2.6	2.8	2.8	3.0	3.2	3.2	3.2	3.2	3.2	3.2
	Weight (t)	16	33	39	45	52	55	64	67	72	80
Min working dimension	Length (m)	9.5	12.2	12.2	13	13	13	13	13.8	14.5	14
	Width (m)	4.4	6.2	6.2	6.8	7.6	7.6	8.5	8.5	8.5	8.8

Hydraulic static pile driver ZYB120

Clamping box

New type clamping box with auto adjustable clamper devices prevent the concrete pile from damage, and ensure high reliability and low troubleshooting of clamping box. The service lives of clamping jaws have been prolonged at least twice after heat treatment technology was done.



Stationary type side & corner piling structure

Upright stationary type side & corner piling structure enable the piling pressure of side piling reach to 70% central piling pressure, which effectively ensure pile perpendicular. Moreover, the machine is easy to transportation and assembly.

Comfortable cabin with easily operational control board

Sub - constant power pile-pressing system.

Model parameter		ZYB120
Max pile driving force (tf)		120
Max oil pressure of the hydraulic system (Mpa)		20
Max theoretic piling speed (m/min)		3.7
Grades of pile driving		2
Pile driving stroke (m)		2.0
Longitudinal pace (m)		2
Horizontal pace (m)		0.5
One angle range (°)		11
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F200
	Max quare pile	F300
	Min tube pile	
	Max tube pile	
Min side piling space (m)		0.7
Side and corner pile driving force (tf)		60
Max lift weight (t)		5
Contact area pressure ratio of long feet (t/m2)		10
Contact area pressure ratio of short feet (t/m2)		10
Piling power (KW)		30
Crane power (KW)		18.5
Dimension and weight of transportation	Length (m)	9.5
	Width (m)	3.2
	Height (m)	2.6
	Weight (t)	16
Min working dimension	Length (m)	9.5
	Width (m)	4.4

Hydraulic static pile driver ZYB 180

Model parameter		ZYB180
Max pile driving force (tf)		180
Max oil pressure of the hydraulic system (Mpa)		19.5
Max theoretic piling speed (m/min)		9.4
Grades of pile driving		4
Pile driving stroke (m)		2.0
Longitudinal pace (m)		2.5
Horizontal pace (m)		0.6
One angle range (°)		14
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F200
	Max quare pile	F400
	Min tube pile	¢ 300
	Max tube pile	¢ 400
Min side piling space (m)		0.7
Side and corner pile driving force (tf)		90
Max lift weight (t)		8
Contact area pressure ratio of long feet (t/m2)		10
Contact area pressure ratio of short feet (t/m2)		10
Piling power (KW)		44
Crane power (KW)		22
Dimension and weight of transportation	Length (m)	12.2
	Width (m)	3.0
	Height (m)	2.8
	Weight (t)	33
Min working dimension	Length (m)	12.2
	Width (m)	6.2

Hydraulic static pile driver ZYB240

Model parameter		ZYB240
Max pile driving force (tf)		240
Max oil pressure of the hydraulic system (Mpa)		20.7
Max theoretic piling speed (m/min)		9.4
Grades of pile driving		4
Pile driving stroke (m)		2.0
Longitudinal pace (m)		2.5
Horizontal pace (m)		0.6
One angle range (°)		14
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F200
	Max quare pile	F400
	Min tube pile	¢ 300
	Max tube pile	¢ 400
Min side piling space (m)		0.7
Side and corner pile driving force (tf)		120
Max lift weight (t)		8
Contact area pressure ratio of long feet (t/m2)		11
Contact area pressure ratio of short feet (t/m2)		11
Piling power (KW)		44
Crane power (KW)		22
Dimension and weight of transportation	Length (m)	12.2
	Width (m)	3.0
	Height (m)	2.8
	Weight (t)	39
Min working dimension	Length (m)	12.2
	Width (m)	6.2

Hydraulic static pile driver ZYB320

Model parameter		ZYB320
Max pile driving force (tf)		320
Max oil pressure of the hydraulic system (Mpa)		20.7
Max theoretic piling speed (m/min)		8.6
Grades of pile driving		4
Pile driving stroke (m)		1.8
Longitudinal pace (m)		3.0
Horizontal pace (m)		0.7
One angle range (°)		14
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F300
	Max quare pile	F400
	Min tube pile	¢ 300
	Max tube pile	¢ 400
Min side piling space (m)		0.8
Side and corner pile driving force (tf)		180
Max lift weight (t)		12
Contact area pressure ratio of long feet (t/m2)		11.1
Contact area pressure ratio of short feet (t/m2)		11.1
Piling power (KW)		67
Crane power (KW)		30
Dimension and weight of transportation	Length (m)	13
	Width (m)	3.2
	Height (m)	3.0
	Weight (t)	45
Min working dimension	Length (m)	13
	Width (m)	6.8

Hydraulic static pile driver ZYB420

Model parameter		ZYB420
Max pile driving force (tf)		420
Max oil pressure of the hydraulic system (Mpa)		21
Max theoretic piling speed (m/min)		9.2
Grades of pile driving		4
Pile driving stroke (m)		1.8
Longitudinal pace (m)		3.0
Horizontal pace (m)		0.7
One angle range (°)		14
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F300
	Max quare pile	F500
	Min tube pile	¢ 300
	Max tube pile	¢ 500
Min side piling space (m)		1.0
Side and corner pile driving force (tf)		210
Max lift weight (t)		12
Contact area pressure ratio of long feet (t/m2)		11.6
Contact area pressure ratio of short feet (t/m2)		12.8
Piling power (KW)		67
Crane power (KW)		30
Dimension and weight of transportation	Length (m)	13
	Width (m)	3.4
	Height (m)	3.2
	Weight (t)	52
Min working dimension	Length (m)	13
	Width (m)	7.6

Hydraulic static pile driver ZYB500

Model parameter		ZYB500
Max pile driving force (tf)		500
Max oil pressure of the hydraulic system (Mpa)		25
Max theoretic piling speed (m/min)		9.2
Grades of pile driving		4
Pile driving stroke (m)		1.8
Longitudinal pace (m)		3.5
Horizontal pace (m)		0.7
One angle range (°)		14
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F300
	Max quare pile	F500
	Min tube pile	¢ 300
	Max tube pile	¢ 500
Min side piling space (m)		1.0
Side and corner pile driving force (tf)		250
Max lift weight (t)		16
Contact area pressure ratio of long feet (t/m2)		12.8
Contact area pressure ratio of short feet (t/m2)		14.1
Piling power (KW)		74
Crane power (KW)		30
Dimension and weight of transportation	Length (m)	11.2
	Width (m)	3.4
	Height (m)	3.2
	Weight (t)	55
Min working dimension	Length (m)	13
	Width (m)	7.6

Hydraulic static pile driver ZYB600

Model parameter		ZYB600
Max pile driving force (tf)		600
Max oil pressure of the hydraulic system (Mpa)		24
Max theoretic piling speed (m/min)		11.5
Grades of pile driving		4
Pile driving stroke (m)		1.8
Longitudinal pace (m)		3.5
Horizontal pace (m)		0.7
One angle range (°)		12
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F300
	Max quare pile	F500
	Min tube pile	¢ 300
	Max tube pile	¢ 600
Min side piling space (m)		1.1
Side and corner pile driving force (tf)		300
Max lift weight (t)		16
Contact area pressure ratio of long feet (t/m2)		12.5
Contact area pressure ratio of short feet (t/m2)		15.2
Piling power (KW)		104
Crane power (KW)		30
Dimension and weight of transportation	Length (m)	12
	Width (m)	3.4
	Height (m)	3.2
	Weight (t)	64
Min working dimension	Length (m)	13
	Width (m)	8.5

Hydraulic static pile driver ZYB700

Model parameter		ZYB700
Max pile driving force (tf)		700
Max oil pressure of the hydraulic system (Mpa)		24.5
Max theoretic piling speed (m/min)		9.4
Grades of pile driving		4
Pile driving stroke (m)		1.8
Longitudinal pace (m)		3.5
Horizontal pace (m)		0.7
One angle range (°)		12
Lifting stroke (m)		1.1
Pile standard	Min quare pile	F300
	Max quare pile	F500
	Min tube pile	¢ 300
	Max tube pile	¢ 600
Min side piling space (m)		1.1
Side and corner pile driving force (tf)		350
Max lift weight (t)		16
Contact area pressure ratio of long feet (t/m2)		13.7
Contact area pressure ratio of short feet (t/m2)		17.2
Piling power (KW)		104
Crane power (KW)		30
Dimension and weight of transportation	Length (m)	12
	Width (m)	3.4
	Height (m)	3.2
	Weight (t)	67
Min working dimension	Length (m)	13.8
	Width (m)	8.5

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