

SUNWARD



山河智能装备股份有限公司
SUNWARD INTELLIGENT EQUIPMENT CO.,LTD.

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使用设备时一定要认真阅读操作与保养手册。山河智能遵循不断完善的原则，对产品的部分改进或许可难以通报阁下，本图册仅作参考，最终解释权属山河智能。
内部资料 请勿外传

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ZYJ CH/EN 2020-08

ZYJ系列
液压静力压桩机
ZYJ SERIES HYDRAULIC STATIC PILE DRIVER

领导关怀/公司简介

LEADERSHIP CARE/COMPANY PROFILE

做装备制造领域世界价值的创造者



2009年3月29日，现任国务院总理李克强视察山河智能
Mar. 29th, 2009, the present premier
Li Keqiang visited SUNWARD



2010年7月2日，时任国务院总理温家宝视察山河智能
肯定自主创新
Jul. 2nd, 2010, the ex-premier Wen Jiabao visited SUNWARD
Highly praised independent innovation

山河智能装备集团是中南大学何清华教授领衔于1999年创办，现已发展为以上市公司山河智能装备股份有限公司（证券代码：002097）为核心，以长沙为总部，以装备制造为主业，在国内外具有一定影响力的国际化企业集团，跻身于全球工程机械企业50强、世界挖掘机企业20强。

公司产学研一体化，依靠先导式创新，以差异化产品实现跨越式发展。集团总资产超过150亿元，员工5000余人。响应供给侧改革要求，公司战略业务定位于“一点三线”（“一点”就是聚焦装备制造，“三线”就是工程装备、军用装备、航空装备），已创新研发出200多个规格型号，具有自主知识产权和核心竞争力的高性能产品。

职业化的营销服务团队、遍布全球的营销服务网络使集团产品畅销国内外，出口100多个国家和地区，“SUNWARD”商标在数十个国家注册。

Sunward Intelligent Equipment Group was founded in 1999 led by Central South University Professor Mr. He Qinghua. Today, it has been developed into the Sunward Intelligent Equipment Co., Ltd. (stock short name: Sunward Intelligent; stock code: 002097), which headquartered in Changsha City and focus on equipment manufacturing, owning independent intellectual property and makes global influences, ranking among top 50 global construction machineries manufacturing enterprises and top 20 global excavator brands.

Sunward holds typical feature of industry-university-research-integration, which has achieved leap development depending on its differentiated competitive and leading innovation. The total asset is more than 15 billions Yuan and the member of staff is over 5,000 responding to the supply-side reform requirements. Sunward's strategic businesses positioned on the "one point and three aspects" (one point refers to focus on the equipments manufacturing; three aspects refer to engineering equipments, military equipments and aviation equipments). Sunward has researched and developed more than and 200 specifications models of products, with high performance of independent intellectual property rights and core competitiveness.

Sunward has a professional marketing and service groups, along with its strong sales networks in the world which makes its products have been actively demanded throughout the country and exported to more than 100 countries and areas around the world. The brand "SUNWARD" has already been registered in dozens of countries worldwide.



国家科技进步二等奖

山河智能装备股份有限公司
国家博士后科研工作站
湖南省人事厅
湖南省博士后工作管理委员会

国家认定
企业技术中心
国家发展改革委 科技部
财政部 海关总署 国家税务总局

国家工程机械动员中心
国家经济动员办公室
二〇〇九年九月

创新型企业
科学技术部 国务院国资委 中华全国总工会
二零一一年七月

国家级工程实践教育基地
中南大学 山河智能装备股份有限公司





高精度数控激光切割
High-precision CNC laser cutting

以精益思想和JIT生产技术为核心，结合公司实际生产积累的经验，建立一种思想、一个平台、多种生产模式并存，满足不同客户群体需要的生产模式。公司拥有确保产品质量的先进设备，建立了CNC数控机床网络管理系统，拥有一支经验丰富的工艺技术团队作为精益化生产的坚强后盾。规范工艺管理，严肃工艺纪律并对工艺纪律作定期督促与检查。

By centering on the lean thinking and JIT production technology and in combination with the experiences accumulated from the practical production of the company, a production mode with one thinking, one platform, and coexisted multiple production modes is established to meet the demands of different customer groups. With the establishment of network management system for CNC machines, the company owns advanced equipment for guarantee of product quality and an experienced process technic team as the solid backing for lean manufacturing. The process management is standardized and the process disciplines are strictly designed and periodically urged and checked.



焊接机器人
Welding robot



数控双面镗铣中心
CNC double-faced boring/milling center



五轴联动车铣加工中心
Five-axis interpolation lathing/milling center



数控深孔镗床
CNC deep hole boring machine



卧式加工中心
Horizontal machining center



尾部布置配重区域大，边桩距小，边桩力大
Large tail ballast area, small border pile spacing, and high border pile driving force



压桩行程长
Long piling stroke



挂式边桩三点位布置，可压边桩、角桩、侧桩
Three-point arrangement of hitch type border piles capable of driving border piles, corner piles, and side piles



压桩力大，压桩速度快，机器紧凑，体积小，灵活方便
High pile driving force, fast pile driving speed, and compact, small, and flexible machine



压中桩边桩时都能面对桩位操作，方便观察
Operations towards pile locations during driving of center piles and border piles ease the observation



维护方便、美观
Easy maintenances and graceful appearance

可伸缩式悬臂，工作时打开，运输时缩回，节约装拆机时间。

Telescoping cantilever unfolds during working and retracts during transportation to save the assembling disassembling time.



独立散热系统
Independent radiator system

夹持机构提供多种结构供客户选择

Pile clamping mechanism offers a variety of structure for the customs

适应各类特殊桩型的夹桩箱,包括:H型钢桩,竹节型桩,梯形桩,三角桩,钢管桩等

Suitable for all kinds of special pile models, including: H steel pile, Bamboo style pile, Trapezoidal pile, Triangle pile, Steel pipe pile.

8缸对顶式夹桩箱,结构简单,维护方便

8-cylinder pile clamping box, simple structure and convenient maintenance

多点均压式夹桩箱,专利技术,采用楔块增力原理,夹持力均匀,特别适合于高吨位和薄壁管桩

Multipoint and isopressing pile clamping box used the wedge energizing principle, provides the uniform stress distribution on pile, especially suitable for largetonnage and thin-wall pipe pile.

新型液压步履式行走

Hydraulic footstep travel mechanism

新型液压步履式行走底盘由具有自动复位、回转补偿功能和均载联动功能两项创新技术组成

New pattern of hydraulic footstep travel mechanism is composed of three latest technical innovations, that is swing compensation, autoreposition and constant load linkage

六个压桩油缸

Six pile clamping cylinders

机器施工速度快,效率高

山河智能大吨位桩机率先采用六个压桩油缸

There are six pile clamping cylinders, high construction speed and high efficiency.

SUNWARD large-tonnage pile driver is the first to adopt six pile-pressing cylinders.

司机室

Cab reserves room

预留安装空调位置

手柄布局合理,操作方便;

The cab reserves room for air-condition installation

Handle layout is reasonable, easy to operate.

两侧添加配重

Counterweight on both sides

整机重心降低,施工更安全

Lowered the center of gravity to ensure more secure construction.

压桩油缸快速同步返回专利技术

Pile pressing cylinder quick and synchronesh return patented technology

通过本技术专利,可使压桩油缸返回速度调高一倍,在同样的泵流量配置下,使施工效率大幅提升。

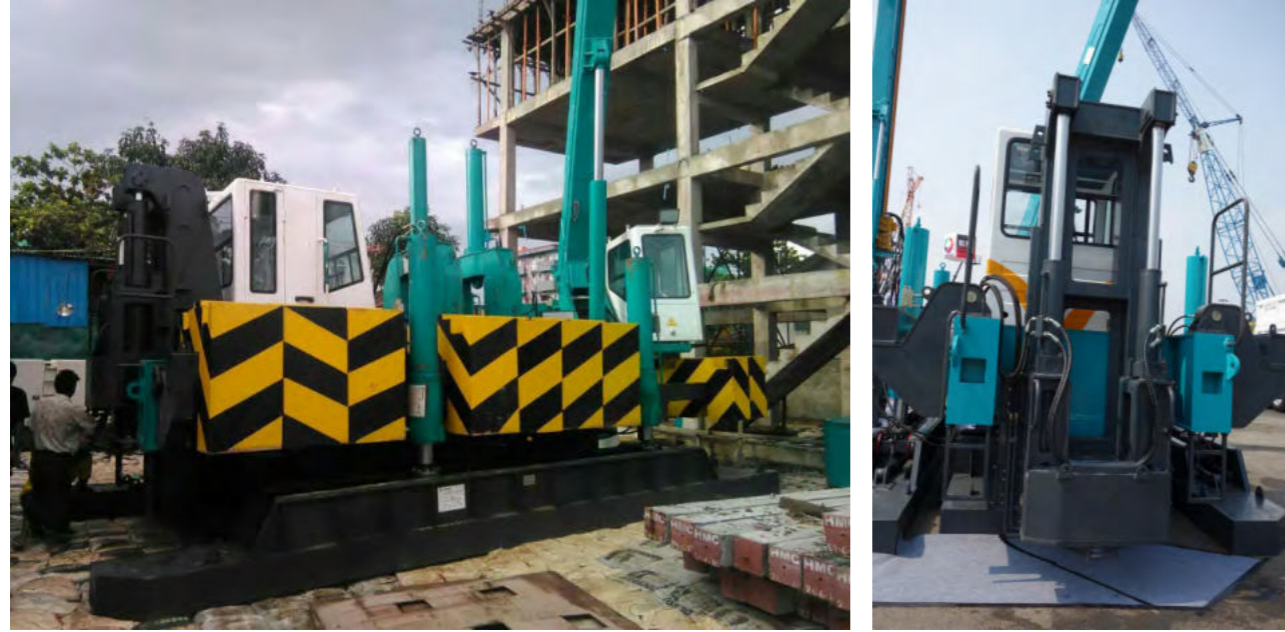
Patent NO. ZL-201220144242.4

Using this technology, cylinder return speed increased one times. With the same configuration, it can achieve high construction efficiency.

挂式边桩器 Hitch type border pile device

挂式边桩器可使边桩距离更小，可贴墙施工。配重高度低、安全，边桩力大。

The hitch type border pile device can realize smaller border pile spacing and the operations against walls, featuring low ballast height, high safety, and high pile driving force.



独特的设计，适合在狭窄空间施工

Unique design is suitable for operations in narrow spaces

在旧城改造或临近其它障碍物进行桩基础施工，边桩、角桩较多且施工麻烦。该机将新型边桩、角桩机构布置在压桩机比较细长方向的一端，在结构上解决了使用同一套装置，在最小的尺寸范围内处理边桩和角桩的难题，更有独特的侧桩位边桩为解决这些难题提供了更多的途径。另一方面，该机尾部有较大的空间放置边桩配重，因而边桩力较大。该机不仅压“中桩”的边距同比最小，而且压“边桩”、“角桩”的距离也最小，能独立完成包括角桩在内的全部桩基工程任务。

During the pile foundation construction for reconstruction of inner cities or closing to other obstacles, the many border piles and corner piles always bring about construction troubles. This machine arranges the new border pile and corner pile mechanism on the slimmer end of the pile driver to structurally solve the problem of handling the border pile and corner pile within the minimum dimensional range with one same device. In addition, the unique border piles at side pile locations provide more approaches for solving these problems. On the other hand, the large tail space of this machine for placement of border pile ballast achieves a high border pile driving force. This machine can not only realize the minimum edge spacing for driving of “center piles” but also realize the minimum spacing for driving of “border piles” and “corner piles” and can independent complete the entire pile foundation construction task, including the corner piles.

新型液压步履式行走底盘由具有自动复位、回转补偿功能的技术组成

The new hydraulic walking chassis is built by the technologies with automatic reset and slewing compensation functions.



新型液压步履式行走
New hydraulic walking chassis



模块化设计，运输方便
Crane moment limiter (Optional)



吊机力矩限制器 (选装) Crane moment limiter (Optional)

杜绝违章操作，符合严格安全施工管理要求。（此装置供用户选配）
It eliminates the rule-breaking operations to meet the stringent operation safety management requirements. (This device is optional at the user's choice)



压桩监测记录系统 (选装) Pile pressing monitoring record system (Optional)

直接有效的桩垂直度监测系统，使操作手在操作室内能准确地观测桩的垂直度，便于操作手对桩压入质量进行监控（此装置供用户选配）

The direct and effective pile verticality monitoring system enables the operator in the operating room to accurately observe the verticality of the pile and eases the operator's monitoring on the pile pressing quality (This device is optional at the user's choice).

规模化生产，配件有保证

Guaranteed spare parts by large-scale production



ZYJ系列静力压桩机参数表

Specification Zyj Series Hydraulic Static Pile Driver

型号 Model		单位 Unit	ZYJ100B-III	ZYJ160B	ZYJ200B	ZYJ260B-II	ZYJ360B-II	ZYJ460B-II
外形尺寸 Overall dimensions	工作长 Working length	mm	6650	9182	10322	11800	13133	13400
	工作宽 Working width	mm	4100	4600	4800	6200	6530	7310
	运输高 Transportation height	mm	3580	3398	3350	3141	3238	3386
最大压桩力 Maximum pile driving force		tf	90	160	200	260	360	460
最小压桩速度 Minimum pile driving speed		m/min	2.4	1.6	1.3	1.12	1.4	0.95
最大压桩速度 Maximum pile driving speed		m/min	8.3	6.3	9	8.1	7.2	8.8
行走能力 Traveling capability	纵向行程 Longitudinal travel	m	1.6	2.2	2.2	3	3	3.6
	横向行程 Lateral travel	m	0.4	0.4	0.4	0.6	0.6	0.6
	转角 Steering angle	°	14	12	10	8	10	10
升降行程 Lifting/lowering travel		m	1.4	1.4	1.4	0.9	0.9	1
标配起重机 Standard hoist			QY8C	QY10A	QY12E	QY12D	QY12C	QY16D
中桩最大吊桩长度 Maximum hoisting length for center piles		m	9	13	14	14	14	14.5
接地比压 Ground pressure	长船 Long ship	Kpa	100	133	142	99	122	112
	短船 Short ship	Kpa	119	146	141	121	145	155
边桩距离 Border pile spacing		mm	340	451	790	860	1240	1045
最小角桩距离 Minimum corner pile spacing		mm	340	746	1400	1570	1620	1580
可配最大圆桩钳口 Maximum installable round pile clamping jaws		mm	350/400	400	400	500	600	600
可配最大方桩钳口 Maximum installable square pile clamping jaws		mm	350/400	400	400	500	600	600
可选夹桩箱 Optional pile clamping box			3522/4022	4025	4025	5022	6025	6028/6014

型号 Model		单位 Unit	ZYJ600BJ	ZYJ680BJ	ZYJ860BG	ZYJ960B-II	ZYJ1060B-II
外形尺寸 Overall dimensions	工作长 Working length	mm	13500	14000	14000	15122	17315
	工作宽 Working width	mm	7860	8360	8560	9160	9160
	运输高 Transportation height	mm	3242	3240	3320	3240	3490
最大压桩力 Maximum pile driving force		tf	600	680	860	960	1060
最小压桩速度 Minimum pile driving speed		m/min	0.7	0.9	0.8	0.7	0.7
最大压桩速度 Maximum pile driving speed		m/min	5.8	9	7.7	7.3	7.8
行走能力 Traveling capability	纵向行程 Longitudinal travel	m	3.6	3.6	3.6	3.6	3.6
	横向行程 Lateral travel	m	0.6	0.7	0.7	0.7	0.7
	转角 Steering angle	°	8	8	8	8	5
升降行程 Lifting/lowering travel		m	1.1	1.1	1.1	1.1	1.1
标配起重机 Standard hoist			QY20C	QY20C	QY25C	QY25C QY35C	QY25C QY35C
中桩最大吊桩长度 Maximum hoisting length for center piles		m	15	15	16.5	16.5	16.5
接地比压 Ground pressure	长船 Long ship	Kpa	132	137	154	148	150
	短船 Short ship	Kpa	162	168	203	196	198
边桩距离 Border pile spacing		mm	680	600	680	995	995
最小角桩距离 Minimum corner pile spacing		mm	1100	1160	1160	1530	1530
可配最大圆桩钳口 Maximum installable round pile clamping jaws		mm	600	600	600/800	600/800	600/800
可配最大方桩钳口 Maximum installable square pile clamping jaws		mm	600	600	600/450	600/800	600/800
可选夹桩箱 Optional pile clamping box			6032/6016	6032/6016	8016/6038 6036/6016	8038/8016 6038	8038/8016 6038

高效、快捷的售后服务

Efficient and rapid after-services

在全国各地设有配件仓库，形成总部仓库、区域中心仓库、省级仓库和地市级仓库四位一体的配件供应保障体系，储存了价值上亿元、2万余种零配件。800名一线服务工程师，200个服务网点，300台服务车，上百家服务顾问单位，保证高效快捷的售后服务。

The spare parts warehouses are established around the world to form an integrated spare parts supply assurance system composed of headquarter warehouse, regional central warehouse, province-level warehouse, and prefecture-level warehouse and store more than 20,000 types of spare parts worthy of RMB >100 million. 800 frontline service engineers, 200 service stations, 300 service vehicles, and >100 service consultant organizations are available for the customers' services.



服务承诺: 一个电话 全程无忧

Service commitment: Whole-process trouble-free with merely one call.



全球服务邮箱(Global service email): service@sunward.cc

购买与咨询热线:

■ 越南、老挝、柬埔寨(Vietnam, Laos, and Cambodia) 缅甸(Burma):

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- E-mail: vnm1@sunward.cc

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■ 马来西亚、文莱、孟加拉国、巴布亚新几内亚(Malaysia, Brunei, Bangladesh, and Papua New Guinea):

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- E-mail: mal@sunward.cc mal1@sunward.cc

CONSTRUCTION APPLICATIONS



大庆油田多台静力压桩机施工现场
Construction scene of multiple static pile drivers in Daqing Oilfield



广东南海8台静力压桩机同时施工
Simultaneous construction scene of 8 static pile drivers in Nanhai, Guangdong



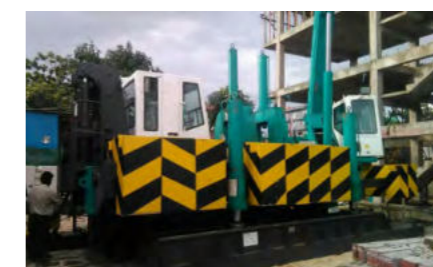
海防5台静力压桩机施工
Construction scene of 5 static pile drivers in Haiphong

山河智能是国内桩机产量遥遥领先的专业制造企业，推进和引领我国静力压桩机技术和管桩行业的发展，公司推出的液压静力压桩机已经批量出口东南亚、俄罗斯、非洲、美洲等地，在全球市场占有率达到65%。

As the professional manufacturer with far leading production capacity in domestic pile driver industry, Sunward is boosting and leading the development of China's static pile driver technologies and tubular pile industry. Our static hydraulic pile drivers have been exported in batches to Southeast Asia, Russia, Africa, and America, with the global market share hitting 65%.



俄罗斯施工
Construction scene in Russia



缅甸施工
Construction scene in Burma



天津施工
Construction scene in Tianjin



武汉施工
Construction scene in Wuhan



河南施工
Construction scene in Henan



厦门施工
Construction scene in Xiamen



孟加拉施工
Construction scene in Bangladesh



马来西亚施工
Construction scene in Malaysia



越南施工
Construction scene in Vietnam