

#### YONGAN MACHINERY

温州永安重工科技有限公司

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## 液压冲击锤

Hydraulic impact hammer



2024目录 Catalogue



永安机械,用心打造桩锤客户满意

第一品牌!

服务热线: 400-826-9187

#### 合作单位 **Cooperative Enterprice**





























































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## Since **1985**

#### More Than 39 Years Service To The Market 39年来服务市场







滨海工厂 / Binhai factory

福鼎工厂 / Fuding factory

瑞安39年工厂 / Ruian 39 years factory



短江ロエ厂

Oujiangkou factory Wuhu factory Sales and services in more than 80 countries and regions

销售与服务超过80个国家与地区



#### 以超一流的品质和感动客户的服务

## 开创液压冲击新理念

With superior quality and touched by the customer service Create a new concept of Hydraulic impact hammer

永安机械创建于1985年,致力于液压振动锤,液压冲击锤,电动振动锤,挖机式液压振动锤、翻桩器等桩工系列产品的设计、研发、生产及租赁服务。三十多年来在广大客户的关心支持下,在全球业内知名度和影响力大幅提升。目前已发展成国内振动锤骨于龙头企业。

永安打桩锤广泛应用于码头、桥梁、栈桥、水运工程项目中施工,也可用于海上风电、房建桩基础打桩。 永安振动打桩锤打桩效率高,操作简单,故障率低,同时还提供专业的售后服务。其中液压振动锤由YZ-90D 到YZ-1600有30多款产品;液压冲击锤由YC-3到YC-280有30多款产品;电动振动锤由DZ-45到DZJ-600有 20多款产品,翻桩器FZQ-100、FZQ-100i到FZQ-1200、FZQ-1200i有20多款产品。

永安机械是国内最早设计制造振动桩锤的企业之一,为桩工领域细分龙头骨干企业,公司制造的零启动调频调矩液压振动锤、YZ-400B液压振动锤和围海造岛用重大工程装备重型液压振动桩锤12联动基组分别荣获2018年、2020年和2023年浙江省首台套荣誉称号。

强大的技术实力使企业在产品研发上不断推陈出新,2020年生产的YZ-800B为目前国内单机最大液压振动锤,并成功应用于中广核汕尾后湖海上风电场项目。公司研发的液压打桩锤也为国内领先技术,公司研发的YC-230打击能量在3900KJ也成功应用于福建平潭长江澳海上风电场项目中,逐渐打破国外巨头的垄断。目前公司正在研发YC-280,该锤打击能量为5040KJ,届时将在行业舞台大展身手,为该领域填补空白。

"永安"牌振动打桩锤各系列产品的足迹已遍布全国各地,在国内300多座大型桥梁,如:杭州湾跨海大桥、港珠澳跨海大桥,厦门集美跨海大桥,南京大胜关长江大桥,钱江九桥,福建平潭公铁两用大桥、内蒙古包头黄河大桥、深中跨海通道、瓯江北口大桥、马鞍山公铁两用长江大桥等被大量广泛应用。同时远销日本、韩国、台湾、埃及、马来西亚、厄瓜多尔、俄罗斯、菲律宾、利比里亚、印尼、赤道几内亚、加纳、越南、澳大利亚、巴西、伊拉克、尼日利亚、伊朗等80多个国家和地区。

永安机械不断致力于产品的技术创新和新产品的研发。近年来,我公司陆续通过了ISO9001、ISO14001、ISO45001、欧盟CE认证。同时我们获得了浙江省科技型中小企业、高新技术企业等诸项荣誉,专利数达100多项,并起草了《液压打桩锤》中国行业标准。未来公司将进一步掌握产品核心技术,改善产品工艺,永安机械向着世界一流的桩工品牌看齐,努力把中国制造的旗帜插遍世界。

Founded in 1985, Yongan Machinery is dedicated in the production & Developing for hydraulic impact hammers, hydraulic vibro hammers Excavator Vibratory Hammer, and electric vibratory hammers. More than 30 years, with the supporting of our customers, the company's performance has been rising year after year. The popularity and influence of the company in the world has also increased significantly. At present, it has developed into a leading enterprise of China vibratory pile hammers.

Yongan piling hammer is widely used in the construction of wharfs, trestles, etc. It can also be used for offshore wind power and building foundation. Yongan piling hammer has high efficiency, simple operation and low failure rate, and also provides the most professional after-sales service. Yongan's hydraulic impact hammer has more than 30 products from YC-3 to YC-280; hydraulic vibro hammer has 20 items from YZ-90D to YZ-1600; electric vibratory hammer has 20 items from DZ-45 to DZJ-600. There are more than 10 types of Pile turnover machine FZQ-100, FZQ-100i to FQZ-1200, FQZ-1200i.

Yong'an Machinery is one of the earliest domestic enterprises to design and manufacture vibration pile hammers, and is a leading enterprise in the field of pile engineering. The company's zero start frequency modulation and torque regulation hydraulic vibration hammers, YZ-400B hydraulic vibration hammers, and 12 linked hydraulic vibration pile hammers for major engineering equipment such as sea reclamation and island building won the first set of honorary titles in Zhejiang Province in 2018, 2020, and 2023, respectively.

The strong technical strength enables the company to continuously supply new products in product research and development, and refresh the record of domestic electric vibro hammer.YZ-800B produced in 2020 is the largest single hydraulic vibro hammer in the world at present, and has been successfully applied to CGN Shanwei Houhu offshore wind farm project. The hydraulic pile hammer developed by the company is also a leading technology in China. The yc-230 strike energy developed by the company has also been successfully applied to the offshore wind farm project outside Changjiang'ao bay of Pingtan Wind Power at 3900kj, gradually breaking the monopoly of foreign giants. At present, the company is developing YC-280, and the strike energy of the hammer is 5040kj. At that time, it will shine on the industry stage and fill the gap in this field.

The footprints of "Yong'an" brand vibratory piling hammer products have spread all over the country, including more than 300 large bridges in China, such as: Hangzhou Bay Bridge, Hong Kong-Zhuhai-Macao Bridge, Xiamen Jimei Bridge, Nanjing Dashengguan Yangtze River Bridge Qianjiang Jiuqiao, Fujian Pingtan Rail-rail Bridge, Inner Mongolia Baotou Yellow River Bridge, and deep-medium channel are widely used. At the same time, it is exported to more than 80 countries and regions such as Japan, South Korea, Taiwan, Egypt, Malaysia, Ecuador, Russia, Philippines, Liberia, Indonesia, Equatorial Guinea, Ghana, Vietnam, Australia, Brazil, Iraq, Nigeria and Iran.

Yongan Machinery is constantly committed to technological innovation and product development. In recent years, our company has passed ISO9001、ISO14001、ISO45001 quality system certification and EU CE certification. At the same time, we have honored Zhejiang Province's science and technology enterprises, high-tech enterprises and other honors, 90 patents, and drafted the "hydraulic piling hammer" industry standard. In the future, the company will further master the core technology of the products and improve the product technology. Yongan Machinery will be in line with the world-class pile-driving brands and strive to send Chinese manufacturing products into the world.



## 永安机械,液压冲击打桩锤专业制造厂家

#### **HYDRAULIC IMPACT HAMMER MANUFACTURER**









#### 工作原理 Working principle

首先,由液压动力系统提供动力,通过高压液压软管输送到桩锤,提升锤芯,当液 压缸提升锤芯到一定高度,通过液压换向阀,使液压缸活塞的上部与下部处于相 同压力,此时活塞在重力的作用下自由下落,锤芯产生打击作用,完成打桩过程。

First, the hydraulic power system provides power, through the high pressure hydraulic hose to the pile hammer, lifting the hammer ram, when the hydraulic cylinder lift the hammer ram to a certain height, through the hydraulic reversing valve, the upper and lower parts of the piston of the hydraulic cylinder are in the same pressure, and the piston is free to fall under the action of gravity, and the hammer ram produces the blow effect. To complete the pile driving process.

近百名技术人才



Nearly 100

占地 5 万多平方米



50 Thousand

"高新技术企业



High-technology





Products Are Exported

## 优秀的液压冲击锤制造商

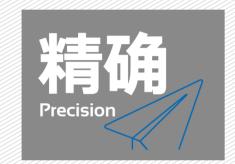
永安机械是液压冲击锤领域的领军者 其技术与理念使得制造出的液压冲击锤优质、耐用和高效。

The leader of the hydraulic impact hammer in Yongan machinery Its technology and ideal make the hydraulic impact hammer high quality, durable and efficient.



## 产品性能, 致力于做到更好

Product Performance
We are always working on better products



快速打桩时可以使用高频打桩;也可以启用远程控制系统,控制稳定的锤头行程,实现精确打桩。这些功能可以有效的防止打桩时锤头提升不稳而造成的故障。

一旦出现软基的情况, 便进行轻微插装打击从而保护起重机或打桩机的安全。

High frequency driving can be used for fast driving; remote control system can also be used to control the stable stroke of hammer head and realize accurate driving. These functions can effectively prevent the failure caused by the unstable lifting of the ram during pile driving. In case of soft foundation, it is necessary to carry out slight pile driving strike to protect the safety of crane or pile driver.



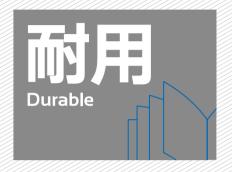
整机采用简易化设计,使操作人员容易上手,同时让维护和保养设备变得简易。永安冲击锤还可以设置成自动打桩,使得施工过程更加轻松。

The whole machine adopts simple design, which makes it easy for operators to operate, and makes maintenance and servicing equipment easily. Yongan hammer can also be set as automatic pile driving, which makes the construction process easier.



永安冲击锤动力站使用卡特或者康明斯发动机配上德国力士乐液压泵,加上简单易懂的液压及电路操作系统,使得动力站具有优良的整体性能。

Yongan impact hammer's power pack choose CAT or CUMMINS engines. Equipped with Germany Rexorth hydraulic pump, and adpoting the simple hydraulic and electrical system, the power pack thus could performed excellent as a whole.



永安液压打桩锤按照长寿命,故障最小化设计制造。电气和液压系统及油管电缆联轴器等相关附件均采用精准设计加工,以确保系统可靠。永安打桩锤只选用高品质易损件,以确保备件使用寿命,从而降低客户的使用成本。

Yongan hydraulic impact hammers are designed and manufactured for long life service with minimal downtime. Precise workmanship is adopted to electric and hydraulic system including hoses, cables, couplings and other related parts, thus the whole system is reliable. All Yonganhammer choose only qualified consumable parts to assure the long life time of the parts. Thus customer can save the cost from consumable parts.



大容量冷却系统确保了液压系统能够高效稳定的工作,即使冲击锤长时间连续工作也不会出现严重过热。同时我们还增加了"防止空打"的功能,将误操作的伤害降到最低。

The large capacity cooling system ensures that the hydraulic system can work efficiently and stable, even if the impact hammer works continuously for a long time, there will beno serious overheating. At the same time, we also added the function of "prevent empty hit" to minimize the damage caused by misoperation.





由于锤体的高效化设计和缓冲垫的安放,锤头 传递到桩头上的打击能量的损失大大减少,工 作的效率得以最大化。通过蓄压器系统,实现 锤头下落中的加速和能耗补偿。

With the help of efficient design of hammer body and the cushion arrangement, impact energy transferred with lower energy loss. That means the job efficiency can be maximized. Equipped with Pressure Accumulator system, which could quicken the drop and compensate the energy loss during ram drop

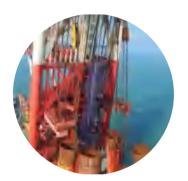
## 产品结构, 我们专注于品质

Product structure,
We are focusing on quality

将我们的产品解剖,用以展示产品每个细节所呈现的功能,

只为您全方位了解我们的产品,深化其中的细节。更好的将维护及使用我们的产品。

We dissected our products to show the functions of every detail of the product, and to understand the products and deepen the details for you. Better to maintain and use our products.









#### 双层油缸设计

Double-layer hydraulic cylinder design

永安机械液压油缸采用双层油缸设计, 并采用单杠提升,使得运行过程中十 公趋定

Yongan Machinery hydraulic cylinder adopts double-layer cylinder design. And the horizontal bar is used to lift, so that the very Stable.

#### 派克蓄能器

Parker accumulator

派克优质蓄能器抗污染能力强,经 久耐用,在工作过程中响应速度快。

Parker's high-quality accumulators have strong anti-pollution ability, Durable and correspondingly fast during work.

#### 海工防腐技术喷涂

Offshore anti-corrosion technology spraying

采用纳米防腐技术,海工防腐油漆,适用高盐雾的工作环境。

Using nano anti-corrosion technology, marine anti-corrosion paint, Suitable for working environments with high salt spray.

#### 锤体行程

Ram strike range

操作人员可以清楚看到锤芯下落过程,并可通过控制面板精准控制打击高度。

Operators can clearly see thr RAM failing process, and can control the height of the strike accurately through the control panel.

#### 锤芯

永安机械冲击锤锤芯由合金钢锻打 成型,具有更高的打击效能,独特的锥 形设计有效降低打桩时的风阻。

The ram of Yongan Machinery's mechanical impact hammer is forged from alloy steel. With higher strike efficiency, the unique conical design is effective.Reduce wind resistance during piling.

#### 桩帽

Pile Sleeve

可定制内径可调节桩帽,适用于多种桩型。独特的PHC桩帽设计,在打桩时有效保护桩头不被破坏。

The inner diameter adjustable pile cap can be customized, suitable for a variety of pile types. Unique PHC pile cap design, Effectively protect the pile head from being damaged during piling.

#### 顶部的防空打控制装置防止替打在未到达指定 位置时误操作打,保护起重设备与桩锤

The anti-empty driving control device on the hammer top provide extra protection for the hydraulic impact hammer and crane equipment because misoperation of piling when the Substitute Body not go to the correct position

#### 油缸密封系统采用特瑞堡密封系统

The impact hammer lifting cylinder sealing system adopts Trelleborg sealing system

#### 油管的柔性连接设计使油管不易在低贯入度反弹时受损

The flexible connection design protect the hoses not easy to be damaged when rebounding from low penetration piling situation

#### 圆形厚壁锤壳设计具有更高强度和自重

Round thick-walled hammer shell design has higher strength and weight

#### 锤芯采用高强度合金钢锻制, 确保耐用性

The impact hammer ram body is forged with high-strength alloy steel to ensure long working life

The reinforced heavy duty lifting Shackle ensure maximum safety

高强度卸扣

#### 油管采用伊顿或马努力分配模块使得油管有序排列

Adopts Eaton or Manuli brand hoses and the distribution manifold module let the hoses arranged in an orderly manner

#### 行程控制装置使锤击行程在 一定范围内有级调整

The ram lifting stroke control system design ensure the hammer stroke to be adjusted in a certain range

#### 翻身机构令吊装和运输更加安全便捷

Turnover mechanism makes lifting and transportation safer and more convenient

#### 高强度合金钢替打支持满负载打桩

High-strength alloy steel piling supports piling at full load

#### 可定制的,适应各桩径的桩帽

Customizable Pile Sleeve to suit each pile diameter



# 我们提供

We offer More models for you to choose



液压冲击锤 Hydraulic Impact Hammer

不含桩帽 Without pile sleev





		YC-3	YC-5	YC-8	YC-12	YC-14	YC-16	YC-17	YC-18	YC-21	YC-25	YC-30	YC-35	YC-40	YC-50	YC-60	YC-80	YC-160	YC-110	YC-120	YC-130	YC-150	YC-180	YC-200	YC-210	YC-220	YC-230	YC-260	YC-280
	打击能量 (knm) blow energy	36	60	120	180	210	240	255	270	357	425	510	595	680	850	1020	1360	3200	1870	2040	2210	2550	3060	3400	3600	3740	3900	4420	5040
	最大行程(mm) Maximum stroke	1200	1200	1500	1500	1500	1500	1500	1500	1700	1700	1700	1700	1700	1700	1700	1700	1200	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1800
	打击频率(bpm) blow rate	80/35	80/35	70/30	70/32	70/30	70/30	70/30	70/30	65/25	65/25	60/25	60/25	60/25	60/25	60/24	60/23	60/23	60/22	60/22	55/20	55/20	55/20	55/20	55/20	55/20	55/20	50/20	50/20
	锤体质量(kg) Ram Weight	3000	5000	8000	12000	14000	16000	17000	18000	21000	25000	30000	35000	40000	50000	60000	80000	160000	110000	120000	130000	150000	180000	200000	210000	220000	230000	260000	280000
	提升方式 Lifting Method						单	缸提升(	(Single	Hydra	ulic Cy	linder	Lifting	)					双缸	提升(	Double	e Hydr	aulic C	ylinder	Lifting	<b>j</b> )			
	₭ Length (mm)	4845	5425	6800	7100	7510	7760	7960	8400	8550	8380	9300	9300	9320	10100	11600	14170	14240	11830	12410	12550	14000	14000	15400	15750	16200	16800	19500	20000
	宽 Width (mm)	960	960	1075	1185	1185	1185	1185	1185	1460	1460	1700	1700	1820	2010	2805	2975	3200	3230	3200	3260	3420	3420	3420	3420	3420	3420	3550	3550
np.	高 Height (mm)	1075	1075	1185	1300	1300	1300	1300	1300	1610	1610	1700	1700	1950	2180	2180	2180	2900	2500	2500	2845	2950	2950	3100	3100	3100	3100	3150	3200
	重量 Weight(kg)	5800	8500	12500	18000	20000	22000	23000	24000	33000	37000	46000	51000	58000	70000	100000	130000	275000	165000	177200	200000	244500	287000	310000	320000	330000	343000	385000	420000

机器外形、技术参数性能及特点如有更改,恕不另行通知。未经永安公司明确书面许可,不得翻印或传播有关资料。



#### 行业标准主编单位/Industry standard editor unit







#### **Power Pack Series**

#### 动力站

#### 确保每一个细节的精度

Ensure the precision of every single detail

取客户的信任,我们要做的第一步就是理解客户的要求,为此,我们不断地 we need to do is to understand the requirements of customers. Therefore, we 倾听客户的要求。根据地勘报告,计算所需打击能量,为客户做选型推荐, 为客户选配定制桩帽,介绍相应的施工工法等等。

永安机械在配备美国卡特发动机,采用力士乐液压系统,并使用进口伊顿油 管连接,其快速接头也是意大利DNP原装进口,而动力站选用的德国摩菲 控制系统将整个电控系统简单实用。各个细节使得设备在整个工作过程中安 全、可靠、耐用、高效。

每个客户都对自己的合作伙伴有着特殊的要求,对每一个项目精益求精,赢 Each customers has special requirements for their own partners. We need always endeavoring to do every project better and win the trust of customers. The first step constantly listen to the customer's requirements. According to the geological survey report, calculate the required strike energy, give the model selection recommendations for customers, select and customize pile caps for customers, and introduce the corresponding construction methods, etc.

Yongan machinery is equipped with USA CAT engine, adopts Rexroth hydraulic system, and is connected by imported Eaton hose. The quick dis-connector is also imported by DNP of Italy. The German Murphy control system selected for the power station makes the whole electric control system simple and practical. All details make the equipment safe, reliable, durable and efficient in the whole working jobsite.

#### 技术参数 Main Technical Parameters

型号			动力站 Pow	er Pack			尺寸Dimension	重量 Weight
	动力发动机型号 Power engine model	发动机型号 Engine model	系统压力(Mpa) System pressure	流量单位L/min Flow unit L/min	液油容积(L) Volume	燃油容积(L) Fuel tank capacity	长*宽*高 L*W*H(mm)	重量 Weight
YC-3	120P	Cummins	12	140	400	260	2800*1450*1950	3000
YC-5	200P	Cummins	17	200	850	400	3350*1500*2050	5000
YC-8	300P	Cummins	21	300	850	450	3350*1500*2050	5100
YC-12	400P	Cummins	23	400	1400	500	3910*1520*2100	6000
YC-14	400P	Cummins	24	400	1400	500	3910*1520*2100	6000
YC-16	400P	Cummins	26	400	1400	500	3910*1520*2100	6000
YC-17	400P	Cummins	28	400	1400	500	3910*1520*2100	6000
YC-18	400P	Cummins	30	400	1400	500	3910*1520*2100	6000
YC-21	600P	CAT C15	25	630	2000	600	4550*1820*2400	8200
YC-25	600P	CAT C15	26	630	2000	600	4550*1820*2400	8200
YC-30	800P	CAT C18	26	630	2000	600	4550*1820*2400	8200
YC-35	800P	CAT C18	24	800	2200	600	4450*1850*2520	9000
YC-40	800P	CAT C18	24	800	2200	600	4450*1850*2520	9000
YC-50	1200P	Cummins	25	1200	4200	1000	6050*2350*2820	20000
YC-60	1200P	Cummins	26	1200	4200	1000	6050*2350*2820	20000
YC-80	1600P	Cummins	27	1600	4200	1000	6050*2350*2820	20000
YC-110	2600P	Cummins	27	2600	4600	2200	7800×2370×2800	30000
YC-120	2600P	Cummins	27	2600	4600	2200	7800×2370×2800	30000
YC-130	2600P	Cummins	27	2600	4600	2200	7800×2370×2800	30000
YC-150	2400X2	Cummins	27	2400	5200	1400	7300*2350*2750	23500
YC-180	2600PX2	Cummins	27	2600	5200	1400	7310*2360*2750	23500
YC-210	3000PX2	KTA50-C2250	27	3000	4600	2200	7800×2370×2800	30000
YC-230	3000PX2	KTA50-C2250	27	3000	4600	2200	7800×2370×2800	30000
YC-280	3000PX3	KTA50-C2250	27	3000	4600	2200	7800×2370×2800	30000

机器外形、技术参数性能及特点如有更改,恕不另行通知。未经永安公司明确书面许可,不得翻印或传播有关资料。

Yongan is continuously seeking for development of their products. For this reason, we reserves the right to supply the improved product without advance notice



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#### 起重机类型 Crane Suspended

永安打桩锤可采用固定导轨式(圆柱形和四方形),起重机悬吊式,海上导轨式,U型架等形式,不仅可以用于陆上和海上打桩工况,斜桩、水下5米内打桩、动力冲击、打板桩等都可以适用。

Fixed Leader Type (Round Shape and Square Type), Crane Suspended Type, Offshore Leader Type, U-Type Leads and others can be available. Not only onshore and offshore pile driving conditions, but also Inclined pile and under water (above 5m) and sheet piling are applicable.

可以根据客户需求指定其他类型尺寸的抓轨 Other dimensions and types can be made according to customer requests.

## 油管 Hose <sup>整制器</sup> controller

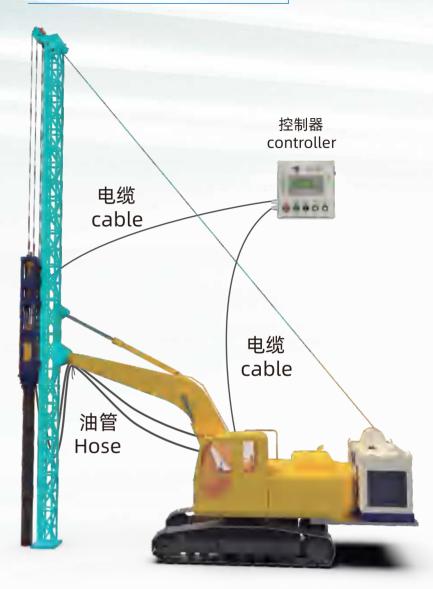
# 油管 Hose

#### 导向架 Leader Mounted Suspended

#### 技术参数 Main Technical Parameters

固定导向架 Fix Leader Guide Type	L 尺寸(mm) L Size	R 尺寸(mm) R Size				
	330	70				
圆形 Round	600	101				
	500	60				
★K Causana	600	80				
方形 Square	600	100				
	700	120				

#### 挖掘机类型 Excavator Type



#### 技术参数 Main Technical Parameters

冲击锤型号 Impact Hammer Model	YC-3	YC-5	YC-8
适配挖机 Suitable Excavator	35	35	40
适配挖机重量 (Ton) Excavator Weight	25	35	40
工作油流量 (Lpm) Required Oil Flow	100	150	230
操作压力 (Bar) Required Setting Pressure	280	280	280
操作电压 (Volt) Required Power Voltage	24	24	24
	油管尺寸	油管尺寸	油管尺寸
进油管 (Inch) Supply Hose	3/4 "	3/4 "	1 "
回油管 (Inch) Return Hose	1"	1-1/4"	1-1/4"

控制器 controller





1.福建长乐海上风电场 Fujian Changle Offshore Wind Farm 施工情况: 桩长94m、桩径3.2-3.8m、桩壁厚5cm、 桩重约400t,水深 32m 至47m,入土深度86m,是全

球规模最大的海上风电项目之一

MX機能及付加工が、 Construction situation: the pile length is 94m, the pile diameter is 3.2-3.8m, the pile wall thickness is 5cm, The pile weighs about 400 tons, the water depth is 32 meters to 47 meters, and the buried depth is 86 meters, which is the wholeOne of the largest offshore wind power projects in the world.

地质情况: 淤泥层, 中细沙层, 粘土层, 中砂层

Geology: silt layer, medium fine sand layer, clay layer and medium sand layer.



#### YC-120 YC-130

2.3.广东海陵岛南海风电 Guangdong Hailing Island Nanhai

施工情况: 桩直径2.8m, 桩长83--98 m, 壁厚5cm, 桩型钢护筒, 入土深度75--98m。

Construction:The diameter of the pile is 2.8m, the length of the pile is 83-98m, the wall thickness is 5cm, and the pile steel casing is used. The burial depth is 75-98m.

地质情况: 淤泥层、细砂层、粗砂层。



YONGAN PROJECT







#### YC-11、DZJ90、DZ60

1.以色列阿什杜德港口码头工区 Israel ashdod port wharf work area 使用单位: 中交二航局 User: CCCC-Second Harbor Eng.Ltd. 使用桩型: H型钢(长19.3m、22m。宽0.527m0.8m)

U型钢(长17.5m,宽1.4m) Pile type:H-shaped steel(19.3m,22m long.Width0.527m,0.8r

U-shaped steel(17.5m long and 1.4m wide) 入土深度:H型钢11m和13m,U型钢8.5m Depth of penetration: 11m and 13m for H-beam, U-shaped steel 8.5m

地址情况: 粉土、粘土和硬质层 Geological conditions:silt,clay and hard layer

#### YC-30\YC-40

2.罗安达渔港成品油库码头

Luanda Fishing Port Product Oil Dep ot 施工单位:中交四航局

User: CCCC Fourth Harbor Engineering Co., Ltd. 施工情况:使用桩型1.2m直径重1.5t, 1.5m直径重5万t,

Construction situation: the used pile type weighs 1.5 tons with a diameter of 1.2 meters, 50,000 tons with a diameter of 1.5 meters, and the buried depth is 30 meters. 地质情况: 泥岩层,沙层。

Geological conditions: mudstone layer and sand layer.

#### YC-12 x40

3.尼日利亚拉各斯炼油厂 Lagos Oil Refinery, Nigeria

施工情况: 40台YC-12, 10000根桩, 带拔桩, 桩型500mm,

Construction situation: 40 YC-12,10000 piles with pull-out piles, with a pile type of 500mm, The burial depth is 28 meters.

地质情况:风化泥层。 Geology: Weathered mud layer.



#### 1.三航桩20搭载YC-110施工

2. 雄程3号搭载YC-110施工

1.2.华能苍南4号海上风电项目 Cangnan No.4 Offshore Wind Power Project

施工单位:中交三航局 User: CCCC Third Harbor Engineering Co., Ltd.

施工情况: 桩长134m, 桩径2.5m-3m, 桩重351.2t, 桩厚547mm, 入土深度69.25m。 Construction situation: The pile length is 134 meters, the pile diameter is 2.5 meters to 3 meters, the pile weight is 351.2 tons, the pile thickness

is 547 millimeters, and the buried depth is 69.25 meters. 地质情况: 泥沙层, 淤泥层, 岩石层。

Geology: silt layer, silt layer and rock layer.



#### YC-40

1.东帝汶Tibar湾 Tibar Bay, East Timor 施工单位:中交四航局

User: CCCC Fourth Harbor Engineering Co., Ltd. 施工情况: 桩径1800mm, 桩长55m, 壁厚30mm, 桩型为钢管桩,入土深度38m。 Construction situation: the pile diameter is 1800 mm, the pile length is 55 m, the wall thickness is 30 mm, and the pile type is steel pipe pile. The burial depth is 38 meters.

地质情况:珊瑚砂、千枚岩 Geology: coral sand and phyllite.



#### YC-30

2.坦桑尼亚达雷斯萨拉姆达港口扩港 Port expansion in Dares Salaamda, Tan zania

施工单位:中交四航局

User: CCCC Fourth Harbor Engineering Co., Ltd. 施工情况: 直径1m, 长31m水泥桩,入土深度15m Construction situation:1m diameter,31m long cement pile,15m depth of soil



#### YC-40

使用单位: Mostotrest User:Mostotrest 使用桩型:直径1.4m,桩长83m Use of pile type:diameter 1.4 meters,

pile length 83 meters 入土深度:62m-70m Depth of soil:62m-70m





3.俄罗斯刻赤海峡大桥 Kerch Strait Bridge, Russia

地质情况: 砂层 Geology:Sand







#### YC-60

1.嵊泗风电场

Shengsi Wind Farm

使用单位:中铁建港航局

User: CRCC HARBOUR&CHANNEL ENGINEERING BUREAU GROUP CO.,LTD 施工情况: 桩径2300mm, 壁厚35mm, 桩长92m, 入土深度: 67.5m Pile diameter: 2300mm, wall thickness: 35mm, pile length: 92m,

buried depth: 67.5m

#### YC-80

2.平海湾F区海上风电场 Offshore Wind in Pinghai Bay Area F

使用单位:中交一航局

User:CCCC-First Harbour Eng.Co.,Ltd. 施工情况: 桩径7.9m, 桩长38m, 壁厚40mm

Construction condition:pile diameter 7.9 meter,pile length 38 meters, pile

thickness 40mm

地质情况:淤泥,强风化层岩

Geological conditions:silt,strongly weathered rock

#### YC-40

3.江苏响水海上风力发电项目

Jiangsu Xiangshui Offshore Wind Power Project

施工单位:中交三航局

User:CCCC-Third Harbour Eng.Co.,Ltd. 使用桩型:上口直径2m,下口直径3m,壁厚30mm,桩长75m的钢护管,打定位桩

Pile type:2meters in diameter at the upper mouth,3 meters in diameter at the lower mouth,30mm wall thickness,75m steel tube for pile positioning

入土深度: 45m左右 Digging depth:anout 45 meters 地址情况:砂层

Geology:Sand







#### YC-17

4.荣乌高速新线ZT6标段石庄大桥

Shizhuang bridge in ZT6 section of new Rongwu Expressway

施工单位:中交第二公路工程局

User: CCCC Second Highway Engineering Bureau 施工情况:水泥预制管桩,直径700mm,入土37m

Construction situation: the diameter of cement precast pipe pile

is, 700mm and the depth of soil is 37m 地质情况: 黄色粘土, 部分夹沙层 Geology:yellow clay,part of sand layer

5.国家能源集团国华渤中B2场址海上风电项目

National Energy Group Guohua Bozhong B2 Site Offshore Wind Power Project

施工情况: 桩长98m, 壁厚5cm, 入土深度86m。 Construction situation: the pile length is 98m, The wall thickness is 5cm, Buried depth 86m. 使用单位: 江苏华西村海洋工程服务有限公司

User: Jiangsu Huaxi Village Ocean Engineering Service Co., Ltd

#### YC-12

6.柘溪镇管新高速路

Guanxin Expressway, Zhexi Town

施工单位:中交二航局

User:CCCC Second Harbor Engineering Co., Ltd

施工情况:长度12m,入土深度6m,桩长12m,壁厚10mm

Construction situation:Length12m, buried depth 6m, pile length 12m,

wall thickness 10mm

地质情况:沙层 Geology: Sand bed



#### YC-5

#### 1.珠海横琴Zhuihai Hengqin

Geological situation:silt,silty clay

施工单位:中交一航局 User:CCCC-First Harbour Eng.Co.,Ltd. 施工情况:直径400mm水泥桩,入泥18m Construction situation:400mm diameter cemtent pile,18 meters into the mud 地址情况:淤泥、粉质黏土



2.中铁大桥局汉石铁路项目 China Major Railway Bridge Engineering Hanshi Railway Project

施工情况: 锁扣钢管桩 Construction situation:lock pipe pile



#### YC-130

3.福建平潭风电项目 Fujian Pingtan Wind Power Project 使用单位: 中交三航局

 ${\sf User:\ CCCC\ Third\ Harbor\ Engineering\ Co.,\ Ltd.}$ 施工情况: 桩长78.6m, 桩径: 6.8m, 桩壁: 55mm

桩重约900t,入土深度约40m。

Construction condition: the pile length is 78.6m, the pile diameter is 6.8m, and the pile wall is 55mm. The pile weighs about 900 tons, and its burial depth is about 40 meters.









#### YC-50\YZ-400\*2

#### 4.福建平潭跨海公铁大桥

Fujian Pingtan cross sea highway and railway bridge

使用单位:中铁大桥局4公司、5公司、6公司,中铁建大桥局,中铁港航 User: China Railway Bridge Bureau 4 company、5 company、6 company, China Railway Construction Bridge Bureau, China Railway Port and shipping

使用桩型: 4.4-4.9m钢护筒 Pile type:4.4-4.9 metre steel casing

入土深度: 22-28米 Digging depth:22-28m地质情况:花岗岩、淤泥、沙层 Geological conditions:granite,silt,sand layer

#### YC-16

5.江西房建施工

Housing Construction in Jiangxi

施工单位: 江西稳健基础

User: Jiangxi Wenjian Foundation 使用桩型: 600mm预制水泥桩

Pile type: 600mm precast cement pile

#### YC-80

6.福清海上风电增压站项目

Fuqing Offshore Wind Power Booster Station Project

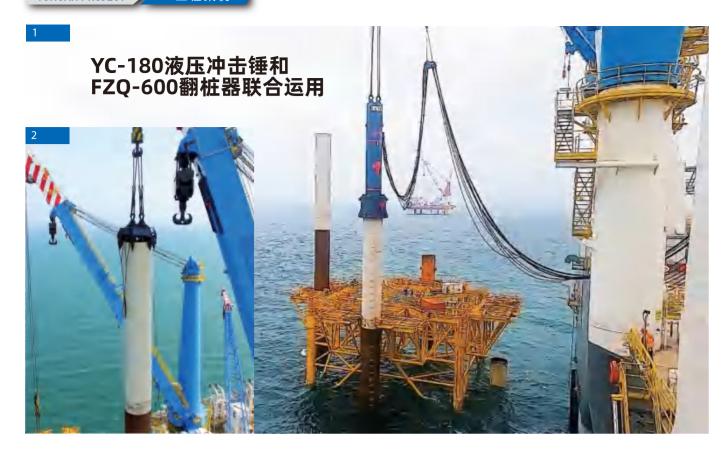
施工单位:中交三航局 User: CCCC-Third Harbour Eng, Co., Ltd. 施工情况:桩直径2.4m,壁厚50mm,长度48m, 重量150t,入土深度30m

Construction situation:pile diameter of 2. 4 meter spwall thickness of 50mm,length of 48 meters,weight of 150 tons,

penetration depth of 30 meters

地质情况: 20米粘土层, 随后为风化层。

Geology: 20m day layer, followed by weathering layer.





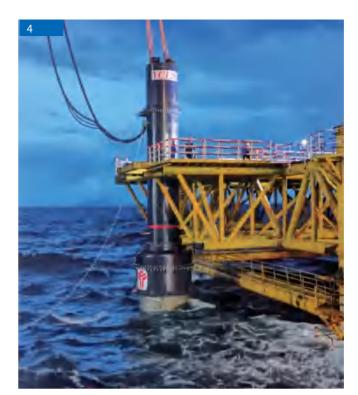
#### YC-180,FZQ-600

**1.2.福州海上风电场项目** Fuzhou Offshore Wind Farm Project 使用单位: 中铁大桥局 USER: CHINA RAILWAY MAJOR BRIDGE ENGINNERING GROUP CO.,LTD. 施工情况: 桩长94m, 桩径3.2-3.8m, 壁厚50mm, 桩重400t, 入土深度86m, 水深32-47m。 The pile is 94m long, 3.2-3.8m in diameter, 50mm in wall thickness, 400t in weight, 86m in buried depth and 32-47m in water depth. 地质情况: 淤泥层, 中细沙层, 粘土层, 中砂层。 Geology: silt layer, medium fine sand layer,



3.西堠门公铁两用大桥项目

Xihoumen dual-purpose highway and railway bridge project 施工情况: 桩长40米,桩径4.02米,壁厚40毫米,入土深度24米 Construction situation:The pile is 40 meters long, with a diameter of 4.02 meters, a wall thickness of 40 millimeters, and a depth of 24 meters into the soil







#### YC-120

4.粤电阳江海上风电 Yuedian Yangjiang offshore wind power

施工情况: 桩径3.5m,桩长31.8m~34.8m, 重量160t左右

Construction condition: the pile diameter is 3. 5m,the pile length is 31. 8m-34. 8m,and the weight is about 160t

#### YC-65

5.西堠门公铁两用大桥项目 Xihoumen dual-purpose highway and railway bridge project

#### YC-120

6.中广核惠州海上风电项目2期 CGN Huizhou Offshore Wind Power Project Phase 2 施工情况: 桩径: 3.3m, 桩长80m, 壁厚50mm, 圆形水泥管,入土深度:48m。 Construction: Pile diameter: 3.3m, pile length: 80m, wall thickness: 50mm, Round cement pipe, buried depth: 48m.







#### YC-35 \ YC-50 x3

1.岱山跨海大桥,海虹6号

Daishan Cross-sea Bridge, Haihong No. 6

使用单位:中交第二航务工程局有限公司 User: CCCC-Second Harbour Eng. Co., Ltd.

施工情况: 1.6m, 1.8m, 2m

Construction situation: 1. 6meters, 1. 8meters, 2 meters

入土深度: 68-106m Digging depth: 68-106 meters 地质情况: 可塑、硬塑粉质黏土及硬塑粉质粘土, 打穿强风化岩层

Emplifice 可至、使至机灰和工及使至机灰柏工,打牙强风花和Geological conditions:plastic,hard plastic silty

clay and hard plastic siltyclay, penetrate through

strongly weathered rock formations

#### YC-40

2.中交四航局越南海上风电项目

China Communications fourth navigation Vietnam Nanhai wind power project

使用单位:中交四航三公司

User: No. 3 company of CCCC fourth Navigation Bureau 施工情况:桩长69m,桩径1.4m,壁厚20mm,沉桩时间1.5小时 Construction situation: Pile length: 69m, pile diameter: 1.4m,

wall thickness: 20mm, pile sinking time: 1.5h

入土深度: 58m 地质情况: 泥沙层

Penetration depth: 58m geology: sediment layer

#### YC-50

3.埕海项目 Erhai Project

施工单位:中石油海洋工程有限公司

User: PetroChina Offshore Engineering Co. , Ltd.

施工情况:桩径925mm,桩长100m,入土深度80m

Construction situation:pile diameter 925 mm,pile length100 meters,

soildepth 80 meters

地质情况:淤泥质 粉质粘土 粉土 粉沙

Geological conditions: silty silty clay silt silt







#### YC-60

4.福建福清兴化湾海上风电场一期项目施工 Construction of Fujian Fuqing Xinghua BayOffshore Wind Farm Phase | Project

施工情况:桩长42-55m,入士30-40m,直径3.2m Construction condition:the pile length is 42-55 meters,the soil is 30-40 meters,and the diameter is 3.2 meters

#### YC-40

5.广州南沙港游轮码头 Guangzhou Nansha Port Cruise Terminal

使用单位:中交四航局二公司

User: The Second Company of CCCC-Forth Harbour Eng. Co., Ltd. 施工情况: 桩长30-40m, 桩径1.2m、1.4m、1.6m, 壁厚220mm, 入士35m, 1小时, 超3000锤, 打到风化层 Construction conditions: pile length 30-40 meters,pile diameter 1.2 meters,1.4 meters, 1.6 meters wall thickness 220mm, 35 meters into the soil, 1 hour, over 3000 hammer, hit the weathered layer

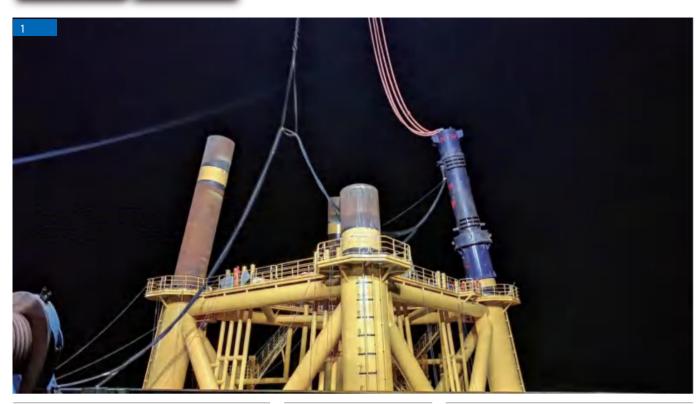
#### YC-110

6.长乐外海海上风电 Changle Offshore Wind Power

使用单位:中铁大桥局 User: China Railway Major Bridge Engineering Group Co. , Ltd.

施工情况: 3500mm直径钢管桩, 入土90m Construction conditions: 3500mm diameter steel pipe pile, 90 meters into

the soil.



#### YC-110

1.象山海上风电场 xiangshan Offshore Wind Power Project

施工情况: 桩径2.5m,桩长86m Pile length 86 meters

#### YC-25

2.广东石化原油码头水工工程 Hydraulic Engineering of Guangdong Pétrochemical Crude Oil Wharf 使用单位: 中交四航局

圆形钢管桩,入土深度: 30.5m。

is 2.2mm.Circular steel pipe pile buried depth: 30.5m. 地质情况: 泥沙层、岩石层

Geology: sediment layer and rock layer.

#### YC-110

3. 平海湾风电 Pinghaiwan wind power 使用单位: 中交三航局

CCCC Third Harbor Engineering Co., Ltd. 入土20m—30m, 桩自重360t左右, 海上风电主基础机座。 The diameter of the pile is 6,300 mm, the wall Construction condition: the pile diameter is 2m, the pile length is 56m, and the wall thickness the pile length is 56m, and the wall thickness the pile is 6,300 mm, the wall thickness the pile is 6,300 mm, the wall the pile is 65 m, and the wall thickness the pile is 6,300 mm, and the wall thickness the pile is 6,300 mm, the wall the wall thickness the pile is 6,300 mm, the wall thickness the pile is 6,300 mm, the wall the wall thickness the pile is 6,300 mm, the wall thickness the p the pile is buried 20-30 m, and the weight of the pile is about 360 tons. It is the main foundation base of offshore wind power.

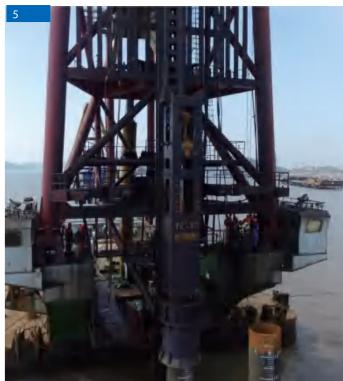
地质情况: 泥沙层、岩石层

Geology: sediment layer and rock layer.











#### YC-80

4.张靖皋长江大桥 Zhang Jinggao Yangtze River Bridge

施工情况: 桩长30.9米, 桩径2.5米, 壁厚1.6厘米,

桩重37吨,入土深度21米。

Construction: the pile is 30.9m long, 2.5m in diameter and 1.6cm in wall thickness, The pile weighs 37 tons and is buried 21 meters

地质情况: 泥沙层, 粗细沙层。

Geology: sediment layer, coarse and fine sand layer.

#### YC-50

5.岱山县跨海大桥 Daishan County Cross Sea Bridge

Construction situation: Pile length 35 meters

#### YC-180

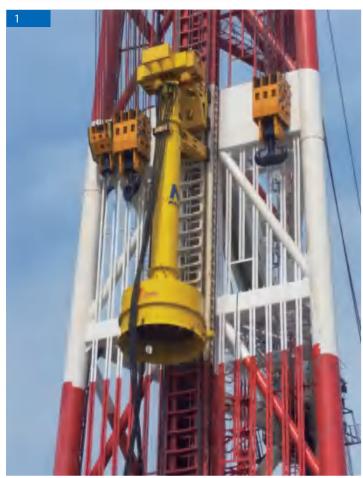
1.台州海上风电场 taizhou Offshore Wind Power Project

施工情况: 桩径7.5m,桩长83-102m,

入土深度: 58~72m

Construction situation:pile diameter 7.5 meters ,

Pile length 83-102 meters Excavation depth: 58-72 meters







#### 替打、抱爪改造

1.MENCK S800挂一航津桩改造项目 Menck S800 renovation project

#### YC-40

2.中牟县黄河特大桥 Zhongmou Yellow River Bridge

施工情况: 桩长36米, 入土深度35米

Construction situation:The pile is 36m long and 35m deep

#### YC-50x2、YC-60

3.莆田南日岛中交一航局风电项目

Putian Nanri Island CCCC first navigation bureau

施工单位:中交一航局

Construction unit: CCCC first Navigation Bureau

wind power project

施工情况: 桩长35米,直径1.8米,泥面标高-13米,入土13.5米

Construction situation:Loose granite pile is 35m long, 1.8m in diameter, with mud surface elevation of - 13m and soil penetration of 13.5m

地质情况: 散体状花岗岩

Geological conditions: Loose granite







#### YC-130、FZQ-600

4.广东海上风电 Guangdong offshore wind power

施工情况: 桩径2.8米、长86-88米、厚5厘米、

桩型钢管桩、入土深度76米

Construction condition:The pile diameter is 2.8m, the length is 86-88m, the thickness is 5cm, the pile 桩型:钢管桩,入土深度71—74米。 type is steel pipe pile, and the penetration depth is 76m

#### YC-130、FZQ-600

5.广东粤电阳江青州一,二期海上风电项目 Guangzhou Nansha Port Cruise Terminal

使用单位: 江苏华景智云科技有限公司 User: Jiangsu Huajing Zhiyun Technology Co., Ltd 施工情况:桩径3100mm,桩长74.5--86.5米,壁厚60mm,

Construction conditions: The pile diameter is 3100mm, the pile length is 74.5-86.5m, the wall thickness is 60mm, the pile type is steel pipe pile, and the penetration depth is 71-74m.

#### YC-40

6.秘鲁钱凯综合港 Peru qiankai comprehensive port 桩长: 40米。桩重: 23吨。 桩径: 1016毫米、1200毫米。

壁厚: 18毫米、24毫米。

Pile length: 40m. Pile weight: 23 tons. Pile diameter: 1016mm, 1200mm. Wall thickness: 18 mm, 24 mm.

施工情况: 55天沉桩158根 Construction conditions: 158 piles in 55 days





YC-18 1.湖北荆州长江公铁大桥 Hubei Jingzhou Yangtze River Highway and Railway Bridge 施工情况: 桩长28米, 入土深度22米

Construction situation: The pile is 28 meters long and has a depth of 22 meters into the soil



YC-230 打击能量3900KJ

福建平潭长江澳海上风电 Strike energy 3900KJ Changjiang'ao bay of Pingtan Wind Power

施工情况:桩长75米,最大打桩直径7.5米,最大激振力6700KN Construction situation: The pile is 75 meters long, Maximum pile driving diameter of 7.5 meters, maximum excitation force of 6700KN

**YC-150** 2.青洲6期风电场 Qingzhou Phase 6 Wind Farm

施工情况: 桩长103米, 入土深度65米







#### YC-12两台

4.江西南昌昌南大桥

Changnan Bridge in Nanchang, Jiangxi Province Haizhou Bay Star Project 施工情况: 桩径0.82米、长27米、厚1厘米、 桩型钢管桩、入土深度5米

Construction condition:The pile diameter is 0.82m, the pile length is 40m, the length is 27m, the thickness is 1cm, the pile type is steel pipe pile, and the penetration depth is 5m

#### YC-30

5.海洲湾之星项目

施工情况: 桩径1.91m, 桩长40m

Construction conditions: The pile diameter is 1.91m,

#### YC-210

6.福建漳州海上风电

fujian zhanghzou offshore wind power 桩长: 85m

桩径: 3.5m 壁厚: 50mm

Pile length: 85m. Pile diameter: 3.5m. Wall thickness: 50mm.