



专业服务 创造价值

Professional Solutions Create More Value

DZJ/DZ系列

DZJ/DZ Series Electric Driven Vibro Hammer

电驱振动桩锤

上海工程机械厂有限公司是我国最早从事电驱振动桩锤设计、制造和销售的企业，早在二十世纪六十年代就已经设计、制造过DZ/DZJ系列振动打桩锤，并成功应用于国内地铁、桥梁和建筑工程等项目的桩基础施工。我公司最新研制的DZJ500S变矩变频电驱振动锤和DZ500S变频型电驱振动锤具有技术先进、贯入力大、性能可靠、沉桩效率高、适用范围广泛等特点，尤其是在海洋工程的挤密砂桩、大型管桩等施工中发挥着重要作用。

DZJ/DZ 系列电驱振动桩锤

DZJ/DZ Series Electric Driven
Vibro Hammer



Shanghai Engineering Machinery Co., Ltd. is the first Chinese company which started designing, manufacturing and selling electric driven vibro hammers. DZ/ DZL series vibro hammers have been manufactured by SEMW since 1960s and have been successfully used on high profile deep foundation projects, such as, metro lines, bridges, etc. The newly designed DZJ500S and DZ500S electric driven vibro hammers are featured: advanced technology, strong penetration, stable, high efficient. They are suitable for wide range of applications, especially for sand compaction piles and large steel pipe piles in marine projects.



性能特点 MAIN FEATURES

1 大偏心力矩和大激振力，沉桩效果好，施工效率高

- 具有较大的偏心力矩和较高的激振力，沉桩能力强、施工效率高，满足海洋工程的挤密砂桩、大型管桩等施工。
- 采用先进的技术和专业的设计软件，使其高效的发挥了振动能量并平稳作业，保证了沉桩精度和施工质量。

1 Big Eccentric Moment & Exciting Force, More powerful and Efficient

- With big eccentric moment and exciting force, it is highly efficient and suitable for sand compaction piles and large steel pipe piles in marine projects.
- Professional design software and advanced technology, which helps to fully use vibratory energy, assures the penetration of piles and accuracy of quality construction.

2 独创的循环冷却系统，有效延长了使用寿命，确保连续工作

- 采用体外循环冷却的专利技术，控制锤体的热量平衡和轴承温升，使其在合适的工作温度下运转。
- 采用飞溅+强制内循环油润滑，确保轴承充分润滑和热量交换。
- 突破原有技术瓶颈，具有24小时不间断施工作业能力。

2 External Cooling Cycle to Extend Serving Life of Bearings

- External cooling cycle to balance the heating of hammer and its bearings, ensures the hammer works in a proper temperature.
- Forced lubrication by splash and approach to ensure the lubricating effect and heat exchange.
- New technology to make constant work around 24hours per day.

3 选用高品质的配套件，确保整机运行稳定可靠

- 采用了专门定制的耐振变频电动机，具有耐振性能强、绝缘性能好、变频范围宽、过载系数大等优点。可在5~60Hz范围内变频工作，低频时能做恒转矩平稳运行，具有较高的启动转矩和较小的启动电流，具有较高的高速过载能力，可保证整机在高载荷下稳定工作。
- 采用进口高端耐振轴承，具有重载荷和高温稳定性等工作特点，保证整机使用可靠性。
- 采用进口高强度传动皮带，热变形较小，具有较高的传动效率和耐久性，保证整机的高效运转。

3 High-quality Parts to Ensure Reliable Performance

- Well selected shatter-proof inverter motor. It featured wide frequency conversions, big overload, and good insulation property. Work within the vibration frequency ranged from 5~60Hz. High starting torque and low starting current. High overload capability while the hammer is operated at high speed.
- Imported shatter-proof bearings, big overload and running stable in high temperature, to assure stability of the equipment.
- Imported drive belt. Strong, effective, less heat distortion, and durable. It ensures the reliable performance of vibro hammers.



■ 港珠澳大桥效果图
Hongkong-Zhuhai-Macao Bridge Effect Picture

DZJ/DZ 系列电驱振动桩锤

DZJ/DZ Series Electric Driven Vibro Hammer

4 先进的变频和调速控制系统， 保证整机性能领先

- 通过变频系统控制整机的工作频率及激振力，可满足多种工况施工。
- 实现双电动机的同步启动和在工作中的动态转矩平衡，保证整机平顺运转。
- 变频系统具有宽电压和宽频率的电源输出特性，满足大载荷工作。
- 控制系统具有远程和本机两种操控方式，操控更灵活便捷。

4 Advanced Inverter and Speed Governing System to Ensure an effective Working

- Converting system controls frequency and exciting force, suitable for variable job sites.
- Double motors start at the same time and proper distribution of dynamic moment assure a smooth running.
- Electrical transmission system featured with wide voltage and wide frequency.
- Two control methods: field control and remote control. Ease of control.

5 可靠的变矩系统，确保设备运行安全平稳

- DZJ系列振动锤具有偏心力矩调整机构，可实现“零”启动、“零”停车和偏心力矩从零到最大范围调整。
- 变矩控制系统能有效的保证振动锤启动和停车平稳，减少共振。
- 可根据施工土层的不同，通过调整来选择合适的偏心力矩进行施工。

6 先进的智能化监控系统，确保操作人员轻松掌控施工过程

- 配备先进的PLC智能化控制系统和检测传感器，通过控制显示器实现振动锤运行参数的全程实时监控。
- 设置油污染和温控的多项检测报警系统，在出现异常情况时及时声光报警。

5 Reliable Eccentric Moment Transform Control System

- DZJ series electric driven vibro hammers contain eccentric moment transform control devices, to realize zero amplitude start, stop and stepless adjustment of eccentric moment from zero to maximum.
- The eccentric moment transform control device stabilizes the hammer when it starts and stops, and decreases resonance of the vibro hammer.
- Stepless adjustment of the eccentric moment according to the soil conditions.

6 Intelligent Control System to Achieve Real-time Monitoring of Operating Parameters

- Through PLC intelligent control systems and real-time monitoring display, to realize the supervision of vibro hammers' whole working procedure.
- Warning system of grease and temperature, to set alarm while the malfunction happens.

经典案例 CLASS CASE



■ 东海风电项目
Donghai Bridge Wind Farm, Shanghai



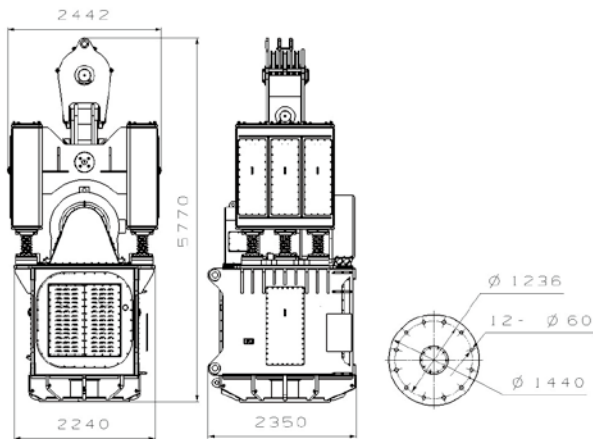
■ 港珠澳大桥挤密砂桩项目
Hongkong-Zhuhai-Macao Bridge (Sand Compaction Pile Construction project)

工程亮点：采用独特的体外循环冷却方式，24小时不间断运作。

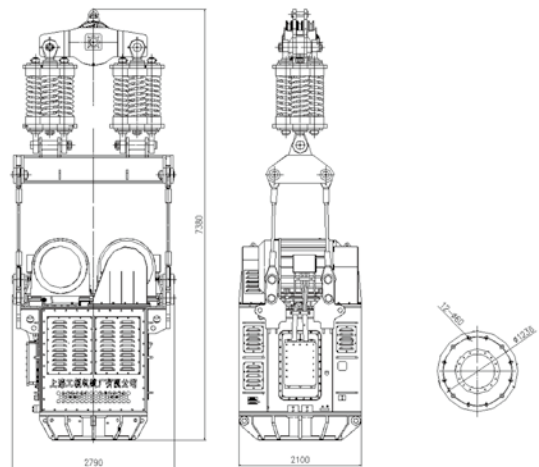
Project Highlights: External cooling system ensures constant work around 24hours.

主要技术参数 SPECIFICATIONS

型号 Model		DZJ500S	DZ500S	DZJ400	DZ400	DZJ300	DZ300
电动机额定功率 Rated power of motor	kW	250 × 2	250 × 2	400	400	300	300
最大偏心力矩 Max. Eccentric moment	Nm	0-5880	5880	0-4900	4900	0-2725	2725
振动频率 Vibratory frequency	rpm	600	600	600	600	680	600
激振力 Drive Force	kN	2370	2370	1980	1980	1930	1500
空载加速度 Unloaded acceleration	g	9.0	9.5	8.5	8.8	10.5	8.5
空载振幅 Unloaded amplitude	mm	22.5	23.5	21	22	20	21
允许拔桩力 Permitted Line Pull	t	130	130	120	120	120	120
工作方式 Working mode		变矩+变频 Variable amplitude &Variable frequency	变频 Variable frequency	变矩+变频 Variable amplitude &Variable frequency	变频 Variable frequency	变矩+变频 Variable amplitude &Variable frequency	变频 Variable frequency
总质量 Total weight	kg	36300	35300	34000	33000	29000	27800
外形尺寸 (L×W×H) Dimensions (L×W×H)	mm	2740×2050 ×7960	2790×2100 ×7380	2550×2180 ×7380	2550×2180 ×5350	2330×1910 ×5830	2050×1740 ×5900



DZ400电驱振动锤外形尺寸
Dimensions of DZ400 Vibratory Hammer



DZ500S电驱振动锤外形尺寸
Dimensions of DZ500S Vibratory Hammer

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