



Variable Frequency Vibrator Rod For Concrete application





Vibrator Rod

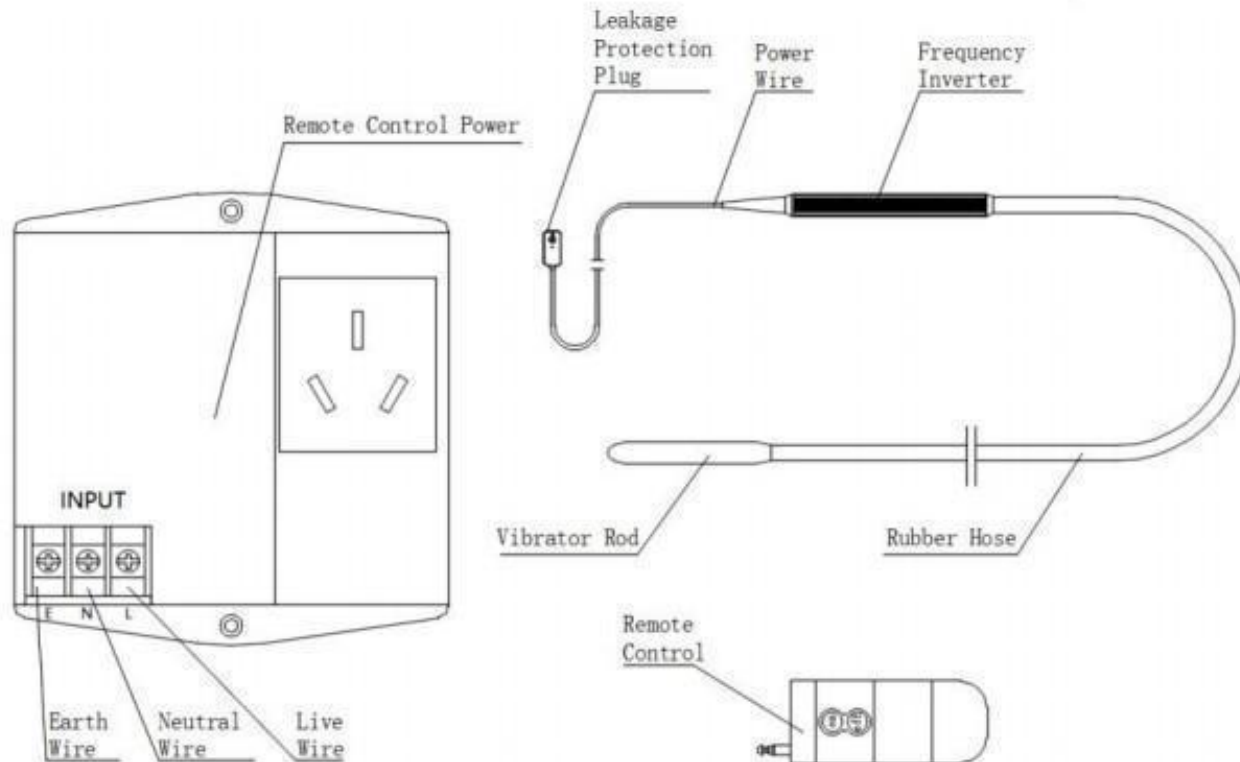


ZDN Concrete Vibrator Rod

This is the new type of concrete vibrator rod with built-in motor which is a new type of plug-in vibrator rod used to compact concrete.



- ◆ Improve the strength of concrete
- ◆ Eliminate air bubbles in water
- ◆ Eliminate the honeycomb pitting phenomenon of concrete
- ◆ Solving the problem of empty concrete packages
- ◆ With built-in motor
- ◆ Saving labor cost



Main components

- ◆ Power cable-Standard 10m length
- ◆ Frequency inverter-Aluminum alloy material
- ◆ Rubber hose-1-50m length or Customized
- ◆ With built-in motor-1800W, Max 2000W
- ◆ Rare earth permanent magnet motor
- ◆ NSK bearing
- ◆ Remote control power
- ◆ Material: Special Steel material



Advantages- Longer using life



Traditional type-50hrs

As the traditional vibrator rods adopt a **large external motor** to drive a **steel wire flexible shaft** to the rod head, and the inner shaft rotates and hits the rod head to generate vibration. Long distance transmission of kinetic energy shortens the service life cycle.

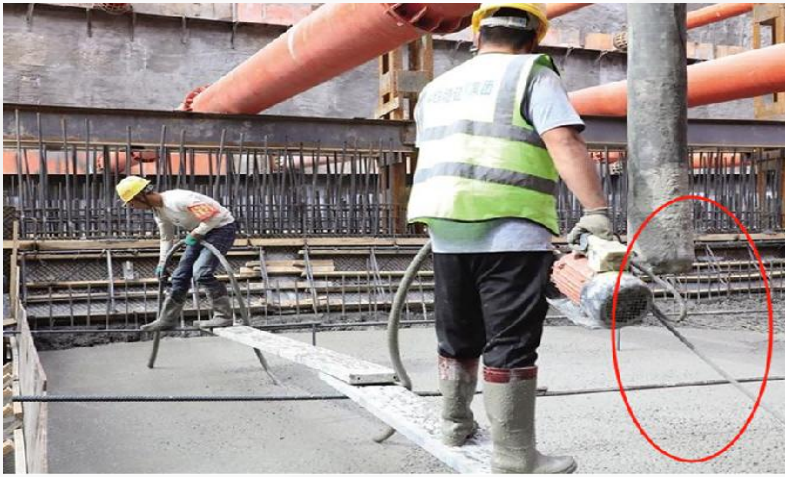


New type of frequency inverter with built-in motor-**300hrs**

The new type of vibrator rod with **built-in Rare Earth Permanent Magnet Motor**, and the motor rotor drives the eccentric block to produce high frequency vibration.



Advantages- Saving labor cost



Traditional type with external motor

Two staffs operate the vibrator rod



New type-Only one worker

Saving labor cost usd 1,100.00/month



Advantages- Higher load start



Traditional type

As the traditional vibrator rods use a large external motor to drive a steel wire flexible shaft to the rod head-**By tapping to start.**

When sudden power outage happened, the rod head is stuck by the steel bar, and the motor cannot be started again after stopping. This makes the rod head unable to be pulled out from the concrete and can only be cutted and replaced.



New type-**Advanced transmission method**

The **variable frequency motor is built into the rod head**, and the rotor in the motor drives the eccentric block to vibrate, it **can be started again even if sudden power outage** to avoid higher maintenance cost.







Advantages- **Advanced transmission method**

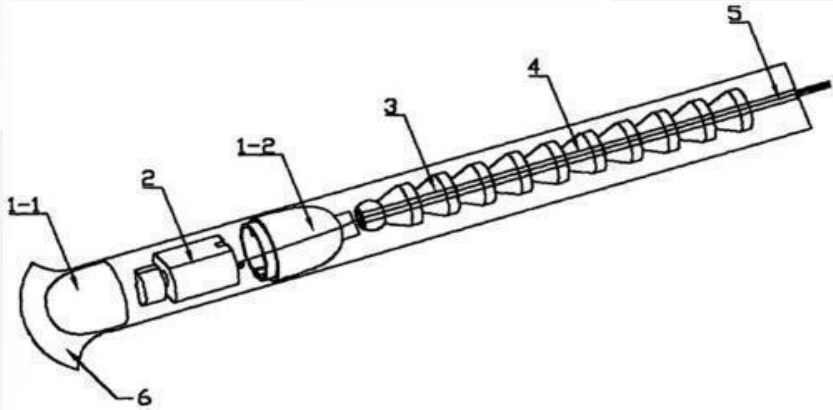
Item	Traditional type- External motor	New type- Variable frequency with built-in motor
Motor	Asynchronous induction motor	Rare earth permanent magnet motor
Motor efficiency	<65%	>85%
Efficiency loss- 6m hose length	30%	0%
Hose length (M)	≤12 Longer length with higher efficiency loss	No limit
Exciting force (N)	3500	5372- Test data
Vibration speed (RPM)	50Hz-2850 60Hz-3450	3300 - 12000
Motor power (W)	1500	1800 - 2000
Motor weight (KG)	13.8	0.52



Advantages- **Lighter weight**

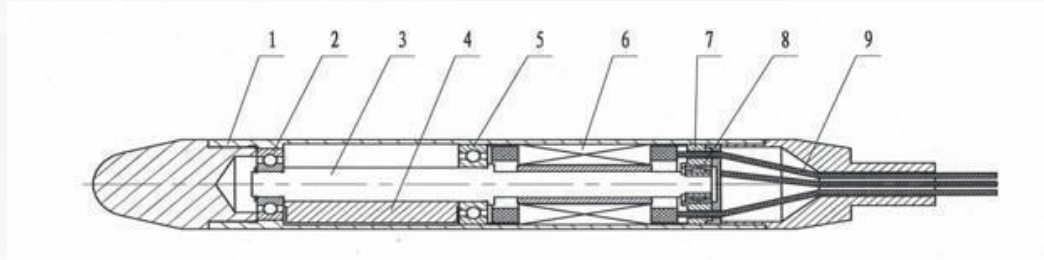
Item	Traditional type- External motor	New type- Variable frequency with built-in motor
Rod head weight (KG)	 老产品棒头：重量 6.7kg 6.7	 4.5
Ribbon hose weight (KG) -6m length standard	13.9	6.7
Motor weight (KG)	 老产品异步感应电机：重量 13.8kg 13.8	 0.52
Total weight (KG) -6 m hose length standard	36.4	14

Advantages- Lower noise



Traditional type

The motor drives the percussion mechanism inside the rod body through the flexible shaft, which generates vibration by tapping the rod body, to cause sharp mechanical noise, which is loud.



New type-ZDN

1- Shell body. 2-Bearing. 3- Shaft. 4-Vibration actuator. 5-Bearing. 6- Motor. 7-Bearing support seat. 8-Bearing. 9-Power cable

The motor drives the eccentric mechanism to vibrate, there is **no contact between the vibrating part and the rod body, with lower noise.**



Advantages- Lower cost

Item	Traditional type	New type- ZDN-VSD	IREN
Dia of rod head (mm)	50	50	58
Length of rod head (mm)	510	400	400
Weight of rod head(kg)	6.7	4.5	4.5
Ribbon hose length (m)	6	6	5
Total weight (kg)	36.4	14	13.8
Vibration frequency (rpm)	2850	12000	12000
Motor power (w)	1500	1800 - 2000	1050
Motor type	Asynchronous induction	Rare earth permanent magnet motor	Asynchronous induction
Motor efficiency	<65%	>85%	<65%
Labor cost	2 workers	One worker	One worker
Brand	China	China	Germany
Using life	50 hrs	300 hrs	150 hrs
Unit price	USD 200/Set	USD 800/Set	USD 3,000/Set



Parts of photos

Rod head





Parts of photos

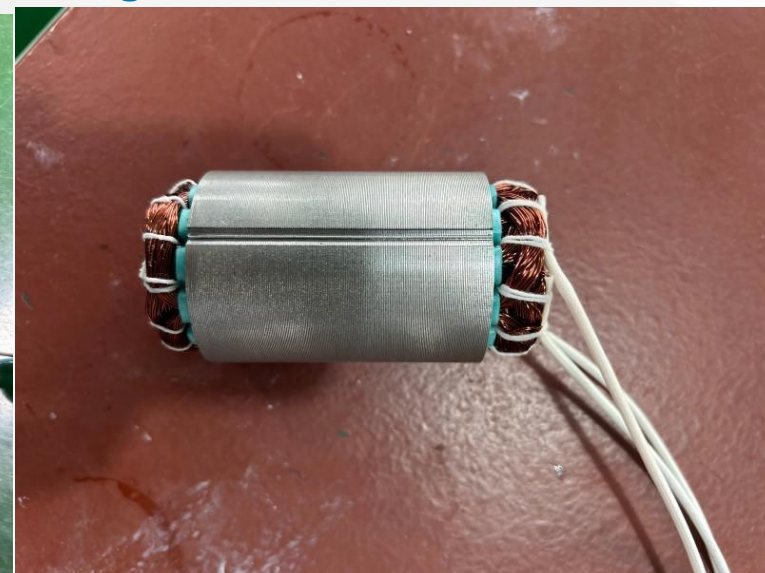
Shaft



Frequency inverter



Rare earth permanent magnet motor



Parts of photos

Rod body



NSK bearing



Remote control power





Parts of photos

Ribbon hose



Completed Vibrator rod unit





Workshop for reference





Workshop for reference





Certifications

报告编号: GJ-70036-2024





中国认可
国际互认
检测
TESTING
CNAS L0550



230063049388

检验报告

检验类别: 委托检验
产品型号名称: ZDN50-1 智能变频混凝土振动棒
委托单位: 合肥盈牛智能装备有限公司

国家建筑城建机械质量监督检验中心




CVC Testing Technology Co., Ltd.

Certificate of Compliance

No. MD24-0388

About the Machinery Directive 2006/42/EC

Applicant: Hefei Onnew Intelligent Equipment Co., Ltd.
No. 13, Zhenxi Road, Xinchang Development Zone, Feidong County, Hefei City, Anhui Province, China

Product/Material: Intelligent Inverter Concrete Vibrating Rod

Trade Mark: —

Model/Type: ZDN50-X (X indicates the length of the rubber hose, expressed as 1, 2, 3, ..., 50)

Rated Specification: 220-240VAC 50/60Hz 1800W Rubber hose length 1-50 m

Tested According to: EN 62841-1:2015/AC:2015

Referred to the Technical Report: RZCE2024-0181MD

This certificate of compliance is based on an evaluation of a tested sample of the product mentioned above. It does not imply assessment of series-production of the product. The applicant should hold the whole technical report at the disposal of the competent authority.

Provided it is also in conformance with other applicable EU/EC directives, the manufacturer or its authorized European representative may draw up an EU/EC Declaration of Conformity and affix the CE-mark shown below to each conforming product.



CVC Testing Technology Co., Ltd.
No. 3, Tianhai Road, Kaifu Avenue, Science City, Guangzhou, 510662, P. R. China
Tel: +86 20 32259888 Fax: +86 20 32259889 E-mail: office@cvc.org.cn
www.cvc.org.cn

Signed by: 
Xiao Hanguang
Date of Issue: 2024年05月20日

LIC: C 008R MD G1

证书号第 6602668 号




发明专利证书

发明名称: 一种 IUB 液智能检测系统

发明人: 韦斌, 文伟国

专利号: ZL 2022 1 0125100.1

专利申请日: 2022年02月10日

专利权人: 合肥盈牛智能装备有限公司

地址: 230000 安徽省合肥市高新区天元路1号软件园1号楼2层
空间360室

授权公告日: 2023年11月01日 授权公告号: CN 114459190 B

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局长 
申长勇



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其他事项参见续页



Certifications





Certifications

证书编号: 48841972号




实用新型专利证书

实用新型名称: 一种应用于混凝土泵送器(泵)的辅助支撑结构

发明人: 吴万金

专利号: ZL 2023 21031045.8

专利申请日: 2023年02月14日

专利权人: 合肥盈牛智能装备有限公司

地址: 230000 安徽省合肥市高新区天元路1号软件园1号厂房B座
空间069室

授权公告日: 2023年04月14日 授权公告号: CN 218562127U

局长 申长雨



第1页共2页
合肥盈牛智能装备有限公司

证书号: 828284071号




发明专利证书

发明名称: 一种非连续性地平信号跟踪测距系统及方法

发明人: 安杨高书娟

专利号: ZL 2022 1 0294561.2

专利申请日: 2022年08月18日

专利权人: 合肥盈牛智能装备有限公司

地址: 230000 安徽省合肥市高新区天元路1号软件园1号厂房B座
空间309室

授权公告日: 2023年08月29日 授权公告号: CN 115378549 B

局长 申长雨



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合肥盈牛智能装备有限公司

证书号: 8004112号




外观设计专利证书

外观设计名称: 控制部外壳

设计人: 陈德来 吴子洪 冯万成

专利号: ZL 2022 3 0276513 X

申请日: 2022年02月29日

专利权人: 合肥盈牛智能装备有限公司

地址: 230000 安徽省合肥市高新区天元路1号软件园1号厂房B座
空间309室

授权公告日: 2022年04月14日 授权公告号: CN 307578546 S

局长 申长雨



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合肥盈牛智能装备有限公司

证书号: 5550688号




发明专利证书

发明名称: 一种HIFI板音性能检测系统

发明人: 王西 张林国

专利号: ZL 2022 1 0128100 X

专利申请日: 2022年02月10日

专利权人: 合肥盈牛智能装备有限公司

地址: 230000 安徽省合肥市高新区天元路1号软件园1号厂房B座
空间269室

授权公告日: 2022年11月01日 授权公告号: CN 111158336 B

局长 申长雨



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Applications





Thanks.