



山东章鼓 股票代码: 002598



专为水产增氧设计 山东章鼓高效增氧鼓风机

SHANDONG ZHANGGU
HIGH EFFICIENCY OXYGENATION BLOWER

安静节能 · 智慧低碳 · 超长寿命 · 维护简便

山东省章丘鼓风机股份有限公司

山东章鼓



山东章鼓高效增氧鼓风机专为水产增氧设计，
可根据水深、养殖面积、水产种类，提供多种
可调供氧模式，一键开机，快速提升水溶氧量。

Shandong Zhanggu High Efficiency Oxygenation Blower
is professional designed for aquiculture oxygenation.
Diverse oxygen supply mode are available as per water
depth, farming size and fisheries kinds, one-button start
design that could increase water dissolved oxygen quickly.



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SHANDONG ZHANGQIU BLOWER CO.,LTD



企业简介 Company Profile

股票代码 : 002598

山东省章丘鼓风机股份有限公司始建于1968年，由山东省章丘鼓风机厂有限公司（原名山东省章丘鼓风机厂）变更而来，具有五十余年的风机设计、生产、制造技术和经验，先后建立了两个中日合资企业，并在美国设立了分公司，成为当时国内风机行业第一家在国外建立分公司的企业。主导产品罗茨鼓风机国内市场占有率一直雄居全国同行业之首。公司制定了“拉长主业，上创新，合资合作，发展大章鼓”的总体发展战略，提出了“做，就做到最好”的工作理念。

经过不断发展，目前已成为集罗茨鼓风机、离心鼓风机、通风机、工业泵、气力输送成套系统、电气设备、MVR 蒸发浓缩与结晶技术和成套系统、环保水处理产品及服务等产品设计、生产、销售于一体的现代化企业。2005年章鼓公司实现整体搬迁，入住自己建设的高标准现代化工业园。工业园区面积43万平方米，建筑气势恢弘，设施完善，为企业跨越式发展和与世界各国企业的合资合作提供了广阔的发展空间。公司于2011年7月7日成功在深交所挂牌上市，股票代码：002598，成为公司发展史上又一新的里程碑。



Shandong Zhangqiu Blower Co.,Ltd (Formerly name: Shandong Zhangqiu Blower Works) is a company with over 50 years' blower design, manufacture technology and experience. We set up two Sino-Japanese Joint-ventures and one USA branch that of 1st company in China blower industry establishing oversea branch. We are the leading enterprise in Zhangqiu local industry and main product-Roots Blower's market occupancy is top-ranked in China blower industry. Overall developing strategy: "Develop main business, pioneer new fields and innovate, cooperate to be a great company". Working concept: "Do the best".

Now we are a modern company integrated the design, manufacturing and sales on products of: Roots Blower, Centrifugal Blower, Fan, Industrial Pump, Pneumatic Conveying System, Electrical Equipment, MVR Evaporation, Concentration and Crystallization system, Waste Water Treatment Product and Service and etc. In 2005, we moved to newly built high-standard modern industrial park. This new industrial park covers an area of 430,000 m² with complete facility and magnificent office building providing wide developing space for cooperation with overseas company and great-leap-forward development of us. In July, 7th, 2011, the company was published listed on Shenzhen Stock Exchange center. Stock code: 002598. This is a great development milestone of us.



荣誉，见证了价值实现的每一步印记



汗水成就梦想 荣誉见证辉煌

Dreams will be realized from sweat,
 Certificates of honor witness the brilliance.



一流的精密制造及装配测试基地

FIRST-CLASS LEAN MANUFACTURING AND TESTING BASE

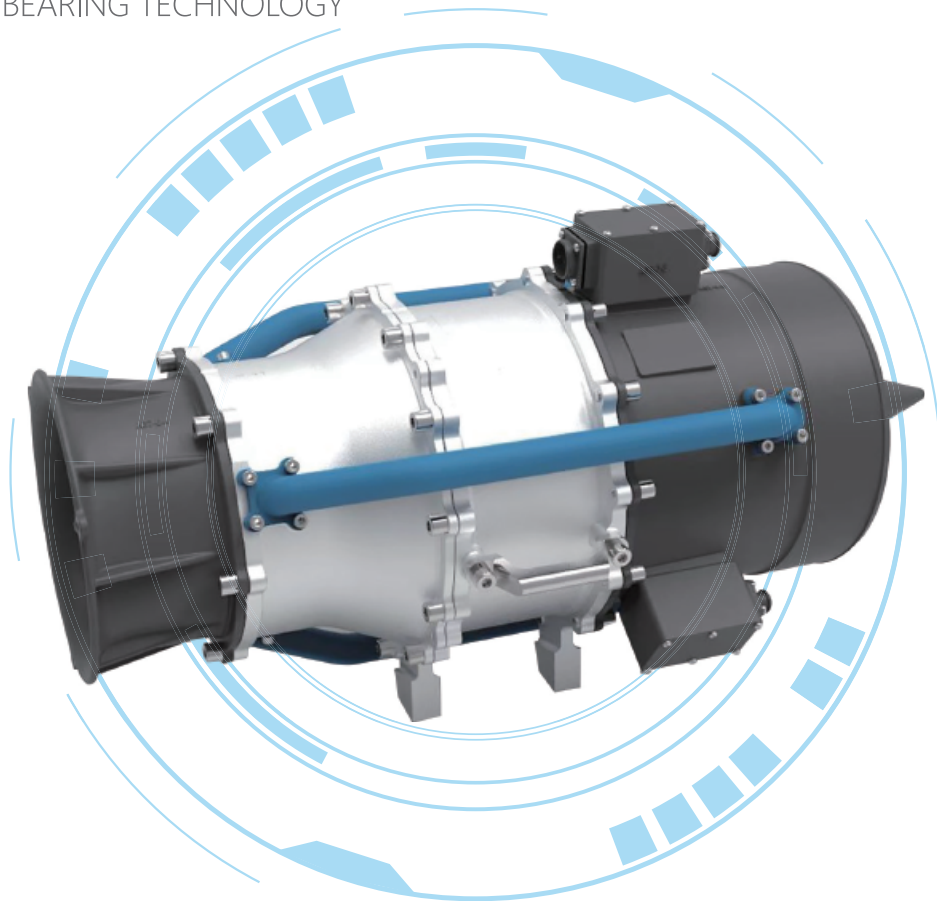
山东省章丘鼓风机股份有限公司建有实验室、研发大楼、加工车间等，拥有国际先进、国内领先的高精度加工设备。

Shandong Zhangqiu Blower Co.,Ltd. has built laboratories, R&D buildings, processing workshops, etc., with internationally advanced and China leading high-precision processing equipment.



空悬风机核心技术

AIR FOIL BEARING TECHNOLOGY



研发团队基于电 - 磁 - 机 - 热多物理场耦合设计技术，自主研发永磁同步电机（PMSM）；通过研究与控制策略协同的高速永磁电机电磁优化设计技术，解决了转子发热量大、转矩脉动高、电机噪声大的问题，使其具有高可靠性、高耐温性、低风阻损失的优势；攻克了转子结构完整性设计与工艺，开发出高功率密度、低成本、高效率的永磁同步电机。

Based on the thermal multiphysics coupling design technology of electromagnetic machine, the R&D team independently developed a permanent magnet synchronous motor (PMSM); Through the electromagnetic optimization design technology of highspeed permanent magnet motor coordinated with the control strategy, the problems of large rotor heat, high torque ripple and large motor noise are solved, so that it has the advantages of high reliability, high temperature resistance and low wind resistance loss. The design and process of rotor structural integrity were overcome, and a permanent magnet synchronous motor with high power density, low cost and high efficiency was developed.

先进三元流复合弯掠轴流叶轮技术

高速直驱永磁同步电机技术

车规级箔片气浮动压轴承技术

高速转子动力学设计方法

热管理设计技术

高效驱动控制技术



空气悬浮高效增氧鼓风机

AIR FOIL BEARING HIGH EFFICIENCY
OXYGENATION TURBO BLOWER

空气悬浮高效增氧鼓风机是一种高效节能、绿色环保的产品,可根据水池深度、养殖面积、水产种类等方面提供多种可调供氧模式,一键开机,曝气均匀扩散到各个水层,快速改善水中溶氧,加速池塘水体物质循环,消除有害物质,促进浮游生物繁殖以及鱼虾新陈代谢作用,提高饵料利用率,同时保证高密度水产养殖水中氧气含量充足,可大幅促进鱼虾的生长发育。

空气悬浮高效增氧鼓风机采用的宽工况高效三元流叶轮,突破了低比转速设计关键技术,效率高。主机的一体化特殊设计,使噪音小于 70dB (A)、震动小于 12 μ m。其采用无级调节,风机可快速启停,使用寿命大于 20 年。

Air Foil Bearing High Efficiency Oxygenation Turbo Blower is a high efficiency, environment-friendly product. Diverse oxygen supply modes are available as per water depth, farming size and fisheries kinds. One-button start design, aeration spreads evenly to all water layers, oxygen dissolved be quickly improved, accelerates the circulation of water substances, eliminates harmful substances, promotes the reproduction of plankton and the metabolism of fish and shrimp, improves the utilization rate of bait, and ensures the oxygen content in high-density aquaculture water is sufficient, which can greatly promote the growth and development of fish and shrimp.

The high-efficiency ternary flow impeller used in the Foil Bearing High-speed Centrifugal Blowers breaks through the key technology of low specific speed design and has high efficiency. The integrated special design of the main engine makes the noise less than 70dB(A) and the vibration less than 12 μ m. It adopts stepless adjustment, and the blower can start and stop quickly, the service life is more than 20 years.

AIR FOIL BEARING HIGH EFFICIENCY OXYGENATION TURBO BLOWER

性能特点

节能高效

高效三元流叶轮
零传动损失
气动效率高达85%
节能20%~40%

低噪音

节能减排，无油污染
节省空间，噪音低于70dB

性能可靠

维护简便，安全可靠
超长寿命，运行稳定

智能设计

手机监测，省时省力
故障诊断，自我保护

PERFORMANCE FEATURES

Energy Saving, High Efficiency

High Efficiency Ternary Flow Impeller
0 transmission lose
Pneumatic Efficiency Up-to 85%
20%~40% Energy Saving

Low Noise Level

Energy Saving and Emission Reduction
Less Footprint
Sound level<70dB

Reliable

Easy maintenance, reliable and safe
Ultra-long life, stable running

Intelligent Design

Cellphone Remote Controlled,
time and power saving,
Malfunction Supervision,
Self-protection

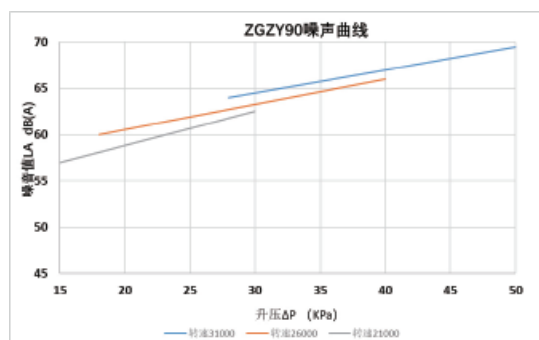
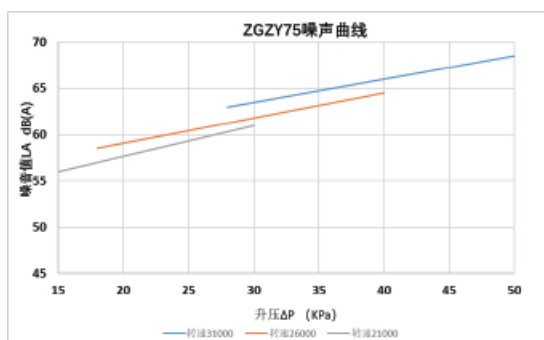
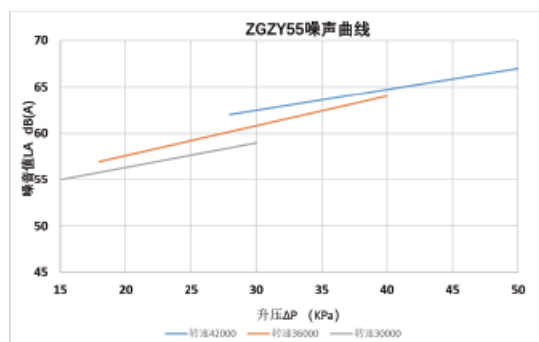
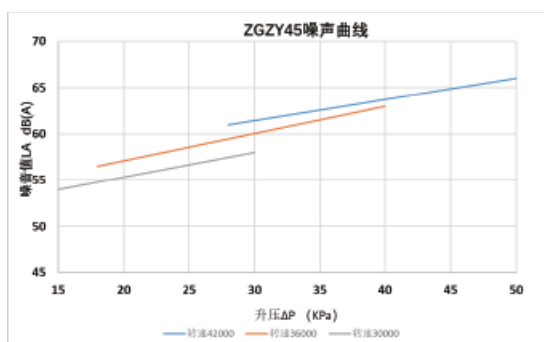
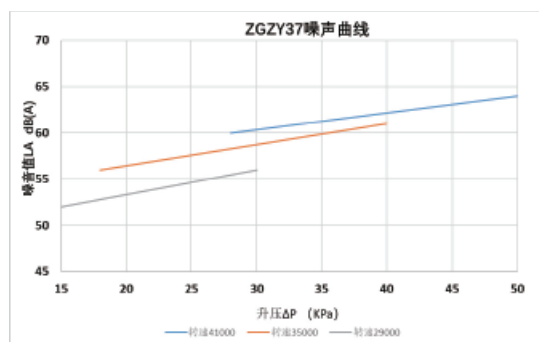
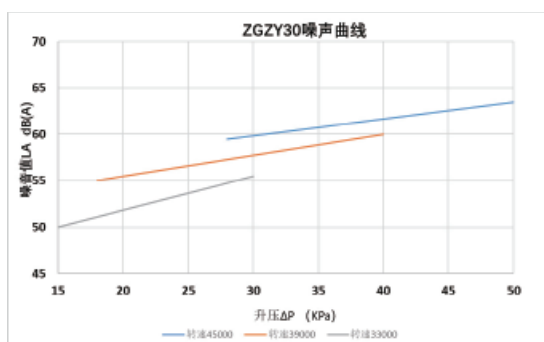
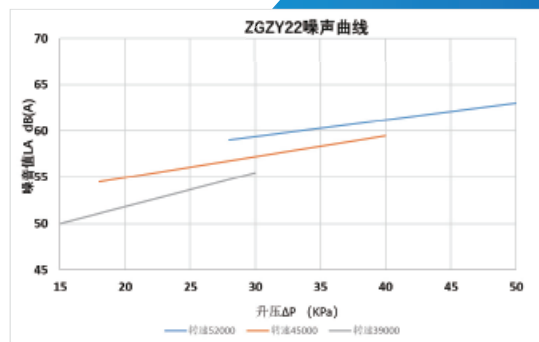
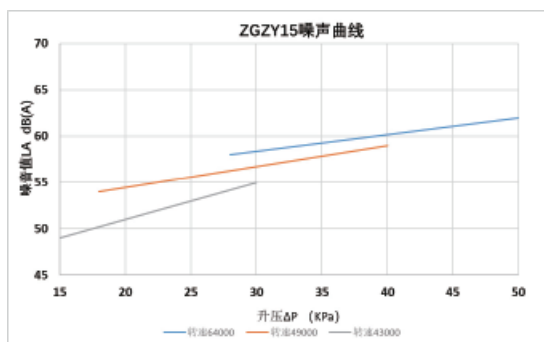
性能比较

PERFORMANCE COMPARISON

性能比较		罗茨鼓风机	高速直驱鼓风机	空气悬浮鼓风机
轴承	轴承	滚珠轴承	陶瓷轴承	空气箔片轴承
	技术来源	国产	国产	国产
	寿命	1-2年	0.5-1.5年	≥20年
	机械损失	轴承能耗2%	滑动摩擦,轴承能耗3%	运行时无摩擦
叶轮	形式	铸造二叶或三叶叶轮	铝合金三元流叶轮	铝合金三元流叶轮
	寿命	5-8年	15年	≥20年
	空气动力学寿命	低	较高	高
高速电机	电动机形式	低速异步电动机	高速永磁同步电机	高速永磁同步电机
	传动形式	皮带或联轴器	直连	直连
	电机效率	86%	94%	97%
	能否控制转速	不能	能	精准调速
	类型	无调速系统	变频调节, 调幅较小	智能化直流调速系统, 调幅大
冷却	冷却方式	油冷/水冷	风冷	风冷
安装	基础	需要	不需要	不需要
维护	润滑油	每班检查,定期添加,费用中等	无需润滑油	无需润滑油
	易损件	轴承、齿轮	轴承	过滤网
	费用	中	高	低
运行费用		最高	中	低
整机效率		70%	75%	85%
整机价格		低	高	价格适中, 满足国内市场需求
售后维保		周期短,费用低,需定期检查维护	需定期返厂维保或更换轴承	仅需更换过滤棉

空气悬浮高效增氧鼓风机噪声值

AIR FOIL BEARING HIGH EFFICIENCY OXYGENATION
OXYGENATION TURBO BLOWER NOISE LEVEL



注：上述数据是根据GB/T2888《风机和罗茨鼓风机噪声测量方法》测得的数据。

Note: The above data are measured according to GB/T2888 noise measurement method for blowers and roots blowers.

空气悬浮高效增氧鼓风机性能参数表

AIR FOIL BEARING HIGH EFFICIENCY OXYGENATION TURBO BLOWER
 PERFORMANCE TABLE

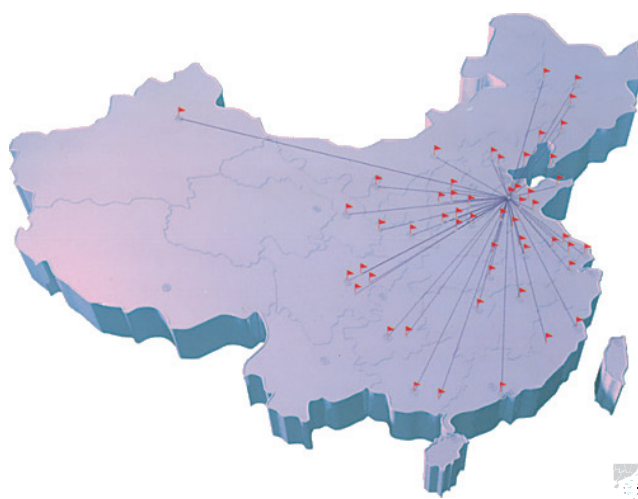
产品系列	ZGZY15	ZGZY22	ZGZY30	ZGZY37	ZGZY45	ZGZY55	ZGZY75	ZGZY90
升压	进口流量 (m³/min) 1atm 20℃							
1~2米水深								
15	40	55	70	85	100	118	140	170
25	28	44	55	82	96	107	132	157
30	25	35	50	78	85	88	130	156
2~4米水深								
40	20	28	40	48	60	75	80	96
50	15	23	32	40	50	70	75	90
转速调节	连续可调							
电机类型	高速永磁同步电机							
轴承类型	箔片无油气浮动压轴承							
冷却方式	风冷							
噪音	✎70dB							

市场分布

MARKET DISTRIBUTION

我们在全国各地共设 42 个办事处，目前除台湾省外全国 33 个省份行政区域均有完善的销售和服务网络。能够及时便捷的为您提供售前、售中和售后服务，从中了解您的需求，在满足客户定制化需求同时，不断完善服务及质量体系。

We have 42 offices throughout the country, in addition to Taiwan Province, 33 provinces in the country's administrative regions have a sound sales and service network. We can provide you with pre-sale, in-sale and after-sales service in a timely and convenient manner, understand your needs, and constantly improve the service and quality system while meeting the customized needs of customers.



应用领域

APPLICATION AREA



适用于水产养殖业及其他需要增氧的行业。

For aquaculture and other oxygenation industries.

罗茨增氧机

ROOTS TYPE OXYGENATION BLOWER

- RR系列在引进日本大晃机械工业株式会社的先进设计制造技术而生产的产品，追求高效率，采用了特殊的叶轮型线。
- 在高压力、输送特殊气体方面处于世界领先水平。
- 在引进日本技术基础上，派生设计出ZR, 3H, ZSH等系列满足多种工况的风机产品。



电子样本



RR系列

流量：0.45~452.4m³/min
升压：9.8~196kPa
真空度：-9.8~-80kPa



3H风机

流量：4.16~232.4m³/min
升压：9.8~98kPa



ZH系列

流量：0.53~59.2m³/min
升压：9.8~58.8kPa

产品简介

RR 系列罗茨鼓风机、真空泵是我公司引进日本大晃机械工业株式会社的先进设计制造技术而生产的产品。该系列产品集中了日本多年研究的技术精华，追求高效率，采用了特殊的叶轮型线，依照空气动力学的研究成果，研制出的高效节能型罗茨鼓风机，特别是在高压力、输送特殊气体方面处于世界领先水平。

Product Introduction

RR series Roots type blowers and vacuum pumps are designed and produced with the advanced technology from TAIKO KIKAI INDUSTRIES CO.,LTD Of Japan. Special type rotor profile and other patent technology are adopted. The blowers have the advantages of high efficiency and energy saving by designed with the principal of pneumatic dynamics. The products are with international advanced level especially in high pressure and delivering special gas.

罗茨增氧机

ROOTS TYPE OXYGENATION BLOWER

- ZG, ZW在引进美国MB系列基础上, 进行升级改造。
- 是当今世界的技术领先产品。



电子样本



ZG 系列

流量: $0.43 \sim 184.4 \text{ m}^3/\text{min}$
升压: $9.8 \sim 98 \text{ kPa}$
真空度: $-9.8 \sim -49 \text{ kPa}$

产品简介

ZG 系列罗茨鼓风机是山东省章丘鼓风机股份有限公司在引进美国 MB 系列罗茨鼓风机基础上, 应用本公司专有技术自行设计、开发的更新换代产品, 该产品在结构和性能上得到大大改善和提高, 是当今世界的技术领先产品, 是具有最好性价比的产品。



ZW系列

流量: $0.22 \sim 59.21 \text{ m}^3/\text{min}$
升压: $9.8 \sim 78.4 \text{ kPa}$
真空度: $-9.8 \sim -49 \text{ kPa}$

Product Introduction

ZG Blowers with tri-lobe are heavy duty style new products based on MB blowers which technology is from America. It is the replacement for Durofow models of Gardner Denver, RAM/RCS models of Dresser Roots, and RBS models of Robuschi.

空气悬浮轴承高速离心鼓风机

FOIL BEARING HIGH-SPEED CENTRIFUGAL BLOWER



电子样本

空气悬浮轴承高速离心鼓风机是一种高效节能、绿色环保的产品，其机械结构简单、运动部件少、控制鲁棒性好、维护方便。采用车规级无油高可靠动压空气悬浮轴承，运行过程中无摩擦、机械损失小。采用先进的永磁同步电机技术，转速最高可达95000rpm，仅需5s可满转速运行。电机效率高达97%，达到双一级能效标准。

Foil Bearing High-speed Centrifugal Blower is a high-efficiency, energy-saving, green and environmentally friendly product, its mechanical structure is simple, the moving parts are few, the control robustness is good, and the maintenance is convenient. It adopts automotive-grade oil-free and high-reliability dynamic pressure foil bearing, which has no friction and small mechanical loss during operation. Using advanced permanent magnet synchronous motor technology, the maximum speed can reach 95000rpm, and it only takes 5s to run at full speed. The motor efficiency is as high as 97%, which meets the two-stage energy efficiency standard.



测试条件：标准大气压，湿度 65%，气温 20℃，空气密度 1.20kg/m³ (偏差：±5%)
Air Flow (m³/min) : 1atm, 20℃, 65%RH, density=1.2kg/m³, Tolerance=±5%

型号	出口压力（kPa）									kW
	30	40	50	60	70	80	90	100	120	
	进口流量（m³/min）									
ZGK-15	24	17	14	13	10	/	/	/	/	15
ZGK-22	36	29	24	21	18	16	/	/	/	22
ZGK-30	49	39	33	28	25	22	/	/	/	30
ZGK-37	62	48	41	35	31	28	25	22	19	37
ZGK-45	78	62	51	45	39	34	32	28	23	45
ZGK-55	94	76	60	54	47	40	38	34	28	55
ZGK-75	124	95	76	69	63	55	49	45	37	75
ZGK-90	157	120	95	86	79	69	62	56	46	90
ZGK-110	190	150	115	104	93	85	72	67	57	110
ZGK-132	221	170	136	122	108	99	86	79	67	132
ZGK-150	252	190	156	140	122	112	99	90	77	150
ZGK-185	314	230	190	171	155	136	124	112	91	185
ZGK-225	380	290	228	208	183	164	145	132	111	225
ZGK-300	504	378	312	276	243	220	198	181	150	300

磁悬浮鼓风机

MAGNETIC SUSPENSION CENTRIFUGAL BLOWER

磁悬浮鼓风机是一种高效、节能、环保产品，采用三元流离心叶轮和高速永磁同步电机集成直驱结构设计。它通过内置的位移传感器实时检测转轴的振动，将得到的信息传入磁悬浮轴承控制器进行调理、运算，产生控制电流，再将该电流输入磁轴承线圈，产生电磁力，从而实现转轴的悬浮。

Magnetic Suspension Centrifugal Blower is a product of high efficiency, energy saving and environment-friendly that is directly mounted by high-speed PMSM and ternary flow centrifugal im-peller. The shaft vibration is timely supervised by build-in displacement sensor. The collected data will be input to the Magnetic Suspension Bearing Controller for computation to generate the control current. This current will be input to the windings of Magnetic Suspension Bearing to generate the magnetic force for suspension.



电子样本



产品系列	GF50	GF75	GF100	GF150	GF200	GF250	GF300	GF400
电机功率 (kW)	50	75	100	150	200	250	300	400
升压 (kPa)	进口流量 (m³/min) 1atm 20°C							
40	61	91	121	182	235			
50	50	74	100	150	195	245	290	391
60	43	64	85	128	165	209	245	332
70	37	55	73	110	143	180	210	290
80	33	49	66	95	128	158	185	256
90	30	44	60	85	115	144	170	241
100			53	75	108	131	155	221
110					99	121	143	205
120					93	113	133	191
150						95	112	156



山东章鼓 股票代码: 002598

诚招各地优秀代理商

山东省章丘鼓风机股份有限公司

SHANDONG ZHANGQIU BLOWER CO.,LTD



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