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Xinruituo

山东瑞拓鼓风机有限公司
SHANDONG RUI TUO BLOWER CO.,LTD.

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瑞拓公众号

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空气悬浮高速离心鼓风机
High speed air
suspension centrifugal blower

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SHANDONG RUI TUO BLOWER CO.,LTD.

公司简介

Company introduction

山东瑞拓鼓风机有限公司，是一家集科研、生产、销售、技术服务为一体的企业，现座落于山东省省会“泉城”济南。总公司位于“风机之乡”章丘，占地4万平方米，公司注册资金叁仟万元，现有员工百余名，核心技术人员20名。

公司拥有磁悬浮鼓风机、空气悬浮鼓风机、MVR蒸汽压缩机，RTL、RTGR、RTR二叶系列罗茨风机，RTSR三叶系列罗茨风机RT、RTC、RTLH、RTSL、B系列风机产品，共600多种规格型号。包括：罗茨风机，罗茨鼓风机，氧化风机，脱硫风机，硫化风机，污水处理罗茨风机，真空包装罗茨风机，水泥厂专用风机，水产养殖增氧机，高压风机，负压罗茨风机，气力输送设备，除尘设备，脱硫脱硝设备，污水处理整套设备及配件等，服务于电力、冶金、石油、化工、钢铁、水泥、环保、矿山、隧道、风洞等行业，市场前景广阔。随时欢迎您来厂考察。山东瑞拓鼓风机有限公司各地办事处目前有：山东（青岛）、天津、北京、沈阳、长春、哈尔滨、西安、兰州、银川、包头、太原、石家庄、合肥、无锡、南京、重庆、成都、昆明、杭州、福建、广州、南昌、武汉等20多处办事处。集售前、售中、售后于一体的服务系统，为客户第一时间上门服务，解决问题。

Shandong ruituo blower Co., Ltd. is an enterprise integrating scientific research, production, sales and technical services. It is located in Jinan, the capital of Shandong Province. The head office is located in Zhangqiu, the hometown of wind turbines, covering an area of 40000 square meters, with a registered capital of 30 million yuan. It has more than 100 employees and 20 core technicians.

The company has magnetic suspension blower, Air suspension blower, MVR steam compressor, RTL, rtgr, RTR two blade series Roots fan, RTSR three blade series Roots fan RT, RTC, rtlh, RTSL, B series fan products with more than 600 specifications and models. Including: Roots blower, roots blower, oxidation blower, desulfurization blower, sulfuration blower, sewage treatment roots blower, vacuum packaging roots blower, special blower for cement plant, aquaculture aerator, high-pressure blower, Negative pressure roots blower, pneumatic conveying equipment, dust removal equipment, desulfurization and denitrification equipment, sewage treatment equipment and accessories, etc., are used in electric power, metallurgy, petroleum, chemical industry, steel, cement, environmental protection, mining, tunnel, wind tunnel and other industries, with broad market prospects. You are welcome to visit our factory at any time. At present, Shandong ruituo blower Co., Ltd. has more than 20 offices in Shandong (Qingdao), Tianjin, Beijing, Shenyang, Changchun, Harbin, Xi'an, Lanzhou, Yinchuan, Baotou, Taiyuan, Shijiazhuang, Hefei, Wuxi, Nanjing, Chongqing, Chengdu, Kunming, Hangzhou, Fujian, Guangzhou, Nanchang, Wuhan, etc. Set pre-sale, sale, after-sale in one service system, to provide customers with first-time door-to-door services, solve problems.

空气悬浮离心鼓风机

Air suspension centrifugal blower

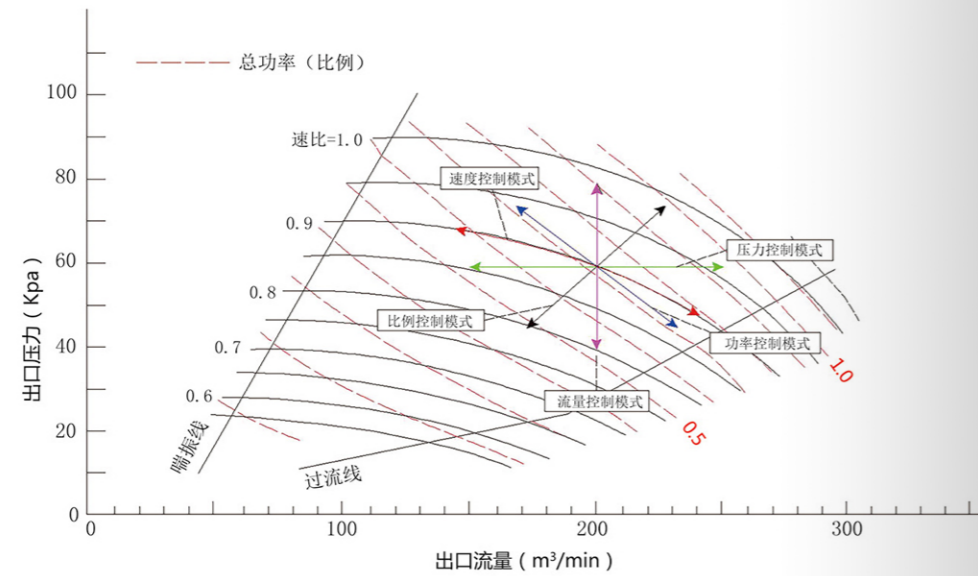
是一种高效节能环保的新型鼓风机，具有节能、低噪声、无油、运行可靠、操作维护简便和半永久性寿命等特点。

It is a high efficiency and energy saving and environmental friendly blower. It has many advantages, such as energy saving, low noise level, oil free, reliable performance, easily operation and maintenance, and semi-permanent service life.



鼓风机运行模式适用于不同行业工艺控制

The blower's operation model fitting for different industrial process control



应用范围

Application range



适用于污水处理，食品药业、石油化工、皮革印染、冶金纺织、水泥建材。

Widely used in wastewater treatment, food, medicine, petrochemical, leather printing, metallurgy, textile, cement, and building material, and so on.



空气悬浮鼓风机系列选型

Air suspension blower model

型号 model	出口压力 kpa outside pressure	流量 m³/min flow rate	功率 HP/kw motor power	出口口径 outside diameter	尺寸 mm dimension 长宽高 wlxh length, width, height	冷却 cooling
HKB-20	30~80	6~15	20HP/15kW	DN150	750x1250x1170	风冷
HKB-30	30~80	7~25	30HP/22kW	DN150		
HKB-50	30~80	10~25	50HP/37kW	DN150		
HKB-75	30~100	18~62	75HP/55kW	DN200	1050x1750x1500	
HKB-100	30~100	23~105	100HP/75kW	DN200		
HKB-125	30~80	25~115	125HP/90kW	DN200		
HKB-150	30~100	28~130	150HP/110kW	DN300	1050x2100x1750	
HKB-200	30~100	36~210	200HP/150kW	DN300		
HKB-250	30~100	40~235	250HP/185kW	DN300		
HKB-300	30~100	80~260	300HP/220kW	DN400	1300x2300x2240	
HKB-400	30~100	80~275	400HP/300kW	DN500	1820x2300x2240	



空气悬浮离心鼓风机介绍

Introduction of air suspension centrifugal blower

- 空气悬浮鼓风机为新型高效节能高速鼓风机，它由3大核心技术组成。
- 高效空气悬浮轴承，永磁高速同步电机及变频系统，铝合金AL7075（航空铝材）精密铸造的高精度叶轮。
- 空气悬浮离心鼓风机，不需要齿轮箱增速器及联轴器，由高速电机直接驱动，而电机采用变频器来调速。鼓风机叶轮直接与电机结合，而轴被悬浮于主动式空气轴承控制器上。因为没有物理接触和无需润滑油系统，所以空气悬浮离心鼓风机具有高效，节能，低噪音，运行可靠和长期无需维修保养的特点。
- 空气悬浮离心鼓风机采用一体化紧凑型设计。叶轮，高速电机，变频器，空气轴承及其控制系统配有CPU微处理器的控制面板集于一体，提高了安装，操作的便利性。为客户大大节省能源和日常维护费用，提供清洁的作业环境。所以具有技术先进，性能可靠，结构简单，体积小，节约能源，维护方便等特点。
- Air suspension blower is a new type energy saving high speed blower, it is made up of 3 key technology: high speed air suspension bearing, permanent magnet high speed synchronous motor, and aluminum alloy AL7075(aviation aluminum precision casting high-precision impeller).
- Air suspension centrifugal blower doesn't need gear box booster and coupling, driven by high speed motor directly. The motor is adjusted by VFD control.
- The impeller of blower is connected with motor directly, but the shaft is floating on the active air bearing controller. Because there's no physical contact and no needs of lubrication oil system, the air suspension centrifugal blower has many features like: high efficiency, energy saving, low noise level, reliable operation and long term maintenance-free.
- Air suspension centrifugal blower is in integration compact structure. Impeller, high speed motor, VFD, air bearing and its control system with CPU microprocessor control plate connected together, increase the convenient of assemble and operation. To help customer save energy and daily maintenance cost, and provide a clean operation environment. As a result, it has many features, for example, advanced technology, reliable performance, simple structure, small volume, energy saving, easily for maintenance, etc.

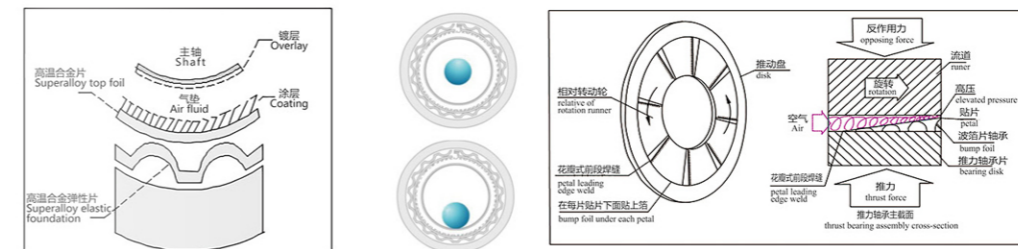


核心技术

Key technology

空气悬浮轴承

- 空气悬浮轴承使用的是空气浮力而非润滑油，是利用周围的空气代替润滑油，因此可在更高温度、高速度下运转。空气悬浮轴承的优势在于启动灵活和低成本运行，并且无机械摩擦，无需润滑油，无振动，噪音少，寿命长。
- 鼓风机启动时，轴承与轴是有接触，属于摩擦接触，到达起飞转速时，轴承和轴是无接触，无摩擦，转子处于悬浮状态。
- Air suspension bearing**
- air suspension bearing uses air floating instead of lubrication oil, it takes use of air nearby to replace lubrication oil. As a result, it could operate in higher temperature and higher rotary speed. The advantage of air suspension bearing is in flexible starting and low cost operation, no mechanical friction, no needs of lubrication oil, no vibration, low noise level, longer service life.
- When the blower starts, there's contact between bearing and shaft, belonging to mechanical friction. When the rotary speed reaches flying speed, there's no contact between bearing and shaft, no friction, and the impeller is in a floating condition.



自动化智能控制系统

- 采用电机与变频器调速控制系统，PLC自动调节风量风压，使风机工作范围内达到最佳经济运行状态。
- 控制系统对转速、风压、风量、温度等进行自检，具备防喘振和报警自动停机功能。面板控制操作智能简便。

Auto control system

- The control system uses motor and VFD to control the rotary speed, PLC adjusts the flow rate and pressure automatically, to realize the best economic operation condition in the blower's working range.
- Control system could test the rotary speed, pressure, flow rate, temperature by itself. It has the function to anti-surge, alarm and automatic shutdown. The control board is easily for operation.



核心技术

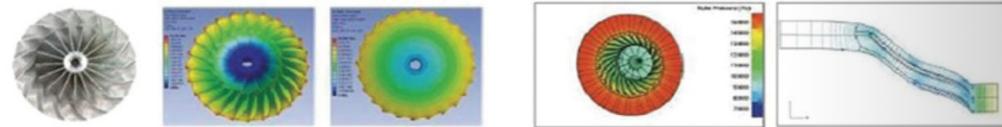
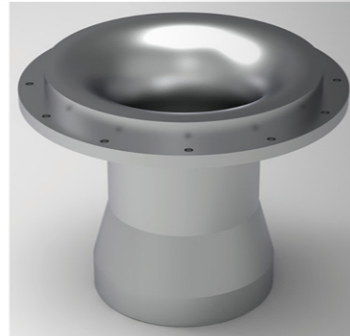
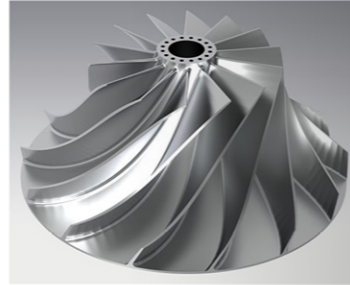
Key technology

高效离心叶轮

- 采用三元流动理论设计及参数优化,使叶轮效率最大化,工作区域广。
- 叶轮材质采用高强度锻铝或钛合金,抗变形能力强,不仅轻巧,而且消耗电量极小。
- 叶轮经五轴数控加工中心精密加工而成,精密制造的叶轮,具有高强度,高气动效率,低磨损的特点,叶轮全部经过防腐处理。
- 我们设计的每一个型号的叶轮都经过长期的台架实验,确保其气动性能高效可靠,叶轮多变效率可达 85%,并通过 115% 超速试验测试。
- 采用变频调节方式,取消了导叶片调节,启动电流更小,鼓风机的可调范围更宽。
- 叶轮与轴直接连接,动力传递效率为 100%。

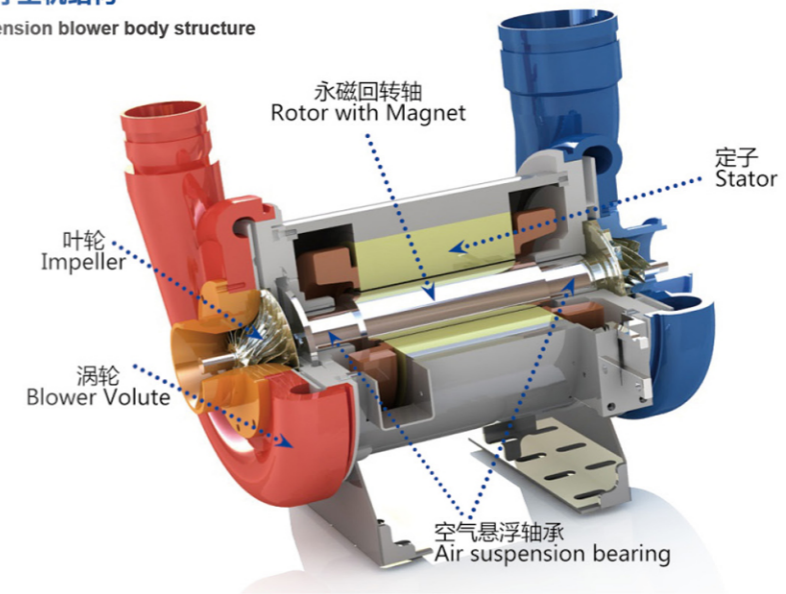
High efficiency centrifugal impeller

- It uses ternary flow theory design and specification optimization, to realize maximize efficiency, and wide area of operation.
- The impeller is using high strong wrought aluminum or titanium alloy, better performance in anti-deformation, light weight, and smaller cost is electric power.
- The impeller is machined by five axis CNC machining centers, precision machined impeller, with high strength, high aerodynamic efficiency, low abrasion. And impeller has passed anti-corrosion treatment.
- Each model's impeller we designed has passed long term bench test, to ensure its high and reliable aerodynamic efficiency. The variable efficiency of impeller could reach 85%, and have passed 115% speeding test.
- Using VFD control method, cancel guide vane adjustment, smaller starting current, wider range of blower's adjustment range.
- Impeller and shaft connected directly, the motor power transmission efficiency reach up to 100%.



空气悬浮主机结构

Air suspension blower body structure



区分 item	说明 description
电动机种类 motor type	高速永磁电机 high speed permanent magnet motor
变频器种类 VFD type	国内外知名品牌 domestic and foreign famous brand
旋转速度 rotary speed	20,000~65,000 rpm
噪音度 noise level	小于 80dB
产品型号 product model	15~400kW

超高速永磁电机

山东瑞拓鼓风机有限公司, 技术使用高效永磁电机, 效率高达 95% 以上, 可进行精密的速度控制。运用最小化设计, 转速快, 采用空气冷却, 达到电机高效。空气冷却比水冷却的可靠性更高, 运行维护更简便, 保证设备的安全持续运。

Super high speed permanent magnet motor

Shandong ruituo blower Co., Ltd uses the high efficiency permanent magnet motor, efficiency higher than 95%, could be controlled by precision speed control. It is designed in the smallest structure, faster rotary speed, using air cooling, to realize motor's high efficiency. The reliability of water cooling is higher than air cooling, much easier operation and maintenance, to ensure the continuous long term operation safely.

加工检测设备 Processing and testing equipment



应用领域 Application area



污水处理厂
Waste water treatment

玻璃制造业
Glass producing

纺织印染业
Textile

生物医药业
Biomedicine

热电行业
Thermal power

钢铁冶金
Steel metallurgy

污水、石油、冶金、制药、煤炭、化工、纺织、印染、食品、水泥、电力行业。

Waste water treatment, oil, metallurgy, medicine, coal, chemical, textile, printing, food, cement, electric power.

广泛用于各个行业的曝气，增压，气体输送，烘干、萃取、净化、真空包装、溶液回收、气相分离等工艺。

Widely used in different industries, for aeration, pressure rising, pneumatic conveying, drying, Extraction and purification, vacuum pressure package, Solution recovery, gas phase separation and other processes.