鑫华东 XINHUADONG

HDAIRUS

AIR SUSPENSION HIGH-SPEED CENTRIFUGAL BLOWER

HIGH EFFICIENCY/ENERGY SAVING/OIL-FREE/ MAINTENANCE-FREE/LOW NOISE



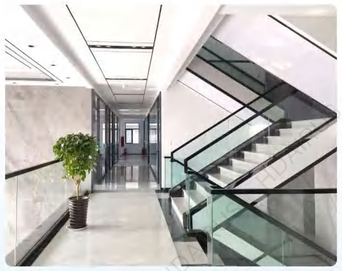
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SHANDONG HUADONG BLOWER CO.,LTD



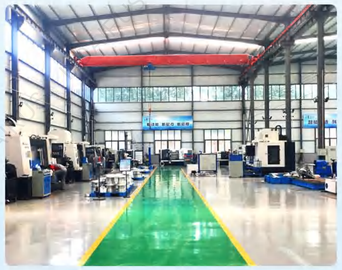
COMPANY PROFILE









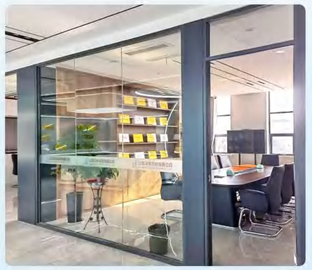




Shandong Huadong Blower Co., Ltd., founded in 2010, is located in Mingshui Economic & Technological Development Zone, Zhangqiu District, Jinan City, Shandong Province. We are a National-level Specialized, Refined, Unique & Innovative "Little Giant" Enterprise and National High-tech Enterprise. Covering a total land area of 100,000 m^2 with 70,000 m^2 of standard production workshops, the company is equipped with more than 200 sets of CNC machining equipment and employs over 500 staff. Our R&D team consists of over 60 doctors and masters, and we hold more than 100 national patents and various intellectual property rights.







Air Suspension Series



High-Efficiency Centrifugal Impeller

Optimized according to triple-flow theory, the impeller is made of high-strength forged aluminum or titanium alloy. Bench tests have verified a multi-stage efficiency of up to 85%, and it has passed a 115% overspeed test. Using variable-frequency control and eliminating guide vanes, the impeller features low start-up current and a wide regulation range. Directly connected to the shaft, power transmission efficiency is 100%, resulting in lightweight and energy-saving operation.

Airfoil Bearing

Air foil bearings use air instead of lubricating oil, supporting high-temperature and high-speed operation. They offer advantages such as flexible start-up, low operating cost, oil-free and frictionless operation, and long service life. During start-up, the bearing contacts the shaft; once reaching take-off speed, the shaft is levitated, enabling frictionless operation.

High-Speed Permanent Magnet Motor

Equipped with a high-efficiency permanent magnet motor with over 95% efficiency, supporting precise speed control. Compact and high-speed, it uses safe and reliable air cooling for easy maintenance.

Working theory



The airfoil bearing turbo blower adopts the air suspension bearing technology. When the blower starts, the rotor rotates at a high speed of 6000-10000 RPM or above. A compressed air film is generated between the rotor and the air foil bearing, allowing the rotor to be completely suspended above the air film during operation, achieving zero friction and zero wear. Combined with a high-speed permanent magnet motor for direct drive of the three-dimensional flow impeller, there is no need for a gearbox, coupling, or lubrication system. Its core advantages lie in high efficiency and energy saving (up to 30% power saving), lifetime maintenance-free, 100% oil-free cleanliness, ultra-low noise operation, and precise and efficient regulation of air volume and pressure through intelligent frequency conversion control.



Product series & specifications

Air-Supported Centrifugal Blower Parameter Table

Model \ Pressure	40kPa	50kPa	60kPa	70kPa	80kPa	90kPa	100kPa
HKB15 Max flow(m3/min)	11.6	10.6	9.8	8.8	8	/	/
HKB20 Max flow(m3/min)	15.6	14.6	13.4	12.2	11	/	/
HKB30 Max flow(m3/min)	25	23	21.3	19.5	18	/	/
HKB50 Max flow(m3/min)	41	38	35	32	29	24	22
HKB75 Max flow(m3/min)	63	58	53.5	49	44	39	36
HKB100 Max flow(m3/min)	83	76	70	64	58	51	47
HKB125 Max flow(m3/min)	78	88	82	76	70	/	/
HKB150 Max flow(m3/min)	124	114	106	97	88	76	70
HKB200 Max flow(m3/min)	158	147	136	126	114	103	96
HKB250 Max flow(m3/min)	130	146	164	153	142	111	106
HKB300 Max flow(m3/min)	240	225	208	190	172	150	140
HKB400 Max flow(m3/min)	320	300	275	252	230	198	184

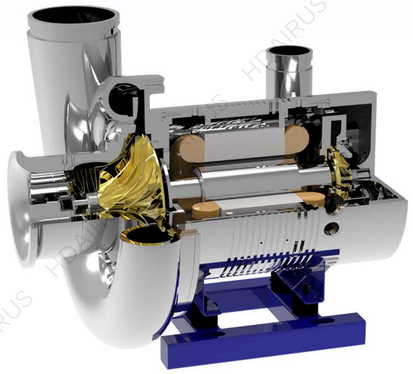
Note:

1. The selection is for reference only, and the final contract or technical agreement shall be sent to the technical department for review and selection.
2. The pressure is a pressure parameter that does not include altitude correction. If the site is used at an altitude of more than 500 meters, the altitude correction parameter should be reviewed by the technical Department.

Key technology

Air suspension blower body structure

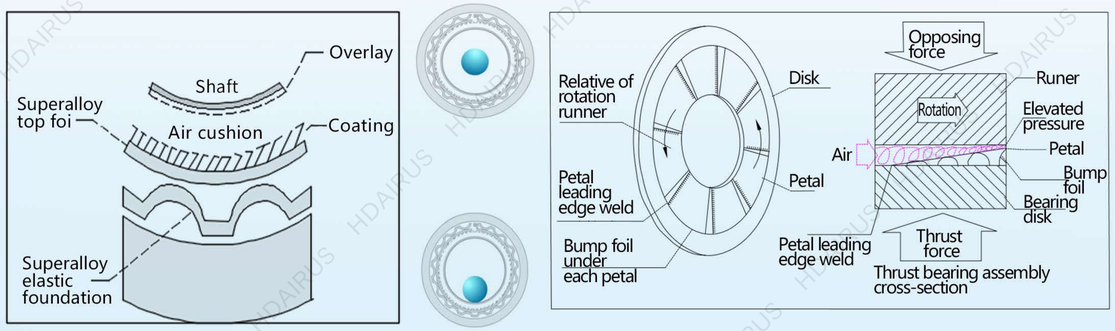
Item	Description
Motor type	High speed permanent magnet motor
VFD type	High-Frequency Vector Variable-Frequency Drive
Rotary speed	20000～80000rpm
Noise level	Less than 80dB
Product model	15~400kW



Airfoil Bearing

Airfoil bearings use air buoyancy instead of lubricating oil, relying on surrounding air to replace oil, allowing operation at higher temperatures and higher speeds. The advantages of airfoil bearings include flexible startup and low operating cost, with no mechanical friction, no need for lubricating oil, no vibration, low noise, and long lifespan.

During blower start-up, the bearing has brief contact friction with the shaft, which is normal frictional contact. Once take-off speed is reached, the main shaft levitates, eliminating contact friction; the rotor operates in a suspended state.



High speed permanent magnet motor

High-Efficiency Permanent Magnet Motor, its efficiency exceeds 95% and supports precise speed control. Designed with minimalistic structure, it achieves high rotational speeds and uses air cooling, which is more reliable than water cooling, making maintenance easier and operation safer.

Auto control system

The control system uses motor and VFD to control the rotary speed, PLC adjusts the flow rate and pressure automaticly, 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.

High efficiency centrifugal impeller

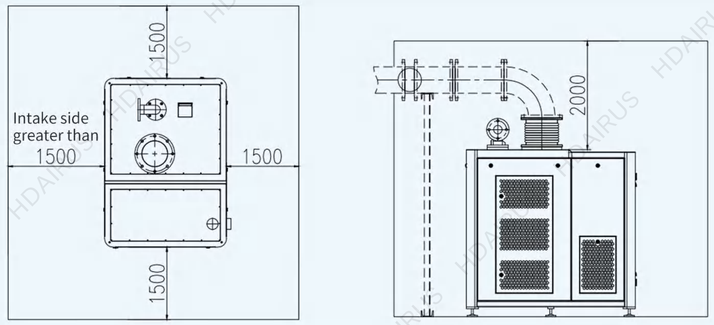
Using triple-flow theory and parameter optimization, impeller efficiency is maximized across a wide operating range. The impeller is made of high-strength forged aluminum or titanium alloy, providing excellent deformation resistance while keeping weight low, greatly reducing operational power consumption.

Machined on a five-axis CNC center for precision, the impeller combines high strength, high aerodynamic efficiency, and low wear. All impellers are corrosion-protected.

Each model undergoes long-term bench testing to ensure high and reliable aerodynamic performance. Multi-stage efficiency can reach 85% and passes 115% overspeed tests.

Variable-frequency control eliminates guide vane adjustment, resulting in lower start-up current and a wider blower regulation range.

Blower working environment and installation diagram



The blower is installed in a relatively clean and dry indoor area with sufficient space to ensure air circulation. Do not install the blower outdoors or exposed to rain, snow, and humidity. If the above conditions are not available, please consult our company before installation.

01.

The recommended operating ambient temperature of the air suspension centrifugal blower is -10 °C ～ 45 °C. If the ambient temperature is always lower than 0 °C, please add heating equipment in the blower room; if the a mbient temperature is always higher than 35 ° C, be sure to strengthen the ventilation of the blower room to ensure the indoor heat dissipation.

02.

In order to ensure the reliable operation of the blower and the convenience of installation and maintenance, there should be a certain amount of space around the blower. The recommended minimum reserved space is shown in the figure. It is recommended that the area of the blower room be appropriately increased to reduce Room echo.

03.

Subject to the performance of electronic components and fluid components, it is recommended to install the blower at an altitude of less than 1000 meters. If you have to install in an area with an altitude of more than 1000 meters, please consult our engineers before installation.

04.

The blower should be installed in a place as clean as possible. The dust will shorten the service life of the inlet filter, which will cause the motor to generate severe heat or the filter to be replaced frequently.

Application area

Widely used in waste water treatment, oil, metallurgy, medicine, coal ,chemical, textile, printing,food,cement,electric power.


Sewage treatment


Cement


Paper


Textile


Thermoelectric


Petrochemical


Food manufacturing

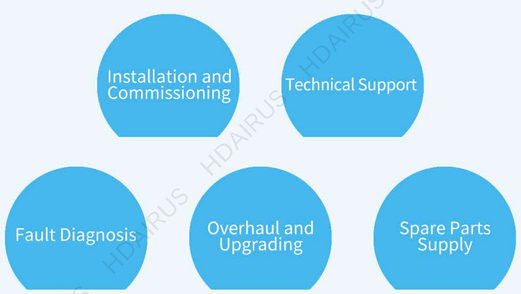

Pharmaceutical


Electronic


Plating


Steel smelting

After-sales Service



■ Service Assurance

We provide 24/7 uninterrupted service response. Our robust, well-organized logistics system ensures fast delivery of spare parts to customers, alongside a full suite of after-sales support.

■ 7×24-Hour Professional Support

1-hour rapid after-sales response; on-site installation guidance within 48 hours
Huadong Blower deeply appreciates all clients, providing lifetime service and free lifelong technical support.







Quality Assurance



PROMOTING INDUSTRIAL CIVILIZATION

CREATING A BETTER LIFE TOGETHER

Huadong Blower is equipped with advanced inspection and test equipment. We adhere to our manufacturing philosophy: "Design & Development – Test & Verification – Operation Optimization – Market Launch – Continuous Innovation". We conduct comprehensive inspection and testing for core components including air foil bearing, high-power high-speed permanent magnet synchronous motors and high-efficiency centrifugal impellers, which fully guarantees the stability and reliability of our product.

Huadong Blower always insists on always being better than customers' expectations;creating a timely, professional, pleasant and thoughtful service concept. Everything is based on the mission of exceeding customer needs and is responsible for the results!













Qualifications and honors

Our company has accumulated more than 100 honorary titles, and has more than 100 intellectual property rights related to leading products, including more than 50 invention patents. They have passed ISO9001 International Quality Management System Certification, ISO24001 Environmental Management System Certification, ISO45001 Occupational Health and Safety Management System Certification, Two Integration Management System Certification, Intellectual Property Management System Certification, EUCE Certification and EAC Certification.





Key partners

Trusted by tens of thousands of clients, we deliver customer service without end.

HOA PHAT
TOSHIBA
THERMAX
C.P. GROUP
SITARA
McDonald's
TATA
МЕГАТЕХНИКА
ПРОМЫШЛЕННОЕ ОБОРУДОВАНИЕ
SINOPEC
中国石油
中国海油 CNOOC
MCC 中国中冶
中国三峡 China Three Gorges Corporation
中国水务 CHINA WATER
中核集团 CNNC
中粮 COFCO
自然之源 重塑你我
SINOMA 中国中材

Enterprise culture

Corporate Mission：

To continuously create value for customers, develop the enterprise, bring happiness to employees, and contribute to the nation through industry.

Corporate vision:

To become a global leader in aerodynamic technology.

Corporate Values:

·People-oriented, valuing contributors
·Innovation, entrepreneurship, and internationalization

Corporate Spirit:

Never give up — we are the best team!

Huadong Blower is heart-to-heart with its employees



Classic cooperation

