



Miniature high  
speed and high  
efficiency airfoil  
bearing turbo  
blower

Add: Hongtangling industrial park,Zhangqiu District,Jinan City,Shandong Province,China  
Sales Department: 0531-67804861  
Service Hotline: 4008-797-786  
Fax: 0531-67804861  
E-mail: [info@huadongblower.com](mailto:info@huadongblower.com)  
Postcode: 250201  
[www.hdturbocompressor.com](http://www.hdturbocompressor.com)





## Company introduction

SHANDONG HUADONG BLOWER CO., LTD., founded in 2010, engaged in blower business since 2007. It is located in Zhangqiu District, Jinan City, Shandong Province, registered capital of 100 million yuan, covers an area of 100,000 square meters, 60,000 square meters of standard workshop, more than 100 sets of CNC machining center equipment. Now we have more than 300 employees, including 60 technical research and development personnel with doctor's degree and master's degree as the core.

The company's products are characterized by high efficiency, energy saving and green environmental protection. Main products: HMGB Maglev high speed motor, maglev bearing and bearing control system, HMGB Maglev High speed centrifugal blower, HMC Maglev High speed centrifugal compressor, HMGB maglev turbine vacuum pump, HKB series air suspension high speed motor, air suspension bearing, air suspension blower, MVR steam compressor, HDL, HDGR, HDR two lobe system root blower, HDSR, HDLH, HG three lobe series roots blower.

At present, our unit has won the "national specialized special new small giant enterprise", "high-tech enterprise", "Shandong specialized and special new enterprise", "Shandong Major project", "Shandong Famous trademark", "Shandong famous brand", "Shandong famous product", "Shandong Gazelle Enterprise", "Shandong Invisible Champion Enterprise", "Shandong Equipment Manufacturing Industry Science and Technology Innovation Award First Prize", "Jinan City One Enterprise One Technology Research and Development Center "Jinan Gazelle Enterprise" "Jinan Green Factory" "Jinan Green low-carbon technology Achievement Catalogue" "Jinan Advantage Industrial Product catalogue" "Zhangqiu Quality Award Organization Award" "Zhangqiu Quality Award Individual Award" "Advanced Party branch" "Advanced Communist Party member management" "civilized and honest private enterprise" "Top Ten advanced tax units" "contract heavy credit enterprises "Industry", "Consumer satisfaction unit", "Excellent entrepreneur per mu tax contribution Award", "Qualified Supplier of China Petrochemical Industry" and other honorary titles, the company now has more than 100 intellectual property rights related to leading products, including 31 invention patents, The products 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 evaluation certificate and EU CE certification, maglev series products were selected into the national industrial energy-saving equipment recommend catalogue and Energy Efficiency Star equipment product catalogue.

## Enterprise qualification





## Comprehensive advantages

### POWER SAVING RATE 40% //////////////

- PMSM & high efficiency centrifugal impeller
- Energy saving 40% comparing with roots blower, etc

### LOW NOISE , NO LUBRICATION //////////////

- Low vibration and noise < 70dBA
- Oil-free design in the air compression process, discharging oil-free clean air

### INTELLIGENT REMOTE CONTROL //////////

- PLC + remote data monitoring
- Remotely debug and adjust equipment operating conditions

### STABLE AND RELIABLE //////////////

- The air volume generated by the centrifugal impeller is continuous and stable, and there is no pressure decay during long-term operation.
- It can be started and stopped frequently, with a wide range of working conditions and an adjustable speed range of 5%-110%.
- Annual inspection, whole lifetime warranty

### CONVENIENT MAINTENANCE //////////////

- The special structure design takes only 30 minutes to disassemble and assemble, making it easy to install
- No mechanical maintenance for normal operation

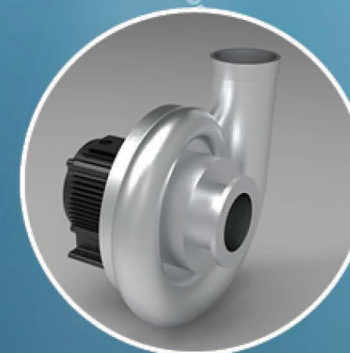
No lubrication

Energy efficient

Easy to maintain

Intelligent control

Low noise

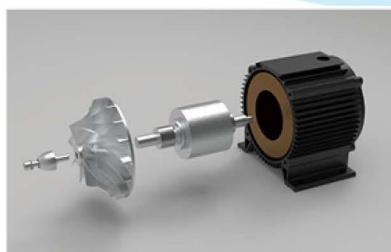


## Core technology



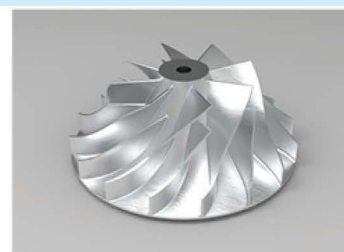
### HIGH SPEED PERMANENT MAGNET MOTOR

- Adopt high-efficiency permanent magnet synchronous motor (PMSM), efficiency  $\geq 96\%$ .
- Microcomputer control, the speed can reach more than 20,000 rpm.
- The insulation is registered as H pole (maximum high temperature resistance 170°)



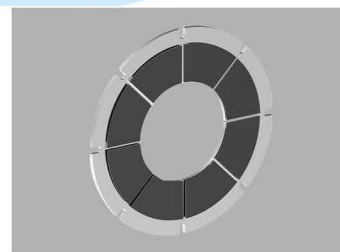
### INTEGRATED DIRECT DRIVE

- The design of the impeller and motor sharing a common shaft eliminates the need for intermediate transitions such as pulleys and other connecting components, reducing transmission losses to zero and achieving 100% transmission efficiency.



### THREE-DIMENSIONAL FLOW IMPELLER

- Precision manufacturing of aviation aluminum materials with strong corrosion resistance.
- 5-axis machining center is precision manufactured with tolerances below 5/1000mm.
- Light weight, less power consumption.



### AIR FOIL BEARINGS

- Use air buoyancy instead of bearings.
- Start with flexible and low-cost operations.
- No mechanical friction, no lubrication.
- No vibration, no noise, long lifetime.

## Intelligent remote control

According to the user's needs, the remote monitoring, setting management, fault alarm and record analysis of the aerator are realized to achieve the goal of comprehensive management.

### INTELLIGENT CONTROL PANEL

- Maintain a certain pressure, flow and speed through the PLC control system, and it is simple.
- 24 hrs monitoring of equipment operation through touch screen.
- Use mobile APP to achieve remote control.
- Equipped with anti-surge function to improve equipment safety and provide multiple working modes.
- Automatic fault alarm to facilitate analysis of fault causes.

### HIGH EFFICIENCY FREQUENCY CONVERTER

- Stability and reliability.
- High-speed rotation function that saves energy by adjusting frequency.
- Built-in DC reactor can suppress power supply harmonics and enable precise operation and soft start.
- According to the specifications of different blower, the operating frequency of the inverter is generally 400-1000Hz.

### PLC ELECTRIC CONTROL SYSTEM

- 24 hrs monitoring system operation data and trajectory, multiple protection and early warning functions.
- IoT data management establishes a backend service platform and modular management of equipment energy efficiency.

### PERMANENT MAGNET HIGH SPEED EQUIPMENT

- Optimized design of PMSM permanent magnet synchronous motor for high-speed rotation.
- Precise speed control via frequency converter.





## Economic performance



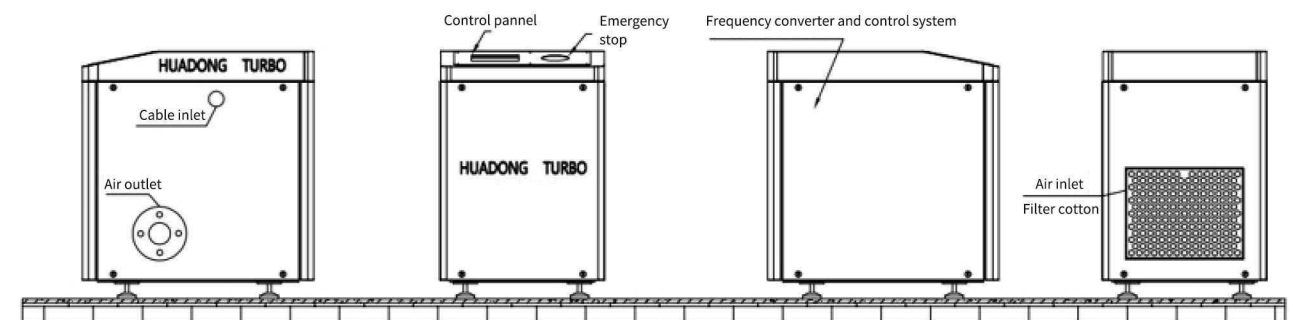
Model	Operating power	Alternative power	Power saving			Electricity cost	Save cost of electricity per year
			Per hour	Per day	Per year		
HKG4	4	5.5	1.5	36	13140	0.7 元 / 度	9198
HKG7.5	7.5	11	3.5	84	30660		21462
HKG15	15	22	7	168	61320		42924
HKG22	22	30	8	192	70080		49056
HKG30	30	45	15	360	131400		91980
HKG37	37	55	18	432	157680		110376

## Type selection and installation

Flow rate Pressure	HKG7.5	HKG15	HKG22	HKG30	HKG37	HKG45
15	22	39	57.5	78	95.5	121
20	20	37	52	74	89	115
25	16	30	43	60	74	95.5
30	14	26.4	38.3	51.3	63	76
35	12	23	33	45	58.5	69
40		19	29	38.5	48	58.5

Remarks: Environmental requirements: atmospheric pressure: 101.3KPA, temperature: 20C, relative humidity :65%.

### INSTALLATION DIAGRAM



### INSTALLATION RENDERINGS





## Product advantages

ITEM	HUADONG BLOWER	NOMARL BLOWER
integrated opration	The whole machine, microcomputer control system, and frequency converter are highly integrated in a box, skid-mounted and easy to install.	Only bare machine, no microcomputer control system, and an additional frequency converter is required.
Microcomputer control	The speed can be adjusted steplessly according to the oxygen supply demand, and power consumption can be precisely controlled.	Brainless air supply results in insufficient air supply to the far shed and excessive air supply to the nearby shed, resulting in waste.
Touch control	The smart control panel has a finger touch screen, making it easy to get started.	Without touch control, the machine can only be turned on and off simply, and controlled by an external inverter. The operation is complex and can easily cause malfunctions.
Mobile remote control (optional)	With the remote control of your mobile phone, you can monitor the operation of the blower and remotely control the amount of oxygen at home. No matter where you are, the shrimp shed is under control.	Without mobile remote control, need to repeatedly walk between the computer room and the shrimp shed to confirm the oxygen supply situation. will not be able to understand the oxygen supply situation once they leave the shrimp shed.
Automatic alarm system	Automatic alarm and timely recording of fault causes, microcomputer-based fault warning to reduce downtime.	It will only shut down and alarm, and the cause of the failure cannot be recorded.
Filtration system	A complete filtration system provides clean air to ensure the healthy growth of fish and shrimp aquaculture.	Only bare machine ,unfiltered air is directly inhaled, and the oxygen supply contains many impurities, which can easily cause fish, shrimp and aquatic products to be contaminated and die.
Corrosion resistant	The protection of the filter system and box makes the machine a longer service lifetime.	The air salinity in coastal areas is high, and the main engine is prone to corrosion. Cleaning and maintenance costs are high, and the gain outweighs the loss.

## Good helper of aquaculture



### Quickly improve fluoride content in water

It can make full use of the favorable factors of the breeding pond and truly play the role of "one inch of water, one inch of fish".

### Prevent or reduce fish and shrimp floating heads

Due to the fast oxygenation effect, it is less likely to cause flooding of the pond with dead fish and shrimps.

### Accelerate pond material circulation

As the dissolved oxygen in the pond is replenished, aerobic bacteria in the lower water and silt multiply rapidly, thereby accelerating the inorganization process of organic matter and forming new organisms.

### Purify water

Due to the accelerated circulation of materials in the pool, organic matter that affects the life of fish and shrimp (including excrement, animal carcasses, etc.) is converted into inorganic salts, creating a good growth environment for fish and shrimp.

### Stable water quality

As the amount of dissolved oxygen in the water increases, the material in the pond circulates quickly, creating good material conditions for the reproduction of plankton and keeping the water quality stable.

### Improve feed utilization rate

Due to the improvement of dissolved oxygen in the pond water, the speed of material circulation is accelerated, which promotes the metabolism of fish and shrimp, is beneficial to the growth of fish and shrimp, and improves the feed utilization rate.

### Helpful in preventing and treating fish and shrimp diseases

Due to the increase in dissolved oxygen in the water, fish and shrimp have a good system and grow quickly, which enhances the resistance of fish and shrimp to diseases, and the incidence rate decreases accordingly.

