



Oil Free And Silent Air Suspension Blowers Air Bearing For Clean Environment

Basic Information

- Place of Origin: China
- Brand Name: Aipu
- Model Number: Air Suspension Blowers
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: Export Standard Packaging
- Payment Terms: T/T, L/C



Product Specification

- Flow Range: 5-500m³/min
- Boost: 5-120kPa
- Temperature: Up To 60°C
- Filter Density: F8
- Filtration Accuracy: PM2.5
- Filtration Efficiency: Up To 85 Per Cent
- Highlight: silent air suspension blower,
silent suspension centrifugal blower,
oil free air suspension blower



Oil-free and silent air suspension blowers - for a clean environment

Product Description

Product Overview

Engineered to provide clean, contaminant-free airflow for sensitive processing environments, these oil-free and silent air suspension blowers leverage groundbreaking air bearing technology to deliver exceptional performance without any mechanical contact or lubrication. By eliminating the need for traditional oil-lubricated bearings, these blowers achieve whisper-quiet operation and a completely oil-free air stream - making them the ideal choice for applications where product purity, cleanliness, and worker safety are paramount.

Key Technical Features

Air Bearing Suspension

Innovative air bearing design provides frictionless, contact-free rotor levitation

Enables silent, vibration-free operation without any need for oil or grease

Supports use in ISO Class 1-5 cleanroom environments and other critical applications

High-Efficiency Airflow

Optimized aerodynamic flow path maximizes airflow output and energy efficiency

Variable frequency drive allows for precise flow rate adjustment and optimization

Delivers strong, stable air supply for a wide range of industrial processes

Comprehensive Monitoring and Control

Integrated PLC and HMI provide real-time system oversight and diagnostics

Predictive maintenance algorithms monitor equipment health and performance

Remote access and cloud-based analytics enable 24/7 optimization

Cleanroom-Compatible Design

All internal and external surfaces designed for easy cleaning and sterilization

Totally enclosed, dust-tight construction prevents particle contamination

Certified for use in the most stringent cleanroom environments

Key Advantages

Completely oil-free and silent operation supports use in sensitive, cleanroom-based applications

High-efficiency airflow delivery minimizes energy consumption and operating costs

Advanced monitoring and control features ensure optimal performance and reliability

Cleanroom-compatible design meets the most rigorous cleanliness requirements

Foil Bearing Technology

Foil bearing has physical contact between the rotor and the bearing before starting, the relative movement of the rotor and the bearing generates air pressure when starting, when the rotor rotates, the speed of the air around the rotor can be converted into pressure energy, and the air pressure makes the rotor float when the rotor reaches a certain rotation speed and plays a lubricating role. Foil bearing technology effectively solves the problems of low efficiency, short life, and the need for regular maintenance and lubrication of the traditional mechanical support transmission system.



Air Suspension Bearing High Speed Centrifugal Blower Series Selection

Air Flow (m³/min): 1 atm, 20°C, 65% RH, density = 1.2 kg/m³, Tolerance = ±5%

model number	Outlet pressure (bar)										power	Weight	Outlet calibre	Dimension (mm)		
	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.2							
	Inlet Flow(m³/min)										kw	kg	PN1.0 MPa	elder	width	height
ZGK15	24	17	14	13	10	/	/	/	/	15	300	DN150	1300	800	1230	
ZGK22	36	29	24	21	18	16	/	/	/	22	310					
ZGK30	49	39	33	28	25	22	/	/	/	30	330					
ZGK37	62	48	41	35	31	28	25	22	19	37	350					
ZGK45	78	62	51	45	31	34	32	28	23	45	550	DN200	1500	1100	1580	
ZGK55	94	76	60	54	47	40	38	34	28	55	630					
ZGK75	124	95	76	69	63	55	49	45	37	75	650					

ZGK90	157	120	95	86	79	69	62	56	46	90	830				
ZGK110	190	150	115	104	93	85	72	67	57	11	880	DN300	1500	1100	1580
ZGK132	221	170	136	122	108	99	86	79	67	132	930				
ZGK150	252	190	156	140	122	112	99	90	77	150	1450	DN300	1800	1500	2080
ZGK185	314	230	190	171	155	136	124	112	91	185	1720				
ZGK225	380	290	228	208	183	164	145	132	111	225	2140	DN400	2300	1700	2140
ZGK300	504	378	312	276	243	220	198	181	150	300	2320				

When the atmospheric conditions and medium are varied, the relative performance conversion calculation will be different, we can re-designed in accordance with the requirement of users to adapt to different working conditions. There are two cooling methods for air suspension centrifugal blower: self-circulating water cooling and forced air cooling. If you have special requirements on the cooling mode, please tell us in advance.



Scope of application

It is suitable for sewage treatment industry, petrochemical industry, food and drug industry, textile industry, metallurgy industry, cement and construction materials industry, printing and dyeing industry and other industries.

Market Distribution

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.

High Performance Aerodynamic Design Methodology for Wide Service Conditions

By studying the influence of impeller and volute flow on efficiency and working stability, the R&D team proposed a flow control method and a pneumatic optimization design method to improve the performance of the main engine, which greatly improved the efficiency of the main engine.

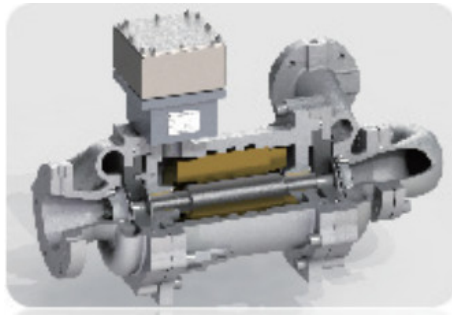
Manufacturing & Equipment Base

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



High power density permanent magnet synchronous motor technology

Based on the thermal multiphysics coupling design technology of electro magnetic machine, the R&D team independently developed a permanent magnet synchronous motor (PMSM); Through the electromagnetic optimization design technology of high speed 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.



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