Highly Accurate Controlled Vacuum Magnetic Levitation Pump Achieving Ultra High Vacuum in Harsh Process Environment

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Aipu
- Model Number: GFV75
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: Export Standard Packaging
- Payment Terms: T/T, L/C

Product Specification

- Models: GFV75
- Brand Name: Aipu
- Gas Volume Range: 44-91
- Power: 75KW
- Highlight: **75kw magnetic levitation pump**, **75kw magnetic levitation vacuum pumps**

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Highly Accurate Controlled Magnetic Levitation Vacuum Systems - Achieving Ultra-High Vacuum in Harsh Process Environments

Product Description

Highly Accurate Controlled Magnetic Levitation Vacuum Systems - Achieving Ultra-High Vacuum in Harsh Process Environments
Key Features:
Precise Magnetic Levitation Control:
Advanced magnetic field control algorithms
Maintains exceptional stability and accuracy of levitation
Ensures reliable performance in harsh process conditions
Ultra-High Vacuum Performance:
Multi-stage turbomolecular and diffusion pump design
Achieve vacuum levels down to 10^-11 Torr
Ideal for applications requiring extreme vacuum environments
Oil-Free and Contamination-Free Operation:
Completely dry vacuum pumping technology
Eliminates the risk of oil contamination
Maintains a clean vacuum environment
Rugged and Durable Construction:
Engineered to withstand extreme temperatures, vibrations, and pressures
Minimizes the impact of harsh process conditions on vacuum performance
Automated Monitoring and Diagnostics:
Real-time monitoring of critical parameters
Predictive maintenance capabilities for maximized uptime
The highly accurate controlled magnetic levitation vacuum systems are designed to deliver exceptional vacuum performance and stability, even in the most demanding and harsh process environments. Leveraging advanced magnetic levitation control algorithms, these systems maintain precise positioning and stability of the levitated components, ensuring reliable operation and consistent vacuum levels.
Capable of achieving ultra-high vacuum levels down to 10^-11 Torr, these vacuum systems utilize a multi-stage design combining turbomolecular and diffusion pump technologies. This advanced vacuum architecture enables the systems to deliver the extreme vacuum performance required by cutting-edge applications, such as particle accelerators, advanced materials research, and ultra-high-resolution electron microscopy.
Importantly, the vacuum systems are equipped with completely oil-free and dry vacuum pumping technology. By eliminating the need for oil, the risk of potential contamination is mitigated, ensuring a clean vacuum environment that is essential for sensitive applications. This oil-free operation also simplifies maintenance and reduces the environmental impact associated with oil disposal.
The rugged and durable construction of these vacuum systems allows them to withstand extreme temperatures, vibrations, and pressures encountered in harsh process environments. This robust design minimizes the impact of adverse conditions on the vacuum performance, enabling reliable and consistent operation in the most demanding applications.
To further enhance the reliability and stability of the vacuum system, advanced monitoring and diagnostic capabilities are integrated. Real-time monitoring of critical parameters, such as magnetic field strength, temperature, and pressure, enables predictive maintenance strategies, maximizing uptime and minimizing unexpected downtime.

Performance Features

Energy saving and High efficiency
Ternary flow Impeller is directly coupled with high-speed PMSM;
Save more than 30% energy than Water Ring Vacuum Pump,no not need circulating water,
Save more than 20% energy than Multi-stage Centrifugal Vacuum Pump;·
Save more than 10% energy than Single Stage High Speed Centrifugal Vacuum Pump;

Low Noise
With the self-balancing technology, the vibration level of Magnetic bearing is lower than traditionabearings, and there is no friction, Adopting the active vibration damping design, the blower can op
erate smoothly of less vibration.

Maintenance Free
Integrated design, skid mounted structure, convenient installation, one key to start and stop theblower, No need for mechanical maintenance during daily operation, only to replace the filter.

Intelligent Control
With PLC+GPRS/3G/4G, we can real time monitor the operation status of the Blower and controlflow, air pressure and speed by intelligently or manually mode. in case of failure, it can also

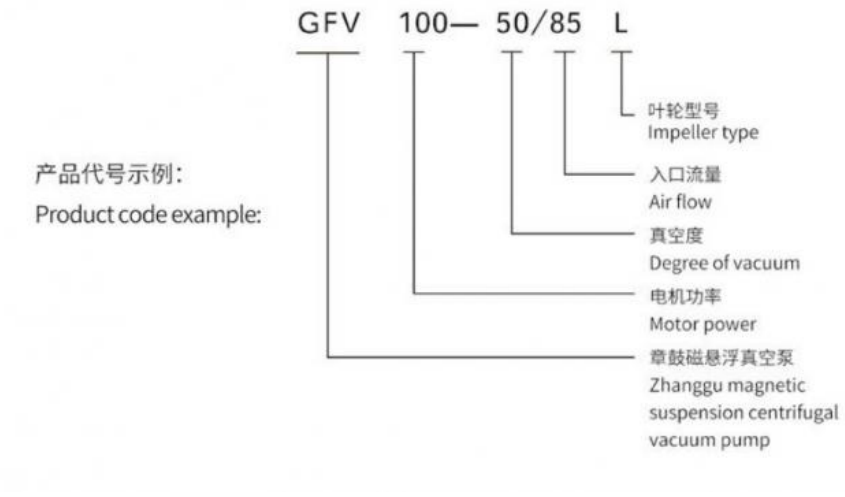
be
repaired and debugged remotely.

Application

It is suitable for vacuum dehydration,post treatment of origami machine,material conveying,tailgas recovery,etc.

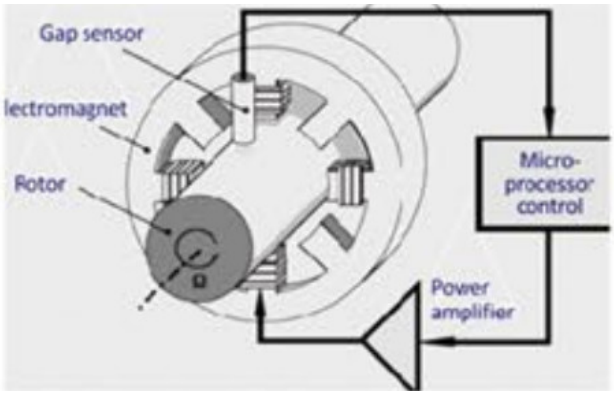
Model Selection of Magnetic Suspension Centrifugal Vacuum Pump

Model	Vacuum pump(kPa)	Air volume range	Power (kw)	Suction pipe diameter
GFV75	10-70	44~91	75	DN150
GFV100		53~121	100	DN200
GFV150		75~182	150	DN250
GFV200		93~235	200	DN300
GFV300		112~290	300	DN400



Technology core

Five-degree-of-freedom magnetic suspension bearing technology which have independentintellectual property rights can guarantee the rotor system is suspended by electromagneticforce when the equipment is powered on.The controller ensures that the signal is collectedmore than 10000 times per second and the stable suspension of high-speed rotor.Redundant power systems and spare bearings could provide multiple protection to avoid anydamage due to the sudden power failure or downtime.



Bearing technology

Active Magnetic Bearing Technology is converted from the magnetic Suspension flywheel tech.nology in the field of space satellite. The high performance attitude control and high eficiencyenergy conversion of the satellite are realized from magnetic Suspension flywheel technology,which greatly improves the attitude control and operation level of the satellite and effectivelysolves the problems of low efficiency, short service life, routine maintenance requirement and lu-brication issues on mechanical support transmission system.

First-class lean manufacturing and testing base

We has built laboratories, R & D buildings, processing work-shops, etc., with internationally advanced and China leading high-precision processingequipment.

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