



Permanent Magnet Variable Frequency Screw Air Compressor 0.5-1.0Mpa

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: Aipu
- Model Number: PMVF
- Minimum Order Quantity: 1PC
- Price: negotiable
- Packaging Details: container
- Delivery Time: 10
- Payment Terms: tt
- Supply Ability: 10t/y



Product Specification

- Exhaust Pressure: 0.5-1.0Mpa
- Displacement: 13.7-77m³/min
- Type: Micro Oil Screw Air Compressor
- Power Source: Electric
- Motor Type: Frequency Conversion
- Highlight: **permanent magnet air compressor, variable frequency screw compressor, 0.5-1.0Mpa air compressor**

Product Description

Product Description:

Permanent magnet frequency conversion control technology

The patented design of weak magnetic control, pressure control, and simple and stable open-loop control of permanent magnet motors can adapt to various harsh working conditions, making the system more stable.

No rotor angle position sensor is required, which simplifies the system and improves its stability. Torque can be compensated at any angle within 360 degrees to achieve perfect torque control. The utilization rate of bus voltage is greater than 93%, far exceeding ordinary frequency converters on the market.

By adopting advanced PID control algorithm, the control speed is accelerated, the control accuracy is improved, and a more stable gas supply pressure is provided to customers.

Constant power control technology fully utilizes motor power. When the set pressure is lower than the maximum pressure, the motor speed can be increased to obtain more exhaust volume.

Efficient permanent magnet synchronous motor

The excitation magnetic field of permanent magnet synchronous motor is provided by permanent magnet, and the rotor does not require excitation current, which improves the efficiency of the motor. Compared with asynchronous variable frequency speed regulation, it saves energy at any speed point, especially at lower speeds. This advantage is more obvious.

Ensure lower temperature rise, protect permanent magnets, and extend motor lifespan; Permanent magnets can withstand temperatures up to 180 degrees Celsius; High protection level.

The efficiency and power factor of permanent magnet variable frequency motors approximate a horizontal curve. Even when the motor is only at 20% load, the force and energy indicators of the permanent magnet motor are still above 80% of full load, which greatly improves the efficiency of electrical energy use and grid quality factor under low load conditions.

The main magnetic field of the permanent magnet synchronous variable frequency speed control motor is constant, and the stator current is almost entirely active current, resulting in a small starting current. Smooth soft start, with a starting current not exceeding twice the rated current.

High efficiency two-stage compression host with unique advantages

The performance of the unit is better than the national first level energy efficiency standard in the frequency conversion range of 60-100%, and the energy-saving effect is most significant in the load range of 40-90%.

Adopting a two-stage compression structure reduces the inter stage compressor and minimizes internal leakage, thereby improving the efficiency of the unit.

There is gear transmission between the first and second stages, which facilitates the adjustment of both rotors within the optimal linear speed range, resulting in higher efficiency.

Innovative atomization and oil air mixing system design enhances inter stage cooling, reduces the flow of lubricating oil, and improves efficiency

The main engine bearings adopt specialized bearings jointly developed with SKF, with a total of 9 bearings to ensure the service life and performance of the main engine.

Efficient intake valve

National patented intake valve

Through 5 million cycles of life testing

Large caliber, low pressure drop

The check valve closes quickly to prevent oil and gas from spraying out of the main engine

Special motor

High starting torque

Multiple specifications of motors available for selection

SKF bearings have low noise and long service life

Equipped with refueling device, refueling can be done without stopping the machine

Customized display and control integrated touch screen

High definition touch screen display

Friendly and intuitive interface, user-friendly menu structure design, easy to query and maintain

Can display multiple lines of running parameters and historical records

Cooling system

Low power consumption and low noise

Efficient axial flow cooling fan

Adopting intake and exhaust noise reduction design

Core advantages:

1. Efficient and energy-saving, reducing operating costs

Adopting Kaishan's independent high-efficiency screw host, optimizing the rotor profile, improving compression efficiency, and saving 10% to 20% energy compared to ordinary air compressors.

Permanent magnet variable frequency drive (optional), automatically adjusts the speed according to actual gas demand, avoids idle waste, and has significant energy-saving effect.

Low friction bearings and efficient cooling systems reduce energy loss and extend equipment lifespan.

2. Micro oil technology provides clean compressed air

Adopting a multi-stage oil and gas separation system, the oil content in the outlet air is $\leq 3\text{ppm}$ (in accordance with ISO 8573-1 Class 1 standard).

Suitable for industries with strict air quality requirements such as food, medicine, and electronics.

3. Intelligent control system, easy to operate

7-inch touch screen human-machine interface, real-time display of operating parameters (pressure, temperature, current, running time, etc.).

It has functions such as fault self diagnosis, remote monitoring, and data recording, supports Internet of Things (IoT) access, and achieves intelligent management.

Multiple machine linkage control can be set up to optimize the coordinated operation of multiple air compressors and improve energy efficiency.

4. Stable and reliable, easy to maintain

The host adopts high-strength cast iron and precision bearings, with a design life of over 100000 hours.

Intelligent temperature control system ensures stable operating temperature and avoids high temperature shutdown.

Modular design, key components such as oil filters, air filters, and oil separation cores are easy to replace, reducing maintenance costs.

5. Low noise, environmentally friendly and energy-saving

Adopting a silent chassis and shock-absorbing design, the noise level is as low as 65-75dB (A), which meets industrial environmental noise standards.

Product Selection Table:

PMVF Two stage compression permanent magnet series products

产品型号	排气压力 (Mpa)	排气量 (m³/min)	电机功率 (KW)	排气接口	重量 (kg)	外形尺寸 (mm)
PMVF100-6-II	0.6	16.55	75	DN65	2220	2760×1630×1735
PMVF100-7-II	0.7	15.80	75	DN65	2220	2760×1630×1735
PMVF100-8-II	0.8	14.65	75	DN65	2220	2760×1630×1735
PMVF100-10-II	1.0	13.70	75	DN65	2220	2760×1630×1735
PMVF120-6-II	0.6	21.68	90	DN80	2720	2760×1630×1735
PMVF120-7-II	0.7	20.15	90	DN80	2700	2760×1630×1735
PMVF120-8-II	0.8	19.25	90	DN65	2680	2760×1630×1735
PMVF120-10-II	1.0	16.48	90	DN65	2680	2760×1630×1735
PMVF150-6-II	0.6	25.54	110	DN80	3000	3070×1810×1800
PMVF150-7-II	0.7	24.02	110	DN80	3000	3070×1810×1800
PMVF150-8-II	0.8	23.00	110	DN80	3000	3070×1810×1800
PMVF150-10-II	1.0	20.10	110	DN80	3000	3070×1810×1800
PMVF180-6-II	0.6	32.86	132	DN100	4050	3300×1810×2080
PMVF180-7-II	0.7	28.55	132	DN100	3150	3070×1810×2080
PMVF180-8-II	0.8	26.90	132	DN80	3050	3070×1810×1800
PMVF180-10-II	1.0	23.94	132	DN80	3050	3070×1810×1800
PMVF215-6-II	0.6	38.07	160	DN100	4700	3660×1980×2100
PMVF215-7-II	0.7	36.60	160	DN100	4700	3660×1980×2100
PMVF215-8-II	0.8	34.31	160	DN100	4700	3660×1980×2100
PMVF215-10-II	1.0	28.46	160	DN100	4700	3660×1980×2100
PMVF250-6-II	0.6	45.26	185	DN100	5070	3660×1980×2230
PMVF250-7-II	0.7	41.10	185	DN100	4860	3660×1980×2100
PMVF250-8-II	0.8	39.80	185	DN100	4860	3660×1980×2100
PMVF250-10-II	1.0	34.31	185	DN100	4860	3660×1980×2100
PMVF270-6-II	0.6	47.90	200	DN100	4950	3660×1980×2230
PMVF270-7-II	0.7	45.28	200	DN100	4950	3660×1980×2230
PMVF270-8-II	0.8	43.12	200	DN100	4950	3660×1980×2100
PMVF270-10-II	1.0	36.60	200	DN100	4950	3660×1980×2100
PMVF295-6-II	0.6	55.90	220	DN100	6120	3890×2160×2250
PMVF295-7-II	0.7	50.26	220	DN100	6120	3890×2160×2250
PMVF295-8-II	0.8	47.48	220	DN100	5450	3890×2160×2250
PMVF295-10-II	1.0	41.02	220	DN100	5450	3890×2160×2250
PMVF335-6-II	0.6	59.70	250	DN125	6700	3890×2160×2250
PMVF335-7-II	0.7	56.00	250	DN125	6700	3890×2160×2250
PMVF335-8-II	0.8	52.50	250	DN100	6320	3890×2160×2250
PMVF335-10-II	1.0	45.00	250	DN100	6320	3890×2160×2250
PMVF375-6-II	0.6	64.80	280	DN125	7100	4110×2310×2350
PMVF375-7-II	0.7	62.40	280	DN125	7100	4110×2310×2350
PMVF375-8-II	0.8	59.50	280	DN125	7100	4110×2310×2350
PMVF375-10-II	1.0	55.70	280	DN125	7100	4110×2310×2350
PMVF420-6-II	0.6	73.30	315	DN125	8100	4110×2370×2525
PMVF420-7-II	0.7	66.70	315	DN125	8100	4110×2370×2525
PMVF420-8-II	0.8	64.80	315	DN125	7000	4110×2310×2350
PMVF420-10-II	1.0	59.10	315	DN125	7000	4110×2310×2350
PMVF475A-6-II	0.6	77.00	355	DN125	8200	4110×2310×2350
PMVF475A-7-II	0.7	73.20	355	DN125	8200	4110×2310×2350
PMVF475A-8-II	0.8	69.90	355	DN125	7100	4110×2310×2350
PMVF475A-10-II	1.0	62.10	355	DN125	7100	4110×2310×2350

PMVF two-stage compression permanent magnet 5bar series

产品型号	排气压力 (Mpa)	排气量 (m³/min)	电机功率 (KW)	排气接口	重量 (kg)	外形尺寸 (mm)
PMVF75-5-II	0.5	14.70	55	DN65	1860	2450×1460×1580
PMVF100-5-II	0.5	19.89	75	DN80	2650	2760×1730×1900
PMVF120-5-II	0.5	25.56	90	DN80	2660	2760×1730×1900
PMVF150-5-II	0.5	30.34	110	DN100	3820	3660×1980×2100
PMVF180-5-II	0.5	34.65	132	DN100	4700	3660×1980×2100
PMVF215-5-II	0.5	43.10	160	DN125	5260	3910×2160×2280
PMVF250-5-II	0.5	48.20	185	DN125	6200	3910×2160×2280
PMVF270-5-II	0.5	50.47	200	DN125	6300	3910×2160×2280
PMVF295-5-II	0.5	59.66	220	DN150	6820	3560×2350×2350
PMVF335-5-II	0.5	64.76	250	DN150	6920	3560×2350×2350

PMVF-II two-stage compression permanent magnet series products

产品型号	排气压力 (Mpa)	排气量 (m³/min)	电机功率 (KW)	排气接口	重量 (kg)	外形尺寸 (mm)
PMVF22-II	0.6-0.9	3.8-4.6	22	G1	550	1650×900×1110
PMVF37-II	0.6-0.9	6.5-7.65	37	G1½	740	1820×1000×1140
PMVF37L-II	0.5-0.7	7.95-9.05	37	G1½	800	1820×1000×1440
PMVF55-II	0.6-0.9	10.5-12.5	55	G1½	1100	2100×1200×1330
PMVF75-II	0.6-0.9	14.5-16.5	75	G2	1450	2160×1220×1580
PMVF90-II	0.6-0.9	17.6-20.9	90	DN65	2040	2650×1280×1650
PMVF110-II	0.6-0.9	21.5-25.5	110	DN80	2400	2700×1400×1880
PMVF132-II	0.6-0.9	25.5-32.5	132	DN80	2460	2700×1400×1880
PMVF160-II	0.6-0.9	32.5-38.3	160	DN100	4180	3560×1980×2100
PMVF185-II	0.6-0.9	37.5-45.2	185	DN100	4220	3560×1980×2100
PMVF200-II	0.6-0.9	40.5-47.9	200	DN100	4710	3560×1980×2230

Applications:

1. Manufacturing industry

1. Automobile manufacturing

Application scenarios: spraying, assembly, pneumatic tools, tire inflation

Advantages:

- Provide stable and clean compressed air to avoid spraying impurities
- Variable frequency models can adapt to gas fluctuations in production lines, saving energy and reducing consumption

2. Mechanical processing

Application scenarios: CNC machine tools, pneumatic fixtures, laser cutting

Advantages:

- Low oil content ($\leq 3\text{ppm}$), protecting precision equipment
- Efficient and energy-saving, reducing production costs

2. Food and beverage industry

1. Food packaging

Application scenarios: blowing bottles (PET bottles), filling, labeling

Advantages:

- Compliant with ISO 8573-1 Class 1 oil-free air standard
- Avoid oil contamination and ensure food safety

2. Food processing

Application scenarios: Pneumatic conveying, fermentation, stirring

Advantages:

- Micro oil design to prevent oil from mixing into food
- Stable gas supply to ensure continuous production

3. Pharmaceutical and Electronic Industry

1. Pharmaceutical industry

Application scenarios: tablet compression, aseptic packaging, fermentation

Advantages:

- Compliant with GMP standards to ensure that s are free from contamination
- Low noise, suitable for clean workshops

2. Electronic manufacturing

Application scenarios: chip packaging, PCB cleaning, SMT mounting

Advantages:

- Ultra low oil content to prevent contamination of precision electronic components
- Variable frequency control to meet high-precision production requirements

4. Textile and Chemical Industry

1. Textile industry

Application scenarios: Jet loom, spinning, printing and dyeing

Advantages:

- Stable gas supply to improve loom efficiency
- Energy saving design to reduce power consumption

2. Chemical industry

Application scenarios: Pneumatic conveying, reactor stirring, instrument control

Advantages:

- High temperature resistant design, suitable for chemical environments
- Low maintenance costs and reduced downtime

5. Other industries

Advantages of PMVF in Industry Application Scenarios

Stable gas supply for instrument control and pneumatic actuators in power plants, suitable for high load operation

Mining drilling and pneumatic tools are dust resistant and adaptable to harsh environments

Printing machines and paper conveying clean air to avoid ink pollution

Plastic processing injection molding machines and blow molding machines are energy-saving and reduce production costs

Support and Services:

Our Micro oil screw air compressor product comes with comprehensive technical support and services to ensure that our customers are satisfied with their purchase. Our team of experts is available to provide assistance with installation, operation, and maintenance of the product. We also offer repair and replacement services for any faulty parts or components. Additionally, we provide training and educational resources to help our customers maximize the performance and lifespan of their Micro oil screw air compressor.

Packing and Shipping:

Product Packaging:

The Micro oil screw air compressor comes in a sturdy cardboard box with the product image and specifications printed on the outside. Inside, the product is securely packaged with foam inserts to prevent any damage during transportation.

Shipping:

We offer free shipping for the Micro oil screw air compressor within the continental United States. Our standard shipping time is 3-5 business days. For expedited shipping, please contact our customer service team. We ship via trusted carriers such as UPS, FedEx, and USPS and provide a tracking number for your convenience.

FAQ:

Q: What is the brand name of this product?

A: The brand name of this product is Aipu.

Q: What is the model number of this product?

A: The model number of this product is Micro oil screw air compressor.

Q: Where is this product made?

A: This product is made in China.

Q: Does this product have any certifications?

A: Yes, this product is certified by ce.ul.

Q: What is the minimum order quantity for this product?

A: The minimum order quantity for this product is 1pc.

Q: Is the price of this product negotiable?

A: Yes, the price of this product is negotiable.

Q: What is the packaging details for this product?

A: The packaging details for this product is container.

Q: How long is the delivery time for this product?

A: The delivery time for this product is 10 days.

Q: What are the payment terms for this product?

A: The payment terms for this product is tt.

Q: What is the supply ability of this product?

A: The supply ability of this product is 10t/y.



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