WORLD CLASS · SUPER EFFICIENT · RELIABLE · SILENT

J|N|P

PMVF SCREW VACUUM PUMP

MEMBER OF CAGI Compressed Air & Gas Institute

MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

KAISHAN

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KAISHAN

Kaishan Compressor Global

WORLD WIDE SUPPORT

Globally recognized industrial presence

Kaishan has steadily grown to become a significant, diversified engineering company developing high value machinery for industries worldwide.
With modern, specialized manufacturing facilities positioned in seven strategic locations, Kaishan's group of thirty-two subsidiary companies produce over 70,000 rotary screw and 250,000 reciprocating compressors annually. Kaishan is the world's third largest manufacturer of compressed air, mining and drilling equipment and supports industries in more than 60 countries including: USA, Australia, Germany, Japan, Korea, Russia, Africa and throughout Latin America.

Vertically integrated global strategy

Kaishan's global strategy of combining skilled engineering with highly efficient manufacturing allows us to provide performance proven, reliable equipment at a significant cost savings to our customers. Additionally, Kaishan's manufacturing processes are 85% vertically integrated insuring full control of the material supply chain. This vertical approach supplies high quality components at a lower cost, and affords Kaishan the ability to respond rapidly to changing market demands.

Practiced environmental sustainability

Integral to the design and manufacture of our products is outstanding energy efficiency. Kaishan's fundamental belief in environmental sustainability drives us to produce products that maximize energy efficiency and help to preserve precious energy resources. Single and two-stage compressors that produce more compressed air per unit of power input as well as expanders that utilize waste energy to produce electricity are just two of the fundamental products in our sustainable approach.

Throughout our manufacturing processes, unused waste materials are recycled at every stage to minimise the use of raw materials. This approach translates to lower initial costs and a smaller environmental footprint that helps us all. Kaishan's committment to environmental responsibility ensures that we will continue to develop technologies and manufacturing solutions that provide industry with machinery of exceptional value - now and well into the future.

Better design based on application conditions to meet the needs of maximum air extraction and maximum energy saving

20-100% ultra-wide adjustment range, adaptive to changes in pumping speed and vacuum degree

High efficiency and energy saving
Sturdy and stable
Quiet and environmentally friendly

The most cost-effective design based on application conditions: lower consumables cost, and one of the vacuum pumps with the smallest footprint among similar products

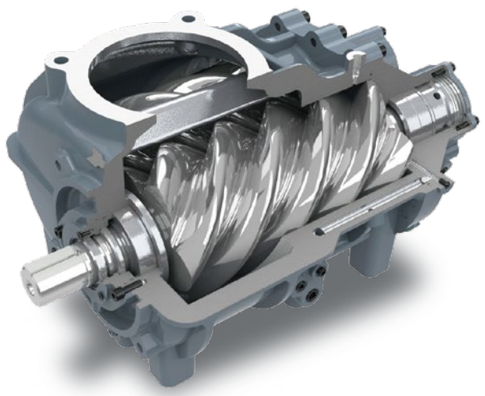
The patented intake valve is used to achieve differential pressure injection, cancel the forced injection of the oil pump, and achieve no oil pump power loss and no oil pump failure risk, your worry-free and energy-saving choice.

Based on the optimized design under all application conditions: the intake valve capacity adjustment and permanent magnet motor speed regulation realize the n-type climb of the suction volume, so that the vacuum pump is always in the best performance range in the 5-350mbar range.

The original vacuum pump end-of-air replenishment solution allows you to reduce the gas volume attenuation of the vacuum pump under high vacuum and run more stably.

Kaishan's independently developed permanent magnetic vacuum pump speed control system can achieve the maximum suction volume and maximum power output of the vacuum pump under different vacuum requirements.

Excellent PID control and intake valve capacity adjustment perfectly match your vacuum pressure and vacuum volume requirements, and the pressure is more stable.

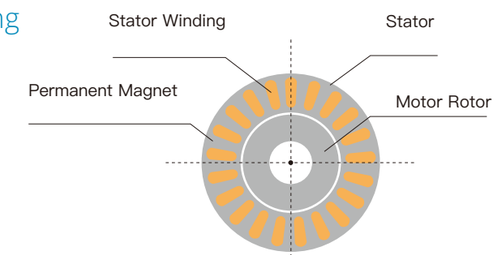


Advanced host design

The main engine adopts "Y" rotor profile, cylindrical and tapered roller bearing triple design, and the bearing life is greater than 100,000 hours. Superb reliability and service life.
Low-speed large head design, stable performance, lower noise
Integrated design, easy installation

When the vacuum pump runs to the target vacuum, the motor load gradually decreases. The efficiency and power factor of traditional motors will decrease at low loads, affecting equipment efficiency.

Kaishan's customized permanent magnet motor design and development has higher motor efficiency and wider speed regulation space, which can achieve wide-screen adjustment of the maximum air extraction volume up to 30%-170%, better matching your actual working conditions and reducing unloading power consumption.



Special high efficiency inverter

The high-performance current vector inverter dedicated to permanent magnet synchronous motor drive can achieve low-speed high-torque output, has good dynamic characteristics, super overload capacity and super overheating function, making the inverter, motor and host perfectly matched.

- **Built-in DC reactor (for units above 30kW)**
- **High speed stabilization accuracy, wide speed regulation range**
- **Large low-speed torque, small torque pulsation**
- **Large margin derating design**
- **Wide voltage input range**

Powerful control system

The unique design meets the requirements of multiple pressures and displacements under different working conditions.
Various types of protection are more comprehensive and powerful, and the functions such as timed start and stop meet various possible application requirements.
7-inch full touch controller, multiple languages.
485 port is reserved as standard.
UL and CE certifications are obtained.

High-efficiency permanent magnet synchronous motor

High efficiency

The excitation magnetic field of the permanent magnet synchronous motor is provided by permanent magnets, 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 when the speed is low and the load is high. This advantage is more obvious.

Small starting current, small impact on the power grid

The main magnetic field of the permanent magnet synchronous variable frequency speed regulating motor is constant, the stator current is almost entirely active current, and the starting current is small.

Large margin design

Ensure lower temperature rise, protect permanent magnets, and extend motor life;
Permanent magnets can withstand temperatures of 180 degrees.

Small size and light weight

Because high-performance permanent magnet materials are used to provide the magnetic field, the air gap magnetic field of the permanent magnet motor is greatly enhanced compared to the induction motor. The permanent magnet motor has a simple structure, light weight, and a volume of about 1/3 the size of an ordinary asynchronous motor.

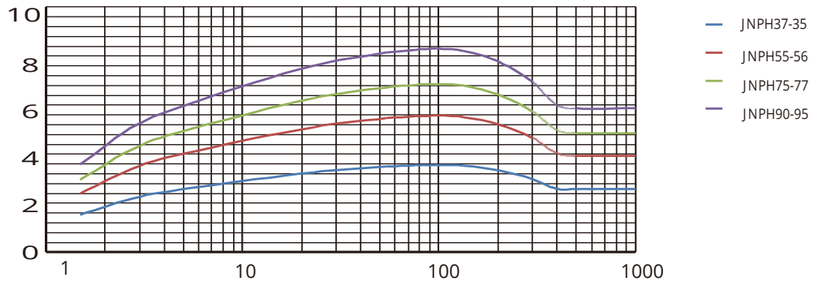
Good performance index

The efficiency and power factor of the permanent magnet variable frequency motor are approximately a horizontal curve. Even when the motor is only 20% loaded, the power index of the permanent magnet motor is still more than 80% of the full load, which greatly improves the energy utilization efficiency and grid quality factor under low load conditions.

Specification Parameter Table

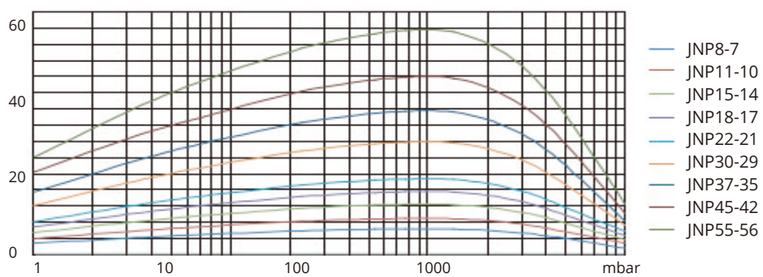
JNPH Technical Parameter

MODEL	Motor power	Nominal pumping speed	Ultimate pressure	Weight	Installation dimensions mm								
JNPH	kW	m³/min	mbar	kg	L	W	H	A	A1	A2	B	B1	B2
JNPH37-35	37	35.4	0.5	1460	2000	1500	1810	DN150	1213	1365	DN100	450	485
JNPH55-56	55	56.7	0.5	2370	2200	1650	1910	DN200	1308	1610	DN150	480	500
JNPH75-77	77	75.8	0.5	2770	2200	1650	1910	DN200	1292	1538	DN150	480	500
JNPH90-95	90	92.2	0.5	3050	2400	1800	2010	DN250	1470	1697	DN200	604	578



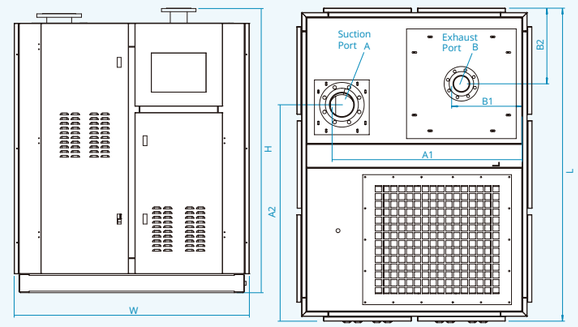
JNP Technical Parameter

MODEL	Motor power	Nominal pumping speed	Ultimate pressure	Weight	Installation dimensions mm								
JNP	kW	m³/min	mbar	kg	L	W	H	A	A1	A2	B	B1	B2
JNP8-7	7.5	7.1	0.5	580	1215	1015	1410	DN100	300	421	DN65	425	180
JNP11-10	11	9.8	0.5	600	1215	1015	1410	DN200	300	421	DN65	425	180
JNP15-14	15	13.6	0.5	700	1315	1265	1700	DN125	339	413	DN80	469	223
JNP18-17	18.5	17.2	0.5	750	1315	1265	1700	DN125	339	413	DN80	469	223
JNP22-21	22	21.3	0.5	1150	1665	1615	1890	DN150	410	600	DN100	773	383
JNP30-29	30	28.8	0.5	1300	1665	1615	1890	DN150	410	600	DN100	773	383
JNP37-35	37	35.4	0.5	1460	1665	1615	1890	DN150	410	600	DN100	773	383
JNP45-42	45	41.3	0.5	2230	2415	1615	2165	DN200	408	1828	DN150	1268	399
JNP55-56	55	56.7	0.5	2370	2415	1615	2165	DN200	408	1828	DN150	1268	399

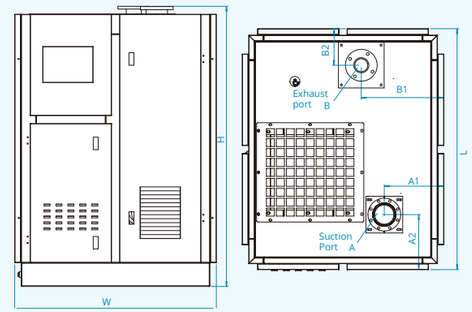


* Due to technical updates and design changes, the installation dimensions may be adjusted, and the actual technical plan shall prevail.

JNPH Series



JNP Series



Accessories

Fully automatic water removal and separation tank

- Large processing capacity
- Programmable PLC control
- Liquid level visual liquid level ultra-high sound and light alarm
- Luitable for vacuum systems with large water content such as CNC processing.

Model	Connection	Capacity
GLS350	DN150	2300m³/h
GLS500	DN200	4600m³/h
GLS1000	DN300	6000m³/h

Vacuum buffer tank

- Reduce fluctuations in operating vacuum
- Stainless steel and carbon steel materials are available
- Can isolate small amounts of dust particles and droplets
- Coatings can be customized according to anti-corrosion requirements

Model	Connection	Volume
V-06	DN100	0.6m³
V-10	DN125	1m³
V-20	DN150	2m³
V-30	DN200	3m³
V-40	DN250	4m³

Vacuum filter

It can effectively filter dust and oil-gas mixtures with high filtration accuracy. The volume and number of vacuum filters can be selected according to the usage environment and gas volume.

Model	Connection	Number of filter elements	Volume
KSZK-100-1	DN100	5	1m³
KSZK-200-1	DN100	10	1m³
KSZK-300-1	DN100	15	1m³
KSZK-100-2	DN150	5	2m³
KSZK-200-2	DN150	10	2m³
KSZK-300-2	DN150	15	2m³
KSZK-400-2	DN150	20	2m³
KSZK-100-3	DN150	5	3m³
KSZK-200-3	DN150	10	3m³
KSZK-300-3	DN150	15	3m³
KSZK-400-3	DN150	20	3m³