



Rotary-screw air compressor



Ma'an Shan Jufeng Compressor Manufacturing Co., Ltd.



PRODUCT FEATURES

ENERGY SAVING

Ultra-low frequency speed control technology enables the motor operating frequency of MAYA rotary-screw air compressor 15Hz lower than that of ordinary variable frequency rotary-screw air compressors. It truly achieves constant pressure variable operation without no-load, minimizing the loss of useless work.

HIGHRE LIABILITY

The variable frequency device soft start avoids the impact of power grid shocks and the impact on the machine itself. It eliminate the disadvantages of long-term high-speed operation of the unit and does not require a power frequency device. There is no contactor, which eliminates contactor failure; Although leakage always exists in the air application system, the application of VFD eliminates the 0.2Mpa excessive air pressure, reduces the probability of system leakage, which is a 25% reduction in leakage compared with no application.

QUIET & ENVIRONMENT FRIENDLY

Advanced Vector Variable Frequency Control reduces vibration and noise of the unit, and it can be used at the gas consumption site without the need for a dedicated machine room, saving land space and the additional cost of installing external pipe networks; the exhaust oil content is less than 3PPm, which does not pollute the environment. vector Variable Frequency Control reduces vibration and noise of the unit, and it can be used at the gas consumption site without the need for a dedicated machine room, saving land space and the additional cost of installing external pipe networks; the exhaust oil content is less than 3PPm, which does not pollute the environment.

SAVE 30%ELECTRICITY & IMPROVE OPERATION LIFE

The unique Ultra-low Variable Frequency Control Technology is combined with the compressor motor frequency conversion technology to form a full Variable Frequency Control of the variable frequency rotary-screw air compressor, which further achieves energy saving. Compared with the power frequency screw machine, electricity can be saved by more than 30%, while extending the service life of the lubricating oil and the unit.



Development history of MAYA

Focus on the utilization of air!

1994

MAYA started to lead the industry, focusing on research, development, production and sales of belt air compressor and main accessories like air compressor pump head, etc.

2004

After 10 years of diligent technical experience, our rotary-screw air compressors released in 2004 and have gradually begun to meet domestic market demand ever since.

2014

Later, with the development of the market, energy-saving awareness deepened. Inverter entered people's field of vision. We started to equip rotary-screw compressors with variable frequency device. That is our early variable frequency rotary-screw air compressor. Later, with the development of the market, the awareness of energy conservation was deeply rooted in people's minds. So we upgrade our focus into manufacturing variable frequency rotary-screw air compressor.

2022

Through more than 30 years of research, development and practical operation experience, we constantly explore and upgrade technology to manufacture better rotary-screw air compressors. We launched our new series of air compressors under our brand named MAYA.



Energy saving examples

31% POWER OFF

An example of energy saving of permanent magnet synchronous inverter(PSMI) on rotary-screw air compressor: The average gas output of a 37KW ordinary screw air compressor is only 75% of the rated exhaust volume.

Note: The model purchased by the user can produce 6 cubic meters of gas, but the actual average gas consumption is only 75%, that is about 4.5 cubic meters. If it runs 6,000 hours a year, and the electricity fee is counted by kW·h.

The calculation is as follows: The ordinary machine will produce three losses:

1. No-load loss, 2. Pressure difference loss, 3. Motor efficiency loss.

It is well known that the 37-kilowatt ordinary screw compressor has an inherent service factor of 1.2. 37 kilowatts actually refers to the output shaft power (actual load power), and the unit input power should be about 45 kilowatts!

No-load loss energy saving formula:

No-load loss = 25% unloading time x no-load current loss (45%)

No-load loss = $0.25 \times (0.45 \times 45 \times 6000) = 30375 \text{ kW} \cdot \text{h/year}$

Pressure difference loss energy saving formula:

Pressure difference loss = 75% loading time x 2 bar pressure difference loss (14%)

Pressure difference loss = $0.75 \times (0.14 \times 45 \times 6000) = 28350 \text{ kW} \cdot \text{h/year}$

Motor efficiency loss formula: 37KW permanent magnet motor efficiency is about 5% greater than the efficiency of ordinary induction motors.

Motor efficiency loss = $45 \times 6000 \times 0.05 = 13500 \text{ kW} \cdot \text{h/year}$

Total electricity savings = $30375 + 28350 + 13500 = 72225 \text{ kW} \cdot \text{h/year}$

The power consumption of an ordinary compressor = 75% (loading time) x $45 \times 6000 = 202500 \text{ kW} \cdot \text{h/year}$ + 25% (idle time) x $0.45 \times 45 \times 6000 = 30375 \text{ kW} \cdot \text{h/year}$ = $232875 \text{ kW} \cdot \text{h/year}$

Power saving rate = $72225 / 232875 \approx 31\%$

Conclusion: After using PSMI, the electricity bill is effectively reduced by 31%!



CHOOSE THE BEST

How to choose air compressor correctly

1. Consider the energy efficiency rating, The lower the better.

The formulation of national energy efficiency standards is based on specific power. Using this value as an evaluation standard is more in line with the actual use status of customers. The smaller the unit input specific power value, the more energy-saving the machine is. Unit input specific power = unit total input power (including fan power consumption + system loss) / volume flow.

2. Consider the safety of compressor operation

An air compressor is a machine that works under pressure. When it works, it is accompanied by temperature rise and pressure. The safety of its operation should be given priority. Usually, the product quality assurance system of certified manufacturers is perfect, and there will be no major quality problems. Even if there are some problems, the manufacturer will be responsible for the three guarantees.

3. Consider gas usage occasions and conditions

If the gas usage site is small, a vertical type should be selected; if the gas usage site changes over long distances, a mobile type should be considered; if there is no electricity available at the usage site, a diesel engine driven type should be selected; if there is no running water at the usage site, an air-cooled type must be selected.

4. Consider the quality of compressed air

Generally, the compressed air produced by air compressors contains a certain amount of lubricating oil and a certain amount of water. In some occasions, oil and water are prohibited. In this case, you should not only pay attention to the selection of compressors, but also add auxiliary devices if necessary.



Permanent

Magnet

Motor



Variable

Frequency

Drive



Cloud

Service



Smart

Air

Utilization

MAYA is the choice of "no compromise"

We think every day, every hour, every minute:

“ Why do customers choose us other than competitors?

What can I do for customers?

What cost-effective products and services can we bring?

How can customers choose us in the long run? ”

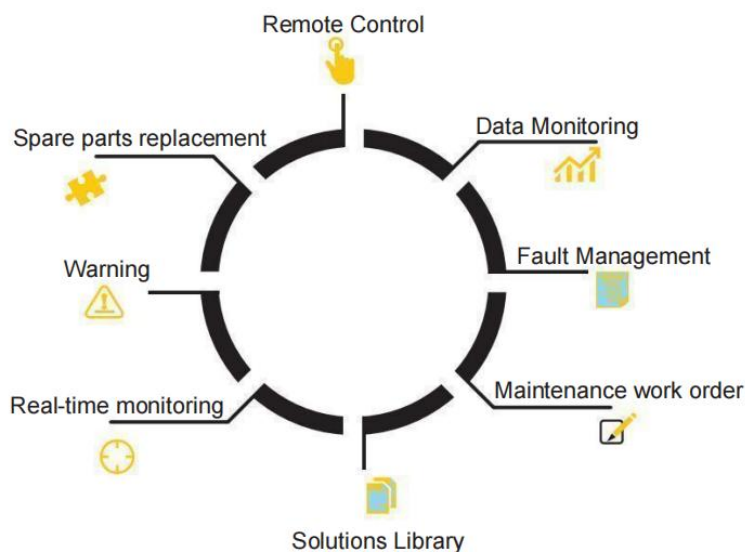
MAYA has been exploring the answer to this question since its inception.

Today, compared with those companies with mediocre products and poor services, we reject mediocrity and not only offer amazing product but also willing to provide each customer with exclusive personalized services.

Working with MAYA is a choice of "no compromise" !



Intelligent cloud control



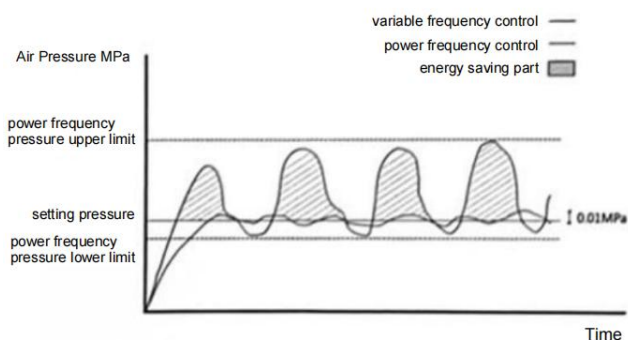
Unique Variable Frequency Control technology

The rotor speed is continuously adjusted within a large range of large rotor low ratio power, automatically matching the changes in gas volume at the gas consumption point, and the pressure fluctuation is controlled within $\pm 0.01\text{MPa}$; there is almost no energy loss caused by pressure increase.

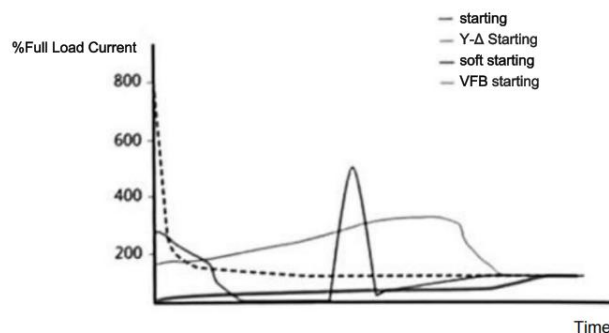
It saves 45% of no-load power consumption to reduce the energy loss caused by no-load state.

High-performance Variable Frequency Device, small starting impact, avoiding starting overload.

Specially designed VFD control cabinet, large size, optimal ventilation design, the ambient temperature reaches 45°C and the performance is still running.



variable frequency control VS power frequency control



VFB starting VS soft starting VS Y-Δ Starting VS starting



Centrifugal fan, permanent magnet motor and variable frequency device work together to achieve high efficiency, low noise, steady operation under harsh conditions.

Ningbo Baosi customized low pressure rotary vane vacuum pump has large rotor with low speed and noise, which effectively improves the stability of the machine and its internal pressure ratio effectively improves the motor power ratio.





**Larger and thicker
radiator is superior
than the ordinary
radiator on market**





Two-Stage Compression Permanent Magnet Variable Frequency Rotary Screw Air Compressor

Two-stage compression energy saving principle

Oil-injected rotary-screw air compressor
Two-stage compression improves the energy efficiency of the compressor. The two-stage compression screw main unit adopts two-stage compression, namely the first stage compression and the second stage compression. After the first stage compression, the oil and gas can be fully mixed between the stages to reduce the suction temperature of the second stage compression, thereby reducing power consumption.



Parameters

Model	Volume Flow m ³ /min				Power KW	Noise dB	Outlet Pipe Diameter	Overall Dimension mm			Weight KG
	0.7Mpa	0.8Mpa	1.0Mpa	1.3Mpa				L	W	H	
JS-30HP-II	4.6	4.5	3.8	2.8	22	68	G11/4	1450	850	1250	580
JS-40HP-II	6.6	6.5	4.5	4	30	68	G11/4	1600	1030	1380	730
JS-50HP-II	7.7	7.5	6	/	37	68	G11/4	1600	1030	1380	780
JS-60HP-II	10.5	10.3	7.3	6.1	45	70	G2	2100	1350	1650	1200
JS-75HP-II	13.6	12.3	10.2	7	55	70	G2	2100	1350	1650	1300
JS-100HP-II	16	15.6	12.8	10.2	75	72	G2	2100	1350	1650	1360
JS-125HP-II	20.7	19.5	16.2	13.2	90	72	DN65	2520	1560	1900	2550
JS-150HP-II	24.8	24	20.2	15.2	110	72	DN65	2520	1560	1900	2650
JS-180HP-II	29	28	23.2	18.7	132	78	DN80	2810	1750	2050	3050
JS-220HP-II	34	33.5	28	23.3	160	78	DN80	2810	1750	2050	3650
JS-250HP-II	39	38	33.5	27.7	185	78	DN100	3420	2190	2250	4750
JS-280HP-II	43	42.5	38.3	33.3	200	78	DN125	3420	2190	2250	5050
JS-300HP-II	51.5	47	42.4	38.3	220	80	DN125	3420	2190	2250	5300



Low Pressure Two-Stage Compression Permanent Magnet Variable Frequency Screw Air Compressor

Energy-saving and durable\practical



Parameters

Model	Volume Flow	Power	Noise	Outlet Pipe Diameter	Overall Dimension mm			Weight
	m ³ /min	KW	dB		L	W	H	KG
JF-75HP-II-5	14.7	55	68	G11/4	2440	1690	1760	2300
JF-100HP-II-5	19.5	75	68	G11/4	2440	1690	1760	2500
JF125HP-II-5	23	90	68	G11/4	2620	1880	1890	2750
JF150HP-II-5	27	110	70	G2	2620	1880	1890	2850
JF180HP-I-5	34	132	70	G2	3230	2080	2200	3050
JF220HP-II-5	42	160	70	G2	3230	2080	2200	3100
JS-250HP-II-5	46	185	78	G2	3420	2190	2250	4750



Permanent Magnet Variable Frequency Rotary-screw Air Compressor for Laser Cutting Machine



Parameters

Model	Volume Flow	Power	Noise	Outlet Pipe Diameter	Overall Dimension mm			Weight
	m ³ /min	KW	dB		L	W	H	KG
JF-20HP-1.6	1.2	15	68	G3/4	1774	749	1720	430
JF-30HP-1.6	1.8	22	68	G3/4	1774	749	1950	468
JF-50HP-1.6	2.3	37	68	G3/4	1774	749	2150	658



Permanent Magnet Variable Frequency Rotary-screw Air Compressor



Parameters

Model	Volume Flow	Power	Noise	Outlet Pipe Diameter	Overall Dimension mm			Weight
	m ³ /min	KW	dB		L	W	H	KG
JF-10HP	1.2	7.5	60	1/2	900	600	830	122
JF-15HP	1.6	11	63	3/4	1100	705	1000	206
JF-20HP	2.3	15	63	3/4	1100	705	1000	206
JF-30HP	3.6	22	65	1"	1250	850	1100	286
JF-40HP	5.3	30	65	1"	1250	850	1100	305
JF-50HP	6.2	37	65	1-1/2	1250	980	1240	440
JF-60HP	8	45	66	1-1/2	1250	980	1240	480
JF-75HP	10.1	55	66	RP2	2100	1360	1650	850
JF-100HP	13.6	75	67	RP2	2100	1360	1650	1000
JF-120HP	16.1	90	67	RP2-1/2	2525	1565	1900	2400
JF-150HP	21.2	110	68	RP2-1/2	2525	1565	1900	2500
JF-175HP	24.5	132	68	DN80	2810	1750	2050	2850



Personalized Customization For Different Industries



for the ceramic industry, which has the characteristics of large gas volume, harsh gas environment and high dust content.



for the medical industry's long-term gas consumption, no shutdown, large gas volume, harsh gas usage environment and so on.



for the textile industry's large gas consumption, low gas pressure, stable pressure requirement and more large amount of cotton wool.



for the cement industry's low gas pressure, large gas volume, bad gas environment and so on.

Service Guarantee

MAYA adheres to the service concept of "no compromise"

and provides professional selection and installation services for your enterprise.



Genuine accessories

MAYA provides high-quality genuine accessories. Use MAYA genuine accessories to enjoy the three guarantees service terms to ensure that your machine is in the best performance.



Professional Team

MAYA's professional service team provides a series of services from pre-sales support to after-sales repair, maintenance, technical support and energy-saving transformation.



Service Network

MAYA has established complete after-sales service stations across the country to ensure that customers receive high-quality services.



FAST DELIVERY



Corporate Social Responsibility

Corporate social responsibility has been incorporated into all aspects of MAYA's business and has been identified as a CDR target.



USER

1. Produce high-quality and reliable products
2. Maintain business reputation



STAFF

3. Abide by ethical standards
4. Promote energy-saving awareness
5. Pay attention to vulnerable groups



SOCIETY

6. Respect human rights
7. Ensure health and work safety
8. Develop skills and promote diversity



GO GREEN

9. Reduce the company's environmental pollution
10. Create more energy-saving products