

PMSM INVERTER SCREW  
AIR COMPRESSOR  
永磁变频螺杆机

**Airhorse**<sup>®</sup>  
艾玛压缩机



广州艾玛压缩机有限公司  
GUANGZHOU AIRHORSE COMPRESSOR CO.,LTD



YOUR CHOICE, OUR PROMISE  
—— 您的选择·我们的承诺 ——



**节能、环保，是对当今工业产品新的技术挑战，成为立足21世纪空压机行业的最大使命。**为迎合时代的需求，领先同行，广州艾玛压缩机以满足客户需求为技术发展之核心，不断开发研制领先时代潮流的先进螺杆压缩机。艾玛压缩机永磁变频系列，运行可靠，低噪音，寿命长，效率高，更节能，产品畅销全球100多个国家和地区。

**ENERGY SAVING AND ENVIRONMENTAL PROTECTION** are new technological challenges for today's industrial product and have become the largest mission of air compressor industry in the 21st century. In order to meet the needs of the times, leading its peers, Guangzhou AirHorse Compressor take meeting customers' demand as the core of technology development, constantly developing advanced leading screw compressors suitable for the trend of the times. AirHorse EPM series screw air compressors are exporting to more than 100 countries and area, with advantage of reliable operation, low noise, long life, high efficiency and more energy-saving.



✓ **更高效**  
MORE EFFICIENT

✓ **更舒适**  
MORE COMFORTABLE

✓ **更稳定**  
MORE STABLE

✓ **更简便**  
MORE CONVENIENT

**1 更高效**  
MORE EFFICIENT

高效机头  
德国技术  
GERMAN TECHNOLOGY



✓ 技术革新  
Technology Innovation

✓ 更高效  
More Efficient

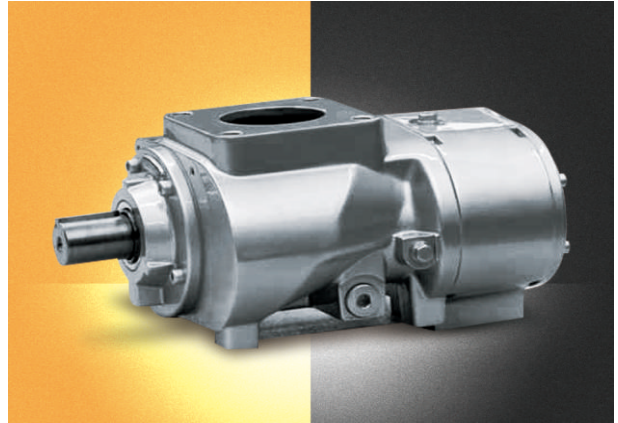
✓ 低噪音  
Low Noise

✓ 低振动  
Low Vibration

✓ 寿命长  
Long Life

**2 更舒适**  
MORE COMFORTABLE

噪音更低  
LOWER NOISE



变频根据用气需要提供能量，没有太多的能量损耗，电机运转频率低，机械转动噪声因此变小，由于变频以调节电机转速的方式，不用反复加载、卸载，减少了频繁加卸产生的噪音，持续加压，降低了气压不稳定的噪声。The frequency conversion type supplies energy according to the gas demand, without too much energy loss, the motor running frequency is low, and the mechanical rotation noise is reduced accordingly. Since the frequency conversion adjusts the motor rotation speed, it does not require repeated loading and unloading, which reduces the noise caused by frequent loading and unloading. Continuous loading pressure, reducing the noise generated by the unstable pressure.

**3 更稳定**  
MORE STABLE

变频调速 · 供气压力稳定

VARIABLE FREQUENCY REGULATION STABLE SUPPLY PRESSURE



✓ 采用充分发挥节能效果的变频调速控制，打造节电省立的新一代节能压缩机

空压机传统的调速方法是通过调节入口阀门来调节进风量，其输入功率大，且大量的能源消耗在阀门载流过程中。当使用变频调速时，如果流量要求减少，通过降低转速即可满足要求。

**Adopting frequency conversion speed control to make full use of energy-saving effects to create a new generation of energy-saving compressor that saves electricity and energy**

The conventional speed regulation method of the air compressor is to adjust the air intake volume by adjusting the inlet valve. The input power is large, and a large amount of energy is consumed in the current-carrying process of the valve. When using the variable frequency speed, if the flow requirements are reduced, the requirements can be met by reducing the speed of the host.

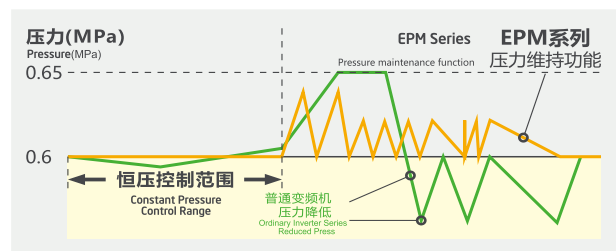
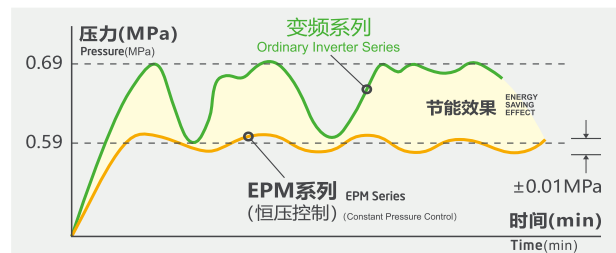


✓ 通过恒压控制，以必要的压力提供所必须的气体量

可以进行压力变动幅度  $\pm 0.01\text{MPa}$  以下的高精度的恒压控制，从而有效地为使用机器提供所必要的最适合压力的空气。而且设定压力的精度为  $0.01\text{MPa}$ ，精确设定实现最大程度的节能。

**Provide the necessary amount of air with the necessary pressure through constant pressure control**

High-accuracy constant-pressure control with a pressure variation range of  $\pm 0.01\text{MPa}$  or less can be performed, effectively providing the machine with the most suitable air pressure necessary. Moreover, the accuracy of the set pressure is  $0.01\text{MPa}$ , accurate setting to achieve maximum energy savings.



**4**

**更简便**  
MORE CONVENIENT

**微电脑控制触摸屏 · 操作简洁方便**

MICROCOMPUTER CONTROL TOUCH SCREEN  
SIMPLE AND CONVENIENT OPERATION



✓ **新开发的操作盘，简洁易懂。**

可直接在操作盘上实现节能模式、远程操作的转换。而且，万一发生故障，显示屏上将显示故障之内容，可以迅速地排除故障。

**The newly developed operating panel is simple and easy to understand**

Energy saving mode and remote operation conversion can be realized directly on the operation panel. Moreover, in the event of a failure, the display will show the contents of the fault and the fault can be quickly eliminated.

✓ **可在LED显示屏上确认压缩机的运行状态以及各种设定。**

The status of the compressor and various settings can be confirmed on the LED display

✓ **艾玛独有的直列矢量控制\*1和PID控制，既实现了快速响应，又保证了安全可靠。**

EPM Series机的可变速控制及压缩机的系统控制，都是艾玛压缩机自行开发的技术。排气压力  $\pm 0.01$  MPa 的控制系统，在实现高度应答的同时，又可发挥超群的负载追随性和安全性。

**AirHorse unique in-line vector control\*1 and PID control achieve fast response while ensuring safety and reliability**

The variable speed control of the EPM Series and the system control of the compressor are all technologies developed by AirHorse. Exhaust pressure  $\pm 0.01$  MPa control system, while achieving a high degree of response, but also to play a superior load following up and safety.

✓ **单触开关实现控制压力的设定变更**

在操作盘上可以简单地节电的控制压力变更。

**One-touch switch for changing control pressure settings**

The power saving control pressure can be easily changed on the operation panel.

✓ **可利用定时运行功能，交替运行等功能实现节能，节省人工。**

You can use the functions of timing operation, alternate operation, etc. to save energy and save labor

**艾玛永磁同步电机**

AIRHORSE PERMANENT MAGNET SYNCHRONOUS MOTOR

✓ **超一级能效 节能更高效**

艾玛压缩机采用的永磁变频同步电动机经过国家级能效实验室检测，其能效等级已经超过国家一级能效。

**Super-level energy efficiency  
More energy efficient**

The permanent magnet frequency conversion synchronous motor used in AirHorse compressor passes national level energy efficiency laboratory tests, have exceeded the national first-class energy efficiency standards.



✓ **高防护等级设计**

安全可靠得到了保障。电机采用IP54高防护等级设计，可杜绝因环境不良造成的故障。

**High Degree Of Protection Design**

Safety and reliability have been guaranteed. Motor adopts IP54 high protection grade design, which can prevent failure caused by bad environment.

✓ **永磁同步电机与异步感应电机不同转速效率对比**

由于工作原理不同，永磁变频同步电机在不同的转速下都保持了95%以上的效率和较高的功率因数。低速时永磁变频同步电机效率较传统异步电机高出20%。

**Comparison of Different Speed Efficiency of Permanent Magnet Synchronous Motor and Asynchronous Induction Motor**

Due to different working principles, permanent-magnet variable-frequency synchronous motors maintain more than 95% efficiency and higher power factor at different speeds. The efficiency of permanent magnet frequency conversion synchronous motor at low speed is 20% higher than traditional asynchronous motor.

## 节能效果对比分析

### COMPARISON OF ENERGY-SAVING EFFECTS

购买空压机时，传统意义上的成本（即购买成本+保养成本），其比例只占到总成本的25%，而能源消耗却占到了75%。

When buying an air compressor, the traditional cost ( ie, purchase cost + maintenance cost ) accounts for only 25% of the total cost, while energy consumption accounts for 75%.

普通（变频）空压机比普通（工频）空压机 节能10-20%

ORDINARY (INVERTER) SCREW AIR COMPRESSOR SAVES 10-20% ENERGY THAN ORDINARY (POWER FREQUENCY) SCREW AIR COMPRESSOR

艾玛永磁变频空压机比普通（工频）空压机 节能33-35%

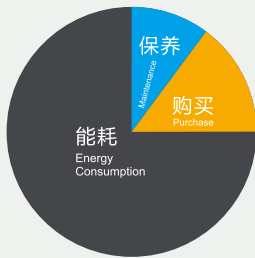
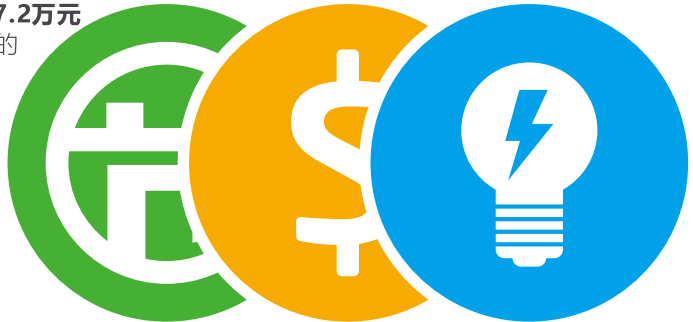
AIRHORSE EPM FREQUENCY CONVERSION SCREW AIR COMPRESSOR SAVES 33-35% ENERGY THAN ORDINARY (POWER FREQUENCY) SCREW AIR COMPRESSOR

举例：

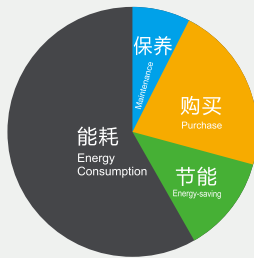
- 1.一台75KW的普通空压机，一年运行8000小时，电费0.62元/度，一年的电费为：**75KW\*8000小时\*0.62/KW.h= 37.2万元**
- 2.艾玛永磁变频75KW的空压机，一年可节约大约35%的能源，共计：**37.2万元\*35%=13.02万元**
- 3.投资回收期 (ROI)：约1年

For Example:

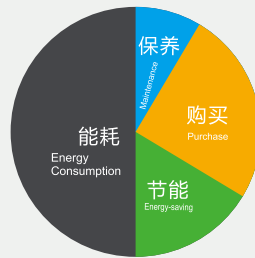
- 1.A 75KW ordinary screw air compressor runs for 8000 hours a year,with an electricity free of ¥0.62/kWh,and the electricity charge for one year is:  
**75KW\*8000 hours\*0.62/KW.h= ¥372,000**
- 2.AirHorse EPM 75KW screw air compressor,saving about 35% a year **A Total of: 372,000\*35%=130,200**
- 2.Return on Investment (ROI): **About 1 Year**



普通（工频）空压机  
Ordinary (power frequency)



普通（变频）空压机  
Ordinary (frequency conversion)



艾玛永磁变频空压机  
AIRHORSE EPM Series

▲ 能耗  
Energy consumption  
▲ 保养  
Maintenance  
▲ 购买  
Purchase  
▲ 节能  
Power saving

## 空压机的维护保养

## MAINTENANCE OF AIR COMPRESSOR



我们为客户的设备维护提供有选择的维护保养服务，内容为您的设备量身定做，可选择单次的定价保养，也可以选择长期零件供应或预防性保养合同，通过以上合约，您可享受超值的服务和保障。以及有竞争性价格的部件检修和更新。我们同时提供节约能源方案，如能量回收，变频改造，节能优化系统等，可大大降低您的生产成本。

We provide selective maintenance services for customer's equipment maintenance. The content is customized for your equipment. You can choose a single price maintenance or choose long-term parts supply or preventive maintenance contract, through the above contract, you can enjoy valued service and guarantee and overhauled and updated parts at competitive price. We also provide energy saving solution, such as energy recovery, frequency conversion, and energy-saving optimization systems, can greatly reduce your production cost.



艾玛压缩机在国内具有较完善的经销商服务体系及5个公司直属售后服务办事处，海外40多个国家分布约130家经销商。可有效对接客户及国内外各种订单，并提供及时有效的售后服务。

AirHorse Compressor has a complete dealer service system in China and 5 after-sales service offices directly under the headquarters, and we have about 130 dealers in more than 40 countries overseas. It can effectively provide service for our customers and process various orders in China and abroad market, we will provide timely and effective after-sales service for you.

# 永磁变频螺杆机 - 技术参数

## TECHNICAL PARAMETER OF EPM SCREW AIR COMPRESSOR

型号 Model	排气压力 Exhaust Pressure (Mpa)	容积流量 Air Flow (m <sup>3</sup> /min)	电机功率 Motor Power (KW)	外形尺寸 Size (L×W×H)mm	出口尺寸 Outlet Size (Size)	机组重量 Weight (Kg)
EPM-10A	0.8	1.1	7.5	890×650×810	1/2"	195
	1.0	0.9				
EPM-20A	0.8	2.3	15	1160×700×1100	3/4"	265
	1.0	2.0				
EPM-30A	0.8	3.8	22	1200×900×1150	1"	365
	1.0	3.6				
EPM-40A	0.8	5.2	30	1400×900×1225		455
	1.0	4.8				
EPM-50A	0.8	6.5	37	1560×1000×1365	1 1/2"	550
	1.0	5.7				
EPM-60A	0.8	7.5	45	1560×1000×1365		580
	1.0	6.8				
EPM-75A	0.8	10.5	55	1800×1160×1490	2"	1000
	1.0	8.9				
EPM-100A	0.8	13.5	75	1800×1160×1490		1080
	1.0	11.5				
EPM-120A	0.8	16.5	90	2100×1430×1740	1650	
	1.0	13.7				
EPM-150A	0.8	20.5	110	2500×1480×1770	2 1/2"	2050
	1.0	17.9				
EPM-175A	0.8	24.0	132	2700×1580×1770		2650
	1.0	21.3				
EPM-220A	0.8	28.5	160	2700×1580×1770	3050	
	1.0	25.5				
EPM-250A	0.8	31.5	185	2800×1830×2280	DN 80	3450
	1.0	28.5				
EPM-300A	0.8	35.2	220	2800×1830×2280		3850
	1.0	31.5				
EPM-350A	0.8	44.1	250	3250×2130×2280	4250	
	1.0	38.1				

### Airhorse®

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WHATSPAPP



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\*温馨提示：本参数表仅供参考，本公司可能对相关参数进行调整，如有变动，恕不另行通知，若有不明处，欢迎来电询问。

\*FRIENDLY REMINDER: This parameter list is for reference only. We may adjust the related parameter. if there is any change, we will not inform you otherwise. If you do not know, please call us.

\*温馨提示：本公司产品标准适用于海拔1000米以下地区。若使用环境海拔超过1000米，欢迎来电咨询，进行定制化配置，以确保设备性能与运行安全。

\*FRIENDLY REMINDER: The standard specifications of our products are applicable to regions with an altitude below 1,000 meters. For usage environments exceeding 1,000 meters above sea level, please feel free to contact us for customized configurations to ensure optimal equipment performance and operational safety.