



**LOW PRESSURE  
SCREW AIR COMPRESSOR  
低压螺杆空压机**

**Airhorse<sup>®</sup>**  
**艾玛压缩机**



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



## 配件介绍

## ACCESSORIES INTRODUCTION

### 技术革新、更高效、低噪音、低振动、寿命长(机头)

### Technological innovation, more efficient, low noise, low vibration, long life (Air end)

- ✔ 机头双螺杆采用最新型线设计，高精度加工，减少压缩气体的泄漏，减少功耗，为客户省钱。  
The air end twin screw adopts the latest line design, high-precision processing, reduces the leakage of compressed gas, reduces power consumption, will saves money for customers.
- ✔ 机头动力平衡性好，没有不平衡惯性力，机器可平稳地高速工作，体积小、重量轻、占地面积少。  
The air end has good power balance, no unbalanced inertial force, and the machine can work smoothly and at high speed, with small size, light weight and compact.
- ✔ 适应性强，具有强制输气的特点，排气量几乎不受排气压力的影响，在宽广的规模内能保持较高的功率。  
Strong adaptability, with the characteristics of forced air delivery, the air flow is almost not affected by the exhaust pressure, and it can maintain high power in a wide scale.

- ✔ 机头零部件少，没有易损件，固运转可靠，寿命长，大修间隔期长，操作维护方便，操作人员不必长时间专业培训，可实现无人值守运转。  
The air end has few parts, no wearing parts, reliable operation and have long life. The interval between major repairs is very long, the operation and maintenance are convenient, and the operator does not need long professional training, can realize unattended operation.



### 超一级能效·节能更高效(三相异步电机)

### Super first-class energy efficiency, energy saving and more efficient (Three-phase asynchronous motor)

艾玛压缩机采用的三相异步电动机经过国家级能效实验室检测，达到国家一级能效标准。  
The three-phase asynchronous motor used by Airhorse Compressor has been tested by a national energy efficiency laboratory and has reached the national first-level energy efficiency standard.

### 高防护等级设计

### High protection level design

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。  
Safety and reliability are guaranteed. The motor adopts IP54 high protection grade design, which can prevent malfunctions caused by bad environment.

### 艾玛三相异步电机能保证长时期高效运行

### Airhorse brand three-phase asynchronous motors can ensure long-term efficient operation.

由于能效高，外加服务系数的加持。因此不易产生过载而导致电机老化，从而保证电机效率。

Due to high energy efficiency, plus the blessing of service coefficient. Therefore, it is not easy to generate overload and cause the motor to age, so as to ensure the efficiency of the motor.



# 内部系统设计介绍

# INTERNAL SYSTEM DESIGN

## 合理电机选择及相关电气系统设计

### Reasonable motor selection and related electrical system design

根据不同供气压力选择相对应的电机，电机能效高，少耗能。电机启动采用星三角启动，降压启动，避免电机刚启动时，瞬间电流升高，对电机造成损坏，避免对电网造成冲击。电气系统有针对电机过载的保护。当电机由于自身机械原因卡死或者客户供气系统导致过载时，电机电流持续升高而导致电机温升，当温升超过设定温度时，电机停止运转，避免电机由于持续温度升高而导致自燃现象。

Choose the corresponding motor according to different air supply pressure, the motor has high energy efficiency and low energy consumption. The motor is started by star-delta starting, with reduced voltage starting to avoid instantaneous current rise when the motor is just started, causing damage to the motor, and avoiding impact on the power grid. The electrical system has protection against motor overload.

When the motor is stuck due to its own mechanical reasons or the customer's air supply system causes an overload, the motor current continues to increase, causing the motor temperature rise.

When the temperature rise exceeds the set temperature, the motor stops running to avoid the motor from being caused by the continuous temperature increase Spontaneous combustion.



## 合理的进气系统设计选型

### Reasonable intake system design and selection

选择加大号的空滤，保证进气压差控制在2KPa左右。专为低压机选配的进气阀。集成泄放阀、补气阀、反比例阀、电磁阀与过滤器。补气阀可以消除空压机开机和卸载时产生的气蚀，减少振动和噪音。反比例阀能实现空压机供气量和耗气量保持平衡，实现无极气量调节功能。

Choose an enlarged air filter to ensure that the intake pressure difference is controlled at about 2KPa. Intake valve specially selected for low pressure machine. Integrated relief valve, air supply valve, inverse proportional valve, solenoid valve and filter. The air supplement valve can eliminate the cavitation generated when the air compressor is turned on and unloaded, and reduce vibration and noise. The inverse proportional valve can balance the air supply and consumption of the air compressor, and realize the function of stepless air volume adjustment.



## 主排气管路优化设计·减少压力损失

### Optimized design of main exhaust pipe to reduce pressure loss

主机至油分离筒的管路根据机型不同采用全金属波纹管或者焊接无缝钢管加部分金属波纹管的设计。金属波纹管除了美观，最重要的是能减少由于机头运行传送到油分离桶的振动，减少机器共振。波纹管口径基本与主机排气口径一致，减少压力损失，增加能耗。

The pipeline from the air end to oil separator tank cylinder adopts the design of all-metal bellows or welded seamless steel pipe and part of the metal bellows according to different models. In addition to the beauty of the metal bellows, the most important thing is to reduce the vibration transmitted to the oil separator tank due to the operation of the air end and reduce machine resonance. The inner diameter of the bellows is basically the same as the exhaust diameter of the air end, reducing pressure loss and increasing energy consumption.

**合理的油气分离系统设计选型**

**Reasonable design and selection of oil and air separation system**

超大油分离筒及油分芯，有效地保证了更低的油耗。气体含油量保证在3PPm以下。

The super-large oil / air tank and oil separation core effectively ensure lower fuel consumption. The oil content of the gas is guaranteed to be below 3PPm.



**合理的管路系统设计·减少压力损失**

**Reasonable piping system design to reduce pressure loss**

系统管路途径加大，减少局部压力损失，能量损耗降低到最少。增加油泵，保证在低排气压力下，润滑油的内循环。

The system pipeline diameter is enlarged to reduce local pressure loss and energy loss to a minimum. Increase the oil pump to ensure the internal circulation of lubricating oil under low exhaust pressure.



**触摸屏控制器介绍**

**TOUCH SCREEN CONTROLLER**

**新开发的操作盘，简洁易懂。**

**Newly developed operation panel, simple and easy to understand it.**

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

The energy saving mode and remote operation conversion can be realized on the operation panel directly. Moreover, in the event of an accident, the fault content will be displayed on the display screen, and the fault can be rectified quickly.



**可利用定时运行功能，交替运行等功能实现节能，节省人工。**

**The timing operation function, alternate operation and other functions can be used to realize energy saving and save labor.**

**单触开关实现控制压力的设定变更**

**Single touch switch realizes the change of control pressure setting**

在操作盘上可以简单地进行节电的控制压力变更和安全性。

You can easily perform power saving control pressure changes and safety on the operation panel.

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

AirHorse special make in line vector  
control\*1 and PID control, it is realize fast  
response and ensure safety and reliability.

LPM 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±0.01MPa的控制系統，在实现高度应  
答的同时，又可发挥超群的负载追随性。

The variable speed control of the LPM Series and the system  
control are technologies developed by AirHorse Compressor.  
The control system with an exhaust pressure of ±0.01MPa, it  
is not only achieves a high degree of response, but also  
exhibits excellent load following performance.

可在LED显示屏上确认压缩  
机的运行状态以及各种设定。

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

## 低压参数表

## LOW PRESSURE PARAMETER TABLE

型号 Model	功率 Power (KW)	马力 Motor (HP)	压力 Pressure (Bar)	排气量 Air Flow (m <sup>3</sup> /min)	出口尺寸 Air Outlet Diameter	外形尺寸 Dimension L×W×H(mm)	重量 Weight (kg)
AHL-20A	15	20	3	3.8	G1	1200×900×1150	460
			4	3.65	G1	1200×900×1150	460
AHL-30A	22	30	3	5.8	G1 1/2	1560×1000×1365	645
			4	5.5	G1 1/2	1560×1000×1365	645
AHL-50A	37	50	3	10	G2	1800×1160×1490	900
			4	7.6	G2	1800×1160×1490	900
			5	7.3	G2	1800×1160×1490	900
AHL-60A	45	60	3	12.8	G2	2100×1400×1780	1300
			4	9.8	G2	1800×1160×1490	940
			5	9.6	G2	1800×1160×1490	940
AHL-75A	55	75	2	19	G2 1/2	2700×1550×2100	2750
			3	16	G2	2100×1400×1780	1450
			4	12.5	G2	1800×1160×1490	1100
			5	12.3	G2	1800×1160×1490	1100
AHL-100A	75	100	2	28.58	DN80	3100×1750×2250	3050
			3	20	G2 1/2	2500×1450×1800	2050
			4	15.7	G2	2100×1400×1780	1500
			5	15.4	G2	2100×1400×1780	1500
AHL-120A	90	120	3	23	G2 1/2	2700×1550×1800	2350
			4	22.5	G2 1/2	2700×1550×1800	2350
			5	19.3	G2 1/2	2500×1450×1800	2150
AHL-150A	110	150	3	28.6	DN80	2800×1550×1950	3300
			4	28.3	DN80	2800×1550×1950	3300
			5	22.2	G2 1/2	2700×1550×1800	2650
AHL-175A	132	175	3	39	DN80	3700×2150×2250	4700
			4	31.1	G2 1/2	2700×1550×1800	3150
			5	27.9	G2 1/2	2700×1550×1800	3150
AHL-220A	160	220	3	43	DN80	3700×2150×2250	4700
			4	38.9	DN80	2800×1550×1950	3450
			5	31.4	DN80	2800×1550×1950	3450
AHL-250A	185	250	3	43	DN80	3700×2150×2250	5000
			4	42.7	DN80	3700×2150×2250	5000
			5	38.9	DN80	3250×2100×2300	4050

## 双级低压参数表

### TECHNICAL SPECIFICATIONS(TWO STAGE LOW PRESSURE COMPRESSOR)

型号 Model	功率 Power (KW)	马力 Motor (HP)	压力 Pressure (Bar)	排气量 Air Flow (m <sup>3</sup> /min)	出口尺寸 Air Outlet Diameter (DN)	外形尺寸 Dimension L×W×H(mm)	重量 Weight (kg)
SLPML-20A	15	20	5	3.48	G1	1400×900×1225	540
SLPML-30A	22	30	5	4.14	G1 1/2	1560×1000×1365	660
SLPML-40A	30	40	5	6.94	G1 1/2	1560×1000×1365	835
SLPML-50A	37	50	5	9.4	G2	1800×1070×1490	1200
SLPML-60A	45	60	5	10.30	G2	1950×1270×1780	1700
SLPML-75A	55	75	5	12.17	G2	2100×1400×1780	1900
SLPML-100A	75	100	5	19	G2 1/2	2500×1450×1800	2460
SLPML-120A	90	120	5	22.42	G2 1/2	2700×1550×1800	3150
SLPML-150A	110	150	5	27.44	G2 1/2	2700×1550×1800	3480
SLPML-175A	132	175	5	31.26	DN80	2800×1750×1950	4250
SLPML-220A	160	220	5	41.20	DN80	3250×2100×2300	5150
SLPML-250A	185	250	5	44.34	DN80	3250×2100×2300	5800
SLPML-300A	220	300	5	50.46	DN125	4800×2100×2300	7150
SLPML-350A	250	350	5	59.8	DN125	4800×2100×2300	7500



目前艾玛压缩机有限公司销售和服务网络在中国划分了华东、华南、华西、华北和东北五个大区域，200多家网点。在主要城市都设立了办事机构，并有优秀的服务人员为您提供优质、快捷的服务。

AirHorse Compressor Co., Ltd. Sales and service network in China is divided into east China, south China, Hwaseo, north China and northeast five large regions, more than 200 outlets. In the main cities have set up offices, and have excellent service staff to provide you with quality, fast service.

**AirHorse® 艾玛**

**广州艾玛压缩机有限公司**

办公室：广州市天河区粤垦路611-619号力达广场A1栋608-610室

工厂：广州市增城区中新镇迳贝路8号

电话：86-20-38090459\32376170 传真：86-20-38090400\32376096

**GUANGZHOU AIRHORSE COMPRESSOR CO.,LTD**

OFFICE ADDRESS：Room 608-610, Lida Plaza, No.611-619 Yueken Road, Tianhe District, Guangzhou China

FACTORY ADDRESS：No.8, Jingbei Road, Zhongxin Town, Zengcheng District, Guangzhou China

TEL：86-20-38090459\32376170 FAX：86-20-38090400\32376096

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[www.ahaircompressor.com](http://www.ahaircompressor.com)

[export@ahaircompressor.com](mailto:export@ahaircompressor.com)

\*免责声明：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。

\*DISCLAIMER: 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.