



CENTRIFUGAL COMPRESSOR

离心压缩机

Airhorse[®]
艾玛压缩机

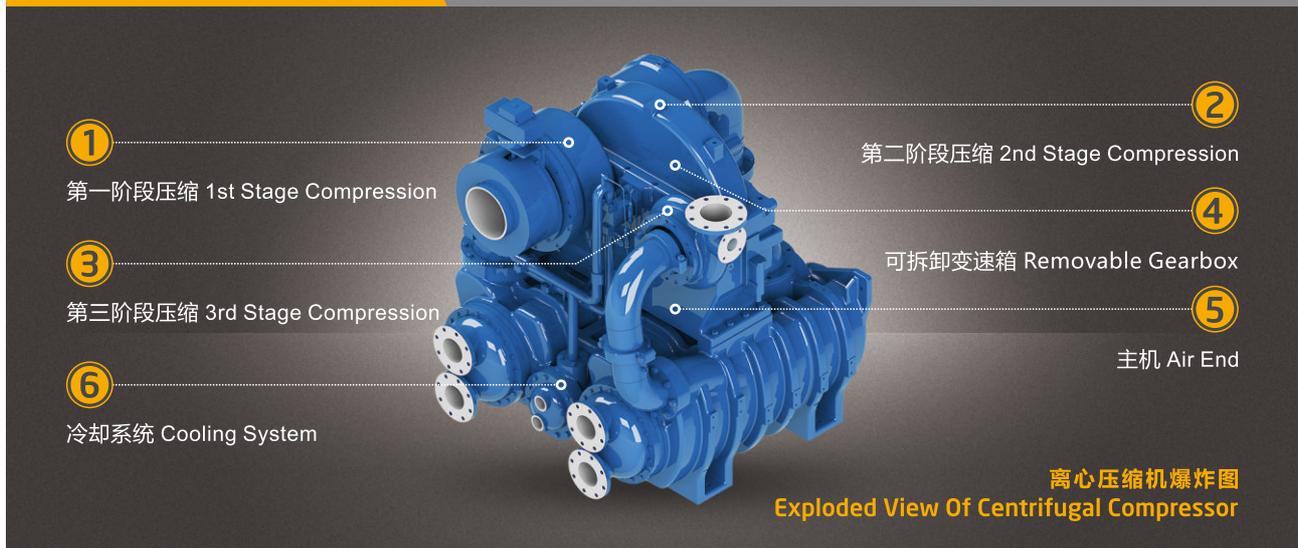


广州艾玛压缩机有限公司
GUANGZHOU AIRHORSE COMPRESSOR CO.,LTD



离心压缩机

CENTRIFUGAL COMPRESSOR



离心压缩机采用模块化设计，卓越的主机系统、独特的不锈钢冷却器、完善可靠的润滑系统、高品质主电机、完善高效的电控系统，真正的随到随用的整体化机组等。具有结构紧凑、运行可靠、节能高效、装配量少、安装方便等优点。能够确保为用户提供连续、稳定、无油的高品质压缩空气。

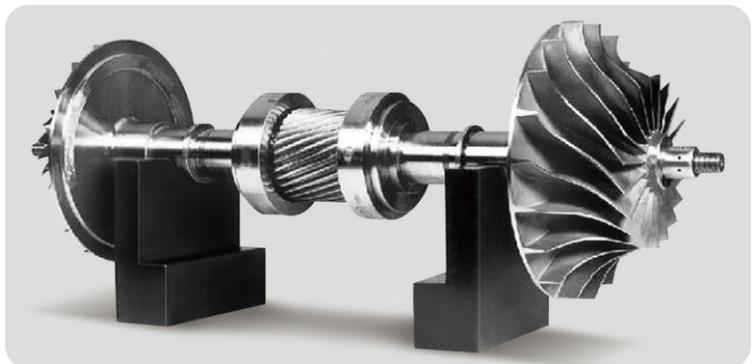
The centrifugal compressor adopts a modular design, including proprietary modules such as the host, cooling system, oil station system, motor, and electric control system. It has the advantages of compact structure, reliable operation, energy saving and high efficiency, less assembly, and convenient installation. It can ensure continuous, stable and oil-free high-quality compressed air for users.

1

叶 轮

IMPELLER

- 航空级高效率高可靠性钛合金叶轮
- 加强型耐腐蚀特殊镀层叶轮(简称黄金叶轮), 抵抗特殊气体侵袭
- 五轴精密加工锻造三元流后弯设计叶轮, 更高的空动效率
- 长短叶片大流量设计
- 更低的流动损失, 和更好的变工况适应能力
- Aviation-grade high-efficiency and high-reliability titanium alloy impeller.
- Enhanced corrosion-resistant special coating impeller (Referred to as gold impeller), resisting the attack of special gases.
- Five-axis precision machining forged ternary flow backward curved impeller, higher aerodynamic efficiency.
- Large flow design with long and short blades.
- Lower flow loss, and better adaptability to variable working conditions.



2

主机

AIR END

转子与轴承设计，确保能在合理的油膜温度、压力、厚度下运行，有效减少轴承功率消耗。提取大量轴承的刚度和阻尼数据，进行转子动力学分析，保证转子合理的振动值，确保额定转速设定远离临界转速运行，增强航整机的稳定性。

The design of the rotor and bearing ensures that it can operate under reasonable oil film temperature, pressure and thickness, effectively reducing the power consumption of the bearing.

Extract the stiffness and damping data of a large number of bearings for rotor dynamics analysis to ensure a reasonable vibration value of the rotor, ensure that the rated speed setting is far away from the critical speed operation, and enhance the stability of the aircraft.



高可靠性轴承

HIGH RELIABILITY BEARING

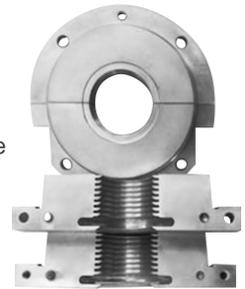
- 五瓣式可倾瓦，可自动调节瓦块与轴的角度，有更好的耐振性和稳定性，能轻易穿越临界速度
- 可倾瓦表面巴氏合金涂层，在任何情况下都能形成最佳油膜，高速稳定性好
- Five-petal tilting tiles, the angle between the pad and the shaft can be automatically adjusted, which has better vibration resistance and stability, and can easily cross the critical speed.
- Babbitt alloy coating on the surface of the tilting pad can form the best oil film under any circumstances, with good high-speed stability.



卓越的密封系统

EXCELLENT SEALING SYSTEM

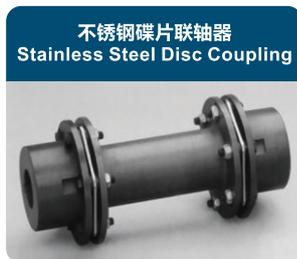
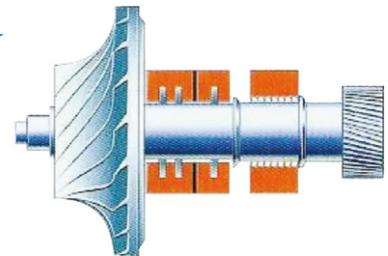
- 专利的密封结构设计
- 无需密封气
- 迷宫式密封使用寿命长
- 极小的空气泄漏
- Patented sealing structure design
- No sealing gas required
- Long service life labyrinth seal
- Tiny air leak



免维护的联轴器

MAINTENANCE-FREE COUPLING

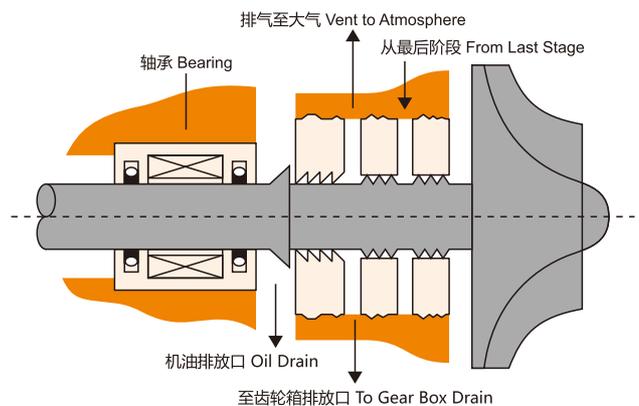
- 无需任何维护的膜片式联轴器
- 高级不锈钢膜片，可靠性极高
- Disc coupling without any maintenance
- High-grade stainless steel diaphragm, high reliability



不需要任何维护
Does not require any maintenance



一般每六个月要加润滑油
需停机大约 4 个小时
Lubricating grease is generally added every 6 months
Approximately 4 hours of downtime



3 整体铸件齿轮箱-模块化集成装配

INTEGRAL CASTING GEARBOX-MODULAR INTEGRATED ASSEMBLY

- 轴承、密封均为水平剖分式结构，吊起齿轮箱上盖即可维护，设备检修方便简单
- Bearings and seals are of horizontally split structure, and can be maintained by lifting the upper cover of the gearbox, which is convenient and simple for equipment maintenance.
- 转子轴采用推力环结构，无须推力轴承，结构简单，传动效率高，可靠性更高
- The rotor shaft adopts the thrust ring structure, no thrust bearing is required, the structure is simple, the transmission efficiency is high, and the reliability is higher.

4 进口导叶阀

INLET GUIDE VANE

- 调节平稳高效，0~100%无级调节
- 自带防护罩，操作安全且防尘
- 采用拨叉式结构，可靠性高
- 电动执行器和定位器，无需外供仪表气源
- Stable and efficient adjustment, 0~100% stepless adjustment.
- Self-contained protective cover, safe operation and dust-proof.
- Using fork structure, high reliability.
- Electric actuators and positioners, no external instrument air required.



5 高效高可靠性冷却器

HIGHEFFICIENCY AND HIGH RELIABILITY COOLER

- 直管设计，维护时免抽芯，易维护，维修时间节约90%
- 无易损件，维保费用低
- 加大型设计，高效换热，耗水量低，超低气体压损，比传统结构节能1-2%
- 专利变截面设计，气液分离效果好
- 不锈钢托芯设计，降低锈蚀风险
- 无紧固件，掉落打坏叶轮风险为0
- 两端支撑，冷却器芯共振损坏风险为0
- 超长寿命疏水阀，不生锈，强力疏水，零气损
- Straight tube design, free of core pulling during maintenance, easy to maintain, saving 90% of maintenance time.
- No wearing parts, low maintenance cost.
- Large-scale design, high-efficiency heat exchange, low water consumption, ultra-low gas pressure loss, 1-2% energy saving compared with traditional structures.
- Patented variable cross-section design, good gas-liquid separation effect.
- Stainless steel support core design to reduce the risk of corrosion.
- No fasteners, the risk of dropping and damaging the impeller is 0.
- Supported at both ends, the risk of resonance damage to the cooler core is 0.
- Long-life steam trap, no rust, strong water drainage, zero air loss.



6 高性能进气调节器 HIGH PERFORMANCE INTAKE REGULATOR

- 采用IGV的压缩机比采用蝶阀的压缩机效率高7-9%，因为IGV具有进气预旋作用，使气体与叶轮相同的角度进入叶轮。此外，IGV还可以提供更宽的调节范围，让气流扰动小，调节平稳。
- 压缩机采用高可靠的放空控制阀，可在0-100%流量范围内工作，每年可加卸载20万次，为恒压控制设计。
- Compressors using IGVs are 7-9% more efficient than compressors using butterfly valves, because IGVs have an intake pre-rotation effect, making the gas enter the impeller at the same angle as the impeller. In addition, IGV can also provide a wider adjustment range, so that the airflow disturbance is small and the adjustment is smooth.
- The compressor adopts a highly reliable venting control valve, which can work within the flow range of 0-100%, and can be loaded and unloaded 200,000 times a year, Designed for constant pressure control.

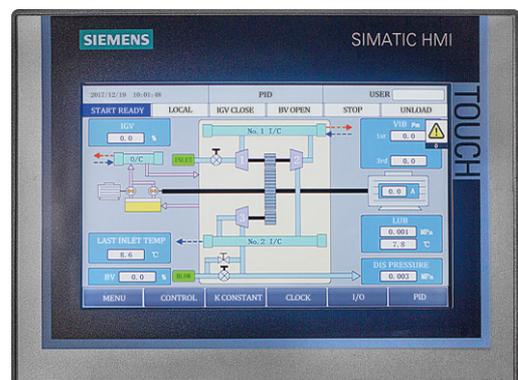


7 完整的润滑系统 COMPLETE LUBRICATION SYSTEM

- 整体焊接油箱
- 油箱加热器
- 油位镜和低油位报警、停机功能
- 主轴直驱主油泵
- 全流量辅油泵，低油压自动启动，带调压阀
- 油过滤器
- 止回阀和安全阀
- Integral welding tank
- Oil tank heater
- Oil level glass and low oil level alarm, shutdown function
- Spindle direct drive main oil pump
- Full flow auxiliary oil pump, automatic start at low oil pressure, with pressure regulating valve
- Oil filter
- Check valves and safety valves

8 先进的本地控制系统 ADVANCED LOCAL CONTROL SYSTEM

- 先进的PLC控制系统 7英寸触摸屏，界面友好，操作简单
- 提供自动双重，恒压控制和自平衡控制模式自动调节气量
- 显示所有的运行参数，提供参数设定
- 具有可调的各种报警和停机功能
- 具备防喘振功能和喘振预测功能
- 可通过DH+, Modbus, Profibus 或以太网协议进行通讯
- Advanced PLC control system 7-inch touch screen, friendly interface, easy to operate.
- Provide automatic dual, constant pressure control and self-balancing control modes to automatically adjust the gas volume.
- Display all operating parameters and provide parameter setting.
- With adjustable various alarm and shutdown functions.
- With anti-surge function and surge prediction function.
- Communication via DH+, Modbus, Profibus or Ethernet protocols.



离心压缩机技术参数

CENTRIFUGAL COMPRESSOR TECHNICAL PARAMETERS

型号 TYPE	压力 Barg (mpa)	流量范围 Air Flow Range (m ³ /min)	功率 Power (kw)	外形尺寸 / Size L×W×H (mm)
AHC-50	0.6~8	25~48	132~263	2650×1650×1850
AHC-80	0.6~10	40~85	225~450	3350×1860×2150
AHC-120	0.6~13	75~132	400~600	3850×2100×2250
AHC-200	0.6~13	115~208	618~1120	4250×2150×2250
AHC-250	0.6~20	175~260	925~1375	4500×2250×2380
AHC-300	0.6~25	228~310	1225~1600	4650×2250×2450
AHC-350	0.6~25	283~260	1500~1850	4850×2250×2500
AHC-450	0.6~25	350~460	1800~2350	5250×2300×2950

大型离心压缩机(空气/氮气)技术参数

LARGE CENTRIFUGAL COMPRESSOR (AIR/NITROGEN) TECHNICAL PARAMETERS

型号 TYPE	压力 Barg (mpa)	流量范围 Air Flow Range (m ³ /min)	功率 Power (kw)	外形尺寸 / Size L×W×H (mm)
AHC-550	0.6~25	430~586	2250~3150	6250×3250×3550
AHC-1000	0.6~25	550~1015	2850~5750	8350×3850×3850
AHC-1500	0.6~25	920~1650	6000~10500	12500×4550×4550
AHC-3000	0.6~25	1680~3000	10800~20000	14500×5350×5350

石油化工行业 · CHEMICAL INDUSTRY

- A** 压缩空气用于空分装置，制取氧，氮，氩等工业气体
Compressed air is used in air separation units to produce industrial gases such as oxygen, nitrogen, and argon
- B** 压缩空气提供动力，用于驱动仪表和阀门
Compressed air powers gauges and valves
- C** 去硫工艺，催化剂再生，润滑油加氢精制
Desulfurization process, catalyst regeneration, lubricating oil hydrofinishing



汽车/制造行业 · AUTOMOTIVE / MANUFACTURING INDUSTRY

- A** 气动、仪表、冲压、电镀、涂装、热处理等生产线
Pneumatic, instrumentation, stamping, electroplating, painting, heat treatment and other production lines
- B** 气动扳手、气动打磨机、吹尘枪、等末端工具
Pneumatic wrench, pneumatic grinder, dust gun, and other end tools
- C** 保护用气、冷却、除尘、清扫
Protective gas, cooling, dust removal, cleaning



航空航天行业 · AEROSPACE INDUSTRY

- A** 发动机模拟风洞
Engine simulation wind tunnel
- B** 高空台测试系统
High altitude test system
- C** 气动部件测试系统
Pneumatic components testing system



金属冶炼行业 · METAL REFINING INDUSTRY

- A** 空分制氮、制氧、制氢
Air separation nitrogen, oxygen, hydrogen
- B** 炼铁炼钢、烧结、轧钢等工艺仪表用气
Iron-making steel-making, sintering, steel rolling and other process instrumentation gas
- C** 氧化铝、电解铝、铅锌冶炼等仪表用气
Alumina, electrolytic aluminum, lead-zinc smelting and other instrumentation gas



纺织化纤行业 · TEXTILE AND CHEMICAL FIBER INDUSTRY

- A** 喷气引纬、气流喷射加捻
Air jet weft insertion, air jet twisting
- B** 气动加压，气流输送，气动落纱
Pneumatic pressurization, air conveying, pneumatic doffing
- C** 气流喷射捻接，仪表自控
Air jet splicing, instrument automatic control



食品 / 医药行业 · FOOD / PHARMACEUTICAL INDUSTRY

- A** 生物发酵
Biological Fermentation
- B** 包装材料的吹扫和清洗
Purging and cleaning of packaging materials
- C** 加工原料的搅拌
Stirring of raw materials





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.

AirHorse® 艾玛

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