

无油螺杆鼓风机 行业应用

- 造纸
- 印刷
- 纺织
- 镀锌
- 污水处理
- 自来水
- 垃圾渗滤液处理
- 印染
- 无纺布
- 物料输送



Oil Free Screw Blower

无油螺杆鼓风机



your low pressure solution

您的低压解决方案

LMF (阿拉玛法) 是一家全球领先的专业制造和提供各种类型压缩机的奥地利公司。拥有超过166年的历史。

一直以来, LMF秉承遵循国际标准的设计原则, 为全球客户提供设计、工程、生产、全负荷测试、安装、启用等一站式服务。

LMF is an Austrian manufacturer of compressors with the experience of over 166 years.

LMF offers its customers the benefits of the latest developments in design engineering, proven manufacturing methods, full load testing prior to shipment, and superior after market support and services.

160年历史 160 YEARS OF HISTORY

1850 成立, 是由Josef Berger组建的一家铸铁厂 Foundation as an iron foundry by Josef Berger

1896 Rudolf Diesel为LMF开发了柴油引擎 Rudolf Diesel developed a diesel engine for LMF

1901 Viktor Kaplan, “卡普兰水轮机”的发明人加入LMF, 是一名设计工程师。LMF当时的产品包括: 柴油引擎、Pelton和Francis透平、磨石机和绳索带动的挖掘机

Viktor Kaplan, the inventor of the "Kaplan-water turbine", joins the staff of the Leobersdorfer Maschinenfabrik as design engineer. Products at this time are diesel engines, Pelton and Francis turbines as well as Stone mills and rope driven excavators

1946 LMF的产品范围衍生至各种空气和气体压缩机, 以及气动工具
The existing LMF production program is extended to include compressors for air and other gases as well as air driven tools

1963 LMF被 Babcock集团收购 专注于生产压缩机 提供各种压力、天然气、工艺气体压缩机, 并为工业行业和电厂提供燃烧器

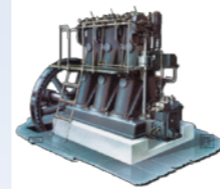
LMF is taken over by Babcock Group. Main focus on manufacturing compressors. Offering a wider range for high pressure as well as natural- and techn. gases. Production of burners for industrial applications and power plants

1988 LMF推出第一台应用于PET吹瓶行业的无油空气压缩机 LMF introduces the first oil-free air compressors for PET applications to the market

1992 通过ISO 9001认证, 开发出速度可调压缩机 ISO 9001 certificate achieved Variable speed-controlled compressors are developed

2007 为地震和制氮领域, 推出高速压缩机 High speed compressors for seismic and nitrogen generation

2012 为地震领域, 开发无油压缩机 Development of oil free screw for seismic units



螺杆鼓风机主机



罗茨鼓风机主机

高效率 High Efficiency

噪音低 Low Noise

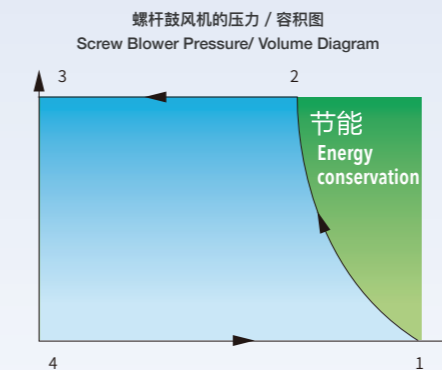
高可靠性 High Reliability

相比罗茨风机, LMF无油螺杆鼓风机最多可节约35%的能源

Compared with Roots blower, KAITEC oil-free screw blower can save 35% energy at most

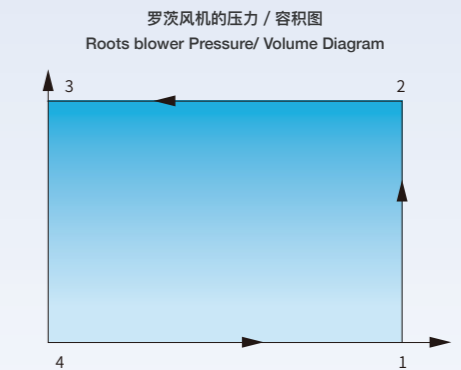


螺杆鼓风机与传统罗茨鼓风机节能效益比较图 Energy Conservation Benefit Comparison Diagram of Screw Blower and Traditional Roots Blower



● 热力学能耗 Thermodynamics energy consumption
● 能源节约 Energy conservation

- 4 → 1 吸气 Inhalation
- 1 → 2 内部压缩。阴阳转子相互啮合, 齿间容积减少, 压力升高
Internal compression. Male and female rotors are intermeshed to reduce the intertooth space volume and increase the pressure.
- 2 → 3 排气。气体被排出管道
Exhaust. The gas is discharged from the pipe.



● 热力学能耗 Thermodynamics energy consumption

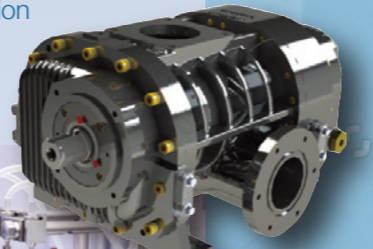
- 4 → 1 吸气 Inhalation
- 1 → 2 外部压缩。空气容积保持不变, 气体由于管网的背压作用而在外部形成压缩。
External compression. The air volume remains unchanged, and gas is compressed externally due to the backpressure effect.
- 2 → 3 排气。气体被排出管道
Exhaust. The gas is discharged from the pipe.



您的低压解决方案

LMF无油螺杆鼓风机，采用专利开发的高效螺杆转子型线，主机6-4头阴阳转子依靠一对高精度同步齿轮啮合运行，轴承与压缩腔体之间进行密封。压缩腔体里无油，为客户提供洁净无油的空气。

The oil-free screw blower is composed of 6-4-head male and female rotors with the same diameter, and runs through engagement of a pair of high-precision synchromesh gears. The bearing and the compression cavity are sealed with carbon ring. The compression cavity is oil free, providing customers with clean and oil-free air.



高效率

主机采用专为鼓风机开发的Y-4型线双螺杆转子；多种压比Vi设计，针对不同排气压力应用，提供不同内压机头，达到最高效率；更节能、更环保、性能和可靠性达到国际领先水平。

High Efficiency

The blower adopts Y-4 profile double screw rotor; The Vi design includes multiple pressure ratios. For different discharge pressure applications, heads with different pressure ratios are provided to reach the maximum efficiency. Thus, the blower is more energy-saving and environmental friendly features, and its performance and reliability reach the international advanced level.

低噪音

整机进气消音，主机进气消音，排气消音并采用全封闭隔音罩，使噪音水平符合国家标准，在同类企业中达到先进水平。

Low Noise

The intake, exhaust noise reduction technology and fully sealed noise enclosure ensure the noise level meets the national standard, reaching the advanced level in the similar enterprises.

长寿命

全部采用进口SKF高速轴承，轴承寿命>100,000小时，整机设计使用寿命超30年。

Long Service Life

All SKF high-speed bearings are imported, so the bearing service life is >100,000 hours.

领先的集成技术

变频机组一体式统一集成；安装简单，运行稳定，可集成变频器和控制器。

Advanced Integrated Technology

Reliable and excellent system, easy installation, stable operation.

主机转子无涂层

创新的无涂层转子设计，避免了运行中涂层脱落带来的损害。

No Coating for Blower Rotor

During operation, the efficiency will not be reduced and coating will not fall off.

LMF鼓风机中国产品线 LMF BLOWER



BF系列螺杆鼓风机 BF Series Screw Blower

- | | |
|-----------------------|---|
| • 皮带传动 | Belt Drive |
| • 4-185 kW | 4-185 kW |
| • 0.3-1.2 bar | 0.3-1.2 bar |
| • 255 m³/h - 6012m³/h | 255 m³/h - 6012m³/h |
| • 标配工频（变频选项） | Mains Frequency |
| • 标配智能控制器和Modbus远程通讯 | Standard: The smart controller and the Modbus |
| • 选配含氧量控制 | Option: oxygen content control |

BFD系列变频直联螺杆鼓风机 BFD Series Variable Frequency Screw Blower

- | | |
|-------------------------|---|
| • 直联传动 | Direct Drive |
| • 30-132 kW | 30-132 kW |
| • 0.3-1.2 bar | 0.3-1.2 bar |
| • 1800 m³/h - 3300 m³/h | 1800 m³/h - 3300 m³/h |
| • 标配变频 | Variable Frequency |
| • 标配智能控制器和Modbus远程通讯 | Standard: The smart controller and the Modbus |
| • 选配含氧量控制 | Option: oxygen content control |

客户定制产品 Customized products



LMF可按用户需求螺杆鼓风机选型，具体咨询当地销售服务中心
The customized products are supplied by LMF, consult your local service center for the detail



您的低压解决方案

生产、总成与测试

Manufacturing Assembly Testing



压缩机总成

压缩机本体、布线、端子盒及操作面板均安装在同一个底座上。根据客户的具体要求，控制系统既可以安装在压缩机框架上，也可以安装在独立的机柜内。

压缩机控制系统

先进的程序控制系统由一支高素质的电气工程师队伍设计和维护。超过60%的LMF压缩机都配备了这些系统，其中包括可编程控制器，显示面板、报警器和全方位压力控制逻辑。此外，电话调制解调器模块和IP接口作为配置的一部分，使全球范围内的服务活动更便捷。

组装

LMF在配备精良的组装车间内，遵循高标准的质量管理要求对压缩机进行组装。

测试

所有压缩机单元均在LMF自己的工厂测试。根据合同规定以及诸如ISO、ASME、DNV、BV、LRS、GL等其它相关国际标准的要求，我们将对设备进行长达四个小时的机械试运行或满载测试。

Compressor Assembly

The compressor itself, cabling, terminal boxes and operator panels are all mounted on a single skid. The control systems can either be mounted on the compressor frame or installed in separate, stand-alone cabinets, depending on the requirements of the customer.

Compressor Control Systems

Our sophisticated electronic control systems are designed and maintained by a team of highly-qualified electrical engineers. More than 60% of all LMF compressors are equipped with these systems, which include programmable logic controls, display panels, annunciators and overall pressure control logics. Also telephone modems and IP interfaces are supplied on request in order to facilitate service activities all over the world.

Assembly

Compressor units are assembled in the highly-equipped LMF assembly shop in accordance with our high quality assurance standards.

Testing

Every compressor unit is tested in our own testing area during a four-hour mechanical testrun or under full load conditions according to contractual specifications and the relevant international standards, such as ISO, ASME, DNV, BV, LRS, GL, ect.



售后服务

After Sales Service

LMF非常重视售后服务，我们最大程度地关注客户对于服务和备件的所有要求。所有备件将在最短时间内送达用户指定的地点，此外，根据客户需要，我们将派遣服务工程师前往运作现场并提供帮助。

Great emphasis is placed on after sales service at LMF, where the utmost attention is paid to all requests for service and spare parts. Spare parts are delivered as quickly as possible to any required destination, and service engineers are sent upon request to operating sites.



正品备件

Spare Parts

LMF随设备提供检测证书和包含完整部件清单的操作手册，从而帮助用户准确快速地识别并订购任何所需备件。

LMF machines are supplied with test certificates and operating manuals containing comprehensive parts lists, enabling the user to identify and order any required spare parts with accuracy and speed.

培训

Training

LMF还为客户的操作及维护团队提供培训课程，培训既可以在客户现场作业时进行，也可以安排在工厂内进行。

LMF also conducts training courses for customer operating and maintenance staff, either on site during start-up or at the factory.



您的低压解决方案