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MLG (F) 37-200kw

煤矿用防爆螺杆式空气压缩机

Explosion-Proof Screw Air Compressor for Coal Mine



精心设计    严格的安全标准    便利的维修保养    可靠的性能    特色两级压缩



上海埃尔特压缩空气系统工程有限公司  
Shanghai Air-Tec Compressor Solutions Co., Ltd.

埃尔特-英格索兰Ingersoll-Rand全资公司专注于煤矿用防爆螺杆式空气压缩机研究-并精通此道，可以为中国大陆用户提供全面的压缩空气领域解决方案。

Ingersoll-Rand--AirTec Company, which is always focusing on and versed in the study of safe and excellent performance of mining air compressors, can offer Chinese user comprehensive compressed air solutions.

所有电气设备均通过防爆合格证和矿用产品安全认证、超长寿命及性能卓越的英格索兰主机、精干专业的解决方案团队、可使用8000小时的超级冷却剂，保证埃尔特公司MLG系列产品如您所愿，数年如一日正常运转。

All electric equipment according with 'MA' certificate, IR airends with long-life and excellent performance, professional air-solutions team, SSR Ultra Coolant, all those ensure the well running of MLG series products.

## 我们的自信源自

### Our confidence comes from following issues

#### ● 安全保证 Safety

我们的每一台矿用空压机，都严格的按照煤矿用空压机的标准和规范进行设计制造，所有电气设备都符合防爆及煤安认证，整机通过安标部门的严格检测，确保您的生产安全。

Every model of our MLG air compressors are designed and manufactured according to standards in Coal Mining Industry. Electric equipment with 'MA' Certificate and strictly tested machines ensure your safe manufacturing.

#### ● 可靠性背景 Reliability

性能卓越的IR主机使我们自信的基础--寿命可达100000小时，易损件极少，操作简单，非常适合为有煤尘或瓦斯场所提供源源不断的压缩空气。

We are confident enough in the excellent performance of IR Airend--The useful life of 100000 hours, few consumable parts and user friendly operation system are benefit to compressed air supply in full grime and gas environment.

#### ● 专业的解决方案团队和服务团队

##### Professional air solution and service team

我们公司核心力量之一是精干的解决方案和服务方案团队，所有团队成员都有着多年的压缩机解决方案和服务经验，并专门针对煤矿防爆空压机的特殊使用环境进行严格的培训，可以根据您的要求和矿井实际情况，能够保证提供安全、可靠、专业、最优的解决和服务方案。

We have professional air solution and service team in AIR-TEC. All members have rich experience on repairing and serving, as well as strictly training focusing on special working environment of mining compressor. We are confident to provide safe, reliable, professional and excellent solution and service project.



## 系统概述

### System Summarization

#### ● 适用范围 Application

- 为煤矿井下有煤尘或瓦斯突出的场所提供压缩空气
- Mainly used for coal mine where full of grime and gas

#### ● MLG产品的特点与优点 Features & Benefits

- 性能卓越的IR主机-寿命可达100000小时;
  - 易损件少;
  - 一体化防爆设计-所有电气设备均有防爆合格证及矿用产品安全认证;
  - 可靠性高;
  - 操作简单
- 
- Excellent performance of IR airends--- up to 100,000 hours
  - Few Consumable parts
  - Integration explosion prevention design---all electric parts have the certificates of coal mining.
  - High reliability
  - User friendly Operation System



## 防爆组件

### Explosion-Proof Parts

**防爆电机**-专为井下爆炸性气体环境设计的具有矿用产品安全标志认证的防爆电机,防爆等级为"ExdI"。

**Explosion-Proof motor** - specially designed for volatile gas environment of mine, have 'MA' authentication of mine products. Grade of Explosion Prevention is 'ExdI'.

**矿用隔爆兼本质安全型真空电磁启动柜**—取得防爆合格证和矿用产品安全标志认证的矿用电磁启动柜,除具有防爆、过载、短路、断相、漏电、防自启动等保护,还具有超温、超压、断水、断油等完善的空压机保护,确保整个机器的安全万无一失。

**Intrinsic Safe Vacuum Electromagnetic Startup Equipmet** - pass through the safety test and certification of coal mining products, capable of protection for not only explosion prevention、over loading、short circuit、break off、creepage and start-self prevention, but also over temperature、over pressure、stop water and stop oil. All these capabilities ensure the safety of air systems in mine.

**其他防爆组件**—整机中有安标要求的部件包括电缆、底架连接装置等,同样拥有矿用产品安全标志认证。

**Other Explosion-Proof parts** - any parts of machine include cables,base bindiny mechanism and so on, certainly have safety certificate of mine products too.

# 整体组装设计—坚固，静音，便于维护保养

## Integration Assembly Design

- ruggedization, low noise, easy maintenance



**高达46°C的环境温度**—MLG(F)系列产品能够在高温环境中(115°F/46°C)有效运行。即使是在酷热的矿井中，也能避免由于高温和弄脏的冷却器而产生令人讨厌的停车现象。

**As high as 115°F/46°C Ambient** - MLG(F) compressors operate in high ambient conditions, making them suitable for locations around the world. Even if the compressor is operated in the sweltering mines, the high temperature rating ensures fewer nuisance shutdowns caused by fouled coolers.

**维修保养方便**—外罩面板拆卸方便，易于日常维护保养，这些面板同时确保了机组低噪音运行。

**Easy Serviceability** - The MLG(F) package is remarkably uncluttered, making serving easy. All components are readily accessible behind easily removable panels. In the same time, the low sound enclosure is standard and keeps sound levels to a minimum.

**简便的安装**—把机器推入工作面附近的轨道，固定轮轨，接上供应电源及管道系统即可。

**Simple installation** - push the compressor into the railway of working place in mine, fix the wheel, connect the power and ductwork, OK, that's all.

**一体化的机组设计**—整机与附属设备用管道，导线连接在一起，安装在底架上组成一个集动力、控制为一体的完整空气压缩机箱式机组。

**Integration design** - compressor is connected with accessorial equipments, pipelines, leads and so on, installed on one pedestal, become a box air compressor system.

## 可靠的性能

### Reliable Performance

性能卓越的IR主机，严格规范的性能测试

Excellent IR Air-Ends, Strictly Test

**卓越的主机设计**—MLG系列空压机的核心是IR坚固而可靠的主机，IR是唯一一家在主机上采用质量最高的背靠背滚锥轴承的公司。滚锥轴承以线接触方式承受推力载荷，这样大大的延长了主机的使用寿命。同时在主机上也装有一个轴承油槽，在主机停机时，可以储存冷却剂，这样能确保在重新启动时，轴承能得到充分润滑，从而延长了轴承的使用寿命，大大提高了大修和维修的周期。

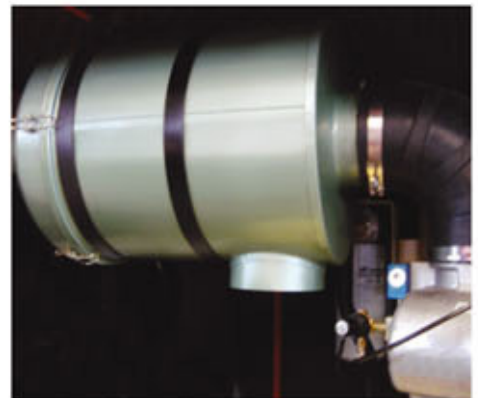
**Advanced Airend Design** - At the core of MLG(F) is our rugged and reliable airend. Used in thousands of compressors worldwide, our airend is known for trouble-free operation and minimal maintenance. Our airends utilize only the highest quality duplex tapered roller bearing. Roller bearings provide line contact for thrust loads, and dramatically improve the life of the airend. The airend also incorporates a bearing coolant dam that traps coolant in the bearing during shutdown. This ensures proper bearing lubrication during the critical start-up phase, and longer bearing life.

**超级冷却剂**—机组采用专为螺杆空压机配置的SSR超级冷却剂（Ultra Coolant），使用寿命长达二年或8000小时。具有润滑、密封及冷却功能，其优良的分水性能和生物分解性能，保证主机永不积碳。

**The Ultra Coolant** - is a patented synthetic coolant for the screw air compressor. It provides additional long-term value for you. Since it's superior performance allows drain intervals to be extended to 8000 hours. In the same time, it have capability of lubricating, seal and cooling. There's no better way to protect your investment.

**超强处理能力的空气滤清器**—针对煤矿井下多煤尘的环境，我们特地选用了一种适用于多粉尘恶劣环境的空气滤清器，过滤精度高，寿命长；在此空气滤清器上还装有真空指示器，能够及时准确的提醒用户更换滤芯。

**Super Disposal Capability of Air Filter** - adapt to the sordid environment of mine, high filtration precision, long life and easy to replace and clean.



# 两级压缩

## Two-stage Compress

### 减少轴承负荷 Reduced Bearing Loads

每一级压缩过程中会因压缩比低，而降低轴承的负荷，延长主机的寿命。我们所选择的是质量最好的轴承，从而保证您所使用的压缩机高效且可靠。

A lower compression ratio in each stage reduces bearing loads and increases airtend life. Our use of the highest quality bearings available assures you of years of reliable, efficient service.

### 冷却剂喷射帘 Coolant Curtain

两级压缩效率高的原因之一是冷却剂喷射帘设计。向经过一级压缩后的空气喷射雾状冷却剂，能达到意想不到的空气冷却效果。这样压缩空气进入二级压缩阶段前，就降低了空气的温度，大大的节约了压缩所需能量。而且使用冷却剂喷射帘可以省却中间冷却剂。

One of the keys to the efficiency of the two-stage is the coolant curtain. Significant cooling of the air is achieved by injecting atomized oil into the compressed air stream leaving the first stage. Lowering the air temperature prior to entering the second stage significantly lowers the energy required for compression. The coolant curtain also eliminates the need for an intercooler.

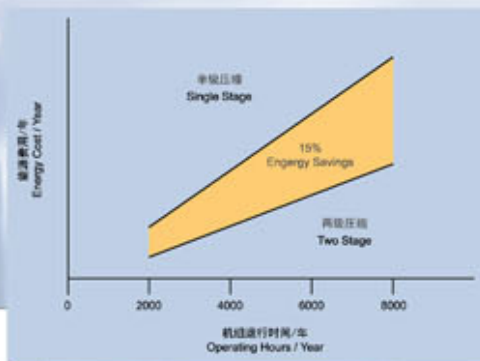
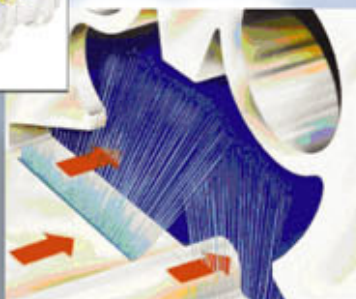
### 节能型主机 Energy Efficient Airtend

如果您要采购更高效的螺杆式压缩机，请选用我们的两级空气压缩机。此种压缩机的核心是我们经久耐用的两级主机。两级压缩替代一级压缩，可以实现多达15%的节能效果。

If you're looking for the greatest efficiency possible from a rotary screw then check out our two-stage compressors. The heart of the compressor is our time-proven two-stage airtend. By compressing the air in two steps instead of one, energy savings of up to 15% are realized.

我们的转子经过二十道程序的精加工，保证了转子型线的精确度，可靠性和有效性。

Our rotors are precision machined in a twenty-step process, ensuring unmatched rotor profile accuracy, repeatability, and efficiency.



# 技术参数

## Parameters

风冷机型 Model			MLGF-37	MLGF-55	MLGF-75	MLGF-90	MLGF-110	MLGF-132	MLGF-160	MLGF160-2S
排气压力	Mpa(G)	容积流量 Capacity m <sup>3</sup> /min (FAD)	(最低操作压力0.45Mpa) Minimum operating pressure 0.45 Mpa							
	0.75		6.1	10.1*	13*	17.1*	20*	23.5	28*	31.1*
	0.85		6	9.1	12.1*	15.3*	19.2*	22.3	26	29.6
	1.0		5.7	8.3	11	14	17.5	21	25	27.2
	1.25		6.8	9.5	11	13.5	17	20.5	22	
冷却风量m <sup>3</sup> /min Cooling flow			204	207			425			
机组出口温度°C Discharge outlet temp.			<80°C							
主电动机	功率Power		37	55	75	90	110	132	160	160
	电机转速Motor PRM		1475	1480	1480	1485	1485	1485	1485	1485
	电源及启动方式		380/660/1140V/3P/50HZ 直接启动 Direct on line							
	绝缘等级/防护等级		F级/IP55							
机组	运行环境温度°C		1.7~46							
	传动方式Driven		齿轮直联 Direct gear driven							
	冷却剂容量L Coolant volume		12.9	42			114			
	机组外形尺寸//mm		2200*1000*1400	2600*1200*1700			3500*1200*1800		3750*1400*1900	
组	机组质量kg Package		1600	2600	2800	3000	3850	3950	4050	5750
	排气接口		Rp1.0	Rp1.5	Rp2.0			Rp2.5		
	冷凝液排放接口		Rp0.5							

水冷机型 Model			MLG-110	MLG-132	MLG-160	MLG160-2S	MLG-185	MLG200-2S
排气压力	Mpa(G)	容积流量 Capacity m <sup>3</sup> /min (FAD)	(最低操作压力0.45Mpa) Minimum operating pressure 0.45 Mpa					
	0.75		20*	23.5	28*	31.1	32*	41.5*
	0.85		19.2*	22.3*	26*	29.6	30*	38.8
	1.0		17.5	21*	25	27.2	27.5	36.2
	1.25	13.5	17	20.5*	22	25	29.6	
冷却水量m <sup>3</sup> /hr Cooling water flow			10		13.6			14.2
进水温度°C Inlet water temp.			1.7~46					
机组出口温度°C Discharge outlet temp.			环境温度+8°C					
主电动机	功率Power		110	132	160	160	185	200
	电机转速Motor PRM		1485	1485	1485	1485	1485	1485
	电源及启动方式		380/660/1140V/3P/50HZ 直接启动 Direct on line					
	绝缘等级/防护等级		F级/IP55					
机组	运行环境温度°C		1.7~46					
	传动方式Driven		齿轮直联 Direct gear driven					
	冷却剂容量L		114					135
	机组外形尺寸//mm		3500*1250*1800			3750*1400*1900		3750*1400*2000
组	机组质量kg Package		3850	3950	4050	5750	4550	7750
	排气接口		Rp2.0	Rp2.5			Rp3	
	冷凝液排放接口		Rp0.5					

注：轮轨轨距可提供600/900mm，出厂标准600mm，也可接受特殊规格订货  
整机工作电压需做特别说明，出厂标准为660V，具体按订货定

\*：已取得认证机型(同时认证机型在不断增加，具体情况请咨询我公司)

## 已认证机型



- MLGF10.1/7.5-55G
- MLGF13/7.5-75G
- MLGF12.1/8.5-75G
- MLGF17.1/7.5-90G
- MLGF15.3/8.5-90G
- MLGF20/7.5-110G
- MLGF19.2/8.5-110G
- MLGF28/7.5-160G
- MLGF31.1/7.5-160G-2S

## 防爆证



- MLG20/7.5-110G
- MLG19.2/8.5-110G
- MLG22.3/8.5-132G
- MLG21/10-132G
- MLG28/7.5-160G
- MLG26/8.5-160G
- MLG20.5/12-160G
- MLG32/7.5-185G
- MLG30/8.5-185G
- MLG41.5/7.5-200G-2S

## 煤安证



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