

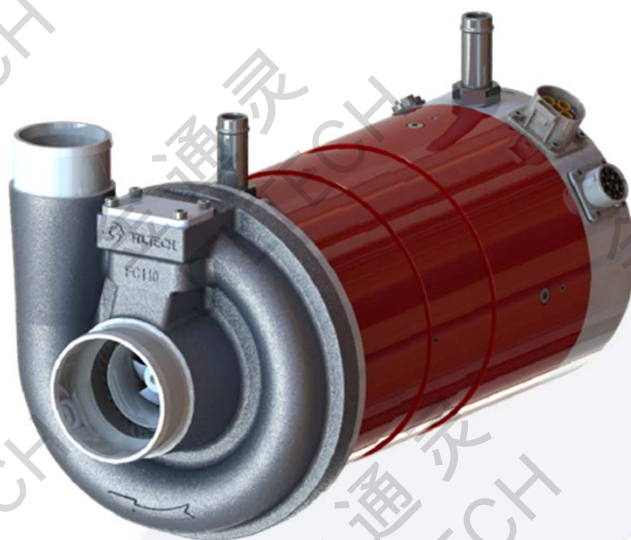
Celeroton inside



源自瑞士 服务中国

氢燃料电池空气压缩机

Hydrogen Fuel Cell Air compressor



江苏金通灵氢能机械科技有限公司

Jiangsu Jintongling Hydrogen Machinery Technology Co., Ltd.

公司简介 Company Profile

金通灵科技集团股份有限公司（股票代码：300091）成立于1993年，位于江苏省南通市，现有注册资本14.89亿元，致力于高端流体机械制造，服务于电力、化工、新能源、可再生能源、分布式能源等多个领域。

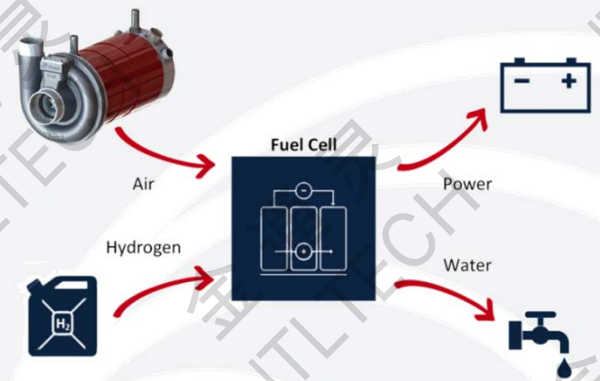
江苏金通灵氢能机械科技有限公司是金通灵科技集团股份有限公司的全资控股子公司，专业从事氢燃料电池空压机的研发、生产和销售。公司与瑞士知名氢燃料电池空压机制造商 Celeroton 公司合作，全套引进技术和生产线，并根据汽车行业质量管理标准要求，建成了年产5万台氢燃料电池空压机的生产基地。

金通灵与 Celeroton 公司合作开发的氢燃料电池空压机，采用单级离心式结构、超高速永磁电机以及高硬度耐磨螺旋槽式空气轴承，结构紧凑、系统效率高、运行稳定可靠，能够充分应对各种车辆行驶环境，适用于各类氢燃料电池商用车、乘用车。

Jintongling Technology Group Co., Ltd (JTL TECH) established in 1993 and is located in Nantong, Jiangsu Province, China, listed on the Shenzhen Stock Exchange in June 2010, stock code 30091. With a registered capital of 1.489 billion RMB, JTL TECH is dedicated in manufacture of high-end fluid equipment, serving in many fields such as electric power, chemical industry, new energy, & renewable energy, distributed energy, etc.

As a wholly-owned subsidiary of JTL TECH, Jiangsu Jintongling Hydrogen Machinery Technology Co., Ltd (JTL HYDROGEN) specializes in the R&D, production and sales of hydrogen fuel cell air compressors. JTL HYDROGEN deeply copes with Celeroton, a Switzerland famous fuel cell air compressor manufacture, completely imported its technology and production line, and built up a production base with an annual output of 50,000 sets of hydrogen fuel cell air compressors in accordance with the quality management standards of Chinese automobile industry.

The hydrogen fuel cell air compressors jointly developed by Jintongling and Celeroton adopt single-stage centrifugal structure, ultra-high speed permanent magnet motor and high hardness wear-resistant spiral groove air bearings, which have compact structure, high system efficiency, stable and reliable operation, and can fully cope with various vehicle driving environments, which are suitable for all types of hydrogen fuel cell commercial vehicles & passenger cars.



技术优势 Technology advantage

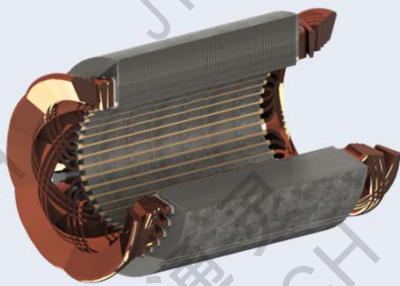
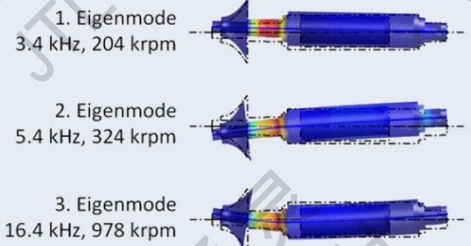


**空气动力学
Aerodynamics**

- 单级离心式结构，结构简单，高效可靠
Single stage centrifugal, compact design, high efficiency & reliability.
- 三元流叶轮，强度高，气动效率高，低磨损
3D-flow impeller with high strength, high aerodynamic efficiency & low wear.
- 直连式转子，动力传递效率100%
Directly connected rotor, 100% transmission rate.

**转子动力学
Rotor dynamics**

- 专业软件计算
Calculated by professional software.
- 优化电机、轴承设计
Optimizing motor & bearing design.
- 平衡验证，确保转子平稳运行
Verified by balancing, ensure stable operation.

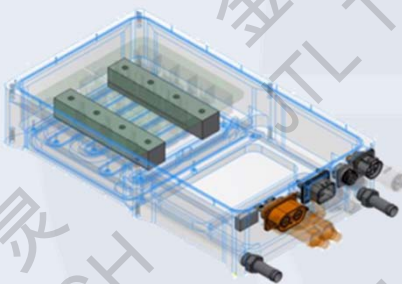
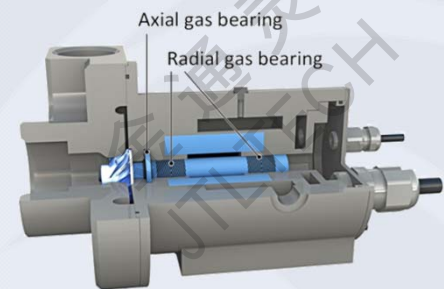


**超高速永磁同步电机
Ultra-high speed PMSM**

- 功率密度比高
High power density.
- 效率高
Maximum efficiency.
- 噪音小、重量轻
Quiet & low weight.
- 液冷散热
Liquid cooling.

**空气轴承
Gas bearing**

- 螺旋槽式空气轴承，稳定可靠
Spiral grooved air bearing with high stability;
- 超高硬度耐磨材质
Ultra-high hardness wear-resistant material;
- 无油、无接触、免维护，半永久性寿命
Oil free, contact free, maintenance free, semi permanent service life;
- 抗振动、冲击，无噪音
Vibration resistant, shock resistant & quiet.



**高速变频控制器
High frequency converter**

- 无传感器控制、高度动态速度控制
Sensorless control for highly dynamic speed adjustment.
- 同源设计，系统效率最大化
Single source design, maximizing system efficiency.
- 适用电压200-750VDC
Suitable for input voltage of 200-750VDC.
- 空气轴承诊断及燃料电池辅助功能
Gas bearing diagnostics and fuel cell function.

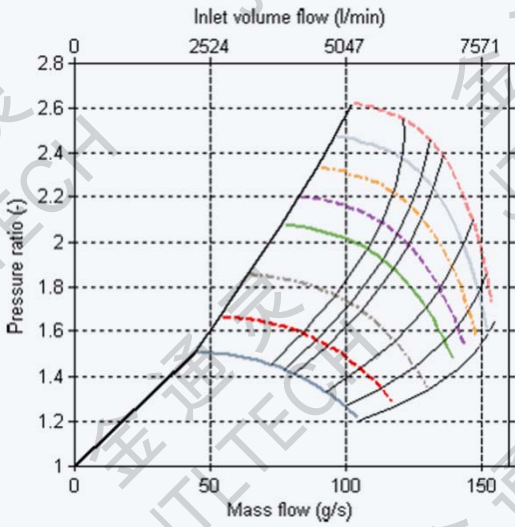
FC110参数表 Datasheet

型号 Model	FC110-15	FC110-15+
额定功率 Rated power	15kW	17kW
最大流量 Max. Flow rate	150g/s	150g/s
最高压比 Max. Pressure ratio	2.6	3.0
额定工况 Rated condition	2.5 @ 110g/s	2.8 @ 110g/s
效率 Efficiency	≥76%	
轴承 Bearing	空气轴承 Gas bearing	
启停寿命 Start/stop cycle	> 100,000次	
最高转速 Max. rotation speed	~ 150000rpm	
环境温度 Ambient Temp.	-30-55°C	
输入电压 Input voltage	250-750VDC	
冷却方式 Cooling	液冷 (50%乙二醇水溶液) Liquid (50% water glycol mixture)	
冷却水接口 Cooling connector	SAE J1231430192, 16mm	
通讯 Communication	CAN2.0	
尺寸和重量 Dimension & Weight	压缩机 Compressor	变频器 Converter
	373.5x188x220mm	430x248x94mm
	15kg	12kg

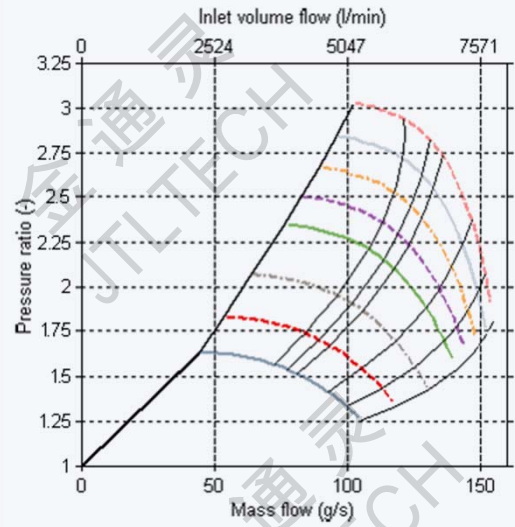
FC110性能及尺寸 Performance & dimensions

压比vs质量流量 Pressure ratio vs Mass flow

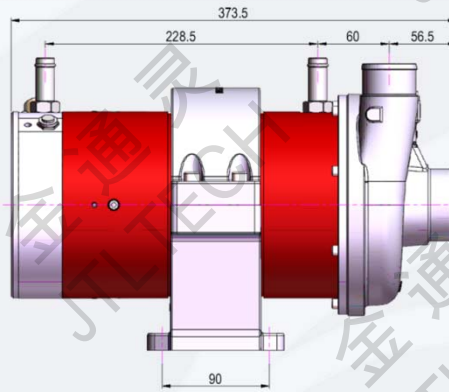
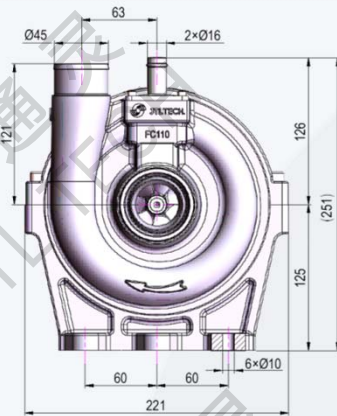
FC110-15



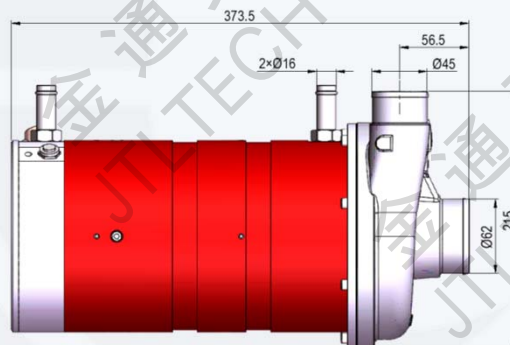
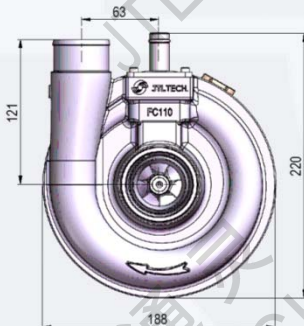
FC110-15+



尺寸图（含支架） Dimension with mounting fit



尺寸图（不含支架） Dimension without mounting fit

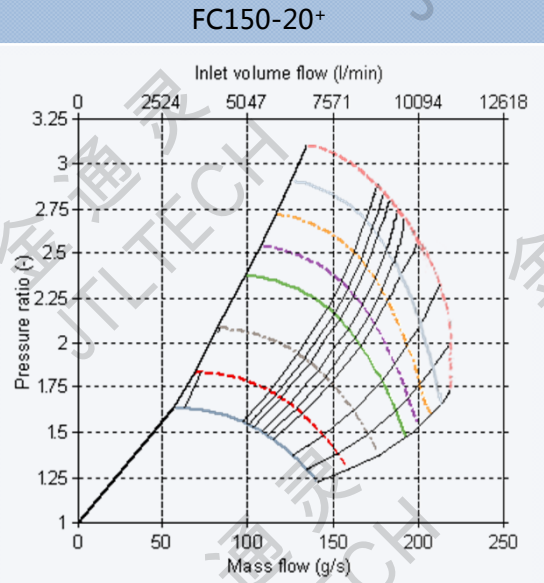
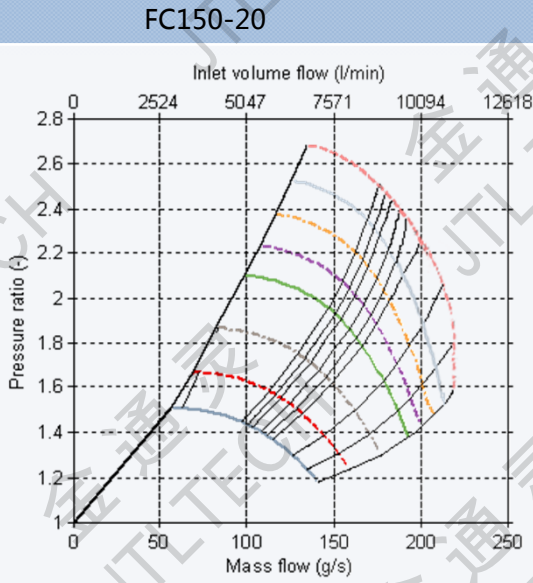


FC150参数表 Datasheet

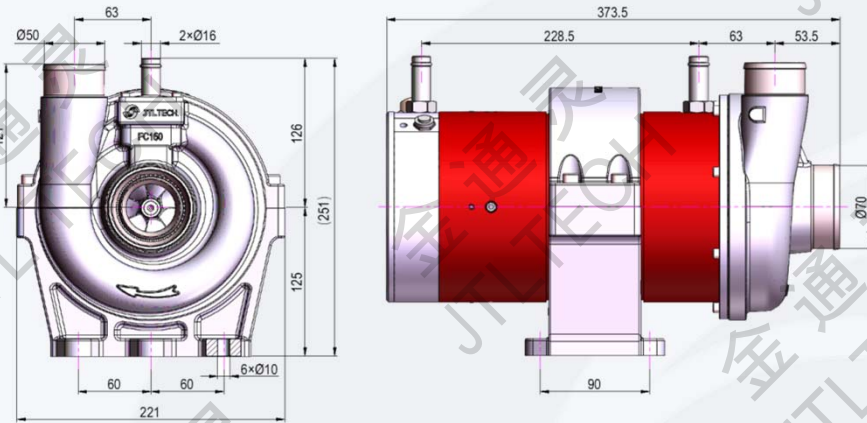
型号 Model	FC150-20	FC150-20+
额定功率 Rated power	19.5kW	21kW
最大流量 Max. Flow rate	210g/s	210g/s
最高压比 Max. Pressure ratio	2.65	3.0
额定工况 Rated condition	2.5 @ 150g/s	2.8 @ 150g/s
效率 Efficiency	≥78%	
轴承 Bearing	空气轴承 Gas bearing	
启停寿命 Start/stop cycle	> 100,000次	
最高转速 Max. rotation speed	~ 150000rpm	
环境温度 Ambient Temp.	-30-55°C	
输入电压 Input voltage	250-750VDC	
冷却方式 Cooling	液冷 (50%乙二醇水溶液) Liquid (50% water glycol mixture)	
冷却水接口 Cooling connector	SAE J1231430192, 16mm	
通讯 Communication	CAN2.0	
尺寸和重量 Dimension & Weight	压缩机 Compressor	变频器 Converter
	373.5x188x220mm	430x248x94mm
	15kg	12kg

FC150-20性能及尺寸 Performance & dimensions

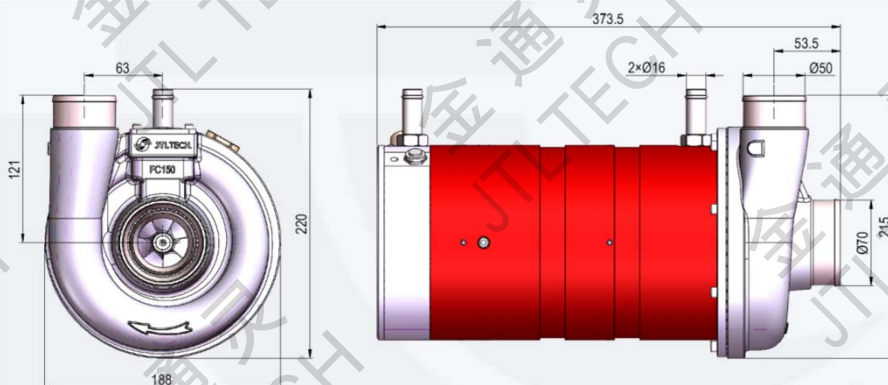
压比vs质量流量 Pressure ratio vs Mass flow



尺寸图（含支架） Dimension with mounting fit



尺寸图（不含支架） Dimension without mounting fit





江苏金通灵氢能机械科技有限公司

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