

INFINAIR® 英飞

诱导射流风机

PIV/YFPIJ/YFPIM

Positive Inducing Fan Series

INFINAIR® 英飞

上海诺地乐通用设备制造有限公司
INFINAIR CORPORATION

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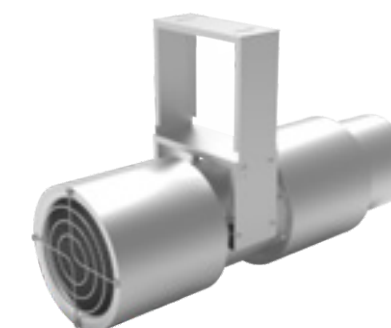
PIV



YFPIJ



YFPIM



公司介绍

秉承绿色环保与智能互联的未来发展理念，英飞风机始终坚持在通风领域，坚持不懈投入研发，并以“可靠便利，环保节能，智能互联”作为我们试图为您创造的核心价值。

成立时间：2003年9月
占地面积：33,000 m²
地址:上海市嘉定区清能路55号

服务网络：
公司的营销和服务网络覆盖全国，包括上海、北京、深圳、吉林、辽宁、天津、山西、河南、陕西、山东、江苏、安徽、浙江、福建、重庆、四川、湖南、湖北、广东、广西、海南、贵州、新疆等地区，为客户提供及时的技术支持和可靠的售后服务。

公司愿景：
成为最值得信任的专业空气运动与控制、调节品牌

公司使命：
提供最可靠、便利的空气运动与控制、调节服务

荣誉资质：
高新技术企业
上海著名商标：**INFINAIR®英飞**
上海名牌产品：英飞风机
SGS ISO 9001、ISO 14001、OHSAS 18001管理体系认证

技术实力：
英飞空气动力实验室，荣获CNAS（中国合格评定国家认可委员会）国家实验室认可
中国大陆首家荣获AMCA（国际空气运动与控制协会）认可的实验室
众多产品具备国际AMCA认证、TUV认证、CE认证，国家防爆及消防认证等

Company Info

INFINAIR is committed to providing high-quality products and friendly services to our customers throughout the world. We strive to consistently meet or exceed our quality standards in the design, manufacturing and distribution of products to our customers. We are also determined to be different in caring our environment through innovative ideas.

Established: September, 2003
Area : 33,000m²
Company Address: 55 Qingneng Road, Jiading District, Shanghai, China PRC.

Sales & Service Office:
Our sales and after-sale service network promise easy access to customers anywhere in mainland China. They are located in various locations:
Shanghai, Beijing, Shenzhen, Jilin, Liaoning, Tianjin, Shanxi, Henan, Shaanxi, Shandong, Jiangsu, Anhui, Zhejiang, Fujian, Chongqing, Sichuan, Hunan, Hubei, Guangdong, Guangxi, Hainan, Guizhou and XinJiang.

Company Vision:
To be the most trusted brand in ventilation industry.

Company Mission:
Provide reliable, convenient air movement controls, operations and services.

Awards and Achievements:
High-tech Enterprises
Renowned Shanghai trademark: **INFINAIR®英飞**
Shanghai Famous Brand Product: INFINAIR FAN
SGS ISO 9001、ISO 14001、OHSAS 18001 Management Certificates

Technological Strength:
INFINAIR's Air Movement & Sound Laboratory is the first Air Movement and Control Association (AMCA) accredited laboratory in mainland China.
It is also certified by Chinese National Accreditation Service for Conformity Assessment (CNAS).
Most of the INFINAIR's products are tested and certified by many international certification bodies such as AMCA, TUV , CE, CCC, CNEX, etc.



中国合格评定国家认可委员会(CNAS)
国家实验室认可证书



Certificate Issued by Chinese National
AccreditationService for Conformity
Assessment (CNAS)



AMCA（国际空气运动与控制协会）
实验室认可证书
Certificate of AMCA (Air Movement and
Control Association) Accredited Laboratory

英飞智能通风技术

- **智能需求感知**：随荷载变动、环境变化动态确定运行目标。
- **智能工况调整**：变频或EC智能控制技术在智能调速软件的动态控制下，性能紧密贴近真实需求。
- **智能实时通讯**：通过多种通讯技术，链接互联网或局域网，实现与中控系统及移动终端的智能通讯。
- **智能预警**：可靠的传感器提供了故障的早期征兆，实现智能预警，保证系统稳定运行。

飞鹰服务

- **联合研发**：通过与客户共同开发，以及质量的先期策划，来快速提供真正有效的解决方案。
- **配套定制**：我们的定制服务通过渐进明晰的过程，帮助您找到精确的需求。
- **敏捷服务**：遍布全国的英飞售后服务工程师，敏捷提供专业服务。

绿色智能环保技术

- **流场模拟分析技术**：
对叶轮气动模型的性能（风量，风压，功耗，噪音）预测提供模拟计算，不必制作样机而预知性能，快速优化。
- **有限元分析技术**：
针对受力和材料特性进行结构可靠性分析。

英飞仿生技术

- **英飞节能仿生**
鸚鵡螺为什么可以轻松浮动和游走？鸟类是如何以极低的能耗翱翔千里？
- **英飞降噪仿生**
猫头鹰的静音飞行，为什么敏感的老鼠也毫无察觉？
自然界生物在千万年进化过程中，如何节约能量进行迁徙，或者在抓捕猎物的时候做到悄无声息？
仿生技术对于英飞风机的研发，提供了重要的灵感。

英飞智能制造技术

- 智能化生产流水线
- 在线测功、动平衡和通讯检测
- 机器人焊接工艺
- 敏捷的精益生产
- 6Σ体系

认证及检测

- **产品普遍通过国内外认证**：
CCCf,AMCA,TUV,CE, ATEX,UL,RoHS,ErP2015等。
- **产品性能及可靠性检测**：
风量，风压，功率，噪音，
高低温耐久，盐雾，淋雨等。

物联

- 矩阵互联
- 中控互联
- 终端互联



INFINAIR's Intelligent Ventilation Technology

- **Intelligent Adaption:**
We can quickly adapt to changes in the business environment.
- **Intelligent Adjustment :**
The use of inverter or EC smart control technology can make the fans achieve best results under the control of the intelligent speed regulation system.
- **Intelligent Real-time Information:**
Individual workstations are linked to the central control system through internet or local area network.
- **Intelligent Detection System:**
Reliable sensors can detect early symptoms and notify the user. Ensuring stable operation.

INFINAIR's After-sales Service

- **Joint Research & Develop**
The Joint R&D can provide customer the necessary support and guidance during the initial research progress.
- **Customization**
Our products are fully customizable. We are able to satisfy customer requirements on an individual basis.

Green Smart Technology

- **CFD Simulation & Analysis**
A computer-aided air movement simulation model which can calculate the efficiency of the fan based on the number of blades, blade angle, width, and sound level.
- **Finite Element Analysis Technology**
To analyze and provide accurate prediction of how material is likely to respond when subjected to structural and/or thermal loads.

INFINAIR's Bionic Technology

- **INFINAIR's Bionic Energy Conservation**
We develop energy saving products by observing behaviors from the animal kingdom. For example, birds can glide for thousands of kilometers without flapping.
- **INFINAIR's Bionic sound Reduction**
Why Owls can fly so silently? Even mice are not being able to detect their approach?
The research and development of INFINAIR's products are heavily inspired by the animal evolution over the past millenniums. We have learnt how energy and sound are being able to conserve from their amazing changes.

INFINAIR's Intelligent Fabrication

- Intelligent fabrication process
- Capable to carry out online performance, balance level and communication testing
- Robotic welding technology
- Agile Manufacturing, responds quickly to customer desires
- 6Σ Systems

Certifications and Tests

- **Most of the products are certificated by:**
CCCf, AMCA, TUV, CE, ATEX, UL, RoHS and ErP2015.
- **Performance and Reliability Tests:**
Airflow, Air Pressure, Power, Sound Level, Temperature Durability, Salt Spray and Water Proof Test, etc.

Connectivity

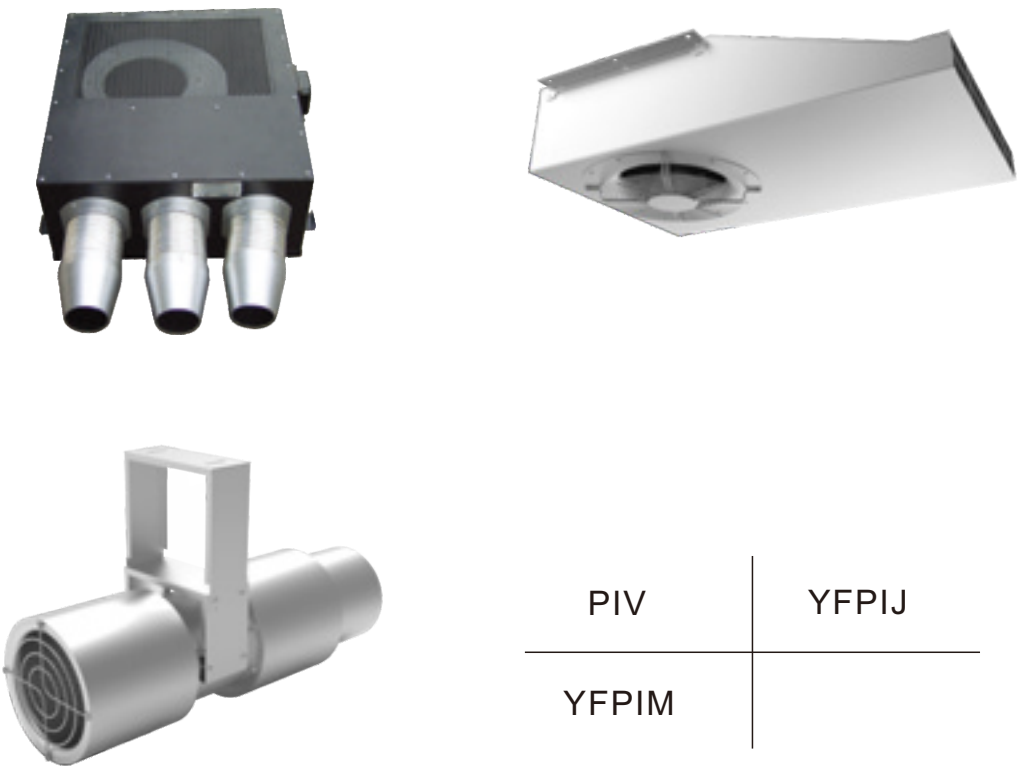
- Matrix Connection
- Central Connection
- Terminal Connection

诱导射流通风机
Positive Inducing Fan Series

- 诱导射流通风机的原理来自于空气动力学中高速喷流的扰动特性，利用喷出带有较高动能的高速气流来诱导及扰动周围大量空气，并将其带至特定的目标方向。喷流中心速度由喷嘴出口点起逐渐减低，但是喷流宽度逐渐增加，所诱导的周围的空气量也逐渐增加。一方面稀释室内有害气体，另一方面带动室内空气流动，有害气体集中而快速地沿着预设的空气流道行进至排风机处，由排风机排走，从而实现地下车库的良好换气。

Designed according to the principles of aerodynamics, positive inducing fans induce and disturb surrounding air through the high velocity discharge produced and then guide the air in specified directions. The central discharge velocity gradually comes down with the increasing distance away from the outlet nozzle, but the discharge area expands so that more air can be induced. By diluting indoor harmful gases and circulating air at the same time, positive inducing fans can gather these gases and bring them along the predefined flow passage quickly to the exhaust fan, thus making the air well ventilated in the underground car parks.

- 诱导射流风机应用的场所，可以有效降低车库内有害气体与烟雾的浓度，保持良好空气，改善车库环境。同时，在紧急状态下YFPIJ型风机可用于消防排烟。
Positive inducing fans can effectively dilute harmful gases and smoke in car parks, keeping air well ventilated and improving the environment. At the same time, Model YFPIJ fans can be used for emergency smoke extraction.



产品应用场合
Applications

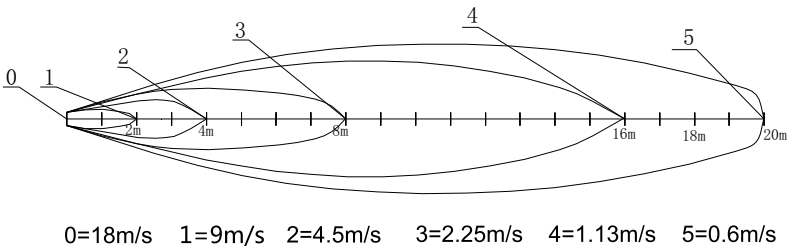
诱导风机利用高压喷出的气流引导周围的大量气体到指定的方向与区域，从而达到降低废气浓度，提高空气品质的目的。

- 应用场合：
- 地下车库
 - 地下娱乐场所
 - 有局部污染的大面积区域诱导通风
 - 区域联动的智能诱导通风

Guiding the surrounding air to predefined areas and in specific directions through the high velocity discharge produced, positive inducing fans help dilute the waste gases and improve air quality.

- Applications:
- Underground car parks
 - Underground entertainment venues
 - Large areas with certain parts polluted
 - Intelligent inducing ventilation that features regional linkage

风速衰减示意图
Discharge velocity
decrement



地下车库
Underground car parks



地下娱乐场所
Underground entertainment venues



有局部污染的大面积区域诱导通风
Large areas with certain parts polluted



区域联动的智能诱导通风
Intelligent inducing ventilation
that features regional linkage

PIV

V系列诱导风机
Positive Inducing Fans Series V



一、产品特点

Product Features

- 体积小，重量轻，节省空间，安装方便，无需管路，减少投资，针对性强，效果好。
Small-size and light-weight; Easy installation with no additional ducts required; Highly targeted and cost-effective.
- 高效节能：采用气体诱导的方式，让空气流动。
Energy-efficient: inducing air through the high velocity discharge produced.
- 挠性金属喷嘴：可随意调整出风角度。
Flexible metallic nozzle with easily adjustable discharge angles.
- 智能诱导功能可选：区域联动，节能可靠。
Intelligent positive inducing function available: sub-regions interlinked to ensure energy efficiency and reliability.
- 优质的镀锌钢板外壳，可选静电环氧喷涂。
Housing made of quality galvanized steel sheet; housing finished with electrostatic epoxy coatings also available.

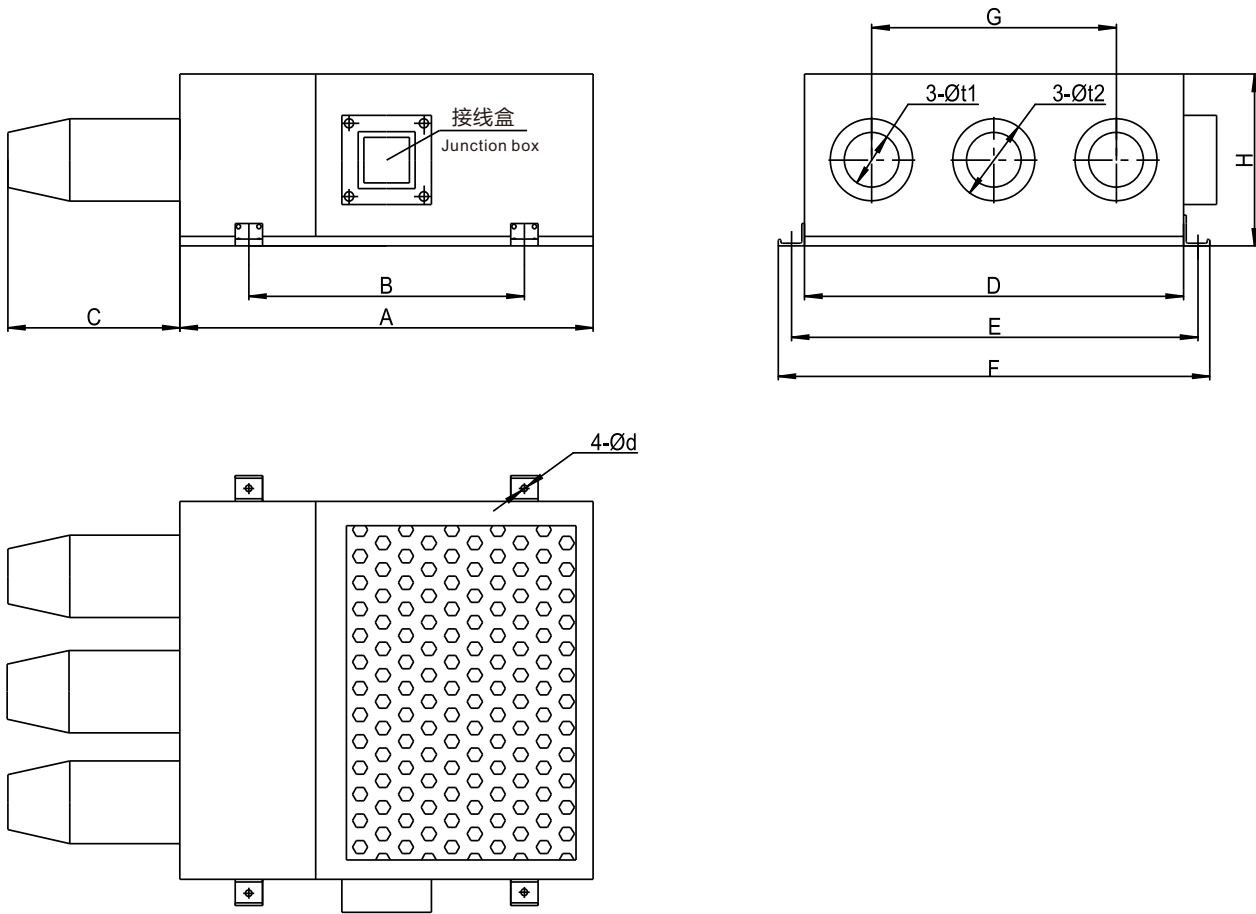
二、技术参数

Technical Parameters

风机型号 Model	转速 Speed (rpm)	推力 Thrust (N)	风量 Airflow (m³/h)	电机功率 Motor Power (kW)	电源参数 Volt/Hz/Ph (V / Hz / Ph)	噪音 Sound Pressure Level (dB(A))	出口风速 Outlet Velocity (m/s)	重量 Weight (kg)
PIV-B-3	1450	6~11	980~1380	0.12	220 / 50 / 1	42	17~24	35

三、外形尺寸图

Outline Dimensions



单位：毫米
Unit : mm

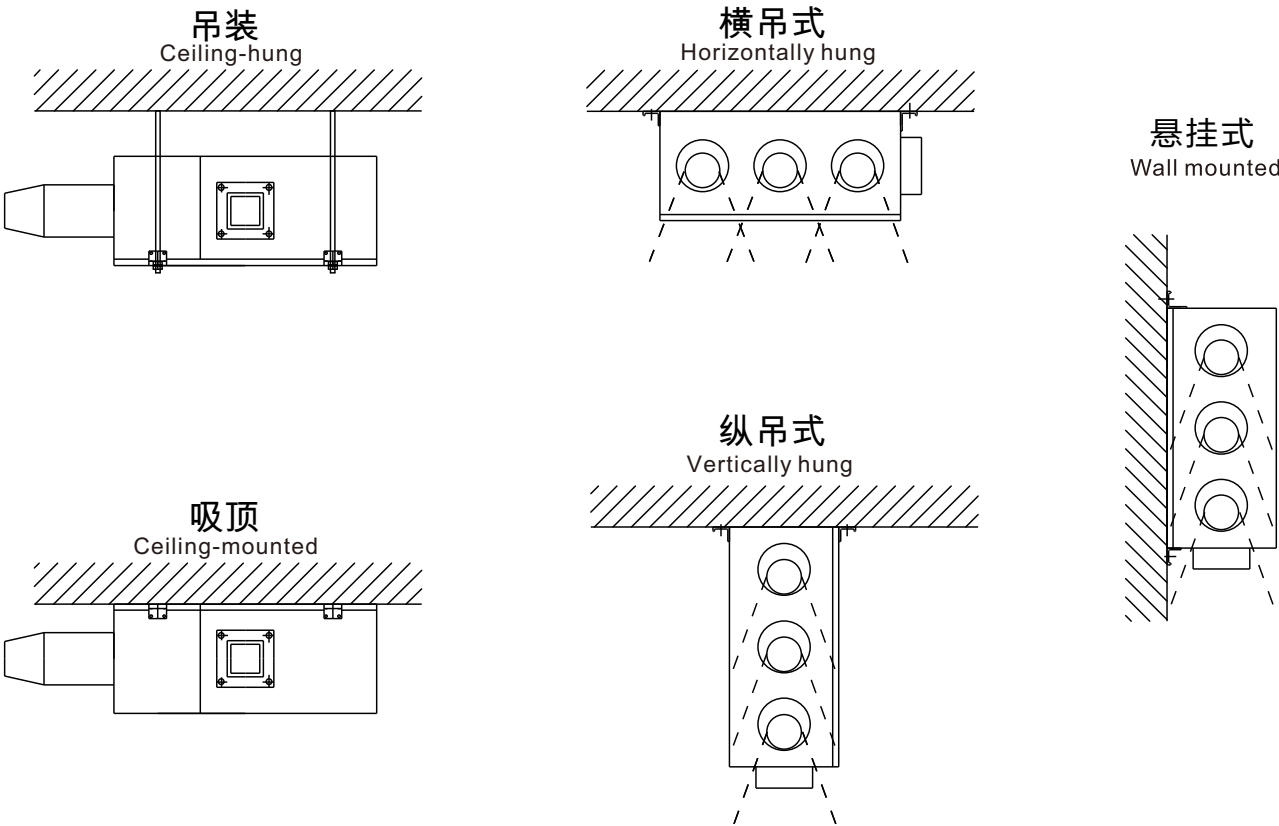
型号 Model	A	B	C	D	E	F	G	H	d	t1	t2
PIV-B-3	600	400	250	550	590	630	335	250	9	80	120

四、风机的安装 Fan Installation

V系列诱导风机可采用吊装和吸顶两个安装方式。吸顶安装分为横吊式、纵吊式、悬挂式。安装时，高度不宜太高，离地高度以2.3~3米为宜。风机出风口和进风口500mm内不得有障碍物。采用吊装方式时，应配备弹簧减振器，采用吸顶方式时，应在螺钉固定处加橡胶减振器。射流风机排布距离小于风机射程，出风口不应相互抵触。

Positive inducing fans Series V can be ceiling-hung and ceiling-mounted. When ceiling-mounted, fans can be horizontally hung, vertically hung or wall-mounted. They should not be mounted too high (preferably 2.3~3 meters high above the ground) and there shall not be any obstructions within 500mm from inlets and outlets. When ceiling-hung, there shall be spring isolators. When ceiling-mounted, Neoprene isolators shall be added to screws. The spacing between fans shall be smaller than the discharge range so that airstreams from different outlets do not collide.

安装方式如图所示
Mounting Types



五、V系列诱导风机智能控制原理
Intelligent Control Principles of Positive Inducing Fans Series V

当控制开关打在自动档时，系统控制方式如下：

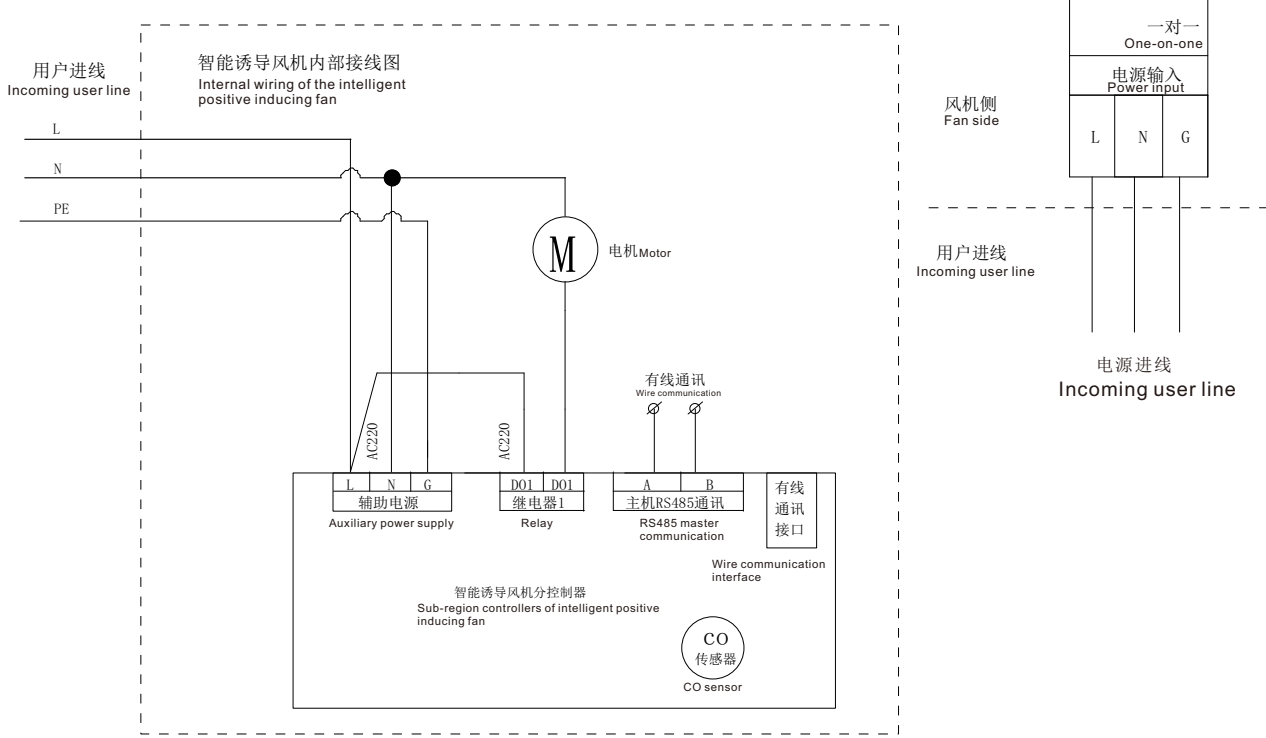
智能诱导风机内部配置灵敏的废气浓度自动感应探头。当探测到其所在区域的CO废气浓度超过30PPM时，本台智能诱导风机自动启动，连续运行5分钟，如果浓度没有降低，则连锁分区集中控制器打开整个区域的智能诱导风机，并打开送、排风机，排除室内废气，并送入新鲜空气。当探测到CO浓度降低到30PPM以下后，风机继续运行10分钟后自动关机。

When the control switch is in the automatic mode, the system is controlled as below:

Inside each intelligent positive inducing fan, there is a sensitive waste gas concentration detector. Upon detection of a carbon monoxide (CO) concentration of over 30PPM, the intelligent positive inducing fan in this specific region will start automatically and run for 5 minutes. If the concentration level remains, the centralized controllers in the interlinked sub-regions will start all the intelligent positive inducing fans. Also, supply fans and exhaust fans will be started to exhaust indoor waste gases and send in fresh air. When the CO concentration level falls below 30PPM, the fans will continue to run for another 10 minutes before they turn off automatically.



PIV分控器接线图
Wiring of PIV sub-region controllers



六、PIV 技术规范 PIV Technical Specification

• 风机类型
Fan Type

风机类型应为诱导风机。风机叶轮为镀锌钢离心叶轮。叶轮应当经过静态和动态平衡，达到AMCA 204标准的G2.5平衡。
The fan shall be a positive inducing one with a centrifugal galvanized steel wheel. The wheel should be subject to static and dynamic balancing tests up to AMCA 204- G2.5 quality grade.

• 风机外壳
Fan Housing

风机外壳应由镀锌钢板 [选项：静电环氧喷涂] 制成，有效防止腐蚀。风机应标配检修门，方便拆卸，以提供维修检测之用。风机出口应设有隔板，保证各喷口均匀出风。

The fan housing shall be made in galvanized steel sheet (or steel sheet finished with electrostatic epoxy coatings) for effective corrosion prevention. There has a removable access door for inspection and maintenance. There shall be baffle plates at the outlet, ensuring regular airstreams from each nozzle.

• 电机
Motor

应采用直联驱动。与风机负载紧密配合，防护等级IP44，绝缘等级F。
The motor shall be direct driven and well match the fan load. It shall be IP44 rated with Class F insulation.

• 喷管
Nozzle

喷管应直接嵌在风机外箱，为铝挠管，由铝合金无缝旋压成型。
Seamlessly formed by spinning with aluminum alloys, the flexible nozzle shall be directly embedded on the fan housing.

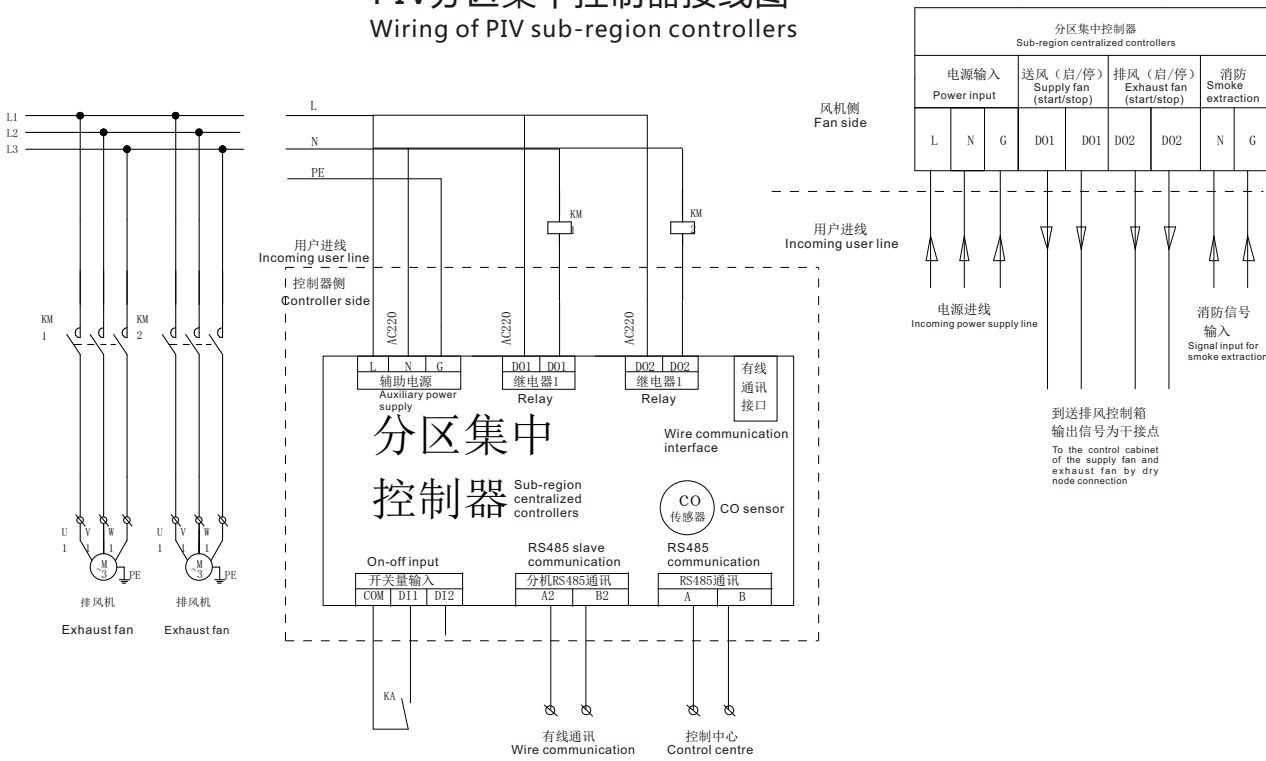
• 铭牌
Nameplate

永久固定的铝制标牌上应有清晰可辨的风机编号、型号和产品序列号（即每台机器的唯一身份证明），从而可保证客户方便地查询配件的历史记录。
A permanently fixed aluminum nameplate shall clearly display the fan number, product model and serial number (a unique ID for each fan) so that the parts used can be traceable by customers.

• 可接受供货商
Qualified Suppliers

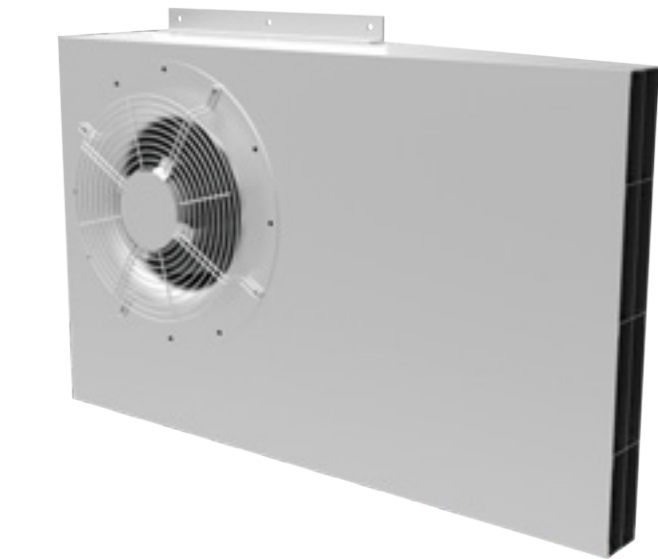
可接受供货商的资信等级为AAA级。英飞或类似产品，设计基于英飞PIV型号。
Qualified suppliers shall be assigned a credit rating of "AAA". **INFINAIR®** or similar products supplied are designed based on PIV models of **INFINAIR®**.

PIV分区集中控制器接线图
Wiring of PIV sub-region controllers



YFPIJ

J系列诱导射流风机
Positive Inducing Fans Series J



一、产品特点 Product Features

- 结构设计紧凑，风机整体高度低，特别适合层高较低的地下停车场。
Compact structural design and low height of the fan body making it especially suitable for underground car parks with low head room.
- 钢制后弯离心叶轮，效率高、流量大、射程远、噪音低。
Centrifugal backward curved steel wheel that features greater efficiency, large airflow, long discharge distance and low sound level.
- 双用途：日常普通通风和火灾时排烟。
Dual purposes: Used for general ventilation and for smoke extraction.
- 工作温度：普通通风：-20℃~55℃。
排烟系统：300℃ / 60minutes。

Operating temperature:
General ventilation: -20℃~55℃.
Smoke extraction system: 300℃ / 60minutes.

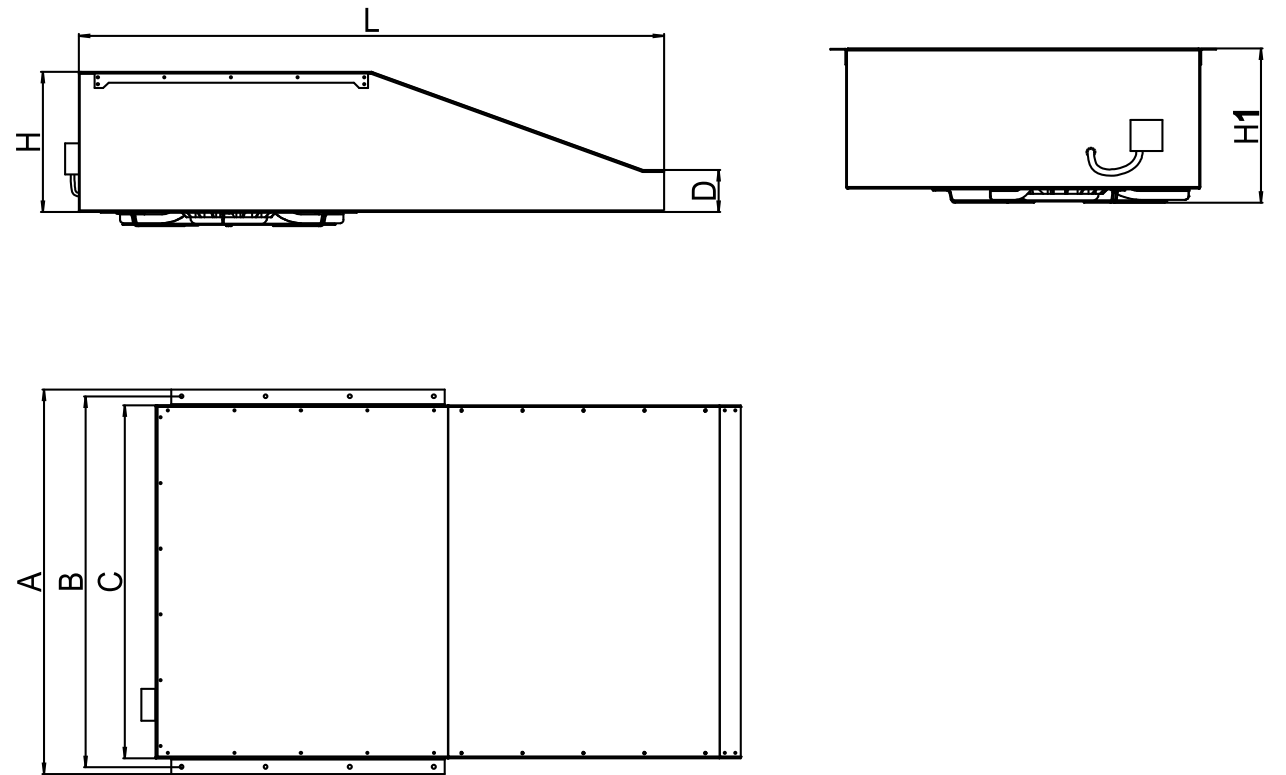
- 电机：防护等级IP55、绝缘等级H（仅用作普通通风时可选用F级绝缘）
Motor: IP55 rated with Class H insulation (For the sole purpose of general ventilation, Class F is also recommended).

- 优质的冷轧钢板外壳，表面静电环氧喷涂。
Fan housing made in quality cold-roll steel sheets finished with electrostatic epoxy coatings.
- 进风口安装有安全防护网，确保风机运转及人员安全。
Air inlet mounted with safety guard to ensure safe working conditions.
- 通过  耐高温性能测试F300 (300℃ / 60minutes) 。
Passed  heat resistance test F300 (300℃ / 60minutes).

二、技术参数 Technical Parameters

风机型号 Model	转速 Speed (rpm)	推力 Thrust (N)	风量 Airflow (m³/h)	电机功率 Motor Power (kW)	电源参数 Volt/Hz/Ph (V / Hz / Ph)	噪音 Sound Pressure Level (dB(A))	出口风速 Outlet Velocity (m/s)	重量 Weight (kg)
YFPIJ-450	1390/690	27/7	4467/2217	0.75/0.18	380 / 50 / 3	75/64	18.6/9.3	118
YFPIJ-500	1400/710	41/10	6171/3130	1.2/0.3	380 / 50 / 3	78/67	20.7/10.4	139
YFPIJ-560	1420/710	68/17	8794/4397	2.1/0.5	380 / 50 / 3	81/69	24.8/12.4	152
YFPIJ-450	1668/828	39/10	5360/2661	1.2/0.3	380 / 60 / 3	84/71	22.3/11.2	118
YFPIJ-500	1680/852	60/15	7405/3755	2.1/0.5	380 / 60 / 3	89/73	24.9/12.4	144
YFPIJ-560	1704/852	97/24	10552/5276	3.5/0.9	380 / 60 / 3	93/76	29.7/14.9	157

三、外形尺寸图 Outline Dimensions



型号 Model	单位：毫米 Unit : mm						
	A	B	C	D	L	H	H1
YFPIJ-450	898	858	808	80	1340	295	335
YFPIJ-500	990	950	900	90	1490	325	365
YFPIJ-560	1100	1060	1010	100	1670	365	405

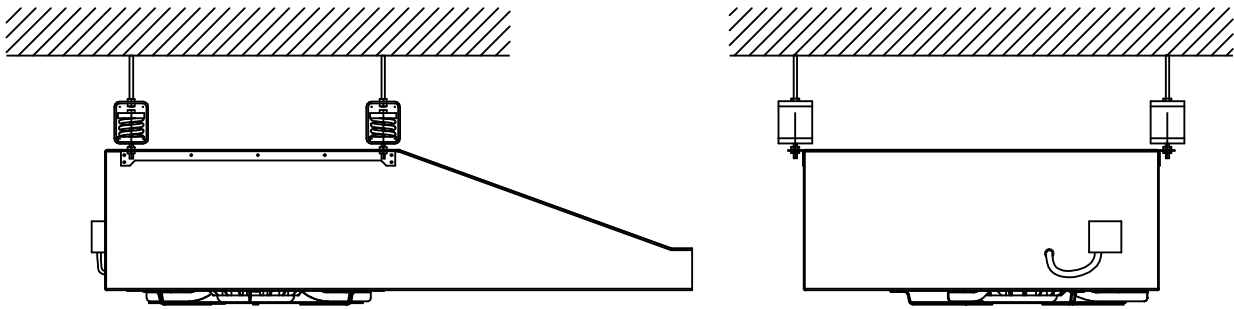
四、风机的安装 Fan Installation

J系列诱导射流风机可采用吊装和吸顶两种安装方式。风机出风口和进风口1000mm内不得有障碍物。采用吊装方式时，应配备弹簧减振器，采用吸顶方式时，应在螺钉固定处加橡胶减振器。射流风机排布距离小于风机射程，出风口不应相互抵触。

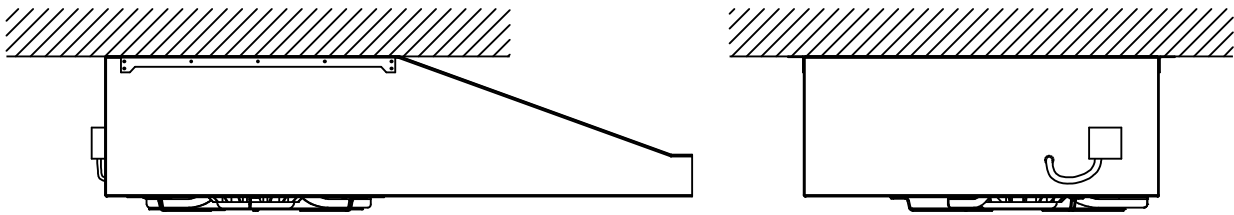
Positive inducing fans Series J can be ceiling-hung and ceiling-mounted. There shall not be any obstructions within 1000mm from inlets and outlets. When ceiling-hung, there shall be spring isolators. When ceiling-mounted, Neoprene isolators shall be added to screws. The spacing between fans shall be smaller than the discharge range so that airstreams from different outlets do not collide.

安装方式如图所示
Mounting Types

吊装 Ceiling-hung



吸顶 Ceiling-mounted



五、J系列诱导射流风机智能控制原理

Intelligent Control Principles of Positive Inducing Fans Series J

当控制开关打在自动档时，系统控制方式如下：

智能诱导风机内部配置灵敏的废气浓度自动感应探头。当检测到其所在区域的CO废气浓度超过30PPM时，本台智能诱导风机自动启动，连续运行5分钟，如果浓度没有降低，则连锁分区集中控制器打开整个区域的智能诱导风机，并打开送、排风机，排除室内废气，并送入新鲜空气。当检测到CO浓度降低到30PPM以下后，风机继续运行10分钟后自动关机。

为配合楼宇自动控制系统或手动控制方式的要求，该系列风机预留有一对远程无源干接点。当此无源干接点闭路时，强制开启系统；当此无源干接点开路时，控制器根据感应到的废气浓度进行自动启停控制。

当旋钮打在手动档时，有高速、低速、停三种工作状态，便于调试维修。用户可根据需要自行选择。

When the control switch is in the automatic mode, the system is controlled as below:

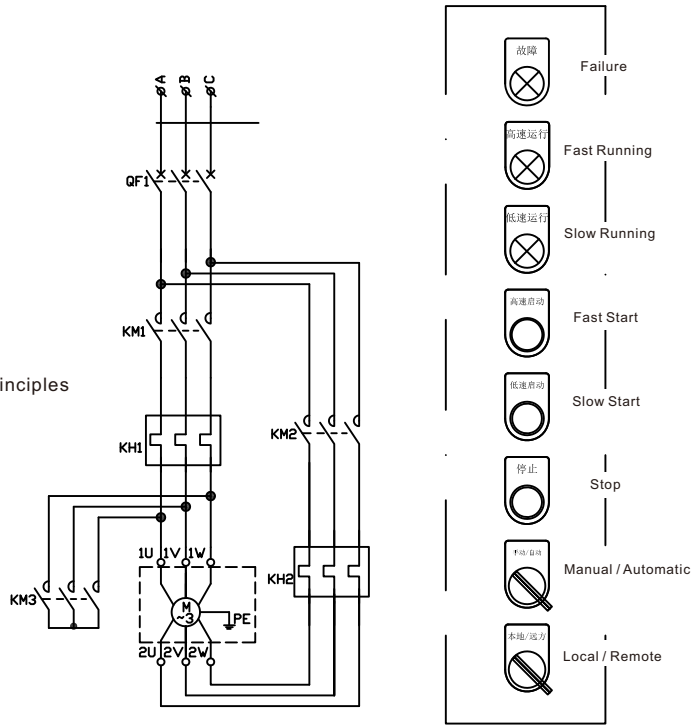
Inside each intelligent positive inducing fan, there is a sensitive waste gas concentration detector. Upon detection of a carbon monoxide (CO) concentration of over 30PPM, the intelligent positive inducing fan in this specific region will start automatically and run for 5 minutes. If the concentration level remains, the centralized controllers in the interlinked sub-regions will start all the intelligent positive inducing fans. Also, supply fans and exhaust fans will be started to exhaust indoor waste gases and send in fresh air. When the CO concentration level falls below 30PPM, the fans will continue to run for another 10 minutes before they turn off automatically.

To meet the requirements of the building automation system or the requirements of manual mode, the YFPIJ intelligent positive inducing fan reserves a pair of remotely-controlled passive dry nodes. When the nodes are closed circuit, the system will start. When the nodes are open circuit, the controllers will automatically start and stop the system based on the detected waste gas concentration.

When the knob is in the manual mode, three options are available for customers to choose from: high-speed, low-speed and stop. This also makes debugging and maintenance work easy.

YFPIJ控制原理示意图

Schematic Diagram of YFPIJ Control Principles



KM1闭合, KM2和KM3断开-- 低速

KM1断开, KM2, KM3同时闭合--高速

KM1 closed circuit, KM2 and KM3 open circuit —— Low

KM1 open circuit, both KM2 and KM3 closed circuit —— High speed

六、YFPIJ 技术规范 YFPIJ Technical Specification

• 风机类型
Fan Type

风机类型应为钢制后弯叶轮离心风机。驱动方式应为直联驱动。风机整体外形应为扁平体结构，电机应安装在进风口内，以降低车库层高，节省土建成本。风机进风口应安装有钢制安全防护网。

The fan shall be in a flat structure and direct driven with a centrifugal backward curved steel wheel. The motor is located inside the inlet. The fan requires much lower head room of car parks, thus reducing the engineering cost. There shall be a steel safety guard at the inlet.

叶轮
Wheel

叶轮应为钢制后弯离心叶轮，全焊接而成。叶轮应经过静态和动态平衡，达到AMCA 204标准的G4.0平衡等级。叶轮处于最高允许转速时，应能保持平稳的气流和较低的噪声。叶轮特性应能有效避免因工作点滑动造成的性能下降。风机结构应能够允许叶轮方便抽出，以便叶轮维护或清洁。

The wheel shall be centrifugal backward curved steel one and all welded. The wheel should be subject to static and dynamic balancing tests up to AMCA 204--G4.0 quality grade. Stable airstreams and low sound level shall be ensured when the wheel is running at the highest speed. When the operating point moves up or down, a decline in fan performance shall be avoided. The fan structure shall be designed so that the motor can be easy to be taken out for maintenance and cleaning.

• 风机外壳
Fan Housing

风机外壳应为冷轧钢板制成（表面做静电环氧喷涂），扁平体结构，其厚度应保证足够的强度与刚度，足以承受运转产生的动负荷。

The fan housing shall be in a flat structure and made in cold-roll steel sheets finished with electrostatic epoxy coatings. It shall be thick and strong enough to withstand the dynamic load generated.

• 进风口
Inlet

风机进风口应严格按照空气动力特性设计，表面光滑呈流线型，以减少紊流，提高风机效率，降低噪声。

The inlet shall be designed based on aerodynamic characteristics with a smooth streamline surface to reduce turbulence so that fan efficiency can be improved and sound lowered.

• 消防认证（仅适用于消防排烟）
Fire Certification(For smoke extraction only)

风机应通过  耐高温性能测试，达到F300（300℃ / 60minutes）标准，并拥有  机构出具的认证证书。

The fan shall pass the heat resistance test of TUV up to the standard F300（300℃ / 60minutes）and a certificate issued by TUV shall be obtained.

• 电机
Motor

电机应与风机负载紧密配合，防护等级IP55，绝缘等级F或H。电机轴承应为滚珠轴承并且免润滑。

The motor shall match the fan load well and shall be IP55 rated with Class F or H insulation. Lubrication-free ball bearings shall be used.

• 铭牌
Nameplate

永久固定的铝制标牌上应有清晰可辨的风机编号、型号和产品序列号（即每台机器的唯一身份证明），从而可保证客户方便地查询配件的历史记录。

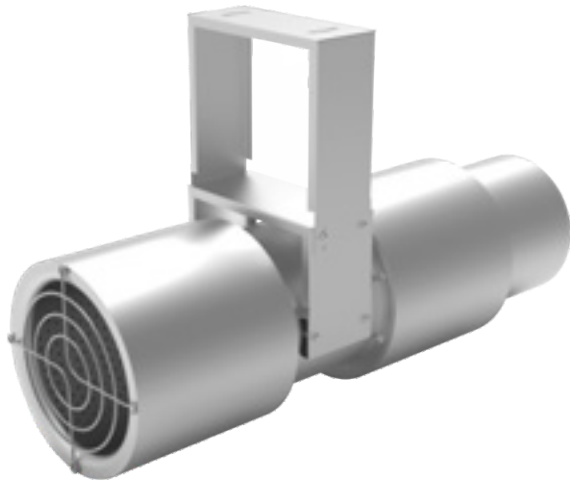
A permanently fixed aluminum nameplate shall clearly display the fan number, product model and serial number (a unique ID for each fan) so that the parts used can be traceable by customers.

• 可接受供货商
Qualified Suppliers

可接受供货商的资信等级为AAA级，英飞或类似产品，设计基于英飞YFPIJ型号。

Qualified suppliers shall be assigned a credit rating of "AAA". **INFINAIR®** or similar products supplied are designed based on YFPIJ models of **INFINAIR®**.

YFPIM M系列射流风机
Positive Inducing Fans Series M



一、产品特点 Product Features

- 适用于地下停车场、地下娱乐场所诱导通风，降低废气浓度，提高空气品质。

Suitable for ventilation in underground car parks and entertainment venues to reduce waste gas concentration and improve air quality.

- 效率高、射程远。
Greater efficiency and long discharge distance.

- 风机进、出口均设置有消声段，噪音非常低。
Silencers fitted at both inlet and outlet for extremely low sound level.

- 电机防护等级IP54、绝缘等级F，在环境温度-20℃～55℃下可长期安全可靠运转。
IP54 rated with Class F insulation, able to maintain safe and reliable operation over a long period of time under -20℃～55℃.

- 外形美观，体积小，重量轻，节省安装空间。
Aesthetically pleasing, small-size, light-weight and space-saving.

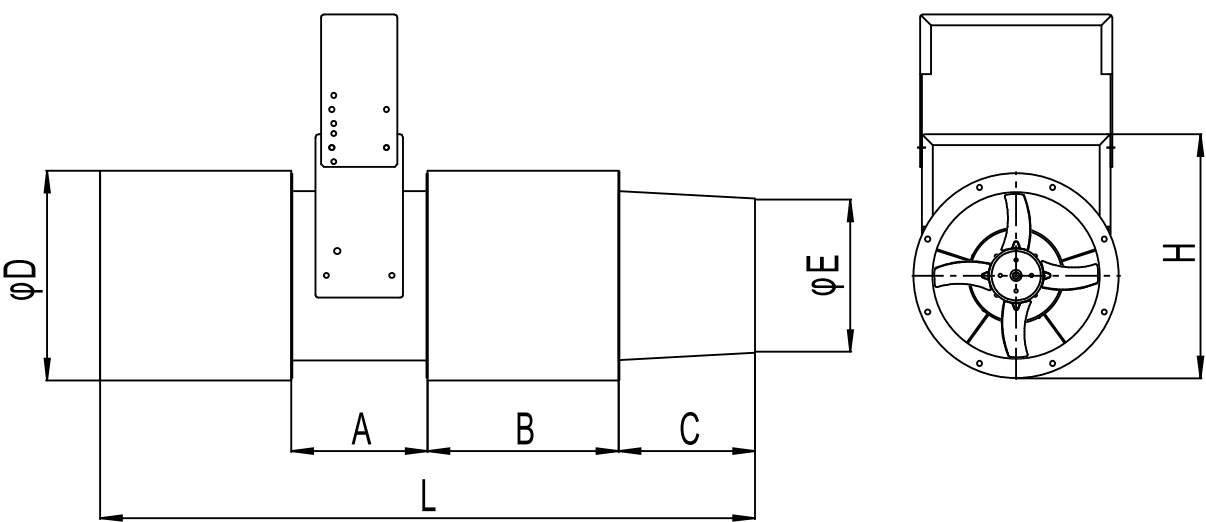
- 随机配置有安装支架，可方便调节安装角度，安装方便。
Easy installation with mounting brackets supplied and mounting angles adjustable.

- 进风口安装有安全防护网，确保风机运转及人员安全。
Air inlet mounted with safety guard to ensure safe working conditions.

二、技术参数 Technical Parameters

风机型号 Model	转速 Speed (rpm)	推力 Thrust (N)	风量 Airflow (m³/h)	电机功率 Motor Power (kW)	电源参数 Volt/Hz/Ph (V / Hz / Ph)	噪音 Sound Pressure Level (dB(A))	出口风速 Outlet Velocity (m/s)	重量 Weight (kg)
YFPIM-280	3360	13	2500	0.37	220 / 60 / 1	62	16.5	40
YFPIM-300	3360	18	3400	0.55	220 / 60 / 1	66	16.5	48
YFPIM-350	3360	28	5000	1.1	220 / 60 / 1	69	17	65
YFPIM-280	2800	10	2080	0.25	220 / 50 / 1	58	13.7	39
YFPIM-300	2800	13	2800	0.37	220 / 50 / 1	62	13.7	48
YFPIM-350	2800	20	4150	0.75	220 / 50 / 1	65	14.2	63

三、外形尺寸图 Outline Dimensions



单位：毫米
Unit : mm

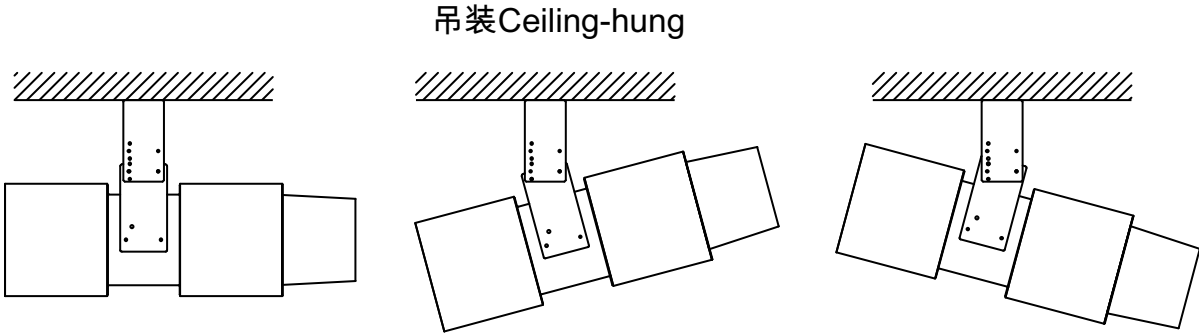
型号 Model	A	B	C	H	L	φD	φE
YFPIM-280	220	320	220	430	1110	364	230
YFPIM-300	250	350	250	450	1200	385	280
YFPIM-350	300	350	300	530	1300	436	320

四、风机的安装 Fan Installation

M系列轴流式射流风机采用吸顶安装。风机出风口和进风口1000mm内不得有障碍物。射流风机排布距离小于风机射程，出风口不应相互抵触。此款风机的出风口可以根据客户要求调整±15度。

Positive inducing fans Series M can be ceiling-mounted. There shall not be any obstructions within 1000mm from inlets and outlets. The spacing between fans shall be smaller than the discharge range so that airstreams from different outlets do not collide. The outlet angle can be adjusted by ±15 degrees based on customer requirements.

安装方式如图所示
Mounting Types



五、M系列射流风机智能控制原理
Intelligent Control Principles of Positive Inducing Fans Series M

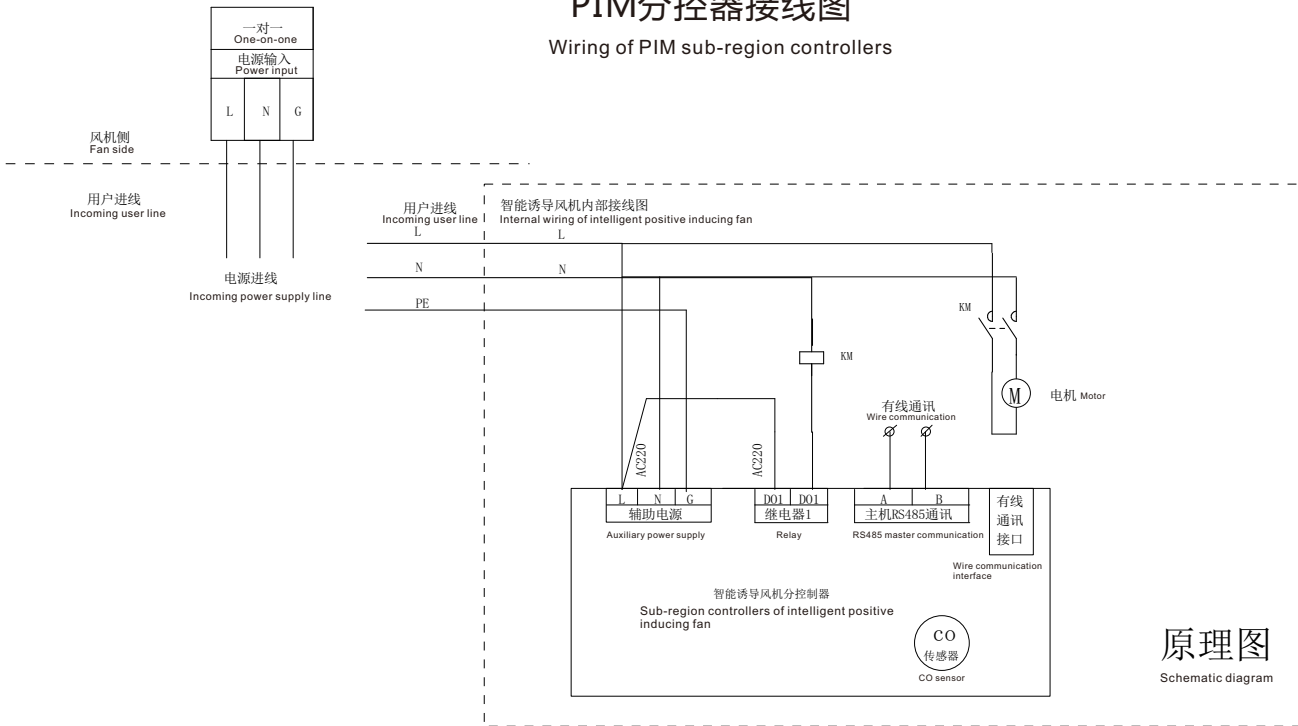
- 智能型有自动、手动控制旋钮。
Intelligent positive inducing fans have control knobs in automatic and manual modes.

当旋钮打在自动档时，系统控制方式如下：
When the knob is in the automatic mode, the system is controlled as below:

- 智能诱导风机内部配置灵敏的废气浓度自动感应器探头。当检测到其所在区域的CO废气浓度超过30PPM时，智能风机自动启动，并带动其连锁的多台普通诱导风机，共同运转。当检测到CO浓度降低至30PPM（或自定义阈值）后，风机继续运行10分钟后自动关机。
Inside each intelligent positive inducing fan, there is a sensitive waste gas concentration detector. Upon detection of a carbon monoxide (CO) concentration of over30PPM, the intelligent positive inducing fan in this specific region will start automatically and run with other linked ordinary positive inducing fans together. When the CO concentration level falls below 30PPM (or any predefined threshold value), the fans will continue to run for another 10 minutes before they turn off automatically.
- 普通的诱导风机的电源由其所在区域连锁的智能型诱导风机供给，并且由智能诱导风机控制它的启停。
The power of ordinary positive inducing fans is provided by the linked intelligent positive inducing fan in the same region that also controls their start and stop.
- 为配合楼宇自动控制系统或手动控制方式的要求，该系列风机预留有一对远程控制干节点，用来采集楼宇自控系统或手动控制柜控制提供的干节点信号。当此干节点闭路时，强制开启系统；当此干节点开路时，控制器根据感应到的废气浓度进行自动启停控制。
To meet the requirements of the building automation system or the requirements of manual mode, the YFPIM intelligent positive inducing fan reserves a pair of remotely-controlled dry nodes to acquisition the signal sent from the building automation system or manual control cabinets. When the nodes are closed circuit, the system will start. When the nodes are open circuit, the controllers will automatically start and stop the system based on the detected waste gas concentration.

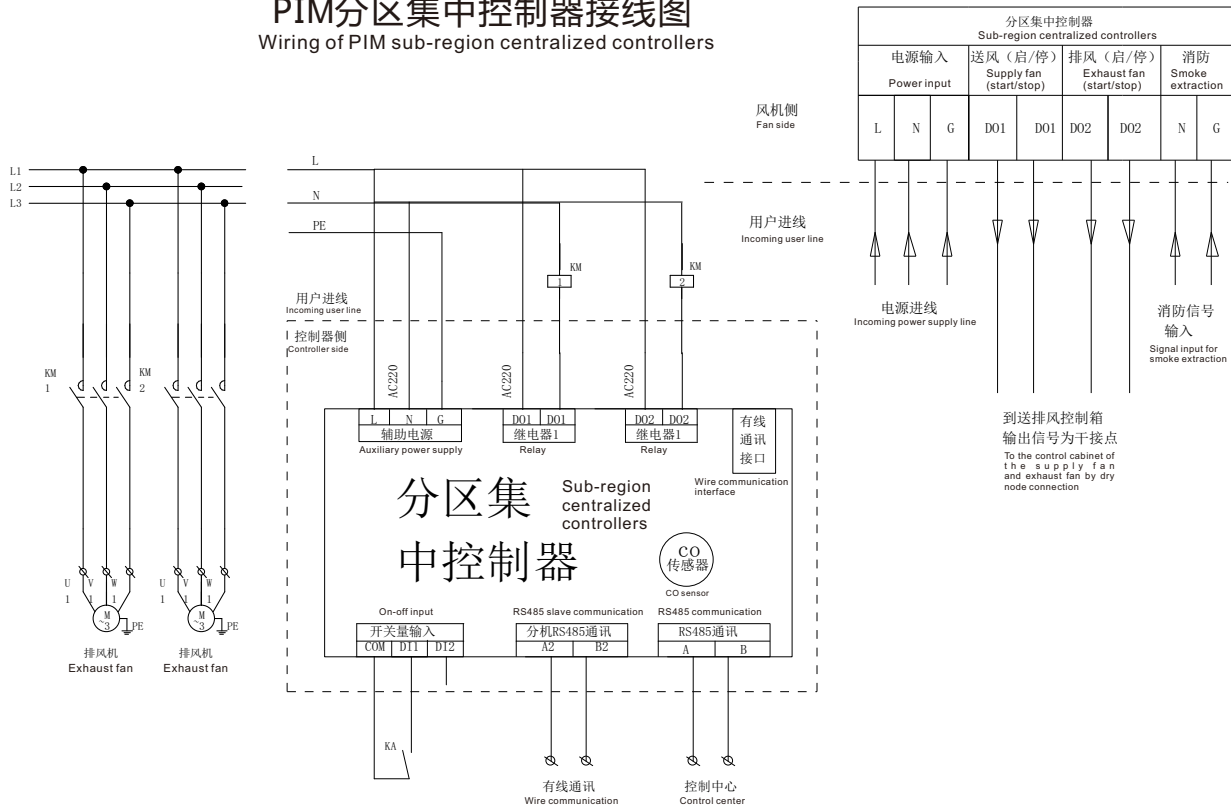
PIM分控器接线图

Wiring of PIM sub-region controllers



PIM分区集中控制器接线图

Wiring of PIM sub-region centralized controllers



六、YFPIM 技术规范 YFPIM Technical Specification

• 风机类型

Fan Type

风机应采用铝制轴流式叶轮，其结构应为直联驱动，风机段两端应安装有管式消音器，消音器与风机段应采用高强度螺栓连接，提升运行安全性，风机进风口应安装有钢制安全防护网。叶轮应经过静态和动态平衡，达到AMCA 204标准的G2.5平衡等级。

The fan shall be direct driven with an aluminum axial wheel. Tube silencer shall be mounted at both the inlet and outlet connected by high strength bolts. There shall be a steel safety guard at the inlet for safe operation. The wheel should be subject to static and dynamic balancing tests up to AMCA 204--G2.5 quality grade.

• 风机外壳

Fan Housing

风机风筒应采用优质钢板经滚圆、连续焊接后旋压翻边制成。风筒与电机支架应采用整体焊接结构，确保有足够的强度与刚度，足以承受运转产生的动负荷。

The fan stack shall be formed in quality steel sheet through the processes of rolling, continuous welding, spinning and flanging. Brackets for both the fan stack and motor shall be wholly welded to be strong enough to withstand the dynamic load generated.

• 消音器

Silencers

消音器应为两层圆筒结构，内层应为穿孔板，外层应采用优质钢板滚圆、焊接而成；中间填充专用吸音棉材料，该材料应具有阻燃特性，无虫害危险，能抗潮湿。

Silencers shall be a two-layer cylinder structure. The inner layer is perforated sheet and the outer layer is quality steel sheet which is rolled and welded. Sound absorptive cotton panels shall be placed in between and they shall be flame retardant, insect-free and damp-proof.

• 表面处理

Surface Processing

风机外壳应进行静电粉末喷涂处理；喷涂后的表面光泽应大于或等于70%，应无凹凸、流挂、裂纹、皱皮、脱落现象。

The fan housing shall be finished with electrostatic powder coatings. The finished gloss level shall be greater than or equal to 70% and the surface shall be a level one without sags, cracks, cockles or detachment.

• 电机

Motor

电机应与风机负载紧密配合，防护等级IP54，绝缘等级F。电机轴承应为滚珠轴承并且免润滑。电机引出电缆线应接至风机圆筒上的接线盒内，方便接线。

The motor shall match the fan load well and shall be IP54 rated with Class F insulation. Lubrication-free ball bearings shall be used. The leading wire shall be connected to the junction box for convenient wiring.

• 喷嘴

Nozzle

锥形喷嘴，采用铝合金材质，经滚圆、焊接而成。重量轻，强度高。

The nozzle shall be of tapered shape, high strength and low weight. It shall be formed by rolling and welding with aluminum alloys.

• 铭牌

Nameplate

永久固定的铝制标牌上应有清晰可辨的风机编号、型号和产品序列号（即每台机器的唯一身份证明），从而可保证客户方便地查询配件的历史记录。

A permanently fixed aluminum nameplate shall clearly display the fan number, product model and serial number (a unique ID for each fan) so that the parts used can be traceable by customers.

• 可接受供货商

Qualified Suppliers

可接受供货商的资信等级为AAA级，英飞或类似产品，设计基于英飞YFPIM型号。

Qualified suppliers shall be assigned a credit rating of "AAA". **INFINAIR** or similar products supplied are designed based on YFPIM models of **INFINAIR**.