

INFINAIR™

YFPIJ

Positive Inducing
Fan Series J



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.

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®**

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.



Certificate of AMCA (Air Movement and Control)



Certificate Issued by Chinese National Accreditation Service for Conformity Assessment (CNAS)



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 Bionic Technology

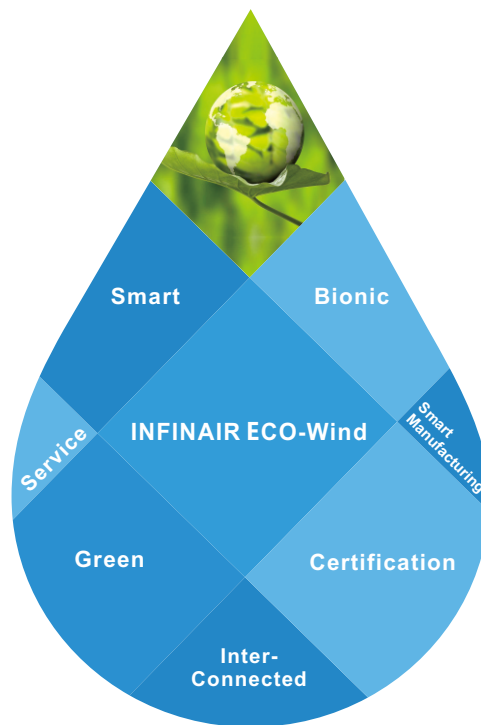
- **INFINAIR's Bionic Energy Conservation**
We develop energy saving products by observing behaviors from the animal kingdom. For example, birds can glide for thousands of kilometers without flapping.
- **INFINAIR's Bionic Noise Reduction**
Why Owls can fly so silently? Even mice are not being able to 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 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
- **Adequate After-sales Service**

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.



Connectivity

- Matrix Connection
- Central Connection
- Terminal Connection

INFINAIR's Intelligent Fabrication

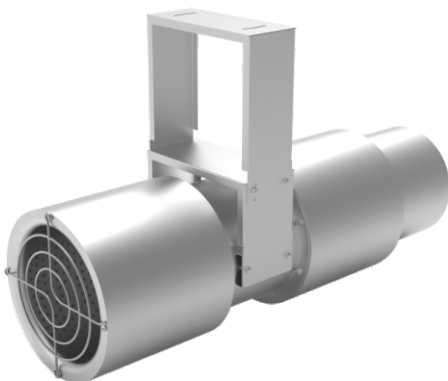
- Intelligent fabrication process
- Capable to carry out online performance, balance level and communication testing. Ensuring reliable quality
- Robotic welding technology
- Agile Manufacturing, responds quickly to customer desires
- 6σ Systems

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.

Positive Inducing Fan Series

- 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.
- 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.



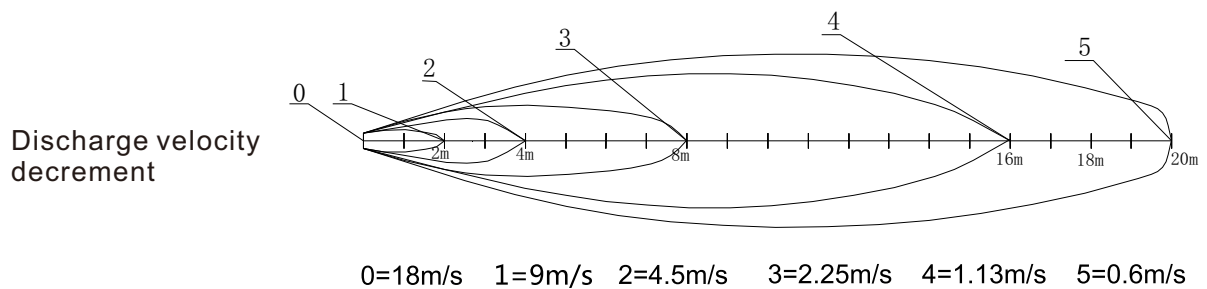
PIV	YFPIJ
YFPIM	

Applications

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



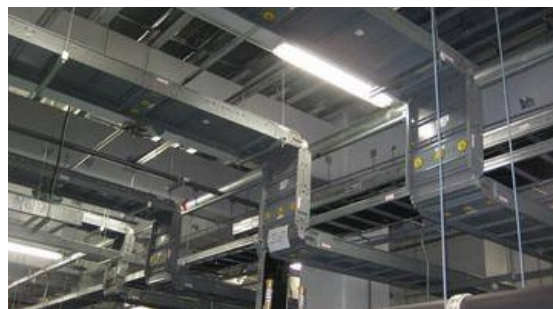
Underground car parks



Underground entertainment venues



Large areas with certain parts polluted




Intelligent inducing ventilation that features regional linkage

Positive Inducing Fans Series J



Product Features

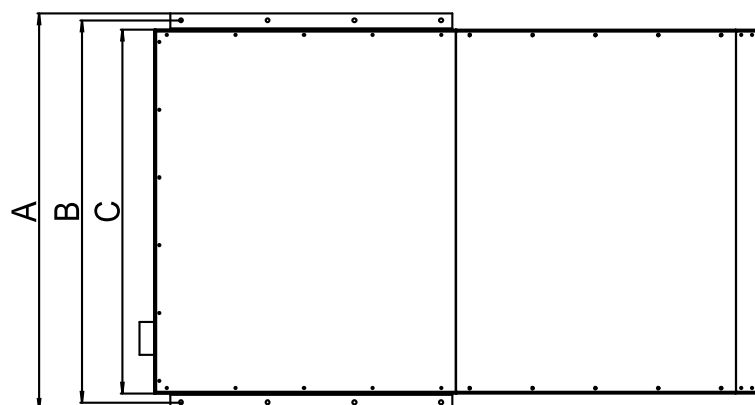
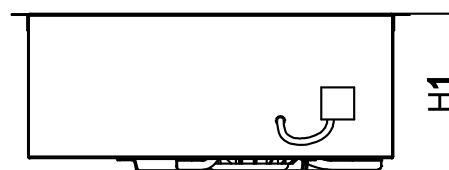
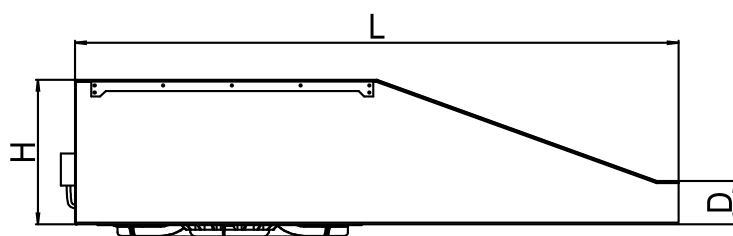
- Compact structural design and low height of the fan body making it especially suitable for underground car parks with low head room.
- Centrifugal backward curved steel wheel that features greater efficiency, large airflow, long discharge distance and low sound level.
- Dual purposes: Used for general ventilation and for smoke extraction.
- Operating temperature:
General ventilation: -20°C ~ 55°C.
Smoke extraction system: 300°C / 60minutes.
- Motor: IP55 rated with Class H insulation (For the sole purpose of general ventilation, Class F is also recommended).

- Fan housing made in quality cold-roll steel sheets finished with electrostatic epoxy coatings.
- Air inlet mounted with safety guard to ensure safe working conditions.
- Passed  heat resistance test F300 (300°C / 60minutes).

Technical Parameters

Model	Speed (rpm)	Thrust (N)	Airflow (m³/h)	Motor Power (kW)	Volt/Hz/Ph (V / Hz / Ph)	Sound Pressure Level (dB(A))	Outlet Velocity (m/s)	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

Outline Dimensions



Unit : mm

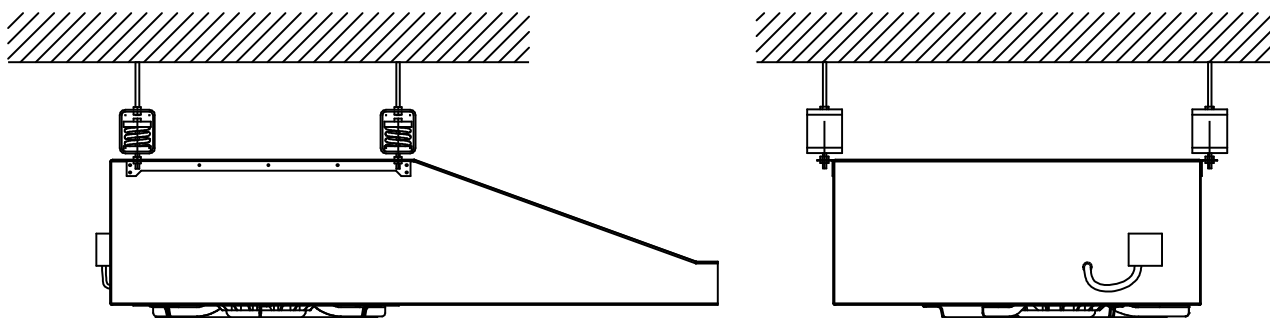
Model	A	B	C	D	L	H	H1
YFPIJ-450	898	858	808	80	1340	295	335
YFPIJ-500	990	950	900	90	1490	325	365
YFPIJ-560	1100	1060	1010	100	1670	365	405

Fan Installation

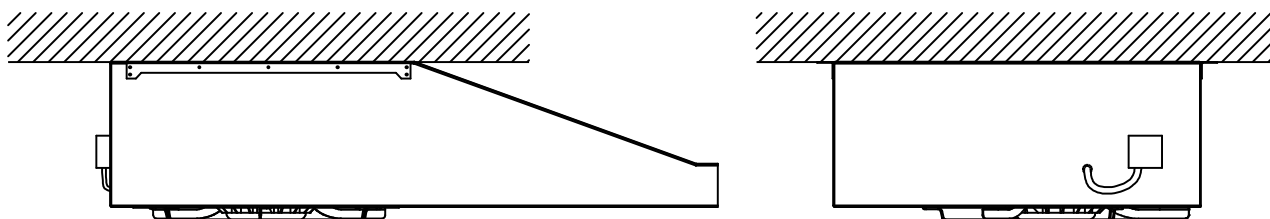
Positive inducing fans Series J can be ceiling-hung and ceiling-mounted. There shall not be any obstructions within 1000mm from inlets and outlets. When ceiling-hung, there shall be spring isolators. When ceiling-mounted, Neoprene isolators shall be added to screws. The spacing between fans shall be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

Mounting Types

Ceiling-hung



Ceiling-mounted



Intelligent Control Principles of Positive Inducing Fans Series J

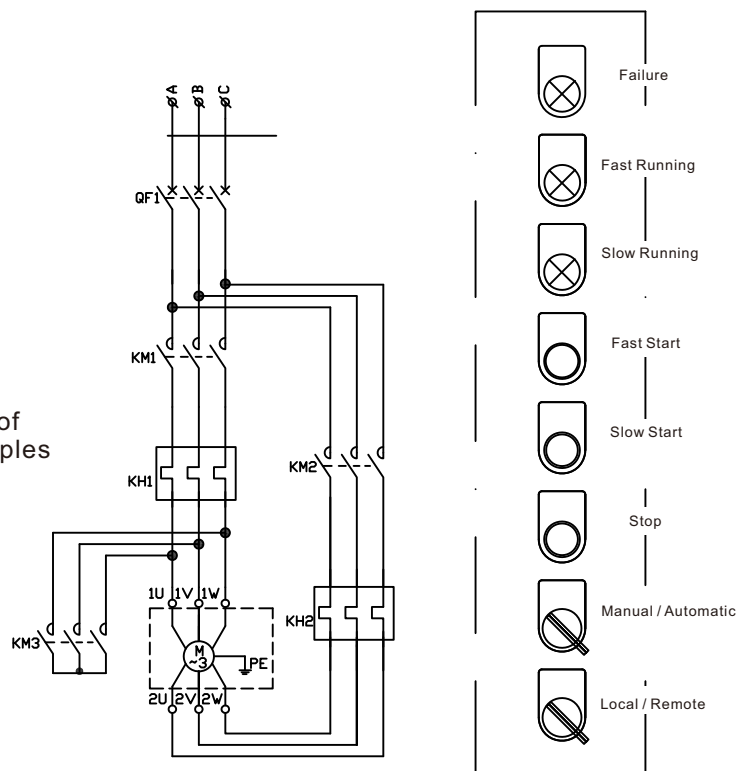
When the control switch is in the automatic mode, the system is controlled as below:

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.

Schematic Diagram of
YFPIJ Control Principles



KM1 closed circuit, KM2 and KM3 open circuit — Low

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

YFPIJ Technical Specification

- Fan Type

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.

- Wheel

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.

- Fan Housing

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.

- Inlet

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.

- Fire Certification(For smoke extraction only)

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

- Motor

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.

- Nameplate

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.

- Qualified Suppliers

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

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INFINAIR reserves the right to make changes to this catalogue in whole or in part without prior notice.

INFINAIR™

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