



TEKSOL
GROUP SOLUTIONS

Ventilation

INFINAIRTM

Product Value Proposition of INFINAIR: Reliable, Convenient, and Novel

At INFINAIR, reliability is paramount, driven by extensive R&D in CFD, FEA, and CAD technologies, and supported by CNAS and AMCA-accredited labs. We continuously invest in processing technology and equipment, enhancing precision and testing. Our certifications, including ISO 9001, ISO 14001, and OHSAS 18001, validate our reliability, with an ISO 9001-compliant system and Six Sigma improvements ensuring quality. INFINAIR offers complete product configurations, quick customization, and flexible lead times, along with innovative products featuring superior performance, convenient installation, low maintenance, and adaptable post-sale service.

Certifications



AMCA Certified



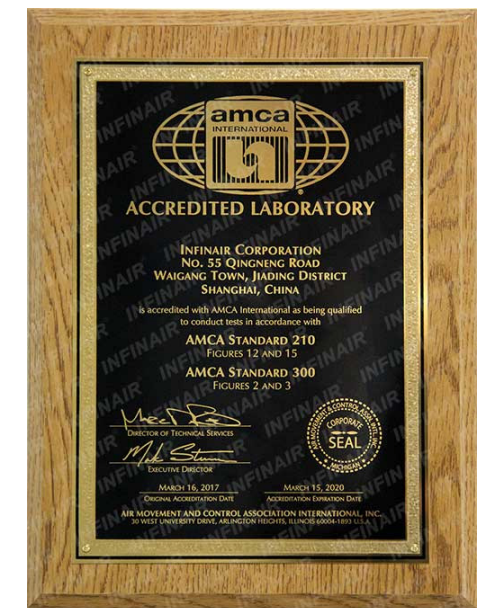
TUV Certified



CE Certified



Explosion proof fan



CNEX Certified



CCCF Certified

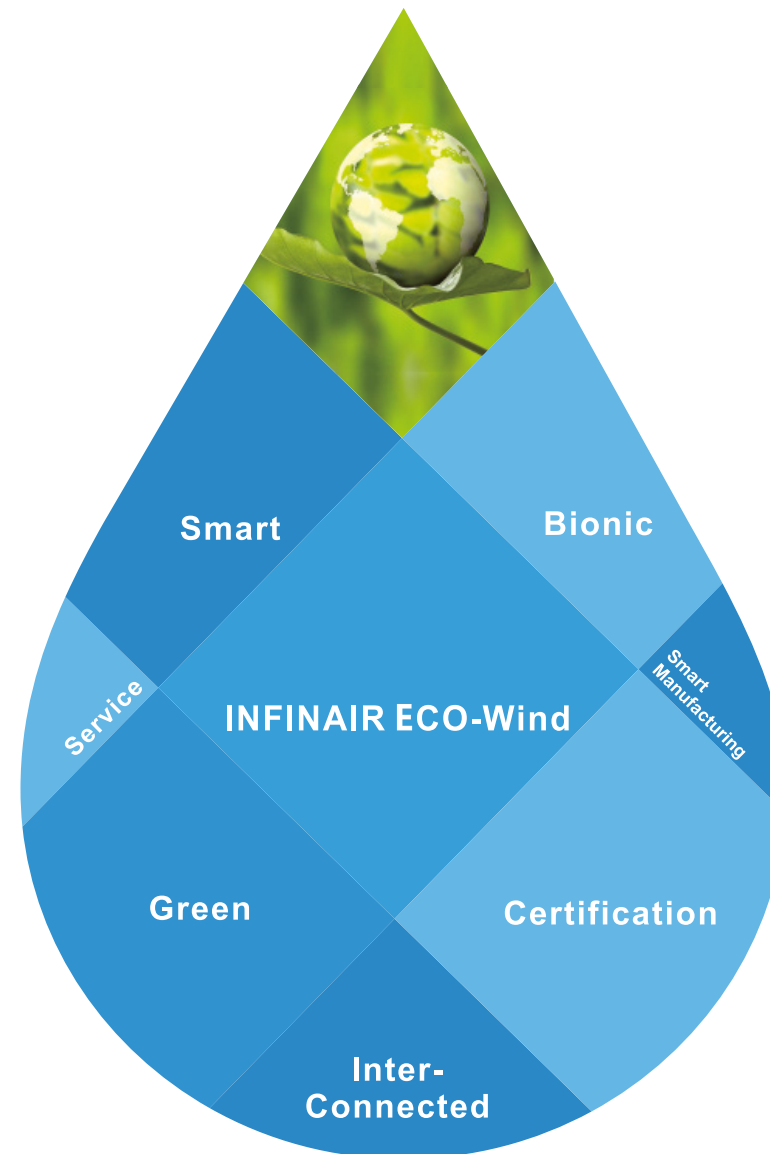


EG Certified



INFINAIR's Intelligent Ventilation Technology

- **Intelligent Adaption:**
We can quickly adapt to changes in the business environment
- **Intelligent Adjustment:**
The combined use of Inverter and permanent magnet synchronous technologies can achieve best results with the use of logic controller
- **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



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 noise 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 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 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
- 6 Σ Systems



Laboratory Introduction

- INFINAIR possesses a testing laboratory of large draft fan, which is China's unique first that passes USA AMCA Certification.
- Following methods are used to increase Infinair aerodynamic laboratory's test accuracy.

- (1) Strictly following AMCA-210 standards to design and fabricate
- (2) Traditional Pitot tube method is replaced by high precision nozzle matrix to increase accuracy.
- (3) State of the art instruments and equipments are widely used in the lab.
- (4) Test instruments are strictly calibrated, the calibration is repeated in time.

The lab assures INFINAIR is capable to test different product design, increase the accuracy and liability of products, and become a good reason why you trust INFINAIR.



High efficiency saves the operation cost greatly

- To adopt optimum aerodynamic characteristics of the wing type vanes
- Smooth the spiral wheel hub to reduce turbulence
- Advanced process reduce clearance of the wheel and cylinder to improve efficiency
- Be equipped with guide vanes of the wheel

High reliability, long service life for long-term operation

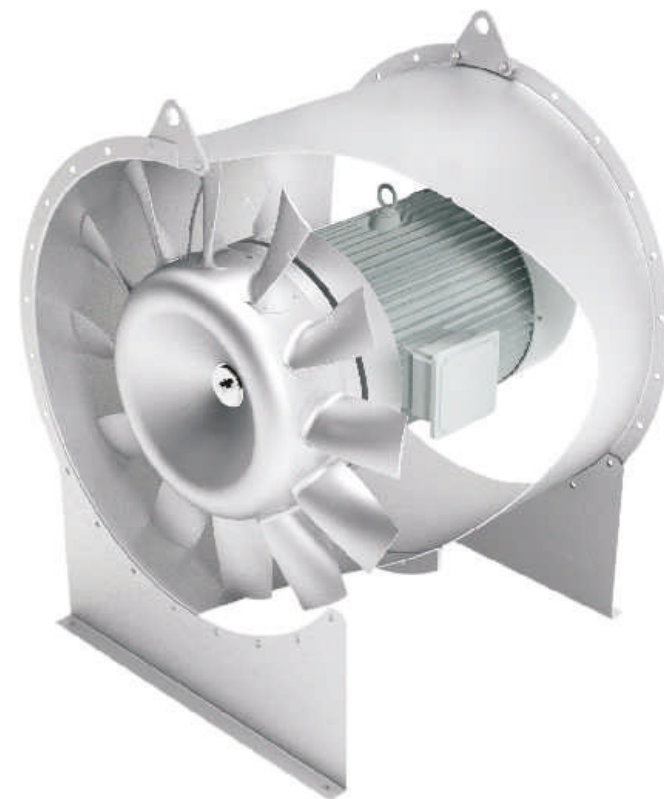
- Optimized design of FEA and experimental verification repeatedly
- Core component adopts casting process to improve the strength
- Mold a molding, high precision and good consistency
- High balancing level makes the running more smoothly

Advantages of direct drive: efficient, maintenance-free

- Higher transmission efficiency
- No wearing parts, low maintenance
- Easier and more effective of maintenance
- Sealed self-lubricating bearing for motor, increasing service life
- Compact design to save installation space

Complete functions

- General air supply& exhaust
- Explosion-proof supply& exhaust
- Positive pressure air supply, Smoke removal duty
- Two-speed supply& exhaust



Convenient and flexible installation

- Floor-mounted: horizontal or vertical
- Ceiling-mounted: horizontal or vertical
- Rooftop: Outdoor roof installation with flag-cloud wind band

INFI-KOAT Molecular Film™, long-lasting coating

- Pickling, phosphating and caustic washing to ensure clean surface
- Electrostatic incorporation of solid powder to obtain uniform coating
- High-adhesion film melt within high temperature furnace
- Resistance to ultraviolet, moisture and marine climate
- Resistance to large area of uniform corrosion and local pitting corrosion





✓ Square casing with multi-discharge, easier to connect

- Square inlet/outlet sleeve flange as standard accessories: round/square conversion duct is not needed
- Duct connection cost reduced, and jobsite working time saved
- Motor can be multi-position
- Multi-discharge: More convenient and flexible for design & construction

✓ Plug fan structure

- Plug fan directly suck air into wheel and pressurize: air flow pattern improved.
- Direct drive no dust generated: suitable for clean rooms of wafer fab, pharmaceutical and food industry.

✓ AMCA Seal: sound and air performance certified

- The sound & air performance is approved by AMCA
- Sound & Air Performance Seal is applied to each fan

✓ Wide performance range and more economic

- 2nd Generation Wind-surfer Centrifugal Wheel: low noise while pressurizing compare with 1st generation
- Maximum wheel diameter is 1 meter, reduce fan quantity and primary investment
- The scroll is saved and the cabinet size is reduced

✓ Centrifugal In-line: obvious advantage in RPM and noise

- Compare with axial/mixed flow fans rotation speed is reduced 20~30%
- The sound pressure level range reduced by 10~15 dB(A)
- Fundamental way to reduce noise





✓ Independent motor chamber: extra long lifetime

- Drive located in an independent chamber, contamination contact free
- Suitable for lubrication grease, kitchen grease, dust and VOC exhaust
- Stable performance and lifetime longer than 10 years

✓ Blade falling resistant, prevent condensation falling into room

- Even if blades break accidentally, blade pieces shall not fall into inside room without safety guard installation.
- Condensation will flow along blade to the outside instead of inside , available in coastal and humid area.

✓ Patented in design, practical & artistic

- Elegant profile design: balanced proportion and sophisticated craftwork.
- Silver white metallic lustre casing: harmonious with different building colors
- Modernize buildings with enhanced taste

✓ Light: suitable for steel structure roofdeck

- Housing and wheel: aluminum alloy material
- Effectively reduce roof load : investment on steel structure is saved

✓ Patented positive cooling technology

- Auxiliary blades suck in air: negative pressure in drive chamber
- Fresh cool air continuously pushing in to drive chamber: cool the motor bearing
- Motor and bearing life extended effectively

✓ Widely applied to needs

- Explosion prevention exhaust, all aluminum construction: Spark A
- Smoke removal application
- Coastal high-salt condensation



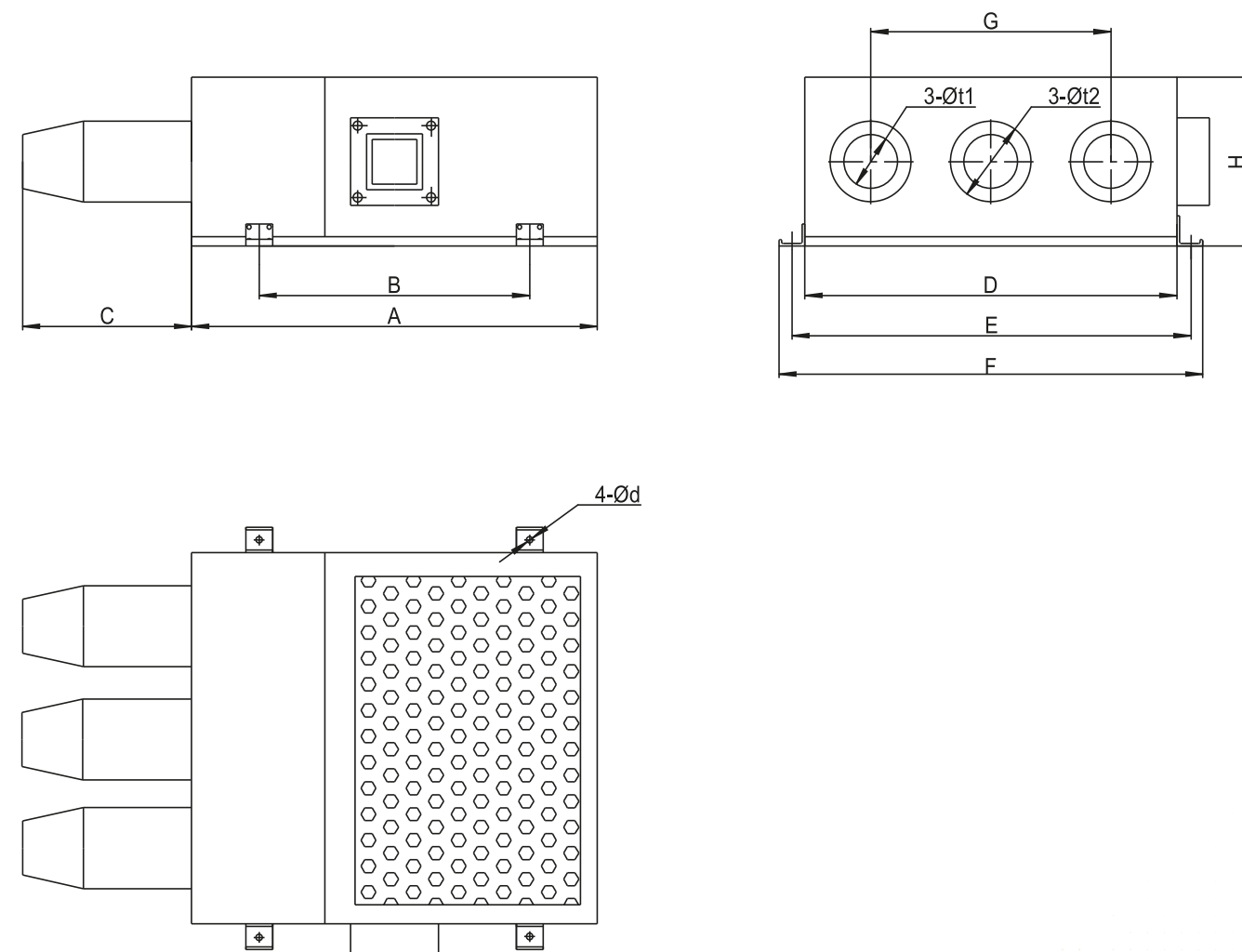


Production Features

- Small volume and light weight for saving mounting space and easy installation, having a special effect of ventilation without ducts for saving cost.
- High efficiency of physically induced airflow, low energy consumption and operating cost.
- Flexible metallic nozzle with adjustable jet angle freely.
- Providing intelligence inducing option for optimizing zone fit ventilation to reduce energy cost and ensure reliability.
- Fan casing is featured in quality galvanized sheet with electrostatic epoxy spraying surface

Technical Data

Model	Speed (rpm)	Thrust Force (N)	Airflow (m ³ /h)	Motor Power (kW)	Voltage (V)	Phase (Ph)	(Hz)	Sound Pressure Level (dB(A))	Outlet Velocity (m/s)	Fan Weight (kg)
YFPIV-B-3	1450	6~11	980~1380	0.12	220	1	50	42	17~24	35



Units : mm

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

Note: Dimension date is for reference only, subject to drawings confirmed by factory.

YFPIJ

Production Features

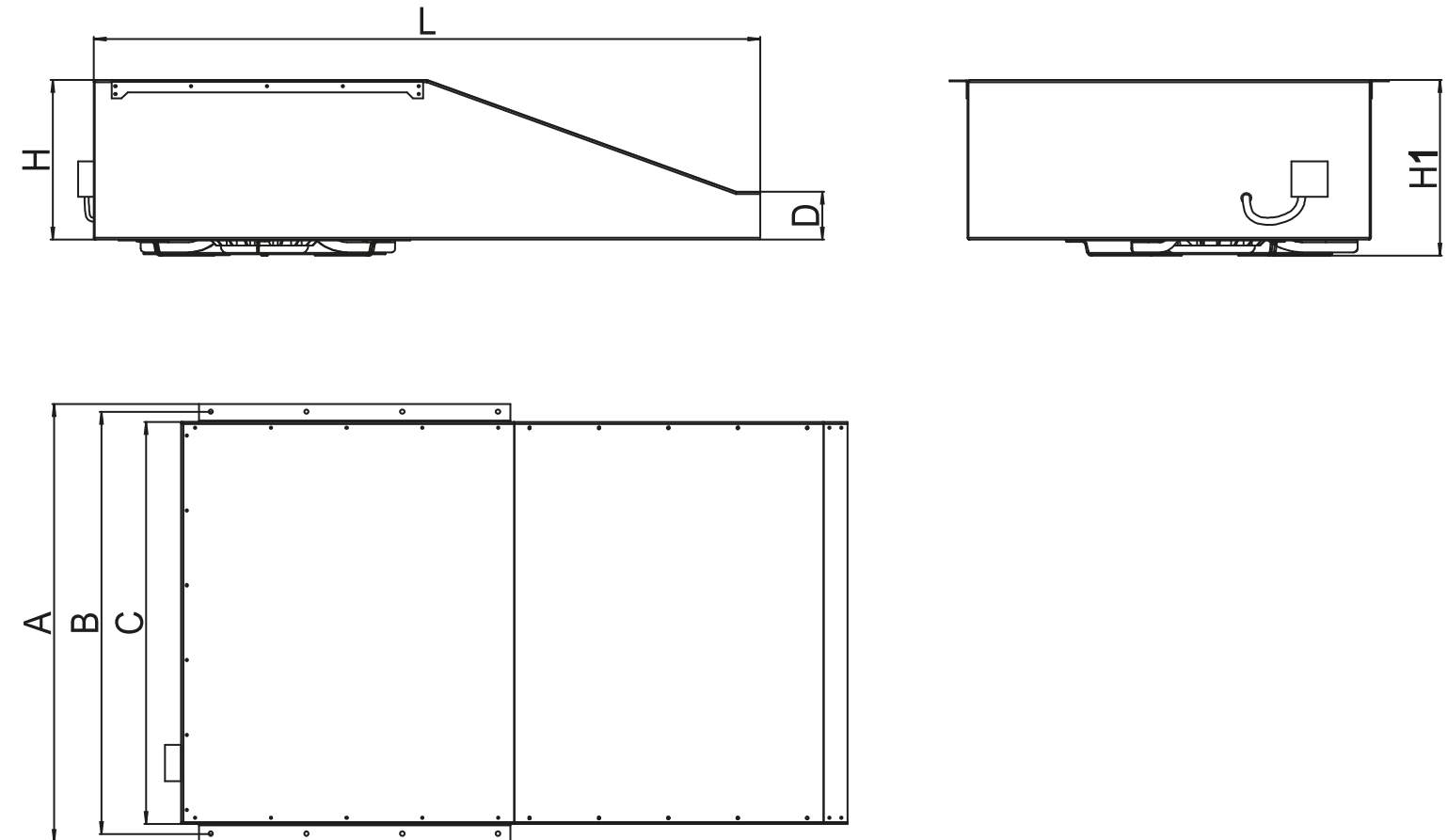
- Compact structure design, low height of fan body, especially suitable for car park with low head room.
- Centrifugal backward curved impeller in quality steel with high efficiency, large volume, long jet distance, low sound level.
- Used for general ventilation and for fire smoke exhaust.
- Operating temperature: General ventilation: -20°C ~ 55°C,
Smoke exhaust system: 200°C /120min,
250 °C/120min, 300°C /60min.
- Motor: All motors are IP55, Class H (optional Class F for general ventilation).

- Fan casing in quality cold-roll steel sheets, with surface in electrostatic spraying epoxy.

- Inlet cone with safeguard to ensure safe working without injuring human.

- (F200 /120min, F250 /120min, F300 /60min)

Certificated by  withstand high temperature test (F200 /120min, F250 /120min, F300 /60min) .



Technical Data

Units : mm

Model	Speed (rpm)	Thrust Force (N)	Airflow (m³/h)	Motor Power (kW)	Voltage (V)	Phase (Ph)	(Hz)	Sound Pressure Level (dB(A))	Outlet Velocity (m/s)	Fan Weight (kg)
YFPIJ-450	1668/828	38/9	5200/2600	1.2/0.3	380	3	60	73/60	22.3/11.2	68
YFPIJ-450	1390/690	26/6	4330/2165	0.75/0.18	380	3	50	71/58	18.6/9.3	68
YFPIJ-500	1680/852	60/15	7250/3625	2.1/0.5	380	3	60	78/63	24.9/12.4	89
YFPIJ-500	1400/710	41/10	6040/3020	1.2/0.3	380	3	50	75/60	20.7/10.4	89
YFPIJ-560	1704/852	106/26	10800/5400	3.5/0.9	380	3	60	84/67	29.7/14.9	102
YFPIJ-560	1420/710	74/18	9000/4500	2.1/0.5	380	3	50	81/65	24.8/12.4	102

Note: The fan weight in the above table does not include that of motor.

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

Note: Dimension date is for reference only, subject to drawings confirmed by factory.

YFPIM

产品特点 Production Features

- Suitable for ventilation in underground car park and entertainment places, decreasing pollution gas concentration for good air quality.
- High efficiency, long jet distance
- Installing silencers at both inlet and outlet ends for low sound pressure level.
- All motors are IP55, Class F, able to work safely and reliably long time under -20°C ~ 55°C.
- Artistic appearance, small dimension, light weight, saving mounting space
- Inherent mounting holder supplied for adjusting mounting angle.

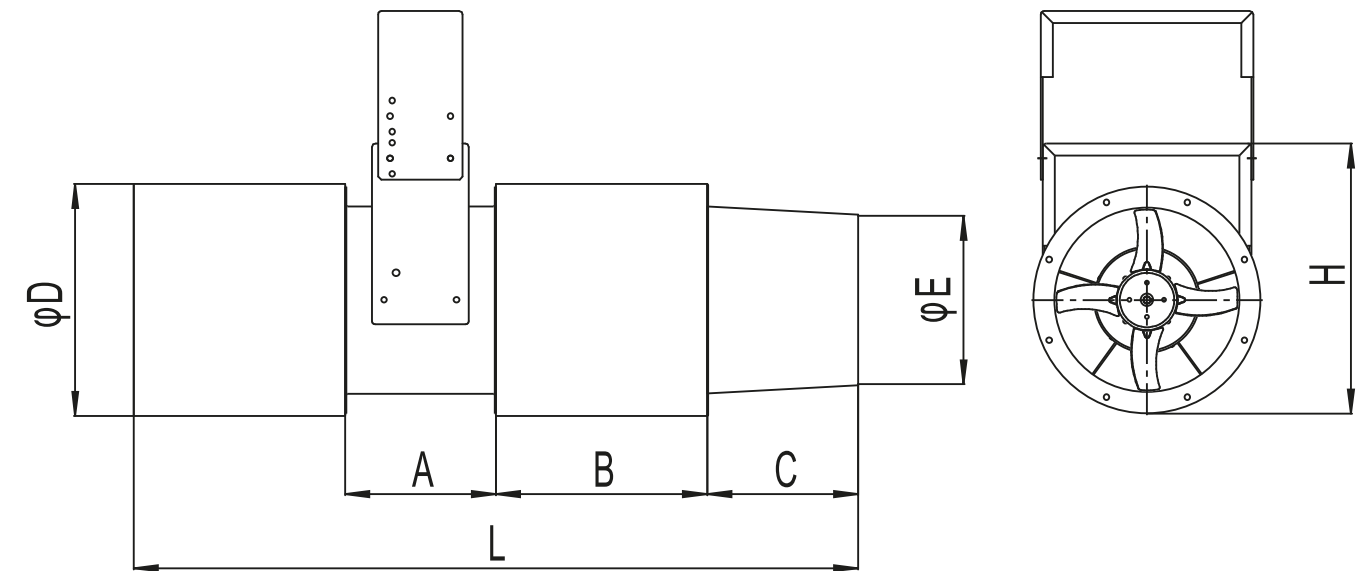


- Inlet cone with safeguard to ensure safe working without injuring human.
- Fans are designed with access door, with electrical parts supplied according to guests.

Technical Data

Model	Speed (rpm)	Thrust Force (N)	Airflow (m³/h)	Motor Power (kW)	Voltage (V)	Phase (Ph)	(Hz)	Sound Pressure Level (dB(A))	Outlet Velocity (m/s)	Fan Weight (kg)
YFPIM-280	3360	13	2500	0.37	220	1	60	62	16.5	40
YFPIM-300	3360	18	3400	0.55	220	1	60	66	16.5	48
YFPIM-350	3360	28	5000	1.1	220	1	60	69	17	65

Notes : Motor frequency is 60Hz above, with optional 50Hz according to requirements of guests.



Units : mm

Model	A	B	C	H	L	φD	φE
YFPIM-280	220	320	220	430	1100	364	230
YFPIM-300	250	350	250	450	1200	385	270
YFPIM-350	300	400	300	500	1400	436	320

Note: Dimension date is for reference only, subject to drawings confirmed by factory.

Fan Installation

YFPIM can be hung or ceiling-mounted. It shall have no obstruction in the distance of 1000mm from inlet and outlet. Rubber cushion shall be used where bolt or screw rod fixed. The fans shall be distributed less than jet range in order to avoid the conflict between the different airstreams. The outlet angle can be adjustable among -15° and +15° upon request.

CUS



Wide Performance Range

- Wheel Diameter: 300~ 1,000 mm
- Wide RPM and performance ranges offering more choices in model selection
- The number of turns adjustable, pulley and motor replaceable: performance range regulated for better adaptability

AMCA Spark Resistant Construction Option

- Supply Spark A and Spark B construction option according to AMCA99-10
- Spark A: Housing is aluminum, wheel and inlet cone are aluminum
- Spark B: Wheel and inlet cone are aluminum

Compact Structure

- Belt drive: AMCA arrangement 10 (motor right under shaft); direct drive: AMCA arrangement 4
- The compact structural design reducing space
- Belt length reduced and belt life extended
- Low center height of scroll leaving more space for duct installation

AMCA Seal: for Sound and Air Performance

- CUS fans certified by AMCA for Sound and Air Performance
- AMCA Seal for Sound and Air Performance tagged on CUS fans

Suitable for Outdoor Installation

- Rain cover available to protect the whole drive unit
- Total protection from sunlight, rain and snow affecting rotating parts
- Fewer impacts from climate factors on the durability and safety of fans

Continuously Welded Housing

- The continuously welded housing has sufficient structural rigidity
- It is more suitable for ventilation of moist air compared with scroll manufactured with lock seam
- The accumulated dropping liquid inside the scroll will not result in leakage
- It is suitable for exhausting air containing condensed water and kitchen fumes



High Efficiency and Dramatically Reduced Operation Costs

- Airfoil blades of optimum air performance
- Vortex hub that smooths the flow of air and reduces turbulence
- Advanced process used to reduce clearance between the impeller and the cylindrical fan body for greater efficiency
- Guide vanes mounted behind the impeller

Great Reliability and Long Service Life Ready for Continuous Operation

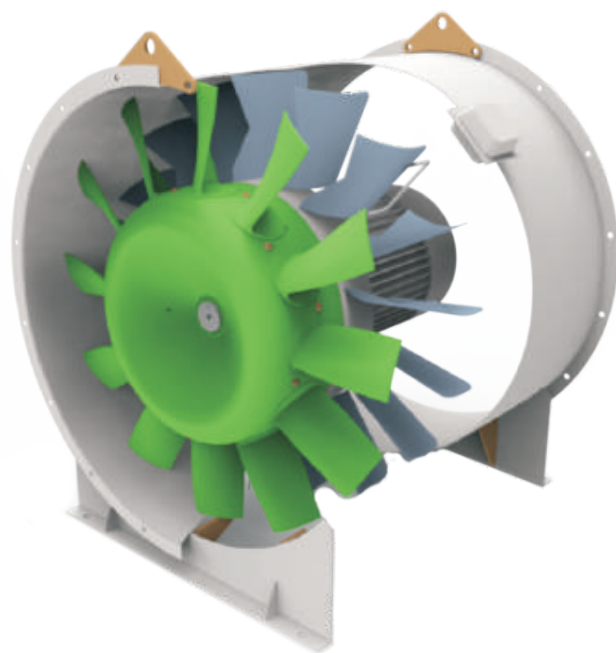
- Optimized design through the FEA method and experimental verification
- Casting process used for core components and high strength achieved
- Die formed for better accuracy and consistency
- Higher balance quality grade and more reliable operation

Direct Driven, Highly Efficient and Maintenance-free

- Airflow delivery of higher efficiency
- No quick wear parts and low maintenance
- Easier and more effective maintenance
- Sealed and lubrication-free motor bearing for longer service life
- Compact design that saves space

INFI-KOAT Modular Film™ Coating, Unfading Over Time

- Pickling, Parkerizing and alkaline wash combined to ensure a clean surface
- Powder adherence through electrostatic attraction to ensure a uniform coating
- Processed in the high temperature furnace for strong adhesion
- Resistant to ultraviolet radiation, moisture and marine climate
- Resistant to uniform corrosion over large areas and localized pitting corrosion



YFMRT - METRO FAN



Airflow Range	10,000 ~ 980,000 m³/h (5,882 ~ 576,471 CFM)
Total Pressure Range	50 ~ 2,300 Pa (0.2 ~ 9.23 in.WG.)
Drive Types	Direct Drive
Mounting Types	Horizontal / Vertical
Applications	1. Metro, Tunnels 2. Construction projects 3. Dams, etc.

Great Reliability

- FEA Optimization: Ensures safety and reliability for emergency smoke removal.
Die-Cast Aluminum Impeller: X-ray tested for quality and safety.
- Dynamic Balancing: Twice balanced for stability and low vibration (ISO G2.5).
Comprehensive Testing: Tested for speed, mechanical performance, vibration, and air performance.

High Efficiency and Low Sound

- Advanced Aerodynamics: Optimized airfoil blades for high efficiency and low noise.
- Streamlined Design: Inlet guard and rear guide vanes enhance flow and reduce sound.

Anti-Surge Patent Design

- Patented Unit: Prevents stall and surge during subway train operations.

Reversible Rotations

- Symmetrical Airfoil Blades: Ensures similar performance in reverse rotations.
- Quick Switching: Reaches rated speed quickly using dynamic braking.

Quality Standards

- Certifications: AMCA design procedure, ISO 9001, ISO 14001, ISO 45001.



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