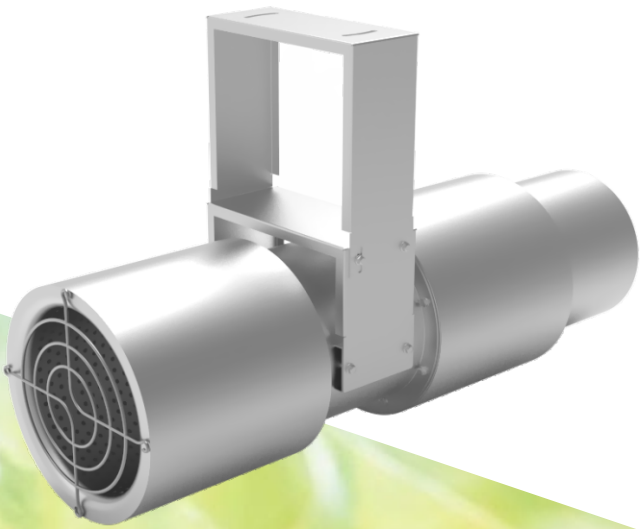
INFINAIR™

YFPIM

Positive Inducing Fan Series M



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.


ACCREDITED LABORATORY

The laboratory of

INFINAIR CORPORATION
NO. 55 QINGNENG ROAD
WAIGANG TOWN, JIADING DISTRICT
SHANGHAI, CHINA

is accredited with AMCA International as being qualified to conduct tests in accordance with

AMCA STANDARD 210
FIGURES 12 AND 15

AMCA STANDARD 300
FIGURES 2 AND 3

DIRECTOR OF TECHNICAL SERVICES

EXECUTIVE DIRECTOR

MARCH 16, 2017
ORIGINAL ACCREDITATION DATE

MARCH 15, 2020
ACCREDITATION EXPIRATION DATE

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.
30 WEST UNIVERSITY DRIVE, ARLINGTON HEIGHTS, ILLINOIS 60004-1893 U.S.A.

Certificate of AMCA (Air Movement and Control


CNAS

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE
(Registration No. CNAS L6341)

Shanghai Nautilus General Equipment Manufacturing Co., Ltd. Laboratory

No.55, Qingneng Road, Waigang, Jiading District, Shanghai, China

is accredited in accordance with ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories/CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule form an integral part of this certificate.

Date of Issue: 2016-10-08
Date of Expiry: 2022-10-07
Date of Initial Accreditation: 2012-08-13

Signed on behalf of China National Accreditation Service for Conformity Assessment

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

INFINAIR's Intelligent Ventilation Technology

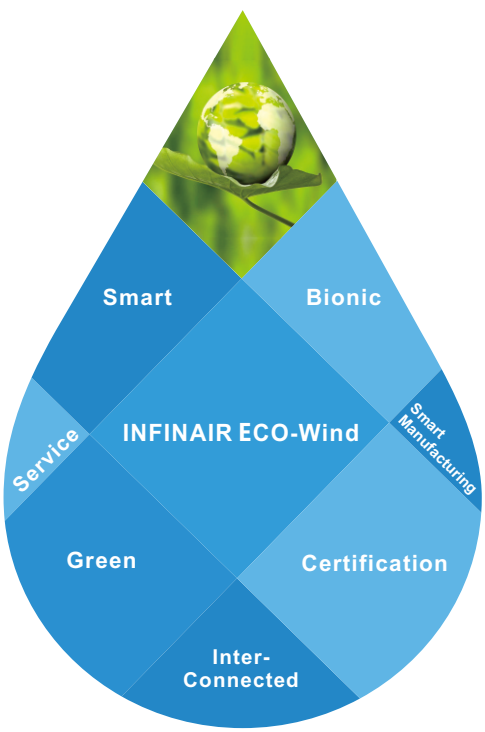
- **Intelligent Adaption:**
  We can quickly adapt to changes in the business environment.
- **Intelligent Adjustment :**
  The use of inverter or EC smart control technology can make the fans achieve best results under the control of the intelligent speed regulation system.
- **Intelligent Real-time 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**



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
- 6ΣSystems

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

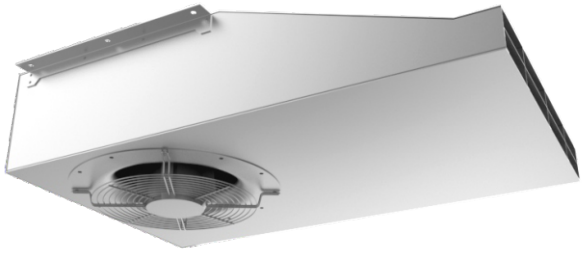
Certifications and Tests

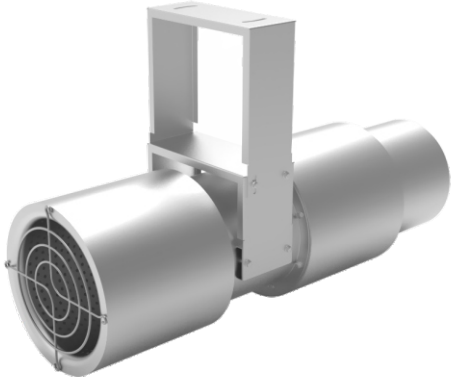
- **Most of the products are certificated by:**
  CCCf, AMCA, TUV, CE, ATEX, UL, RoHS and ErP2015.
- **Performance and Reliability Tests:**
  Airflow, Air Pressure, Power, Sound Level, Temperature Durability, Salt Spray and Water Proof Test, etc.

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	

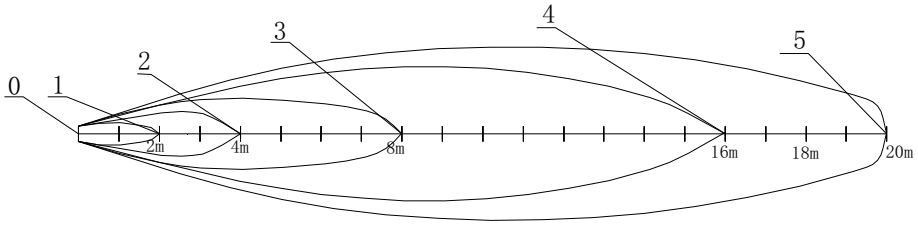
Applications

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 regionallinkage

Discharge velocity decrement



0=18m/s 1=9m/s 2=4.5m/s 3=2.25m/s 4=1.13m/s 5=0.6m/s

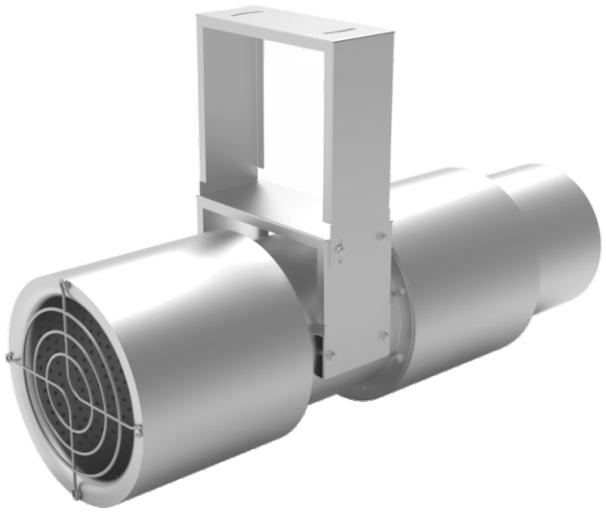
Underground car parks

Underground entertainment venues

Large areas with certain parts polluted

Intelligent inducing ventilation that features regional linkage

Positive Inducing Fans Series M



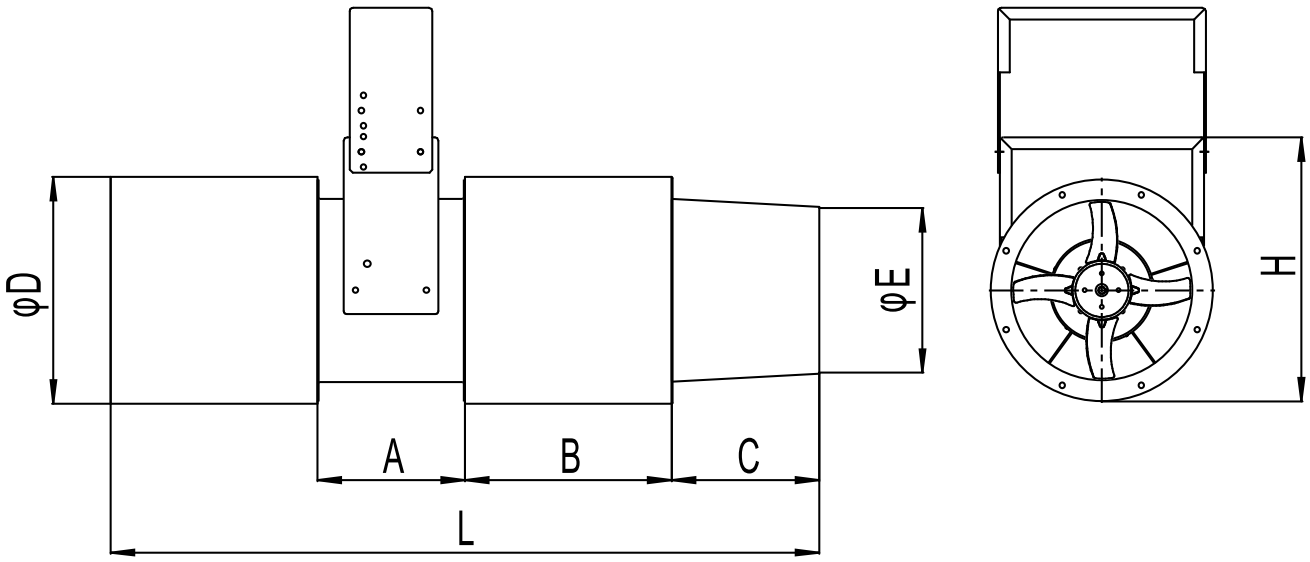
Product Features

- Suitable for ventilation in underground car parks and entertainment venues to reduce waste gas concentration and improve air quality.
- Greater efficiency and long discharge distance.
- Silencers fitted at both inlet and outlet for extremely low sound level.
- IP54 rated with Class F insulation, able to maintain safe and reliable operation over a long period of time under -20℃ ~ 55℃.
- Aesthetically pleasing, small-size, light-weight and space-saving.
- Easy installation with mounting brackets supplied and mounting angles adjustable.
- Air inlet mounted with safety guard to ensure safe working conditions.

Technical Parameters

Model	Speed (rpm)	Thrust (N)	Airflow (m^3/h)	Motor Power (kW)	Volt/Hz/Ph (V / Hz / Ph)	Sound Pressure Level (dB(A))	Outlet Velocity (m/s)	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

Outline Dimensions



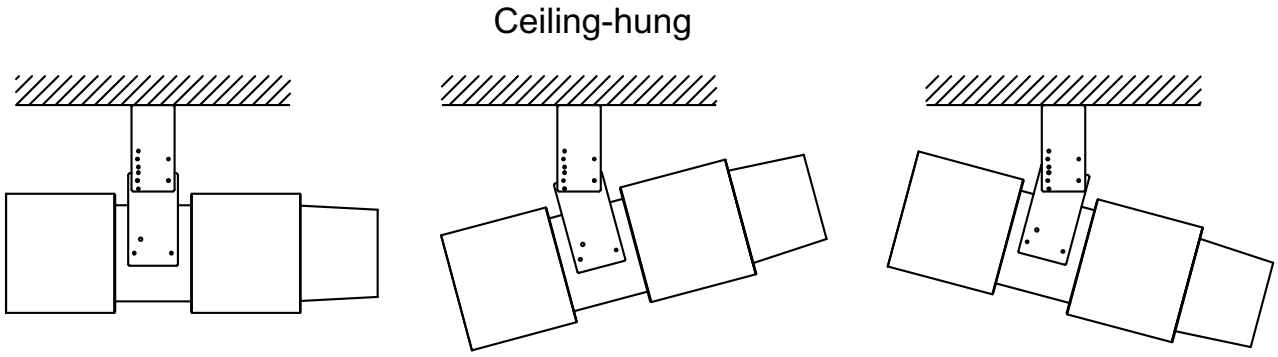
Unit : mm

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

Fan Installation

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.

Mounting Types



Intelligent Control Principles of Positive Inducing Fans Series M

- Intelligent positive inducing fans have control knobs in automatic and manual modes.

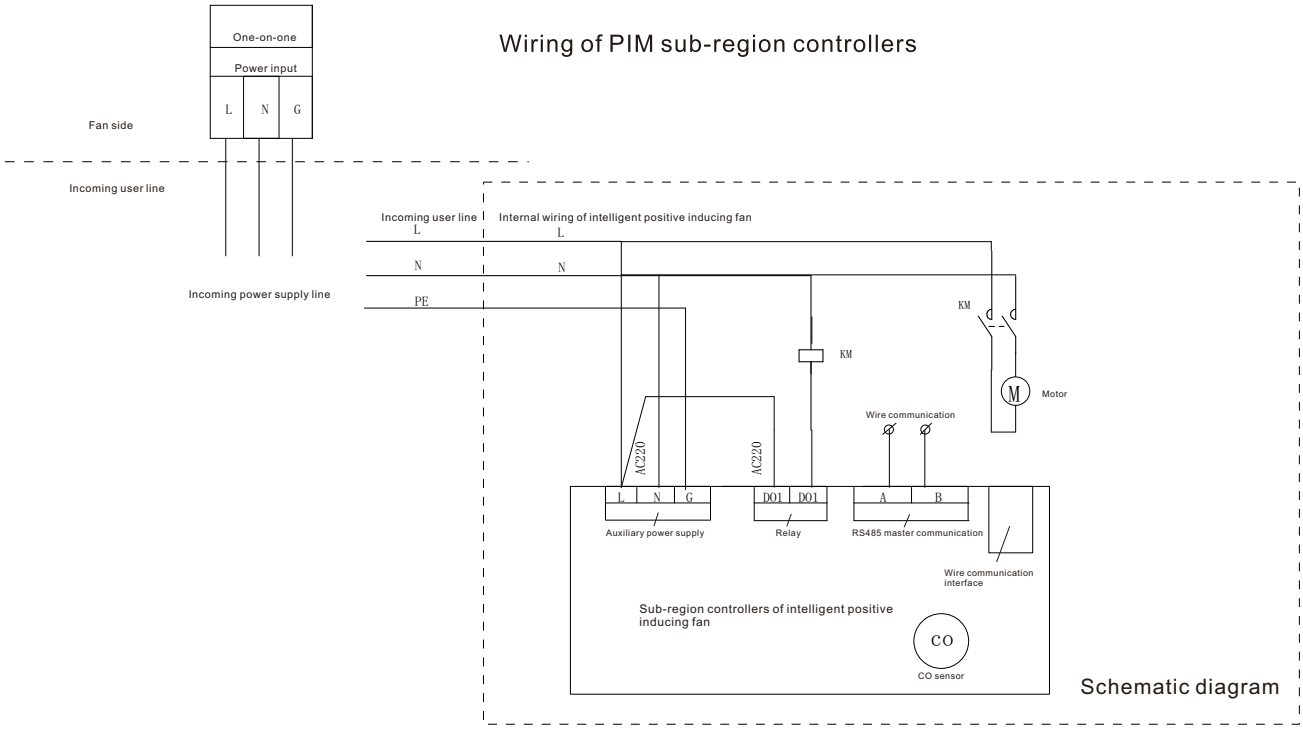
When the knob is in the automatic mode, the system is controlled as below:

- Inside each intelligent positive inducing fan, there is a sensitive waste gas concentration detector. Upon detection of a carbon monoxide (CO) concentration of 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.

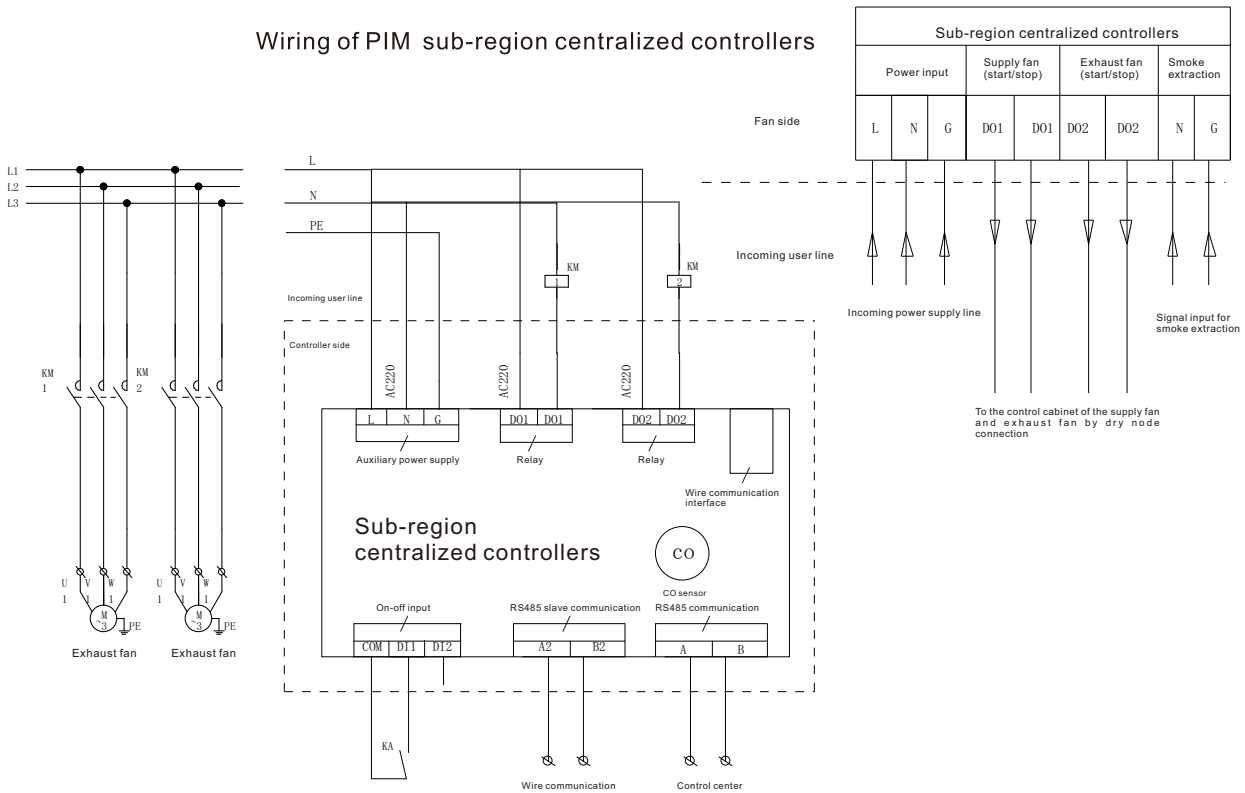
- The power of ordinary positive inducing fans is provided by the linked intelligent positive inducing fan in the same region that also controls their start and stop.

- 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.

Wiring of PIM sub-region controllers



Wiring of PIM sub-region centralized controllers



YFPIM Technical Specification

- Fan Type

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.

- Fan Housing

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.

- Silencers

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.

- Surface Processing

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.

- Motor

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.

- Nozzle

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

- 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 YFPIM models of ***INFINAIR***® .

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INFINAIR™

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