YFIMF
High Performance Mixed Flow Fan

- Patented "Wind Hunter" series mixed flow wheel. Its front disc and venture are carefully designed.
- The mixed flow wheel is utilized to deliver maximum efficiently and low sound levels.
- Heavy-gauge, continuously welded wheel.
- Certified by various certification bodies: AMCA, CCC, CNEX, TUV.
- The wheel is statically and dynamically balanced to G2.5 per AMCA 204.
INFINAIR is an innovative company which provides environmental and intelligence solutions for all aspects of ventilation systems in both private and public sector. They have been INFINAIR’s core values and commitments to our customers over the years.

Established: September, 2003
Area : 33,000m²
Company Address: 55 Qingneng Road, Waigang Town, 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, Jinlin, Liaoning, Tianjin, Shanxi, Henan, Shandong, Jiangsu, Anhui, Zhejiang, Fujian, Chongqing, Sichuan, Hunan, Hubei, Guangdong, Guangxi, Hainan, Guizhou and Xinjiang.

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.

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.

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 millennia. We have learnt how energy and sound are being able to conserve from their amazing changes.

Awards and Achievements:
- Renowned Shanghai trademark: INFINAIR®
- Famous Shanghai brand name
- SGS ISO9001, ISO14001, OHSAS18001 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.

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

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

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 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.

Certifications and Testing
- **Most of the products are certificated by:** CCC, AMCA, TUV, UL, RoSH and Epo2015
- **Performance and Reliability Testing:**
  - Air Volume, Air Pressure, Power, Noise Level, Temperature Deviation, Corrosion and Water Proof Test, etc.
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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 Sigma Systems

INFINAIR’s Intelligent Fabrication Technology
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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.
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- Performance and Reliability Testing: Air Volume, Air Pressure, Power, Noise Level, Temperature Deviation, Corrosion and Water Proof Test, etc.
“Wind Hunter” series Mixed Flow Impeller

Brand New Impeller Design
The inlet bell and the shroud cover are precisely connected, minimizing the backflow and leakage caused by pressure difference.

Advanced Design
Unique airflow characteristics. Our engineers have repeatedly optimized the wheel with countless CFD simulations.

Advanced Fabrication
The wheel and other fixtures are made from a special designed mold and are continuously welded. Ensuring maximum strength is maintained.

High Balancing Level
The balancing level of the wheel is up to G2.5 (AMCA 204) which is much higher than the standard G6.3 required internationally. Stability is greatly increased thus lowering the vibrations and noise.

Lowest Noise Level
The YFIMF has the lowest noise level over the axial and the centrifugal fan.

Product Characteristics

Performance Characteristics
The mixed flow fan has larger air volume over the centrifugal fan and higher air pressure over the axial fan. When placing them under the same working conditions, the mixed flow fan has more advantages over the others in terms of performance and noise level.

High Efficiency
The design of the wheel and guide vane has been repeatedly optimized to assure high efficiency, leakage free and low turbulence.

The models IMF shown herein are licensed to bear the AMCA seal and rating 1 of China Energy Label.

Better Sound Proofing
The noise of the mixed flow fan is determined by its structural design and changes in acoustical power (see fig. below). The noise generated in each air volume segment is much lower than the axial and centrifugal fan with low acoustical level (62.5-250Hz).

Features and Technical Specifications
- Static pressure: 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 112.5, 125, 250, 500, 1000, 2000, 4000, 8000, 16000, 32000 m³/h
- Noise level: 62.5, 125, 250, 500, 1000, 2000, 4000, 8000, 16000, 32000 Hz
Brand New Impeller Design
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Flexible Direct or Belt Driven Option

Direct driven type has six different blade angles available for selection. A solid low maintenance product designed for delivering efficient air flow.

Belt driven type has effective blade angle. Since the motor is located outside, maintenance work or replacement can be carried out easily.

Comprehensive Functionality

It can be used in normal air delivery, explosion resistant, fire & smoke or static-free application.

Patent and Certifications

![Certificate Images]

**Model Number Code**

YFIMF – 710D8/32 – 0.55 – SR

- Application Types:
  - GT: General use
  - SR: Fire & Smoke
  - EX: Explosion proof

- Product Name: YFIMF
- Wheel Diameter: 710mm
- Motor Power: 0.55kW
- Drive Type:
  - D: Direct driven
  - B: Belt Driven

- Pole number of a motor: 8
- Blade angle for direct driven: 32

**Optional Accessories**

- **Rain Cover (Belt Driven type only)**
  For outdoor use only. The rain cover is epoxy coated. It can effectively prevent water from getting inside and is able to reduce noise generated from the motor efficiently.

- **Service Switch**
  It is designed like a master switch for shutting off all power when necessary.

- **Vibration Isolators**
  Rubber or spring vibration isolator. It can either be base-mounted or ceiling hung.

- **Flexible Connector and Companion Flange**
  Inlet/outlet flexible connector and companion flange. Provide handy solution for on-site installation.

- **Inlet/Outlet Guard**
  Prevent accidental injuries while the fan is in operation.

- **Totally Closed Belt Guard**
  Prevent accidental injuries while the fan is in operation.

- **Colors**
  Different color coating can be selected according to customer’s installation requirement.

- **AMCA Sound and Air Movement certificate**
- **CNEX China explosion resistant certificate**
- **CCCf China Compulsory certificate**
- **TUV SUD Fire & Smoke certificate**
- **CNEX China explosion resistant certificate**
Flexible Direct or Belt Driven Option

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Application Types:
- GT- General use
- SR- Fire & Smoke
- EX- Explosion proof

Motor Power: 0.55kW

Drive Type:
- D- Direct driven
- B- Belt Drive (omitted by default)
- 8- Pole number of a motor
- 32- Blade angle for direct drive

Optional Accessories

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## Dimension and weight

### YFIMF-400~500 Base-mounted (belt drive)

<table>
<thead>
<tr>
<th>Model</th>
<th>φ₁ (mm)</th>
<th>φ₂ (mm)</th>
<th>φ₃ (mm)</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>D (mm)</th>
<th>E (mm)</th>
<th>F (mm)</th>
<th>H(max) (mm)</th>
<th>n - φd₁</th>
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<th>weight (kg)</th>
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### YFIMF-560~1250 Base-mounted (belt drive)

<table>
<thead>
<tr>
<th>Model</th>
<th>φ₁ (mm)</th>
<th>φ₂ (mm)</th>
<th>φ₃ (mm)</th>
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Note: 1. Dimensions provided are for reference only and may differ from the actual drawings.
2. The above weight of the fan does not include motor.

### YFIMF-400~500 Ceiling hung (belt-drive)

<table>
<thead>
<tr>
<th>Model</th>
<th>φ₁ (mm)</th>
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<th>φ₃ (mm)</th>
<th>A (mm)</th>
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### Dimension and Weight

#### YFIMF-400~500

**Base-mounted (belt driven)**

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<tr>
<th>Model</th>
<th>Size</th>
<th>φ₁</th>
<th>φ₂</th>
<th>φ₃</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>H(max)</th>
<th>n - φ₁d₁</th>
<th>m - φ₁d₂</th>
<th>weight (kg)</th>
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#### YFIMF-560~1250

**Base-mounted (belt driven)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
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<th>F</th>
<th>H(max)</th>
<th>n - φ₁d₁</th>
<th>m - φ₁d₂</th>
<th>weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YFIMF-560</td>
<td>560</td>
<td>560</td>
<td>1120</td>
<td>1620</td>
<td>2120</td>
<td>2620</td>
<td>3120</td>
<td>3620</td>
<td>4120</td>
<td>4620</td>
<td>512</td>
<td>12 - φ₁2</td>
<td>4 - φ₁18</td>
<td>182</td>
</tr>
<tr>
<td>YFIMF-565</td>
<td>565</td>
<td>565</td>
<td>1130</td>
<td>1630</td>
<td>2130</td>
<td>2630</td>
<td>3130</td>
<td>3630</td>
<td>4130</td>
<td>4630</td>
<td>513</td>
<td>12 - φ₁2</td>
<td>4 - φ₁18</td>
<td>190</td>
</tr>
<tr>
<td>YFIMF-570</td>
<td>570</td>
<td>570</td>
<td>1140</td>
<td>1640</td>
<td>2140</td>
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<td>4640</td>
<td>514</td>
<td>12 - φ₁2</td>
<td>4 - φ₁18</td>
<td>196</td>
</tr>
</tbody>
</table>

#### YFIMF-400~500

**Ceiling hung (belt-drive)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>φ₁</th>
<th>φ₂</th>
<th>φ₃</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>H(max)</th>
<th>n - φ₁d₁</th>
<th>m - φ₁d₂</th>
<th>weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YFIMF-400</td>
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<td>400</td>
<td>800</td>
<td>1200</td>
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<td>2000</td>
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<td>2800</td>
<td>3200</td>
<td>3600</td>
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<td>8 - φ₁2</td>
<td>4 - φ₁18</td>
<td>72</td>
</tr>
<tr>
<td>YFIMF-405</td>
<td>405</td>
<td>405</td>
<td>810</td>
<td>1210</td>
<td>1610</td>
<td>2010</td>
<td>2410</td>
<td>2810</td>
<td>3210</td>
<td>3610</td>
<td>401</td>
<td>8 - φ₁2</td>
<td>4 - φ₁18</td>
<td>77</td>
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<tr>
<td>YFIMF-410</td>
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<td>410</td>
<td>820</td>
<td>1220</td>
<td>1620</td>
<td>2020</td>
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<td>3620</td>
<td>402</td>
<td>8 - φ₁2</td>
<td>4 - φ₁18</td>
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</table>

#### YFIMF-560~1250

**Ceiling hung (belt-drive)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>φ₁</th>
<th>φ₂</th>
<th>φ₃</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>H(max)</th>
<th>n - φ₁d₁</th>
<th>m - φ₁d₂</th>
<th>weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YFIMF-560</td>
<td>560</td>
<td>560</td>
<td>1120</td>
<td>1620</td>
<td>2120</td>
<td>2620</td>
<td>3120</td>
<td>3620</td>
<td>4120</td>
<td>4620</td>
<td>512</td>
<td>12 - φ₁2</td>
<td>4 - φ₁18</td>
<td>72</td>
</tr>
<tr>
<td>YFIMF-565</td>
<td>565</td>
<td>565</td>
<td>1130</td>
<td>1630</td>
<td>2130</td>
<td>2630</td>
<td>3130</td>
<td>3630</td>
<td>4130</td>
<td>4630</td>
<td>513</td>
<td>12 - φ₁2</td>
<td>4 - φ₁18</td>
<td>80</td>
</tr>
</tbody>
</table>

Note: 1. Dimensions provided are for reference only and may differ from the actual drawings.
2. Above weight of the fan does not include motor.

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[www.infinair.com](http://www.infinair.com)
YFIMF-400~500D Dimension (Direct-driven)

YFIMF-560~1120D Dimension (Direct-drive)

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**Technical Specifications**

**YFIMF Technical Specifications (Belt-Driven Type)**

**Fan Type**

Fan type shall be inline mixed flow fan, belt driven.

**Quality Standards**

The fan performance shall be tested in accordance with AMCA Publications 210 and 300 in an AMCA accredited laboratory and certified for air and sound performance. Fans shall be licensed to bear the AMCA ratings seal for air performance (AMCA 210) and sound performance (AMCA 300). Manufacturer shall earn the national manufacturing license together with internationally recognized Quality Management System (ISO 9001) standard.

**Impeller**

Multiple blade angles shall be available to suit various operating environments. The wheel shall contain a shroud cover and a hemispherical back plate. It shall reach the static and dynamic balancing level of G2.5 per AMCA 204 standard. The wheel and fan inlet shall be carefully matched and shall have precise running tolerances for maximum performance and operating efficiency.

**Inlet**

The surface of the aerodynamically designed inlet shall be streamlined and smoothed to ensure the most economical air performance can be achieved. It shall improve the fan efficiency while reducing turbulence and noise.

**Hub**

3D curved steel guide vanes shall be aerodynamically placed within the hub to minimize turbulence and aid in recovering the rotating energy imparted to the air. The hub shall be able to improve the air performance and static pressure efficiency.

**Surface Coating**

The surface of the fan shall be cleaned thoroughly, free of cracks and finished with electrostatic epoxy coating. No uncoated fan parts shall be allowed.

**Belt Driven Type**

The material of the fan shaft shall be 40Cr steel with the hardness level between HB250-280. Its maximum loading shall be 25% larger than the maximum RPM of the fan.

**Wheel**

The wheel shall be mixed flow design. The wheel shall be dynamically balanced to G2.5 per AMCA standard. It shall be fabricated with continuously welded steel foli.
YFIMF Technical Specifications (Belt-Driven Type)

**Fan Type**
Fan type shall be inline mixed flow fan, belt driven.

**Quality Standards**
The fan performance shall be tested in accordance with AMCA Publications 210 and 300 in an AMCA-accredited laboratory and certified for air and sound performance. Fans shall be licensed to bear the AMCA ratings seal for air performance (AMCA 210) and sound performance (AMCA 300). Manufacturer shall own the national manufacturing license together with internationally recognized Quality Management System (ISO 9001) standard.

**Impeller**
Multiple blade angles shall be available to suit various operating environment. The wheel shall contain a shroud cover and a hemispherical back plate. It shall reach the static and dynamic balancing level of G2.5 per AMCA 204 standard. The wheel and fan inlet shall be carefully matched and shall have precise running tolerances for maximum performance and operating efficiency.

**Inlet**
The surface of the aerodynamically designed inlet shall be streamlined and smoothed to ensure the most economical air performance can be achieved. It shall improve the fan efficiency while reducing turbulence and noise.

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3D curved steel guide vanes shall be aerodynamically placed within the hub to minimize turbulence and aid in recover the rotating energy imparted to the air. The hub shall be able to improve the air performance and static pressure efficiency.

**Surface Coating**
The surface of the fan shall be cleaned thoroughly, free of cracks and finished with electrostatic epoxy coating. No uncoated fan parts shall be allowed.

**Belt Drive Type**

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Number of Blade</th>
<th>Hub Material</th>
<th>Hub Shaft</th>
<th>Shaft Material</th>
<th>Shaft Diameter (mm)</th>
<th>Shaft Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YFIMF-560-1120D</td>
<td>3D</td>
<td>4</td>
<td>40Cr</td>
<td>40Cr</td>
<td>40Cr</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>YFIMF-600-1120D</td>
<td>3D</td>
<td>4</td>
<td>40Cr</td>
<td>40Cr</td>
<td>40Cr</td>
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<td>8.5</td>
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<tr>
<td>YFIMF-640-1120D</td>
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<td>40Cr</td>
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<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>YFIMF-680-1120D</td>
<td>3D</td>
<td>4</td>
<td>40Cr</td>
<td>40Cr</td>
<td>40Cr</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>YFIMF-720-1120D</td>
<td>3D</td>
<td>4</td>
<td>40Cr</td>
<td>40Cr</td>
<td>40Cr</td>
<td>8.5</td>
<td>8.5</td>
</tr>
</tbody>
</table>

**Belt**
The pulleys shall be iron casted to provide long life and durability. They shall be factory set to the required RPM and adjustable for final system balancing. Drive belts and pulleys shall be sized for 100% of the fan operating brake horsepower, and shall be readily and easily accessible for service, if required.

**Motor Base**
After fabrication, the steel made base shall be cleaned and remove all grease, oil, scale, etc. It shall then be finished with powder coating to prevent corrosion.

**Belt Drive**
It shall be semi-closed belt guard to prevent injuries. It shall be designed to allow easy access to the belt and pulleys for servicing.

**Motor**
The B3 Motor shall be carefully matched to the fan load. It shall be mounted out of the airstream. It shall be IP44 dust and water protection class; insulation class shall be F and temperature tolerance shall be class B. It shall be equipped with electrostatic epoxy coated rain cover for outdoor operation.

**Optional Accessories**
Spark Resistant (Options)
Spark-resistant designs shall be available for applications that involve flammable gases. The fan shall be constructed per AMCA 99 Type C.

**Fire and Smoke Certification**
(Fire & Smoke Extraction & Control only)
It shall pass the tests as described in the TUV SUD certification requirements for fire & smoke removal duty which it shall maintain normal operation for 120 minutes under the temperature of 300°C.

**Nameplate**
A permanent nameplate shall be mounted onto the fan with its serial number (a unique number for each machine), model number and product number clearly engraved on it.
YFIMF Technical Specifications (Direct-Drive Type)

Fan Type
Fan type shall be inline mixed flow fan, direct driven.

Quality Standards
The fan performance shall be tested in accordance with AMCA Publications 210 and 300 in an AMCA accredited laboratory and certified for air and sound performance. Fans shall be licensed to bear the AMCA ratings seal for air performance (AMCA 210) and sound performance (AMCA 300). Manufacturer shall own the national manufacturing license together with internationally recognized Quality Management System (ISO 9001) standard.

Impeller
Multiple blade angles shall be available to suit various operating environment. The wheel shall contain a shroud cover and a hemispherical back plate. It shall reach the static and dynamic balancing level of G2.5 per AMCA 204 standard. The wheel and fan inlet shall be carefully matched and shall have precise running tolerances for maximum performance and operating efficiency.

Inlet
The surface of the aerodynamically designed inlet shall be streamlined and smoothed to ensure the most economical air performance can be achieved. It shall improve the fan efficiency while reducing turbulence and noise.

Hub
3D curved steel guide vanes shall be aerodynamically placed within the hub to minimize turbulence and aid in recovering the rotating energy imparted to the air. The hub shall be able to improve the air performance and static pressure efficiency.

Surface Coating
The surface of the fan shall be cleaned thoroughly, free of cracks and finished with electrostatic epoxy coating. No uncoated fan parts shall be allowed.

Motor
The B3 Motor shall be carefully matched to the fan load. It shall be mounted out of the airstream. It shall be IP54 dust and water protection class; insulation class shall be F and temperature tolerance class B. It shall be equipped with electrostatic epoxy coated rain cover for outdoor operation. Since the motor is inside the housing, manufacturer shall provide wiring connection box. It shall be made according to the operation conditions of the fan.

Optional Accessories
Fire and Smoke Certification
(Fire & Smoke Extraction & Control only)
It shall pass the tests as described in the TUV SUD certification requirements for fire & smoke removal duty where it shall maintain normal operation for 120 minutes under the temperature of 300°C.

Nameplate
A permanent nameplate shall be mounted onto the fan with its serial number (a unique number for each machine), model number and product number clearly engraved on it.
High Performance Mixed Flow Fan

- Patented "Wind Hunter" series mixed flow wheel. Its front disc and venture are carefully designed for maximum efficiency and low sound levels.
- The mixed flow wheel is utilized to deliver maximum efficiency and low sound levels.
- Heavy-gauge, continuously welded wheel.
- Certified by various certification bodies: AMCA, CCC, CNEX, TUV.
- The wheel is statically and dynamically balanced to G2.5 per AMCA 204.