INFINAIR FANS
IS IT RELIABLE? OF COURSE! WE ARE INFINAIR FANS, ARE YOU?

INFINAIR CORPORATION
Add: No. 55 Qingneng Road, Waigang Town, Jiading District, Shanghai
P.C.: 201806
Tel: 86 21 39185688 EXT-6896
After-sale service Tel.: 400 821 3316
Http: //www.infinair.com

INFINAIR ARABIA COMPANY LTD. certifies that the Centrifugal Inline Square (ISQ) shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

UL 705-2017 Listed Fans
High Quality Products
Aluminum Construction
Less Sound
Quiet Operation
Low Power Consumption

ISO Certified Factory

INFINAIR ARABIA CO. LTD.

INFINAIR FANS
Inline Square Centrifugal Fan
Sizes 300 mm - 1000 mm

UL Listed Fans
Standard UL 705/2017

Inline Square Centrifugal Fans

INFINAIR ARABIA COMPANY LTD.
INFINAIR ARABIA would like to express their thanks to all of you that you have selected INFINAIR products. INFINAIR products have been exported to many countries all over the world. INFINAIR is always looking to satisfy the customers in all levels by providing high quality fans. The fans engineering designs include a lot of solutions that maintain high performance, less power consumption, low noise and high efficiency rate. INFINAIR is very interested in Quality Management ISO 9001 and Health and Safety Management ISO 14001 and ISO 45001. We believe that management is the base to develop our products. INFINAIR has qualified engineers and designers to support customers before and after the orders. We have many training programs for the customers & consultants that enable them to get valuable information about Fans Engineering. INFINAIR has many departments to support their customers: Sales, Application, Engineering, Production, Quality and Service to make sure the products specifications are followed as per customers needs.
INFINAIR ARABIA COMPANY LTD has considered the certifications and accreditation at first priority to make sure that customers will buy a safe product, high quality air performance and finishing. INFINAIR has done many steps toward success for help all kinds of customers in Middle East and North Africa (MENA). All INFINAIR products are under warranty for 18 months of delivery date. If customers would join Warranty extended program for 2 years or 5 years that is also possible.
Smart Needs Identification:
It can dynamically adjust the operation target to the changing load and 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 Intelligent Ventilation Technology

INFINAIR’s Intelligent Fabrication

INFINAIR’s Bionic Technology

INFINAIR’s Intelligent Fabrication

INFINAIR’s Bionic Technology

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 Enterprise
Renowned trademark: INFINAIR
SGS ISO 9001; ISO 14001 and ISO 45001 Management Certificates

INFINAIR ARABIA CO. LTD is the first company in Kingdom of Jordan for producing ventilation industries accustomed in fans production for HVAC objectives and Industrial purposes. It has been founded by the worldwide INFINAIR CORPORATION that has been established in 2003. INFINAIR is a high technology brand. INFINAIR ARABIA is targeting to keep providing very high technology product, new solutions to the market, high energy saving fans, fast delivery to MENA, customer care, service after sales, new innovation ideas help customers to pay less cost with best solutions.

Factory Address: Kingdom of Jordan, Amman, Mowaqqar Free Zone
Sales & Service Office:
INFINAIR ARABIA CO. LTD Sales offices are covering GCC and Africa:
- Jordan Sales Head Office and Technical Support - Amman
- Saudi Arabia, United Arab Emirate, Bahrain, Oman, Qatar and Iraq

Company Vision:
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Control Association (AMCA) accredited laboratory in our Head Quarter in PRC. Most of the INFINAIR’s products are tested and certified by many international certification bodies. The Strength of INFINAIR ARABIA comes from a strong JV with INFINAIR CORPORATION.

INFINAIR’s Intelligent Ventilation Technology

- Smart Needs Identification:
  It can dynamically adjust the operation target to the changing load and 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 Intelligent Fabrication

- Intelligent fabrication process
- Power test, dynamic balancing test and communication test performed on the production line
- Robotic welding technology
- Lean production
- 6 Sigma Systems

INFINAIR’s Bionic Technology

- INFINAIR’s Bionic Energy Conservation
  We develop energy saving products by observing behaviors from the animal kingdom. How can birds fly thousandsof miles with extremely low energy consumption?
- 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 After-sales Service

- Joint Research & Development
  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.

Certifications and Tests

- Most of the products are certified by: CCC, 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.
**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.

**Company Mission:**

Provide reliable, convenient air movement controls, operations and services.

**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 networks promise easy access to customers anywhere in 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 Vision:**

To be the most trusted brand in ventilation industry.

**Awards and Achievements:**

High-tech Enterprise  
Renowned Shanghai trademark: INFINAIR  
Shanghai Famous Brand Product: INFINAIR FAN  
SGS ISO 9001, ISO 14001 and OHSAS 18001 Management Certificates

**Technological Strength:**

INFINAIR’s Air Movement & Sound Laboratory is the first Air Movement and Control Association (AMCA) accredited laboratory in the mainland of 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.

**INFINAIR’s Intelligent Ventilation Technology**

- **Smart Needs Identification:** It can dynamically adjust the operation target to the changing load and 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. How can birds fly thousands of miles with extremely low energy consumption?
  - **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 millennia. We have learnt how energy and sound are being able to conserve from their amazing changes.

**INFINAIR’s Intelligent Fabrication**

- Intelligent fabrication process  
- Power test, dynamic balancing test and communication test performed on the production line  
- Robotic welding technology  
- Lean production  
- 6Σ Systems

**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 After-sales Service**

- **Joint Research & Development**
  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  
- Power test, dynamic balancing test and communication test performed on the production line  
- Robotic welding technology  
- Lean production  
- 6Σ Systems

**Certifications and Tests**

- Most of the products are certified by: UL, SMODE, ATEX, AMCA  
- Performance and Reliability Tests: Airflow, Air Pressure, Power, Sound Level, Temperature Durability, Salt Spray and Water Proof Test, etc.
Example:
Airflow: 1,800 m³/h, Static pressure: 160 Pa

**Step One:** A vertical line is drawn from the given airflow (Point Q: 1,800 m³/h) and a horizontal line from the given static pressure (Point P: 160 Pa). The intersection point (Point W) is the operating point. Then find a performance curve closest to Point W (in this case, it is Static Pressure Curve 12 at RPM 1,380 as shown).

**Step Two:** From the intersection point (Point W1) between the vertical line and Shaft Power Curve is drawn a horizontal line. Its intersection point with the Shaft Power axis (Point E: about 0.15 kW) represents the actual power consumption. So a 0.25 kW motor shall be used.

**Step Three:** From the intersection point (Point W2) between the vertical line and Sound Curve is drawn a horizontal line in Diagram 3. Its intersection point with the Sound Pressure Level axis (Point S: about 59 dB (A)) represents the sound level for the operating point of W.

**Step Four:** From the above steps, the model of the fan is identified as RTC-300-0.25 of belt drive type at 1,380 RPM. If fans of lower power or lower sound are preferred, please refer to larger fans for further comparison. It should be noted that the primary investments for larger fans would increase.

**Step Five:** If a fan of 1,800 m³/h at 180 Pa static pressure is needed, it is easy to know that Point W’ is very close to Curve 13 in boldface (representing the fan of direct drive type at 1,450 RPM and 4-pole motor). The arrow leads to model RTC-300D4 equipped with a 0.25 kW motor, which has low price performance ratio.

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**Fan Law 1**
Airflow delivered by a fan varies in direct proportion to the change in its rotational speed

\[ CFM_2 = \frac{RPM_2}{RPM_1} \times CFM_1 \]

**Fan Law 2**
Static Pressure developed by a fan varies with the square of the change in its rotational speed

\[ SP_2 = \left( \frac{RPM_2}{RPM_1} \right)^2 \times SP_1 \]

**Fan Law 3**
Power required by a fan varies with the cube of the change in its rotational speed

\[ BHP_2 = \left( \frac{RPM_2}{RPM_1} \right)^3 \times BHP_1 \]
# Unit Conversions

## Pressure

<table>
<thead>
<tr>
<th>MULTIPLY</th>
<th>BY TO OBTAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>psi</td>
<td>27.728 in-wg</td>
</tr>
<tr>
<td></td>
<td>2.036 in-Hg</td>
</tr>
<tr>
<td></td>
<td>6894.8 Pa</td>
</tr>
<tr>
<td></td>
<td>704.28 mm-Hg</td>
</tr>
<tr>
<td></td>
<td>51.715 mm-Hg</td>
</tr>
<tr>
<td></td>
<td>0.06805 atm</td>
</tr>
<tr>
<td>in-wg</td>
<td>0.000012 psi</td>
</tr>
<tr>
<td></td>
<td>0.007343 in-Hg</td>
</tr>
<tr>
<td>in-Hg</td>
<td>248.66 Pa</td>
</tr>
<tr>
<td></td>
<td>25.4 mm-wg</td>
</tr>
<tr>
<td></td>
<td>1.8651 mm-Hg</td>
</tr>
<tr>
<td></td>
<td>0.0002454 atm</td>
</tr>
<tr>
<td></td>
<td>0.49115 psi</td>
</tr>
<tr>
<td></td>
<td>13.619 in-wg</td>
</tr>
<tr>
<td></td>
<td>3396.4 Pa</td>
</tr>
<tr>
<td></td>
<td>345.91 mm-wg</td>
</tr>
<tr>
<td></td>
<td>25.4 mm-Hg</td>
</tr>
<tr>
<td></td>
<td>0.03342 atm</td>
</tr>
<tr>
<td></td>
<td>0.000145 psi</td>
</tr>
<tr>
<td></td>
<td>0.00002953 in-Hg</td>
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<tr>
<td></td>
<td>0.10215 mm-wg</td>
</tr>
<tr>
<td></td>
<td>0.00000999 atm</td>
</tr>
<tr>
<td></td>
<td>0.000142 psi</td>
</tr>
<tr>
<td></td>
<td>0.0000891 in-wg</td>
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<tr>
<td></td>
<td>9.7898 Pa</td>
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<tr>
<td></td>
<td>0.07343 mm-Hg</td>
</tr>
<tr>
<td></td>
<td>0.0000966 atm</td>
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<tr>
<td></td>
<td>0.19134 psi</td>
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<tr>
<td></td>
<td>0.53616 in-wg</td>
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<tr>
<td></td>
<td>0.00037 in-Hg</td>
</tr>
<tr>
<td></td>
<td>133.32 Pa</td>
</tr>
<tr>
<td></td>
<td>13.619 mm-wg</td>
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<tr>
<td></td>
<td>0.001316 atm</td>
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<td>14.896 psi</td>
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<td>407.48 in-wg</td>
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<tr>
<td></td>
<td>29.321 in-Hg</td>
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<tr>
<td></td>
<td>101030 Pa</td>
</tr>
<tr>
<td></td>
<td>10350 mm-wg</td>
</tr>
<tr>
<td></td>
<td>760 mm-Hg</td>
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</table>

## Velocity

<table>
<thead>
<tr>
<th>MULTIPLY</th>
<th>BY TO OBTAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>fps</td>
<td>0.0167 ft/s</td>
</tr>
<tr>
<td></td>
<td>0.005080 m/s</td>
</tr>
<tr>
<td></td>
<td>0.30480 m/min</td>
</tr>
<tr>
<td></td>
<td>60 fps</td>
</tr>
<tr>
<td></td>
<td>12 in/sec</td>
</tr>
<tr>
<td></td>
<td>0.30480 m/s</td>
</tr>
<tr>
<td></td>
<td>18.288 m/min</td>
</tr>
<tr>
<td></td>
<td>5 fps</td>
</tr>
<tr>
<td></td>
<td>0.0833 fps</td>
</tr>
<tr>
<td></td>
<td>0.02540 m/s</td>
</tr>
<tr>
<td></td>
<td>1.524 m/min</td>
</tr>
<tr>
<td></td>
<td>196.85 fps</td>
</tr>
<tr>
<td></td>
<td>3.2808 fps</td>
</tr>
<tr>
<td></td>
<td>33.37 in/sec</td>
</tr>
<tr>
<td></td>
<td>60 m/min</td>
</tr>
<tr>
<td></td>
<td>3.2808 fps</td>
</tr>
<tr>
<td></td>
<td>0.05468 fps</td>
</tr>
<tr>
<td></td>
<td>0.65617 in/sec</td>
</tr>
<tr>
<td></td>
<td>0.0167 m/s</td>
</tr>
</tbody>
</table>

## Torque

<table>
<thead>
<tr>
<th>MULTIPLY</th>
<th>BY TO OBTAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>lb-in</td>
<td>0.083 lb-ft</td>
</tr>
<tr>
<td></td>
<td>0.11298 N-m</td>
</tr>
<tr>
<td></td>
<td>0.12 lb-in</td>
</tr>
<tr>
<td></td>
<td>1.3558 N-m</td>
</tr>
<tr>
<td></td>
<td>0.73756 lb-ft</td>
</tr>
<tr>
<td></td>
<td>8.8507 lb-in</td>
</tr>
</tbody>
</table>

## Temperature

°F = 9/5 C + 32  
°C = 5/9 (F - 32)
Electrical Motors

INFINAIR ARABIA fuse High Efficiency motors for all fans. TEFC motor's materials are made from Cast Iron, stainless steel shaft and high quality winding to overcome. The increasing demand for electrical energy to sustain global development requires consistent heavy investments in power supply generation. The best strategy to maintain energy supply in the short term is to avoid wastage and increase energy efficiency. Electric motors play a major role in this strategy, since around 40% of global energy demand is estimated to be related to electric motor applications. Consequently, any initiatives to increase energy efficiency, by using high efficiency electric motors and VFD, are to be welcomed, as they can make a real contribution to reductions in global energy demand.

**Motors Features:**

- High Ambient withstandng 55 degree C
- Premium Efficiency Rating IE3 is a standard
- Super Premium Efficiency Rating IE4 (Option)
- Cast Iron Body and well designed Terminal Box
- Insulation Class is F and Protection is IP55
- Applicable for VFD operation
- Thermal protection integration
- Smoke applications 300 C/ 400 C for 120 min (Option)
- Explosion Proof Motors (Options)
- NEMA 4X application for corrosion protection (Option)

**IE3/4 Premium Motors compared with IE2/1**

![Image of motors showing performance comparison]

**Note:**
Please consult the sales office or the agent nearby your area and ask for motor details. For R&D purposes and logistics, the motors brands, color and specifications are subject to change without prior notice.
Highlights of the 4th Generation of Wind-Surfer™ wheel

The 4th Generation of Wind-Surfer™ wheel
- Excellent sound and air performance
- Wide performance range of high efficiency and non-overloading
- The balance quality grade as high as G2.5 (Just G6.3 for general products)

Air Performance Design

- Optimized design through CFD flow field simulation and repeated tests
- Flow passages control: airflow regulated well through precise synergy
- Wheel cone and inlet cone in conformity with flow field characteristics
- Optimized mounting angle for blades

Structural Design

- Stress analysis by FEA method for better performance
- Various additional strengthening for different specifications
- Riveting technology used to avoid stress

Advanced Process

- Wheel cone and inlet cone formed by spinning to ensure good air performance
- Inlet Cone: replacing the inlet belt to ensure smooth airflow
- Blades: formed by punching to ensure quality
- Tooling: dedicated fixtures to ensure the precise mounting position of blades

Wheel Improved

- Continuous improvement: upgraded to the 4th generation of wheel
- Compared with the 3rd generation: overall performance improved by 5-10%
- Compared with the 3rd generation: overall sound level reduced by 2-3dB(A)

Product Features

Wide Performance Range and More Economical
- The 4th generation of centrifugal Wind-Surfer™ wheel possessing a wider pressure scope and lower sound compared with the 3rd generation
- The wheel diameter as long as one meter, requiring fewer fans and lower primary investment
- No scroll needed and the fan size reduced, making installation easier

No Scroll
- Air directly pressurized in wheel and airflow pattern improved
- Direct drive and dust-free: suitable for clean rooms in microelectronics, food and medical industries

Square Design with Different Discharge Direction Options: Mounting Costs Reduced
- Square inlet/outlet flanged sleeve: connector and ring flange now not used
- Lower air duct connection costs and faster installation
- Different mounting positions available for the motor
- Different discharge positions: ease of design and installation

Sound Solution: Centrifugal Inline Type
- Fundamental difference from axial/mixed flow types: speed reduced by 20-30%
- Range of sound pressure level down by 10-15 dB(A)
- A fundamental solution to sound
Optional Accessories

Gravity Backdraft Damper
The professionally designed gravity backdraft damper comprises inlet/outlet flanged sleeves and a box that ensures damper blades start normally. The damper is installed independent of the fan body.

45 Degrees Rain Cover (With Bird Screen)
When the fan is installed outside, the rain cover can effectively prevent rain infiltration through the inlet or outlet.

Motor Cover (only for belt drive type)
The equipped air window helps to dissipate heat, extend motor life and reduce sound.

Soundproofing Egg Crate Foam Wall Tiles
Premium-grade acoustical materials are placed on the inner shell of the fan, reducing sound pressure level by 6~8 dB(A).

Vibration Isolators
Vibration isolators can be hung or floor-mounted. Neoprene or spring isolators are available.

Catalog Introduction

Fans of each model have performances at different speeds described by curves. Curves shown in boldface represent fans of direct drive type which means the wheel is directly driven by the motor (models of these fans are shown in arrows). A letter E and the number of motor poles are added to the wheel diameter of all the direct drive fans. Curves shown in lightface represent fans of belt drive type. The required wheel RPM is reached through using two pulleys of different diameter ratios. The motor is of two, four and six poles.

Shaft Power Curve shows the actual power consumption of fans. Sound Pressure Level curve shows the sound level 1 Smadrs from the fan.

Example: Airflow: 4,000m³/h, Static Pressure: 500Pa
Step One: A vertical line is drawn from the given air airflow (Point Q: 4,000m³/h) and a horizontal line from the given static pressure (Point P: 500Pa). The intersection point (Point W) is the operating point. Then find a performance curve closest to Point W (in this case, it is curve 16 at 1,615 RPM as shown). If the operating point is far from the performance curve, please choose other models and repeat the same procedure as above until the right performance curve can be found.

Step Two: From the intersection point (Point W1) between the vertical line and Shaft Power Curve is drawn a horizontal line. Its intersection point with the Shaft Power axis (Point E: about 1.1kW) represents the actual power consumption. Based on the coefficient of power reserve (1.15), the required power of 1.5kW is figured out.

Step Three: From the intersection point (Point W2) between the vertical line and Sound Pressure Level curve is drawn a horizontal line. Its intersection point with the Sound Pressure Level axis (Point S: about 73dB (A)) represents the sound level for the operating point W.

Step Four: From the above steps, the model of the fan is identified as ISQ-300(D4) of belt drive type at 1,615 RPM. If fans of lower shaft power are preferred, please refer to larger fans for further comparison. It should be noted that the primary investments for larger fans would increase.

Step Five: If a fan of 4,000m³/h at 400Pa static pressure is needed, it is easy to know that Point W’ is very close to curve 14 shown in boldface (indicating a direct drive fan of 4poles at 1,450 RPM). Then as is shown by the arrow, the ISQ-425D4 fan equipped with a 1.1KW motor is finally identified, which is a much more cost-effective choice.

Note: The coefficient of power reserve is determined by model selection staff based on actual needs (typically 1.15).
Highlights of the 4th Generation of Wind-Surfer™ wheel

The 4th Generation of Wind-Surfer™ wheel
- Excellent sound and air performance
- Wide performance range of high efficiency and non-overloading
- The balance quality grade as high as G2.5 (Just G6.3 for general products)

Air Performance Design

- Optimized design through CFD flow field simulation and repeated tests
- Flow passages control: airflow regulated well through precise synergy
- Wheel cone and inlet cone in conformity with flow field characteristics
- Optimized mounting angle for blades

Structural Design

- Stress analysis by FEA method for better performance
- Various additional strengthening for different specifications
- Riveting technology used to avoid stress

Advanced Process

- Wheel cone and inlet cone formed by spinning to ensure good air performance
- Inlet Cone: replacing the inlet bell to ensure smooth airflow
- Blades: formed by punching to ensure quality
- Tooling: dedicated fixtures to ensure the precise mounting position of blades

Wheel Improved

- Continuous Improvement: upgraded to the 4th generation of wheel
- Compared with the 3rd generation: overall performance improved by 5-10%
- Compared with the 3rd generation: overall sound level reduced by 2-3dB(A)

Product Features

Wide Performance Range and More Economical
- The 4th generation of centrifugal Wind-Surfer™ wheel possessing a wider pressure scope and lower sound compared with the 3rd generation
- The wheel diameter as long as one meter, requiring fewer fans and lower primary investment
- No scroll needed and the fan size reduced, making installation easier

No Scroll
- Air directly pressurized in wheel and airflow pattern improved
- Direct drive and dust-free; suitable for clean rooms in microelectronics, food and medical industries

Square Design with Different Discharge Direction Options: Mounting Costs Reduced
- Square inlet/outlet flanged sleeve: connector and ring flange now not used
- Lower air duct connection costs and faster installation
- Different mounting positions available for the motor
- Different discharge positions: ease of design and installation

Sound Solution: Centrifugal Inline Type
- Fundamental difference from axial/mixed flow types: speed reduced by 20-30%
- Range of sound pressure level down by 10-15 dB(A)
- A fundamental solution to sound

AMCA Seal: for Sound and Air Performance
- ISQ fans certified by AMCA for Sound and Air Performance
- AMCA Seal for Sound and Air Performance tagged on fans
Different Discharge Direction Options

Belt Drive (50/60Hz)

- MTDH: Horizontal Discharge
- MTDL: Left Discharge
- MTDR: Right Discharge
- MTVDLR: Top/Bottom Discharge, L/R Discharge
- MLBT: Bottom Discharge, Motor Location Left Side
- MLTB: Bottom Discharge, Motor Location Right Side
- MRVD: Top/Bottom Discharge, Motor Location Left Side
- MRTD: Top/Bottom Discharge, Motor Location Right Side
- MVDL: Bottom Intake, Left Discharge
- MVPD: Bottom Intake, Right Discharge
- MTRD: Bottom Intake, Top Discharge

Direct Drive

- DDH: Horizontal Discharge
- DDL: Left Discharge
- DDR: Right Discharge
- DDTDLR: Top/Bottom Discharge, L/R Discharge
- DDT: Bottom Intake, Left Discharge
- DDV: Bottom Intake, Right Discharge
- DDB: Bottom Intake, Bottom Discharge
- DVB: Bottom Intake, Top Discharge
- DVBDR: Bottom Intake, Right Discharge
- DVBDB: Bottom Intake, Bottom Discharge

Note: The codes at the top left corner indicate the discharge and motor location.

Example: Top Intake, Right Discharge (MTVDLR)
Mounting style: Vertical (Erect/Upright)
Motor location: Motor Location Top Intake:Top
Discharge: Right
Note: The motor location and discharge direction are determined by viewing from the fan inlet end (as shown).
### Different Discharge Direction Options

#### Belt Drive

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTDH</td>
<td>Horizontal Discharge</td>
</tr>
<tr>
<td>MTDL</td>
<td>Left Discharge</td>
</tr>
<tr>
<td>MTDOR</td>
<td>Right Discharge</td>
</tr>
<tr>
<td>MTVTLR</td>
<td>Top Intake, L &amp; R Discharge</td>
</tr>
</tbody>
</table>

#### Direct Drive 50/60 Hz

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDH</td>
<td>Horizontal Discharge</td>
</tr>
<tr>
<td>DDL</td>
<td>Left Discharge</td>
</tr>
<tr>
<td>DDR</td>
<td>Right Discharge</td>
</tr>
<tr>
<td>DTD</td>
<td>Top Intake, L &amp; R Discharge</td>
</tr>
</tbody>
</table>

#### Ventilation Types

- **MLDT**: Top Discharge, Motor Location Left Side
- **MRDT**: Top Discharge, Motor Location Right Side
- **MLDB**: Bottom Discharge, Motor Location Left Side
- **MRDB**: Bottom Discharge, Motor Location Right Side
- **MRVTD**: Top Intake, Bottom Discharge
- **MTVDL**: Bottom Intake, Left Discharge
- **MTVTL**: Bottom Intake, Right Discharge
- **MTVBL**: Bottom Intake, Left Discharge

### Notes

- The codes at the top left corner indicate the discharge and motor location.
- Example: Top Intake, Right Discharge (MTVTOR)
- Motor location: Motor Location Top Intake: Top
- Discharge: Right
- Note: The motor location and discharge direction are determined by viewing from the fan inlet end (as shown).
Unit Size and Installation

Motor Weight Table

<table>
<thead>
<tr>
<th>Power (kW)</th>
<th>2P</th>
<th>4P</th>
<th>6P</th>
<th>8P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.18</td>
<td>14</td>
<td>13.5</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>0.25</td>
<td>14.5</td>
<td>14</td>
<td>14.5</td>
<td>17</td>
</tr>
<tr>
<td>0.37</td>
<td>15</td>
<td>14.5</td>
<td>16</td>
<td>24</td>
</tr>
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<td>28</td>
</tr>
<tr>
<td>0.75</td>
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<td>16</td>
<td>22</td>
<td>30</td>
</tr>
<tr>
<td>1.1</td>
<td>16</td>
<td>21</td>
<td>24</td>
<td>32</td>
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<td>1.5</td>
<td>21</td>
<td>23</td>
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<td>40</td>
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<tr>
<td>2.2</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
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<td>105</td>
</tr>
<tr>
<td>5.5</td>
<td>63</td>
<td>86</td>
<td>81</td>
<td>115</td>
</tr>
<tr>
<td>7.5</td>
<td>70</td>
<td>76</td>
<td>118</td>
<td>145</td>
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</tr>
<tr>
<td>18.5</td>
<td>142</td>
<td>170</td>
<td>231</td>
<td>290</td>
</tr>
</tbody>
</table>

Note: Please contact INFINAIR sales office for motor weight, its subject to change based on project final requirements.

Fan Size (Belt Drive)

Fan Fastening

The ISQ fan can be installed horizontally or vertically. The motor can be mounted atop, on the sides or at the bottom of the fan. The ISQ fan comes with four supporting feet that can be fixed atop the fan and connected with the hanging isolators through sex screw rods. Also, they can be fixed at the bottom and connected with base isolators. Users are to supply vibration isolators and screw rods.

Change in discharge directions

The ISQ fan has discharge positions on any sides except the motor side and its opposite side and the opposite side of the inlet. The discharge directions can be changed onsite. To do this, the access panel of the new desired discharge direction is removed for an added flange and the original discharge flange is sealed. (This can be done onsite).

The bore diameter for base isolators is ø16 and ø18 for hanging isolators.

Fan Size (Belt-Drive)

<table>
<thead>
<tr>
<th>Unit mm</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>K</th>
<th>L</th>
<th>I</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>ISQ225</td>
<td>600</td>
<td>600</td>
<td>650</td>
<td>470</td>
<td>530 (max)</td>
<td>325</td>
<td>325</td>
<td>695</td>
<td>520</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISQ250</td>
<td>553</td>
<td>650</td>
<td>650</td>
<td>530 (max)</td>
<td>655</td>
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<td>61</td>
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</tr>
<tr>
<td>ISQ275</td>
<td>654</td>
<td>780</td>
<td>830</td>
<td>750</td>
<td>530 (max)</td>
<td>505</td>
<td>505</td>
<td>775</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ISQ300</td>
<td>754</td>
<td>880</td>
<td>950</td>
<td>850</td>
<td>635 (max)</td>
<td>555</td>
<td>555</td>
<td>883</td>
<td>920</td>
<td>112</td>
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<tr>
<td>ISQ500</td>
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<td>1500</td>
<td>261</td>
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</table>

1. Motor is not included in the weight above.
2. The dimensions of Top Intake, Bottom Discharge, Bottom Intake, and Top Discharge refer to Dimensions of Horizontal Discharge.
3. The dimensions of Top Intake, Bottom Discharge, Motor Location Left Bottom Discharge, Motor Location Right Bottom Discharge, Motor Location Left Top Intake, Motor Location Right Top Intake, Right Discharge, and Left Discharge refer to Dimensions of Right Discharge.
4. The dimensions of Top and Bottom Discharge, Motor Location Left Top Intake, Bottom Intake, Right Discharge, and Left Discharge refer to Dimensions of Left Discharge.
Unit Size and Installation

Motor Weight Table

<table>
<thead>
<tr>
<th>Power (kW)</th>
<th>2P</th>
<th>4P</th>
<th>6P</th>
<th>8P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.18</td>
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</tr>
<tr>
<td>0.25</td>
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</tr>
<tr>
<td>0.37</td>
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<td>14.5</td>
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<td>28</td>
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<td>1.5</td>
<td>21</td>
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<td>2.2</td>
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<td>235</td>
</tr>
<tr>
<td>18.5</td>
<td>142</td>
<td>170</td>
<td>231</td>
<td>290</td>
</tr>
</tbody>
</table>

Fan Size (Belt-Drive)

Fan Fastening

The IGQ fan can be installed horizontally or vertically. The motor can be mounted atop, on the sides or at the bottom of the fan. The IGQ fan comes with four supporting feet that can be fixed atop the fan and connected with the hanging isolators through screw rods. Also, they can be fixed at the bottom and connected with base isolators. (Users are to supply vibration isolators and screw rods)

Change in discharge direction:
The IGQ fan has discharge positions on any sides except the motor side and its opposite side and the opposite side of the inlet. The discharge directions can be changed online. To do this, the access panel of the new desired discharge direction is removed for an added flange and the original discharge flange is sealed (this can be done onsite).

Unit mm | A | B | C | D | E | F | H | K | G | I | Weight |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IGQ300</td>
<td>403</td>
<td>500</td>
<td>650</td>
<td>470</td>
<td>530(max)</td>
<td>425</td>
<td>325</td>
<td>495</td>
<td>520</td>
<td>87</td>
<td></td>
</tr>
<tr>
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<td>700</td>
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<td>530(max)</td>
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<td>455</td>
<td>675</td>
<td>700</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>IGQ500</td>
<td>654</td>
<td>780</td>
<td>830</td>
<td>750</td>
<td>530(max)</td>
<td>505</td>
<td>505</td>
<td>775</td>
<td>800</td>
<td>99</td>
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</tr>
<tr>
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<td>950</td>
<td>850</td>
<td>635(max)</td>
<td>555</td>
<td>555</td>
<td>883</td>
<td>920</td>
<td>112</td>
<td></td>
</tr>
<tr>
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<td>1000</td>
<td>700(max)</td>
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<td>605</td>
<td>1035</td>
<td>1070</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>IGQ775</td>
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<td>980</td>
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<td>1100</td>
<td>700(max)</td>
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<td>1170</td>
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<td>1370</td>
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<td>805</td>
<td>1450</td>
<td>1500</td>
<td>261</td>
<td></td>
</tr>
</tbody>
</table>

1. Motor is not included in the weight above.
2. The dimensions of Top Intake, Bottom Discharge, Bottom Intake and Top Discharge refer to dimensions of Horizontal Discharge.
3. The dimensions of Top Intake, Bottom Discharge, Motor Location Left, Top Discharge, Motor Location Right, Bottom Discharge, Motor Location Left, Bottom Discharge, Motor Location Right, Top Intake, Motor Location Right, Top Intake, Motor Location Left, Bottom Discharge refer to dimensions of Right and Left Discharge.
4. The dimensions of Top and Bottom Discharge, Motor Location Left, Top Intake and Bottom Discharge, Motor Location Right, Top Intake, Left and Right Discharge dimensions refer to dimensions of Left and Right Discharge.

Note: The final specifications (dimensions, weight and motor details are subject to be changed according to project requirements, please contact INFINAIR nearby office to approve the final specifications.
Note: The final specifications (dimensions, weight and motor details are subject to be changed according to project requirements, please contact INFINAIR nearby office to approve the final specifications.

Product Specifications

Section 1: Quality Standards
Infinair Square Centrifugal Fan shall be tested and certified in accordance with AMCA Standard 210 & 330. AMCA Seal for Sound and Air Performance shall be lagged on each fan before leaving the factory. The manufacturer shall be certified by ISO 9001:2008.

Section 2: Fan Type
The fan shall be centrifugal type, with an aluminum backward inclined centrifugal wheel directly facing incoming air. The wheel cone shall have a curved section to ensure smooth air movement. Each wheel should be subject to static and dynamic balancing tests up to AMCA 204-2.5 balance quality grade.

Section 3: Fan Housing
Material: The fan housing shall be made in cast steel sheet (Option: cast roll steel sheet finished with electrostatic epoxy coatings). It shall be thick and strong enough to support the drive mechanism and motor.
Shape: The housing shall be a square one equipped with square flanged sleeves to avoid square/round connections. The housing design shall allow different discharge directions. On the left and right sides, there shall be suitable access doors so that motor maintenance and replacement can be performed without the need to remove the air ducts.

Section 4: Drive Mechanism (For belt drive type only)
Shaf: The shaft shall be heat treated through homogenizing furnace to the hardness level of HB370, and the hard film shall be applied to the surface to avoid corrosion. The shaft shall also be subject to balancing tests together with the wheel. The design speed of the shaft shall be at least 25% more than the maximum running speed of the fan.
Pulley: Fan pulleys shall be sized for a minimum of 100% of the driving power. Pulleys shall be cast iron, keyed and securely attached to the wheel and motor shaft. Conical type bushings shall be equipped for easy removal of the pulleys.
Bearing: Two bearings shall be used to support the shaft to avoid vibrations directly coming onto the motor. The bearing L10 rating life shall be 50,000 hours at the maximum operating speed specified in the catalog. The bearing shall be of permanently sealed type and radial paddle ball bearing that can be lubricated.
Drive Support: Drive mechanism shall be supported by thick steel sheet finished with powder coatings to avoid corrosion. The belt tension can be adjusted through the adjusting bolt at the motor base. The design shall make sure the fan shaft and motor shaft is always parallel.

Section 5: Motor
The motor shall match the fan load precisely. It shall be IP55 rated with Class F insulation. The motor bearing shall be lubrication-free ball type.

Section 6: 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.

Section 7: Qualified Suppliers
Qualified suppliers shall be assigned a credit rating of "AAA". INFINAIR or similar products supplied are designed based on Model ISQ of INFINAIR.

Note: The final specifications (dimensions, weight and motor details are subject to be changed according to project requirements, please contact INFINAIR nearby office to approve the final specifications.

---

### Fan Size (Direct-drive)

<table>
<thead>
<tr>
<th>Unit</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>H</th>
<th>K</th>
<th>G</th>
<th>I</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSQ200D</td>
<td>403</td>
<td>580</td>
<td>630</td>
<td>470</td>
<td>325</td>
<td>405</td>
<td>495</td>
<td>520</td>
<td>32</td>
</tr>
<tr>
<td>LSQ250D</td>
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<td>710</td>
<td>760</td>
<td>650</td>
<td>455</td>
<td>515</td>
<td>675</td>
<td>700</td>
<td>55</td>
</tr>
<tr>
<td>LSQ300D</td>
<td>654</td>
<td>780</td>
<td>830</td>
<td>750</td>
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<td>505</td>
<td>775</td>
<td>800</td>
<td>75</td>
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<td>LSQ350D</td>
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<td>950</td>
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<td>555</td>
<td>555</td>
<td>885</td>
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<td>705</td>
<td>865</td>
<td>1320</td>
<td>1370</td>
<td>224</td>
</tr>
</tbody>
</table>

1. Motor is not included in the weight above.
2. The dimensions of Top Intake/Bottom Discharge/Bottom Intake, Top Discharge refer to Dimensions of Horizontal Discharge.
3. The dimensions of Right Discharge/Top Discharge/Bottom Discharge/Right Intake, Left Intake, Top Intake, Right Intake refer to Dimensions of Left Intake/Right Discharge.
4. The dimensions of Top Intake, Left and Right Discharge/Bottom Intake, Left and Right Discharge refer to Dimensions of Left and Right Discharge.

Note: The final specifications (dimensions, weight and motor details are subject to be changed according to project requirements, please contact INFINAIR nearby office to approve the final specifications.

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www.INFINAIR.com
**Product Specifications**

**Section 1: Quality Standards**
Infinair Square Centrifugal Fan shall be tested and certified in accordance with AMCA Standard 210 & 330. AMCA Seal for Sound and Air Performance shall be tagged on each fan before leaving the factory. The manufacturer shall be certified by ISO 9001.2008.

**Section 2: Fan Type**
The fan shall be centrifugal inline type, with an aluminum backward curved centrifugal wheel directly facing incoming air. The wheel cone shall have a curved section to ensure smooth air movement. Each wheel should be subject to static and dynamic balancing tests up to AMCA 204-G2.5 balance quality grade.

**Section 3: Fan Housing**
Material: The fan housing shall be made in cast steel sheet (Option: cast roll steel sheet finished with electrostatic epoxy coatings). It shall be thick and strong enough to support the drive mechanism and motor.

Shape: The housing shall be square one equipped with square flanged sleeves to avoid square/round connectors. The housing design allows different discharge directions. On the left and right sides, there shall be suitable access doors so that motor maintenance and replacement can be performed without the need to remove the air ducts.

**Section 4: Drive Mechanism (For belt drive type only)**
Shaft: The shaft shall be heat treated through homogenizing furnace to the hardness level of H6370, and the hard film shall be applied on the surface to avoid corrosion. The shaft shall also be subject to balancing tests together with the wheel. The design speed of the shaft shall be at least 25% more than the maximum running speed of the fan.

Pulley: Fan pulleys shall be sized for a minimum of 100% of the driving power. Pulleys shall be cast iron, keyed and securely attached to the wheel and motor shaft. Conical type bushings shall be equipped for easy removal of the pulleys.

Bearing: Two bearings shall be used to support the shaft to avoid vibrations directly coming onto the motor. The bearing L10 rating life shall be 80,000 hours at the maximum operating speed specified in the catalog. The bearing shall be of permanently sealed type and install pedestal ball bearing that can be lubricated.

Drive Support: Drive mechanism shall be supported by thick steel sheet finished with powder coatings to avoid corrosion. The belt tension can be adjusted through the adjusting bolt at the motor base. The design shall make sure the fan shaft and motor shaft is always parallel.

**Section 5: Motor**
The motor shall match the fan load precisely. It shall be IP55 rated with Class F insulation. The motor bearing shall be lubrication-free ball type.

**Section 6: 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.

**Section 7: Qualified Suppliers**
Qualified suppliers shall be assigned a credit rating of “AAA”. Infinair or similar products supplied are designed based on Model ISQ of Infinair.
Performance certified is for installation type B-free inlet, ducted outlet. Power rating (kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). dB(A)A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
Performance certified is for installation type B-free inlet, ducted outlet. Power rating (kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). dB(A)-A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
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ISQ 675
Model: ISQ-675

Performance certified is for installation type B-free inlet, ducted outlet. Power rating (kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). dB(A)A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
### ISQ-750

Model: ISQ-750

<table>
<thead>
<tr>
<th>RPM</th>
<th>Static Pressure (Pa)</th>
<th>Shaft Power (kW)</th>
<th>Sound Pressure Level (dB(A))</th>
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</thead>
<tbody>
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<td>646</td>
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</tr>
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<td>424</td>
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<tr>
<td>20</td>
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</table>

Performance certified is for installation type B-free inlet, ducted outlet. Power rating (kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). dB(A)-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
Performance certified is for installation type B-free inlet, ducted outlet. Power rating (kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). dB(A)A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
Performance certified is for installation type B-free inlet, ducted outlet. Power rating (kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). dB(A)-A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
### ISQ-300

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<th>8</th>
<th>LW(A)</th>
<th>dBA</th>
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### ISQ-425

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</tbody>
</table>

Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to as 10² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per ISQ-425. dB(A)A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to as 10 watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 210. LpA-dB(A) levels are not licensed by AMCA International.
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<th>5</th>
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</table>

Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to as 10 watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A)A-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
### Values shown are for inlet Lwa sound power levels for Installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in -12 decibels, referred to as 10 watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A)-weighted sound pressure level is based on 11.5 dB sound attenuation per octave band at 1.5 m. Note that LpA-dB(A) levels are not licensed by AMCA International.
INFINAIR ARABIA CO. LTD

Add: Kingdom of Jordan - Amman City - Mowaqqar Industrial Free Zone
Http://www.infinair-arabia.com
Email: hossam@infinair-arabia.com
Mobile and What's up: +962 - 78538280

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Mix Flow Fan
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