



KDK Ventilation Fans & Air Moving Equipment

# Ventilation Fans & Air Moving Equipment

*Refined Air Quality Solutions*



**KDK Company, Division of PES**  
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<http://kdk.jp>

• Actual colors may vary slightly from those shown.  
• Specifications are subject to change without prior notice.

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| Page | Content                                   |
|------|-------------------------------------------|
| 002  | About KDK                                 |
| 003  | Market Map                                |
| 004  | Product Certification                     |
| 005  | Product Highlight                         |
| 007  | About Indoor Air Quality                  |
| 009  | Installation Simulation                   |
| 011  | Product Summary                           |
| 021  | Ceiling Mount Type Ventilation Fan        |
| 035  | Wall Mount Type Ventilation Fan           |
| 047  | Window Mount Type Ventilation Fan         |
| 055  | Industrial Type Ventilation Fan           |
| 063  | Cabinet Fan (In-line Fan)                 |
| 071  | In-line Centrifugal Fan                   |
| 077  | Mini Sirocco Fan                          |
| 085  | Energy Recovery Ventilator                |
| 095  | Thermo Ventilator                         |
| 099  | Range Hood                                |
| 103  | Hand Dryer                                |
| 107  | Air Curtain                               |
| 115  | Ceiling Fan / Electric Fan                |
| 127  | Ventilation Product Specification Summary |
| 137  | Performance Data Summary                  |
| 171  | Project Reference                         |
| 174  | Installation Method                       |

KDK was founded in 1909, with more than a century old history. By making a commitment to our business philosophy, we strive toward contributing to society through our air and wind technologies.

With the aims of offering the premium product and solution through good distributions and services, we will continue to maintain a leading position in the industry by utilizing advantages of our core competencies. With innovative technology and value-added approach, we are committed to make a reliable and quality product with excellent design and high safety standard in meeting the expectations of our customers all over the world.

Milestone



1909

1913

1918

1919

1933

1956

1960

1962

1981

1989

1993

1995

1999

2003

2009

2016

2019

2021

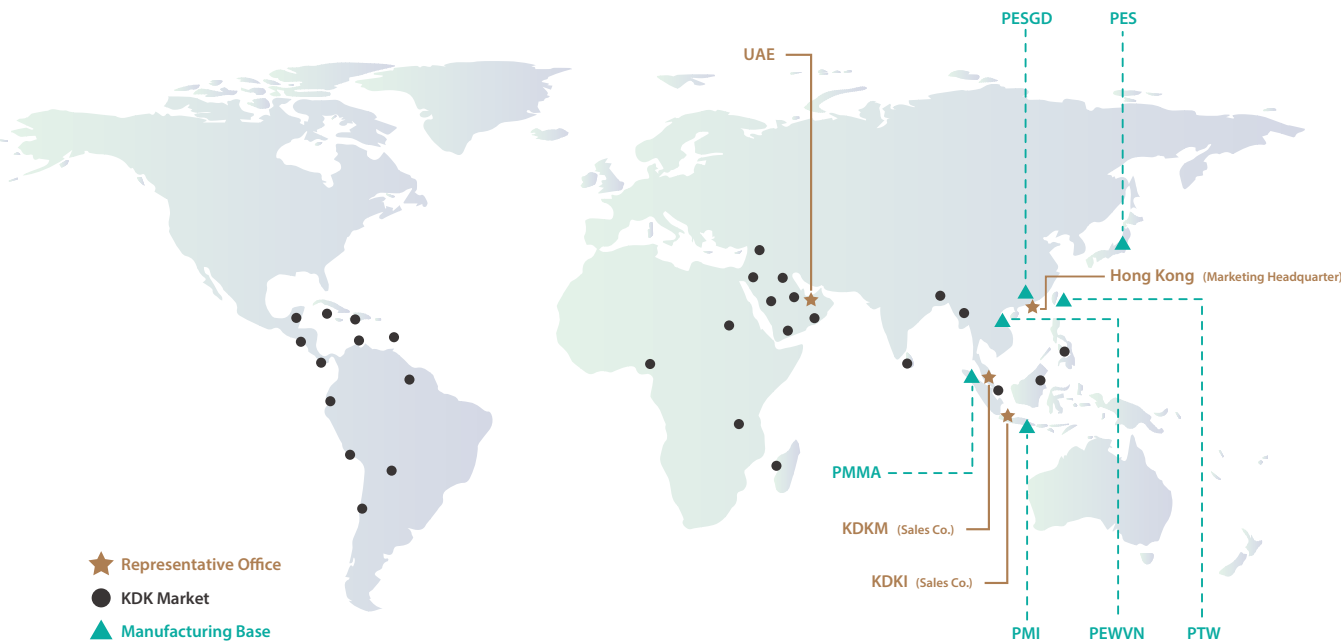
2024

- KDK (Kawakita Denki Kigyousha) was founded
- Mass production of Typhoon Type Electric Fan
- Registration of KDK Trademark
- Starting of export business
- Kawakita Denki Co. was established in Shanghai
- Chuou Denki Co., Ltd. was established in Osaka
- Osaka Denki Seiki Co., Ltd was established
- Registration of new KDK Trademark
- Renamed the company to Matsushita Seiko Co., Ltd
- Set up International Fan Manufacturing Co., Ltd [IFCO] in Hong Kong
- IFCO was renamed as Matsushita Seiko Hong Kong International Manufacturing co., Ltd [HIMCO]
- Set up Shunde Matsushita Seiko Co., Ltd [SHUMCO] in China. It was renamed as Guangdong Matsushita Seiko Co., Ltd. [GDMESC] in 2003 and further changed to PESGD in 2006
- Established Beijing Great Wall Matsushita Seiko Air Conditioning Equipment Co., Ltd. [BGMAC] which was renamed as PESGD-BJ in 2005
- Established Oversea Marketing Headquarter in HIMCO
- Matsushita Seiko Co. Ltd. was renamed as Matsushita Ecology Systems Co., Ltd. and further changed to KDK Company, Division of PES in 2008
- The 100th Anniversary of KDK
- Further expanded a brand-new product line of water pump for better living environment
- The 110th Anniversary of KDK
- New manufacturing base, PEWVN was set up in Vietnam
- The 115th Anniversary of KDK



# Market Map

For a century, KDK has established its business in various countries, building its reputation and brand value in the minds of its customers. Moving forward, in addition to continuous development in existing markets, we will explore new business in potential markets throughout other fast-growing regions.



# Distributor List

| Country              | Distributor                                                                       |
|----------------------|-----------------------------------------------------------------------------------|
| Iraq                 | Al Khait Alabydh Co                                                               |
| Jordan               | Mohammad M Juma & Sons Co.                                                        |
| Kuwait               | Salem M. Al-Nisf Electrical Co. W.L.L.                                            |
| Oman                 | Mohsin Haider Darwish L.L.C.                                                      |
| Qatar                | United Cooperation General Trading L.L.C.                                         |
| Saudi Arabia         | Abdulaziz & Sulaiman Saleh Al-Hakbany Sons Trading Co<br>Haitham Est. for Trading |
| United Arab Emirates | Electra Abu Dhabi L.L.C.<br>Electra Dubai                                         |
| Yemen                | Al Haj Mohamed Ali Sowaid & Sons                                                  |
| Nigeria              | Polysonic Nigeria Ltd.                                                            |
| Sudan                | Central Advanced Digitech Co.                                                     |
| Tanzania             | Multi Cable Ltd.                                                                  |

# Product Certification

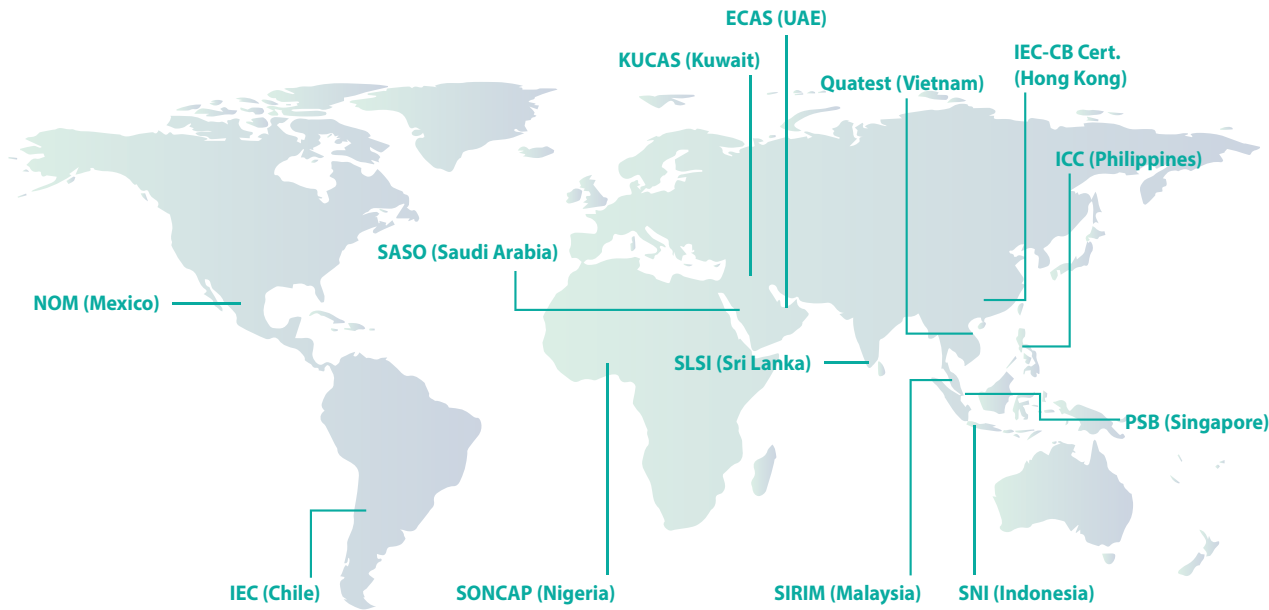
To ensure safety, KDK products are designed and manufactured according to either the standards of JIS (Japan Industrial Standard) or IEC (International Electrotechnical Commission). Test certificates are awarded by recognized test laboratories that further prove the reliability of our products.



## CB Test Certificate

CB Test Certificate is issued to products in compliance with the applicable requirement of IEC standard under CB Scheme (Certification Bodies' Scheme) set by IEC .

Beside the international standard of JIS and IEC, different safety certifications are also acquired to fulfill the requirement in different countries.



## Product Highlight

### KDK In-line Centrifugal Fan

Built to move air, built to last



High Performance



Long Life



Low-Noise



Safe



Installation Simulation  
(Mount above ceiling)

### KDK Ventilation Fans



DC Motor



Energy Saving



Fresh Air



24JRB / 24JAB

| Motor Type                      | DC Motor Model | AC Motor Model |
|---------------------------------|----------------|----------------|
| Model                           | 24JRB          | 24CUH          |
| Static Pressure [Pa]            | 0              | 0              |
| Air Volume [m³/h]               | 160            | 140            |
| Power Consumption at 0 Pa [W]   | 7              | 13.5           |
| Energy Efficiency [m³/h / Watt] | 22.9           | 10.3           |

Power consumption comparison between DC motor series and non-DC motor series

Note: Values measured at 220V 60Hz.

### KDK Thermo Ventilator

Embrace warmth, shielded from cold shocks,  
for cozy comfort every chilly day.



30BUC



Ventilation



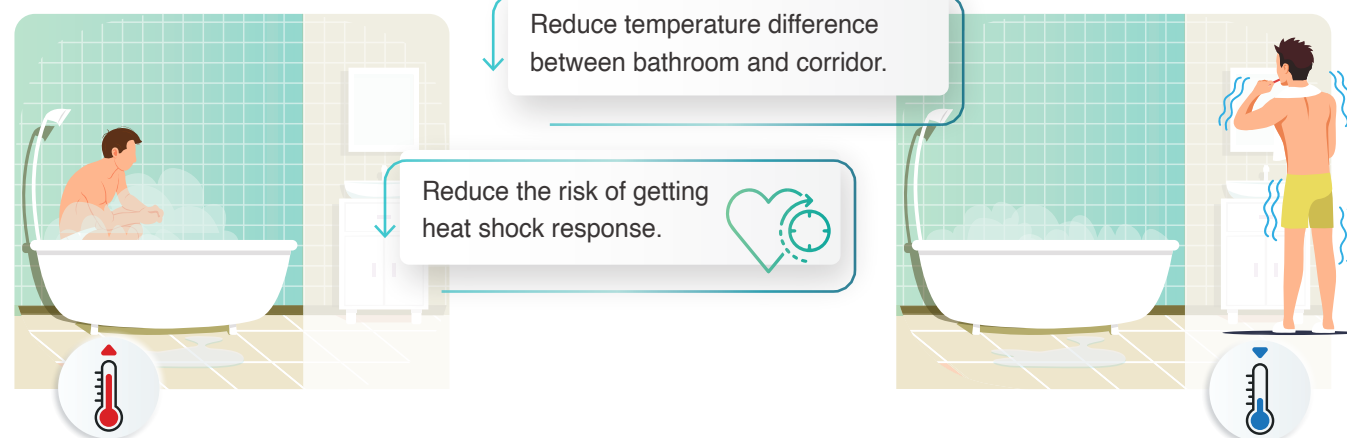
Circulation



Heating



Clothes Drying



Reduce temperature difference  
between bathroom and corridor.

Reduce the risk of getting  
heat shock response.

### High Air Volume Ceiling Mount Type Ventilation Fan

The Quiet Solution for Fresh Air



Quiet Operation



Effective Air Exhaust

Powerful Exhaustion



24CXH

Air volume up to  
**255 CMH**

\*Values measured at 220V 60Hz



# IAQ

INDOOR AIR QUALITY

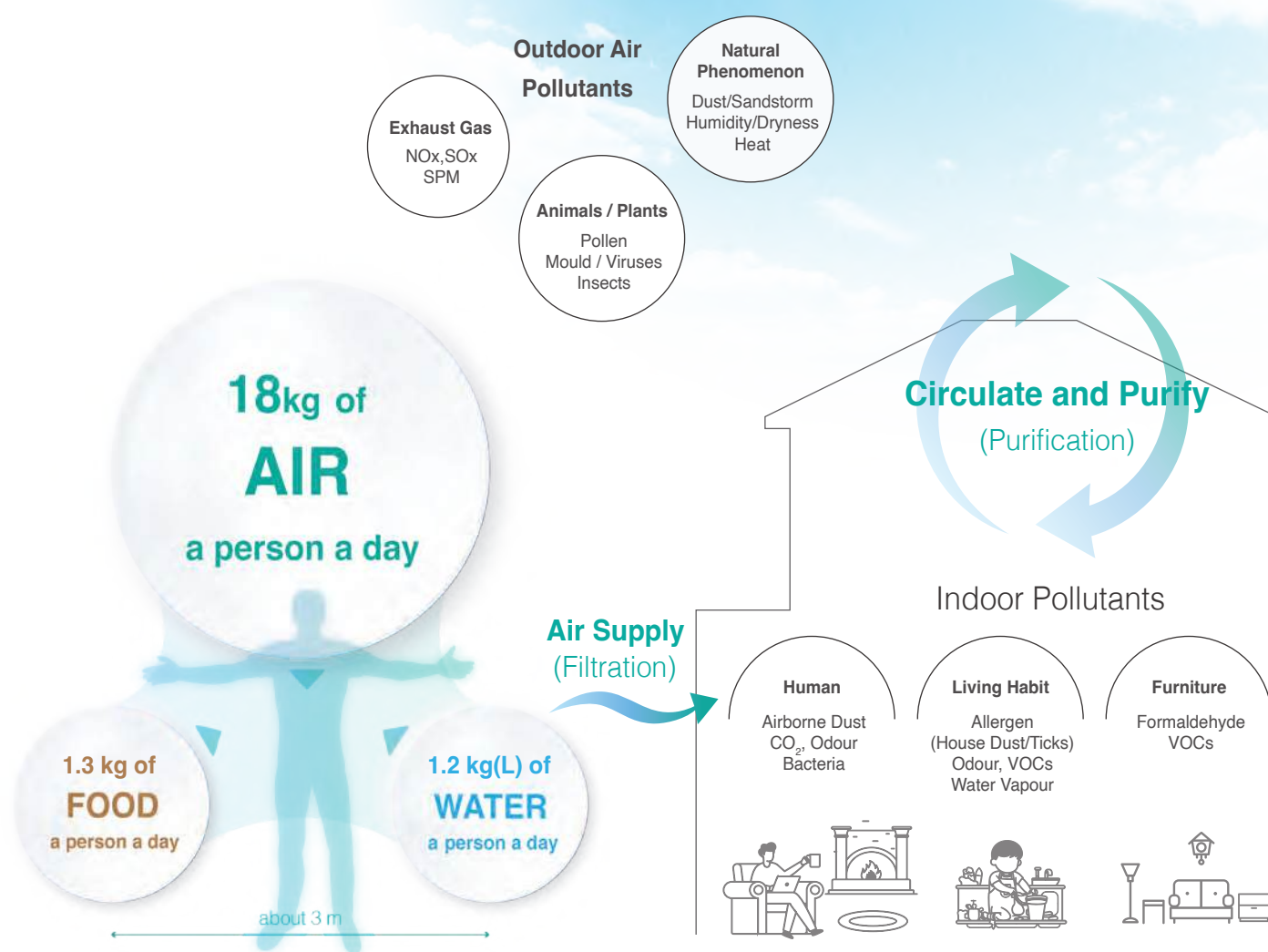
Air Supply  
Air Exhaust  
Air Circulation

3 core KDK solutions to enhance indoor air quality

## The Importance of Indoor Air Quality

We care about the food we eat and the water that we drink, but what about AIR?

It is important to take care of the ONE thing we consume the most...



## Ventilation

### Air Supply

Prevent entrance of unwanted substances

- Energy Recovery Ventilator
- Ventilation Fan (reversible type)

### Air Exhaust

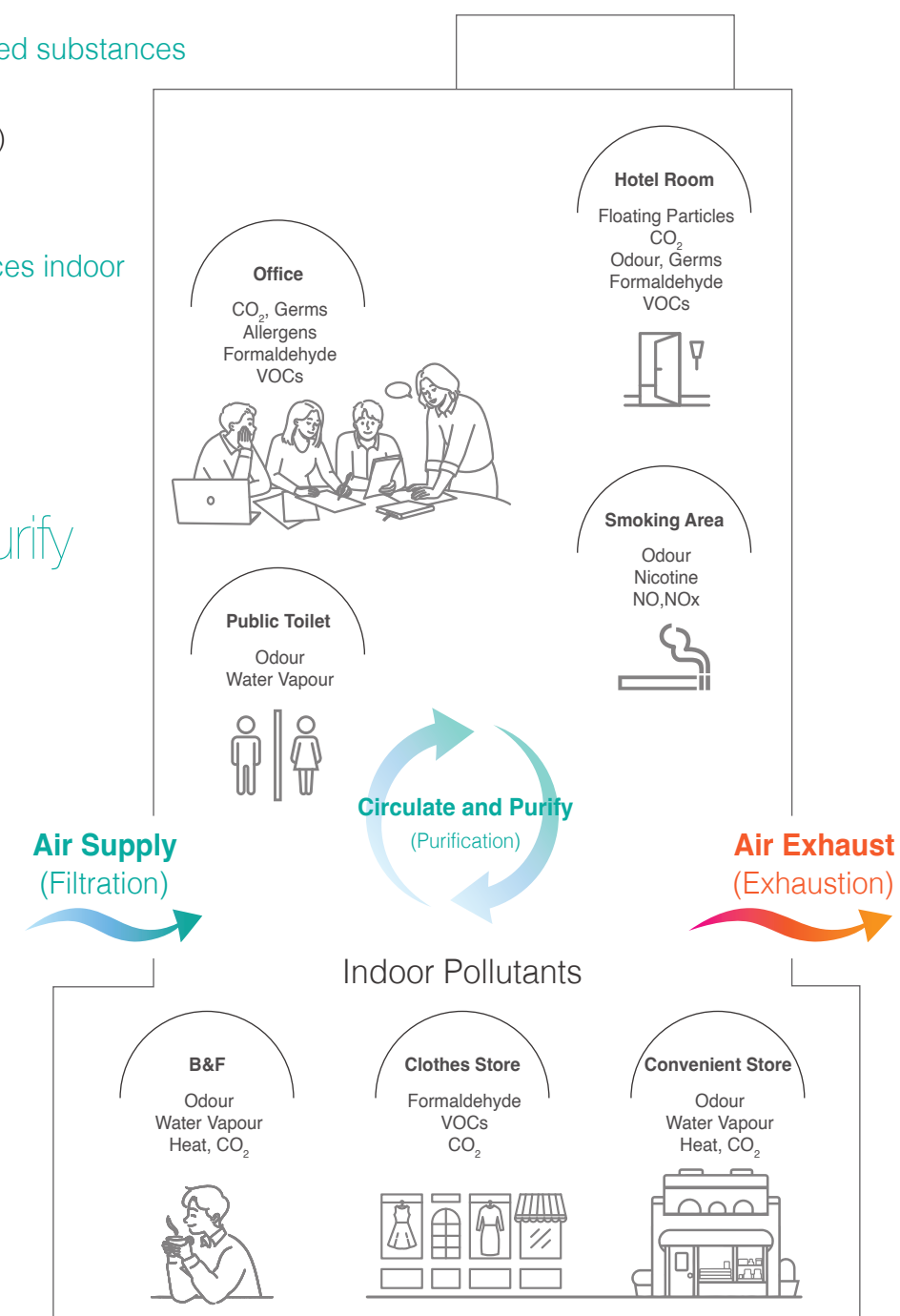
Reduce unwanted substances indoor

- Ventilation Fan
- Range hood
- Thermo Ventilator
- Energy Recovery Ventilator

## Circulate and Purify

### Ventilate and purify air

- Ceiling Fan
- Electric Fan



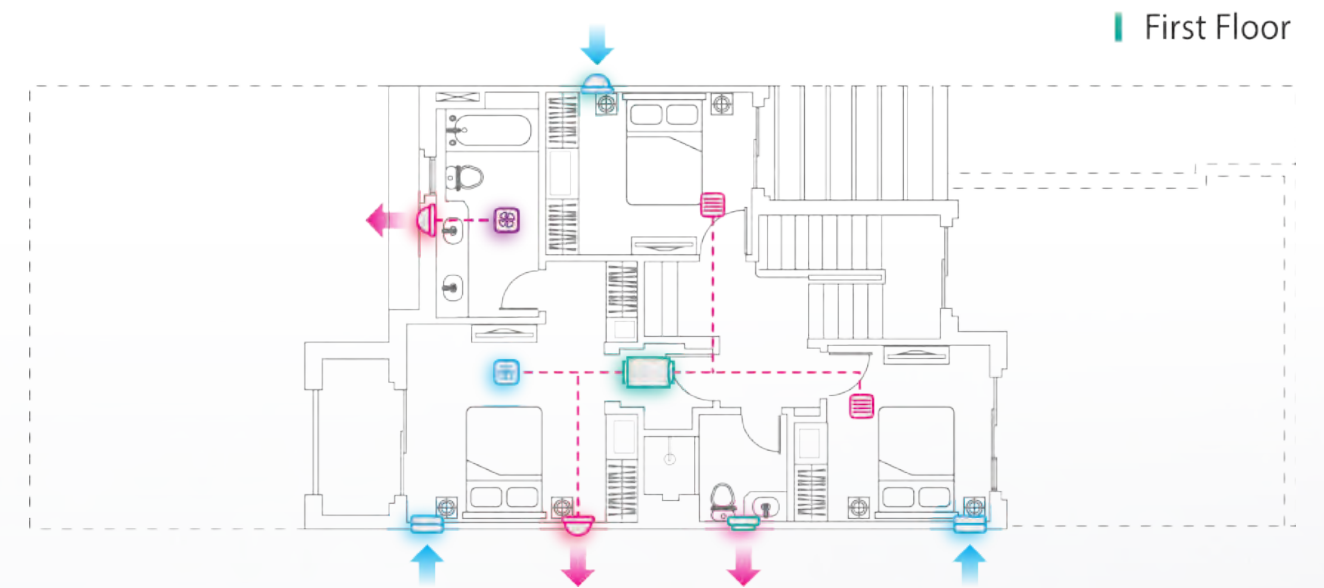
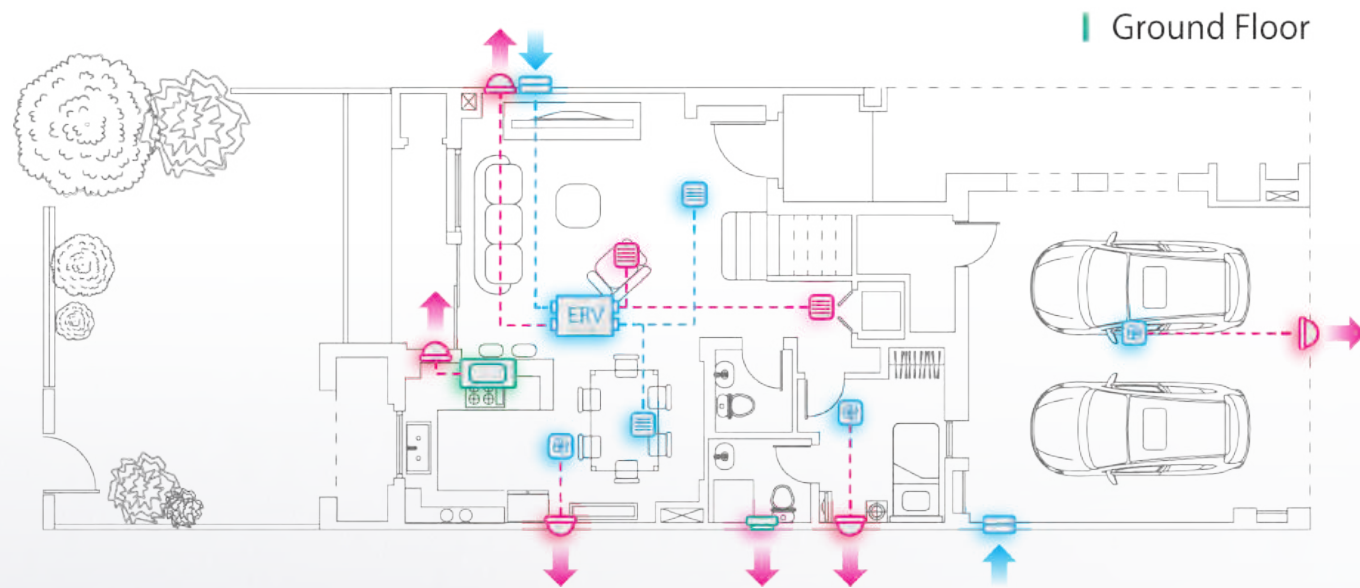
\*1 "Air and Humans – From a Physiological Viewpoint" (1999) by UCHIYAMA Iwao (National Institute of Public Health of Japan)

\*2 "Heat Stroke Environmental Health Manual (2009)" from the Ministry of the Environment, Government of Japan

\*3 "Basic Data Sheet of Agriculture, Forestry, and Fisheries, Statistics Regarding The Food Self-Sufficiency Rate" from Ministry of Agriculture, Forestry and Fisheries of Japan

# Redefining Your Indoor Environment

## Installation Simulation (2-storey villa as example)



-  Ceiling Mount Type Ventilation Fan
-  Wall Mount Type Ventilation Fan
-  Cabinet Fan (In-line Fan)
-  Energy Recovery Ventilator
-  Thermo Ventilator
-  Range Hood
-  Intake Grille
-  Exhaust Grille
-  Vent Cap / Pipe Hood
-  Intake
-  Exhaust



Product Summary

| Product                                                                             | Series             |                                                                                     | Model | DC Motor | Super Low Noise Level                                                               | Fire Resistant | Voltage/<br>Frequency                                                               | Air Volume [CFM]   | Consumption [W] | Page           |                |                |                |           |           |     |      |     |
|-------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|-------|----------|-------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------|--------------------|-----------------|----------------|----------------|----------------|----------------|-----------|-----------|-----|------|-----|
| Ceiling Mount Type Ventilation Fan                                                  | DC Motor Series    |    | 24JRB | ✓        | -                                                                                   | -              | 220-240V/50Hz (Hi)                                                                  | 94                 | 8               | 023            |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-230V/60Hz (Hi)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-240V/50Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-230V/60Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-240V/50Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-230V/60Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |    | 24JAB | ✓        | -                                                                                   | -              | 220-240V/50Hz (Hi)                                                                  | 94                 | 8               | 024            |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-230V/60Hz (Hi)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-240V/50Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-230V/60Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-240V/50Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220-230V/60Hz (Lo)                                                                  |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     | Super Quiet Series |    | 17CUH | -        | ✓                                                                                   | -              | 220V/50Hz                                                                           | 50                 | 7.5             | 025            |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 220V/60Hz                                                                           |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 230V/50Hz                                                                           |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 230V/60Hz                                                                           |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 240V/50Hz                                                                           |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                | 240V/50Hz                                                                           |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |    |                    |                 |                | 24CUH          | -              | ✓              | -         | 220V/50Hz | 82  | 10.5 | 026 |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                |           | 220V/60Hz |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                |           | 230V/50Hz |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                |           | 230V/60Hz |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                |           | 240V/50Hz |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                |           | 240V/50Hz |     |      |     |
|                                                                                     |                    |    | 24CDH | -        | ✓                                                                                   | -              |                                                                                     | 220V/50Hz          | 100             | 13.5           |                |                |                |           | 027       |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     | 230V/50Hz          |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     | 230V/60Hz          |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     | 240V/50Hz          |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     | 240V/50Hz          |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     | 240V/50Hz          |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |    | 24CHH              |                 |                | -              | ✓              | -              | 220V/50Hz |           | 118 | 20.5 | 028 |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                | 230V/50Hz |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                | 230V/60Hz |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                | 240V/50Hz |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                | 240V/50Hz |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                |                | 240V/50Hz |           |     |      |     |
|                                                                                     |                    |   | 24CXH | -        | ✓                                                                                   | -              |                                                                                     |                    | 220V/50Hz       | 138            |                |                |                | 24        | 029       |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    | 220V/60Hz       |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    | 230V/50Hz       |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    | 230V/60Hz       |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    | 240V/50Hz       |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    | 240V/50Hz       |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |  | 27CHH              | -               |                | ✓              | -              | 220V/50Hz (Hi) |           |           | 194 | 28   | 030 |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                | 220V/50Hz (Lo) |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                | 220V/60Hz (Hi) |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                | 220V/60Hz (Lo) |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                | 230V/50Hz (Hi) |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                |                | 230V/50Hz (Lo) |           |           |     |      |     |
|                                                                                     |                    |  | 32CDH | -        | ✓                                                                                   | -              |                                                                                     |                    |                 | 240V/50Hz (Hi) |                |                | 212            | 34        | 031       |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 240V/50Hz (Lo) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 220V/50Hz (Hi) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 220V/50Hz (Lo) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 220V/60Hz (Hi) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 220V/60Hz (Lo) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |  | 38CDG/<br>38CDG 05 | -               | -              | -              | 230V/50Hz (Hi) |                |           |           | 200 | 31.5 | 032 |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                | 230V/50Hz (Lo) |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                | 240V/50Hz (Hi) |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                | 240V/50Hz (Lo) |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                | 220V/50Hz (Hi) |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                |                | 220V/50Hz (Lo) |                |           |           |     |      |     |
|  | 38CHG              | -                                                                                   | -     | -        | 220V/50Hz (Hi)                                                                      | 253            |                                                                                     |                    |                 |                |                | 36             | 033            |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          | 220V/50Hz (Lo)                                                                      |                |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          | 220V/60Hz (Hi)                                                                      |                |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          | 220V/60Hz (Lo)                                                                      |                |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          | 230V/50Hz (Hi)                                                                      |                |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          | 230V/50Hz (Lo)                                                                      |                |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |  |                | 24CMUA                                                                              | -                  | -               | ✓              | 240V/50Hz (Hi) |                |                | 277       | 38.5      | 034 |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                | 240V/50Hz (Lo) |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                | 220V/50Hz (Hi) |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                | 220V/50Hz (Lo) |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                | 220V/60Hz (Hi) |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 |                | 220V/60Hz (Lo) |                |                |           |           |     |      |     |
|  | 24CMHA             | -                                                                                   | -     | ✓        |                                                                                     | 230V/50Hz (Hi) |                                                                                     |                    |                 |                | 299            | 40             | 035            |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     | 230V/50Hz (Lo) |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     | 240V/50Hz (Hi) |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     | 240V/50Hz (Lo) |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     | 220V/50Hz (Hi) |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     | 220V/50Hz (Lo) |                                                                                     |                    |                 |                |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |  | 27CMHA         | -                                                                                   | -                  | ✓               | 220V/50Hz (Hi) |                |                |                | 377       | 50        | 036 |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 220V/50Hz (Lo) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 220V/60Hz (Hi) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 220V/60Hz (Lo) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 230V/50Hz (Hi) |                |                |                |           |           |     |      |     |
|                                                                                     |                    |                                                                                     |       |          |                                                                                     |                |                                                                                     |                    |                 | 230V/50Hz (Lo) |                |                |                |           |           |     |      |     |

| Product                                                                               | Series                   |                                                                                      | Model                                                                                 | Silent Stream Fan | Auto Shutter | Louver        | Voltage/<br>Frequency | Air Volume [CFM] | Consumption [W] | Page |         |     |
|---------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------|--------------|---------------|-----------------------|------------------|-----------------|------|---------|-----|
| Wall Mount Type Ventilation Fan                                                       | Metallic Series          |   | 20ASB/<br>20ASB 05                                                                    | -                 | ✓            | -             | 220V/50Hz             | 304              | 17              | 037  |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 360              | 21.5            |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 230V/50Hz             | 311              | 18.1            |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 240V/50Hz             | 318              | 19.5            |      |         |     |
|                                                                                       |                          |                                                                                      | 25ASB/<br>25ASB 05                                                                    | -                 | ✓            | -             | 220V/50Hz             | 505              | 25              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 562              | 30.5            |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 230V/50Hz             | 509              | 27.3            |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 240V/50Hz             | 523              | 29.5            |      |         |     |
|                                                                                       |                          |                                                                                      | 30ASB/<br>30ASB 05                                                                    | -                 | ✓            | -             | 220V/50Hz             | 696              | 29.5            |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 685              | 34.5            |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 230V/50Hz             | 735              | 31.7            |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 240V/50Hz             | 759              | 34              |      |         |     |
|                                                                                       | Automatic Shutter Series |   | 15AAQ1                                                                                | -                 | ✓            | -             | 220V/50Hz             | 170              | 15              | 038  |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 180              | 19              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 230V/50Hz             | 173              | 17              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 240V/50Hz             | 180              | 19              |      |         |     |
|                                                                                       |                          |   | 20AUA                                                                                 | ✓                 | ✓            | -             | 220-230V/50Hz         | 347-359          | 18-19.5         | 039  |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220-240V/50Hz         | 347-365          | 18-21.5         |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 400              | 22              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 230V/60Hz             | 418              | 23.5            |      |         |     |
|                                                                                       |                          |                                                                                      | 25AUA                                                                                 | ✓                 | ✓            | -             | 220-230V/50Hz         | 559-571          | 25-27           |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220-240V/50Hz         | 559-571          | 25-29           |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 571              | 31              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 230V/60Hz             | 612              | 35              |      |         |     |
|                                                                                       |                          |                                                                                      | 30AUA                                                                                 | ✓                 | ✓            | -             | 220-230V/50Hz         | 706-736          | 28-30           |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220-240V/50Hz         | 706-765          | 28-32.5         |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 706              | 33              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 230V/60Hz             | 765              | 36              |      |         |     |
|                                                                                       |                          |  | 20AUH                                                                                 | -                 | ✓            | -             | 220V/50Hz             | 341              | 22              | 040  |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 383              | 29              |      |         |     |
|                                                                                       |                          |                                                                                      | 25AUH                                                                                 | -                 | ✓            | -             | 220V/50Hz             | 541              | 29              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 553              | 33              |      |         |     |
|                                                                                       |                          |                                                                                      | 30AUH 11                                                                              | -                 | ✓            | -             | 220V/50Hz             | 706              | 29              |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 671              | 33              |      |         |     |
|                                                                                       |                          |                                                                                      |  | 20ALA             | ✓            | ✓             | ✓                     | 220-230V/50Hz    | 324-327         |      | 18-19.5 | 041 |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               |                       | 220-240V/50Hz    | 324-330         |      | 18-21.5 |     |
|                                                                                       |                          | 220V/60Hz                                                                            |                                                                                       |                   |              |               |                       | 359              | 22              |      |         |     |
|                                                                                       |                          | 230V/60Hz                                                                            |                                                                                       |                   |              |               |                       | 371              | 23.5            |      |         |     |
|                                                                                       |                          | 25ALA                                                                                |                                                                                       | ✓                 | ✓            | ✓             | 220-230V/50Hz         | 494-506          | 25-27           |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220-240V/50Hz         | 494-518          | 25-30           |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              |               | 220V/60Hz             | 506              | 31              |      |         |     |
| 230V/60Hz                                                                             |                          |                                                                                      |                                                                                       |                   |              |               | 536                   | 34               |                 |      |         |     |
| 30ALA                                                                                 |                          | ✓                                                                                    |                                                                                       | ✓                 | ✓            | 220-230V/50Hz | 589-618               | 28-30            |                 |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              | 220-240V/50Hz | 589-647               | 28-32.5          |                 |      |         |     |
|                                                                                       | 220V/60Hz                |                                                                                      |                                                                                       |                   |              | 589           | 33                    |                  |                 |      |         |     |
|                                                                                       | 230V/60Hz                |                                                                                      |                                                                                       |                   |              | 618           | 36                    |                  |                 |      |         |     |
|  | 20ALH                    | -                                                                                    |                                                                                       | ✓                 | ✓            | 220V/50Hz     | 321                   | 22               | 042             |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              | 220V/60Hz     | 353                   | 29               |                 |      |         |     |
|                                                                                       | 25ALH                    | -                                                                                    |                                                                                       | ✓                 | ✓            | 220V/50Hz     | 491                   | 29               |                 |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   |              | 220V/60Hz     | 498                   | 33               |                 |      |         |     |
|                                                                                       | 30ALF 11                 | -                                                                                    | ✓                                                                                     | ✓                 | 220V/50Hz    | 550           | 29                    |                  |                 |      |         |     |
|                                                                                       |                          |                                                                                      |                                                                                       |                   | 220V/60Hz    | 539           | 33                    |                  |                 |      |         |     |

Product Summary

| Product                         | Series          |                                                                                     | Model  | Silent Stream Fan | Auto Shutter | Louver | Voltage/ Frequency | Air Volume [CFM] | Consumption [W] | Page |
|---------------------------------|-----------------|-------------------------------------------------------------------------------------|--------|-------------------|--------------|--------|--------------------|------------------|-----------------|------|
| Wall Mount Type Ventilation Fan | Plastic Series  |    | 10BAQ1 | -                 | -            | ✓      | 220V/50Hz          | 45               | 15              | 043  |
|                                 |                 |                                                                                     |        |                   |              |        | 220V/60Hz          | 43               | 17              |      |
|                                 |                 |                                                                                     |        |                   |              |        | 230V/50Hz          | 47               | 16              |      |
|                                 |                 |                                                                                     |        |                   |              |        | 240V/50Hz          | 50               | 17.5            |      |
|                                 |                 |                                                                                     |        |                   |              |        |                    |                  |                 |      |
|                                 | Bathroom Series |    | 10EGKB | -                 | -            | ✓      | 220V/50Hz          | 45               | 4.3             | 045  |
|                                 |                 |                                                                                     |        |                   |              |        | 230V/50Hz          | 45               | 4.6             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 240V/50Hz          | 45               | 5.0             |      |
|                                 |                 |    | 15EGKB | -                 | -            | ✓      | 220V/50Hz          | 95               | 5.7             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 230V/50Hz          | 97               | 6.1             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 240V/50Hz          | 97               | 6.5             |      |
|                                 |                 |  | 10EGSB | -                 | -            | ✓      | 220V/50Hz          | 45               | 4.3             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 220V/60Hz          | 51               | 4.7             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 230V/50Hz          | 45               | 4.6             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 240V/50Hz          | 45               | 5.0             |      |
|                                 |                 |                                                                                     | 15EGSB | -                 | -            | ✓      | 220V/50Hz          | 91               | 5.7             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 220V/60Hz          | 106              | 6.1             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 230V/50Hz          | 94               | 6.1             |      |
|                                 |                 |                                                                                     |        |                   |              |        | 240V/50Hz          | 97               | 6.5             |      |

| Product                           | Series                       |                                                                                       | Model          | Electrically Operated Shutter | Auto Shutter | Cord-operated Shutter | Voltage/ Frequency | Air Volume [CFM] | Consumption [W] | Page |
|-----------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------|-------------------------------|--------------|-----------------------|--------------------|------------------|-----------------|------|
| Window Mount Type Ventilation Fan | Electric Shutter Series      |    | 15WHCT         | ✓                             | -            | -                     | 220V/50Hz          | 135              | 13              | 050  |
|                                   |                              |                                                                                       |                |                               |              |                       | 220V/60Hz          | 135              | 13              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 230V/50Hz          | 135              | 14              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 240V/50Hz          | 135              | 15              |      |
|                                   |                              |                                                                                       | 20WHCT         | ✓                             | -            | -                     | 220V/50Hz          | 262              | 20              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 220V/60Hz          | 283              | 22              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 230V/50Hz          | 262              | 21              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 240V/50Hz          | 262              | 22              |      |
|                                   | Automatic Shutter Series     |  | 15WAA          | -                             | ✓            | -                     | 220V/50Hz          | 124              | 14              | 052  |
|                                   |                              |                                                                                       |                |                               |              |                       | 220V/60Hz          | 131              | 18              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 230V/50Hz          | 131              | 15              |      |
|                                   |                              |                                                                                       | 15WAA/ 15WAAMN |                               |              |                       | 240V/50Hz          | 134              | 16              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 220V/50Hz          | 224              | 15              |      |
|                                   |                              |                                                                                       | 20WAA          | -                             | ✓            | -                     | 220V/60Hz          | 224              | 17              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 230V/50Hz          | 230              | 16              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 240V/50Hz          | 237              | 17.5            |      |
|                                   |                              |                                                                                       |                |                               |              |                       |                    |                  |                 |      |
|                                   | Cord-operated Shutter Series |  | 15WUD          | -                             | -            | ✓                     | 220V/50Hz          | 124              | 8.1             | 054  |
|                                   |                              |                                                                                       |                |                               |              |                       | 220V/60Hz          | 118              | 8.9             |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 230V/50Hz          | 129              | 8.8             |      |
|                                   |                              |                                                                                       | 15WUD/ 15WUDMN |                               |              |                       | 240V/50Hz          | 135              | 9.5             |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 220V/50Hz          | 212              | 16.4            |      |
|                                   |                              |                                                                                       | 20WUD          | -                             | -            | ✓                     | 220V/60Hz          | 212              | 19              |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 230V/50Hz          | 224              | 17.9            |      |
|                                   |                              |                                                                                       |                |                               |              |                       | 240V/50Hz          | 235              | 19.5            |      |



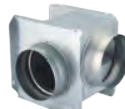
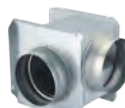
# Product Summary

| Product                                                                             | Series               |                                                                                     | Model                                                                               | Reversible | Durable Powder Coating | Shutter   | Metal Large Blade Assembly | Voltage/ Frequency | Air Volume [CFM] | Consumption [W] | Page |     |
|-------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------|------------------------|-----------|----------------------------|--------------------|------------------|-----------------|------|-----|
| Industrial Ventilation Fan                                                          | Shutter Series       |    | 40KAQA                                                                              | -          | ✓                      | ✓         | ✓                          | 220V/50Hz          | 1,105            | 47              | 056  |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 230V/50Hz          | 1,130            | 52              |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 240V/50Hz          | 1,155            | 59              |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 230V/60Hz          | 1,254            | 67              |      |     |
|                                                                                     | High Pressure Series |    | 25GSE                                                                               | ✓          | ✓                      | Optional  | -                          | 220V/50Hz          | 753              | 41              | 057  |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 220V/60Hz          | 848              | 57              |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 230V/50Hz          | 753              | 43              |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 240V/50Hz          | 753              | 44              |      |     |
|                                                                                     |                      |                                                                                     | 30GSE                                                                               | ✓          | ✓                      | Optional  | -                          | 220V/50Hz          | 1,265            | 87              |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 220V/60Hz          | 1,407            | 119             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 230V/50Hz          | 1,265            | 92              |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 240V/50Hz          | 1,265            | 98              |      |     |
|                                                                                     |                      |                                                                                     | 35GSE                                                                               | ✓          | ✓                      | Optional  | -                          | 220V/50Hz          | 1,736            | 113             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 220V/60Hz          | 1,989            | 161             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 230V/50Hz          | 1,736            | 118             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 240V/50Hz          | 1,736            | 122             |      |     |
|                                                                                     |                      |  | 40GSE                                                                               | ✓          | ✓                      | Optional  | -                          | 220V/50Hz          | 2,295            | 141             | 058  |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 220V/60Hz          | 2,878            | 270             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 230V/50Hz          | 2,295            | 146             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 240V/50Hz          | 2,295            | 151             |      |     |
|                                                                                     |                      |                                                                                     |  | 45GSC      | ✓                      | ✓         | Optional                   | -                  | 220V/50Hz        | 3,061           | 227  | 059 |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            |                    | 220V/60Hz        | 3,514           | 325  |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            |                    | 230V/50Hz        | 3,196           | 235  |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            |                    | 240V/50Hz        | 3,214           | 241  |     |
|                                                                                     |                      | 50GSC                                                                               |                                                                                     | ✓          | ✓                      | Optional  | -                          | 220V/50Hz          | 3,608            | 249             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 220V/60Hz          | 4,179            | 326             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 230V/50Hz          | 3,779            | 258             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 240V/50Hz          | 3,814            | 271             |      |     |
|                                                                                     |                      | 60GSC                                                                               |                                                                                     | ✓          | ✓                      | Optional  | -                          | 220V/50Hz          | 4,732            | 245             |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        |           |                            | 220V/60Hz          | 5,539            | 361             |      |     |
| 230V/50Hz                                                                           |                      |                                                                                     |                                                                                     |            |                        |           |                            | 4,979              | 258              |                 |      |     |
| 240V/50Hz                                                                           |                      |                                                                                     |                                                                                     |            |                        |           |                            | 4,997              | 263              |                 |      |     |
|  | 45GTC                | ✓                                                                                   | ✓                                                                                   | Optional   | -                      | 380V/50Hz | 3,249                      | 220                | 060              |                 |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        | 380V/60Hz | 3,779                      | 330                |                  |                 |      |     |
|                                                                                     | 50GTC                | ✓                                                                                   | ✓                                                                                   | Optional   | -                      | 380V/50Hz | 4,097                      | 320                |                  |                 |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        | 380V/60Hz | 4,715                      | 475                |                  |                 |      |     |
|                                                                                     | 60GTC                | ✓                                                                                   | ✓                                                                                   | Optional   | -                      | 380V/50Hz | 5,544                      | 310                |                  |                 |      |     |
|                                                                                     |                      |                                                                                     |                                                                                     |            |                        | 380V/60Hz | 6,427                      | 450                |                  |                 |      |     |

| Product                                                                               | Series             |                                                                                       | Model | Twin<br>Flow<br>Fan | Noise<br>Absorption<br>Material | Single<br>Phase | Three<br>Phase | Voltage/<br>Frequency | Air<br>Volume<br>[CFM] | Consumption<br>[W] | Page |
|---------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|-------|---------------------|---------------------------------|-----------------|----------------|-----------------------|------------------------|--------------------|------|
| Cabinet Fan                                                                           | Standard Series    |    | 12NSB | ✓                   | ✓                               | ✓               | -              | 220V/50Hz (Hi)        | 106                    | 18                 | 065  |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/50Hz (Lo)        | 85                     | 17                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/60Hz (Hi)        | 112                    | 23                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/60Hz (Lo)        | 85                     | 19                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 230V/50Hz (Hi)        | 106                    | 20                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 230V/50Hz (Lo)        | 88                     | 18                 |      |
|                                                                                       |                    |                                                                                       | 15NSB | 240V/50Hz (Hi)      | 109                             | 22              |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 240V/50Hz (Lo)      | 91                              | 19              |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/50Hz (Hi)      | 200                             | 33              |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/50Hz (Lo)      | 162                             | 29.5            |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/60Hz (Hi)      | 218                             | 42              |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/60Hz (Lo)      | 153                             | 33              |                |                       |                        |                    |      |
|                                                                                       |                    |    | 18NSB | ✓                   | ✓                               | ✓               | -              | 230V/50Hz (Hi)        | 200                    | 35                 | 066  |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 230V/50Hz (Lo)        | 165                    | 31                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 240V/50Hz (Hi)        | 206                    | 37                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 240V/50Hz (Lo)        | 171                    | 33                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/50Hz (Hi)        | 294                    | 60                 |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/50Hz (Lo)        | 238                    | 55                 |      |
|                                                                                       |                    |                                                                                       | 18NFB | 220V/60Hz (Hi)      | 288                             | 73              |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/60Hz (Lo)      | 277                             | 62.5            |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 230V/50Hz (Hi)      | 294                             | 65              |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 230V/50Hz (Lo)      | 247                             | 58.5            |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 240V/50Hz (Hi)      | 300                             | 68              |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 240V/50Hz (Lo)      | 253                             | 62.5            |                |                       |                        |                    |      |
|                                                                                       | Three Phase Series |  | 20NSB | ✓                   | ✓                               | ✓               | -              | 220V/50Hz (Hi)        | 541                    | 120                | 067  |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/50Hz (Lo)        | 424                    | 113                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/60Hz (Hi)        | 506                    | 159                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/60Hz (Lo)        | 365                    | 128                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 230V/50Hz (Hi)        | 547                    | 125                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 230V/50Hz (Lo)        | 441                    | 120                |      |
|                                                                                       |                    |                                                                                       | 23NLB | 240V/50Hz (Hi)      | 553                             | 135             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 240V/50Hz (Lo)      | 465                             | 125             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/50Hz (Hi)      | 706                             | 230             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/50Hz (Lo)      | 530                             | 170             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/60Hz (Hi)      | 647                             | 310             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/60Hz (Lo)      | 471                             | 190             |                |                       |                        |                    |      |
|                                                                                       |                    |  | 25NSB | ✓                   | ✓                               | ✓               | -              | 230V/50Hz (Hi)        | 706                    | 250                | 068  |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 230V/50Hz (Lo)        | 530                    | 180                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 240V/50Hz (Hi)        | 736                    | 260                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 240V/50Hz (Lo)        | 559                    | 190                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/50Hz (Hi)        | 1,001                  | 345                |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 |                 |                | 220V/50Hz (Lo)        | 812                    | 265                |      |
|                                                                                       |                    |                                                                                       | 25NFB | 220V/60Hz (Hi)      | 971                             | 425             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 220V/60Hz (Lo)      | 706                             | 300             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 230V/50Hz (Hi)      | 1,012                           | 350             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 230V/50Hz (Lo)      | 812                             | 270             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 240V/50Hz (Hi)      | 1,030                           | 370             |                |                       |                        |                    |      |
|                                                                                       |                    |                                                                                       |       | 240V/50Hz (Lo)      | 853                             | 290             |                |                       |                        |                    |      |
|  | 25SWC              | ✓                                                                                     | ✓     | -                   | ✓                               | 220V/50Hz (Hi)  | 1,118          | 390                   | 069                    |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 220V/50Hz (Lo)  | 942            | 325                   |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 220V/60Hz (Hi)  | 1,065          | 520                   |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 220V/60Hz (Lo)  | 824            | 380                   |                        |                    |      |
|                                                                                       | 25SMC              | ✓                                                                                     | ✓     | -                   | ✓                               | 230V/50Hz (Hi)  | 1,124          | 410                   |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 230V/50Hz (Lo)  | 942            | 335                   |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 240V/50Hz (Hi)  | 1,130          | 430                   |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 240V/50Hz (Lo)  | 953            | 360                   |                        |                    |      |
|  | 28NXC              | ✓                                                                                     | ✓     | -                   | ✓                               | 380V/50Hz       | 2,354          | 940                   | 070                    |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 380V/60Hz       | 2,649          | 1,450                 |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 415V/50Hz       | 2,354          | 1,000                 |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 440V/50Hz       | 2,354          | 1,000                 |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 380V/50Hz       | 3,061          | 1,180                 |                        |                    |      |
|                                                                                       |                    |                                                                                       |       |                     |                                 | 380V/60Hz       | 3,237          | 1,750                 |                        |                    |      |

Product Summary

| Product                 |                                                                                   | Model | External Rotor Motor | Fan Blades | Voltage/ Frequency | Air Volume [CFM] | Consumption [W] | Page |
|-------------------------|-----------------------------------------------------------------------------------|-------|----------------------|------------|--------------------|------------------|-----------------|------|
| In-line Centrifugal Fan |  | 10MMA | ✓                    | Plastic    | 220V/50Hz          | 146              | 51              | 073  |
|                         |                                                                                   |       |                      |            | 230V/50Hz          | 148              | 54              |      |
|                         |                                                                                   |       |                      |            | 240V/50Hz          | 150              | 57              |      |
|                         |                                                                                   | 12MMA | ✓                    | Plastic    | 220V/50Hz          | 179              | 52              |      |
|                         |                                                                                   |       |                      |            | 230V/50Hz          | 182              | 55              |      |
|                         |                                                                                   |       |                      |            | 240V/50Hz          | 185              | 58              |      |
|                         |                                                                                   | 15MMA | ✓                    | Plastic    | 220V/50Hz          | 370              | 88              |      |
|                         |                                                                                   |       |                      |            | 230V/50Hz          | 379              | 92              |      |
|                         |                                                                                   |       |                      |            | 240V/50Hz          | 388              | 97              |      |
|                         |  | 16MMA | ✓                    | Plastic    | 220V/50Hz          | 394              | 116             | 074  |
|                         |                                                                                   |       |                      |            | 230V/50Hz          | 412              | 122             |      |
|                         |                                                                                   |       |                      |            | 240V/50Hz          | 429              | 128             |      |
|                         |                                                                                   | 20MMA | ✓                    | Plastic    | 220V/50Hz          | 519              | 160             |      |
|                         |                                                                                   |       |                      |            | 230V/50Hz          | 527              | 166             |      |
|                         |                                                                                   |       |                      |            | 240V/50Hz          | 536              | 174             |      |
|                         |                                                                                   | 25MMA | ✓                    | Plastic    | 220V/50Hz          | 538              | 150             |      |
|                         |                                                                                   |       |                      |            | 230V/50Hz          | 544              | 157             |      |
|                         |                                                                                   |       |                      |            | 240V/50Hz          | 550              | 165             |      |
|                         |  | 31MMA | ✓                    | Metal      | 220V/50Hz          | 927              | 215             | 075  |
|                         |                                                                                   |       |                      |            | 230V/50Hz          | 938              | 226             |      |
|                         |                                                                                   |       |                      |            | 240V/50Hz          | 950              | 238             |      |
|                         |                                                                                   |       |                      |            |                    |                  |                 |      |

| Product          |                                                                                     | Model | Single Phase | Adjustable Outlet Direction | Page |
|------------------|-------------------------------------------------------------------------------------|-------|--------------|-----------------------------|------|
| Mini Sirocco Fan |  | 10CGB | ✓            | ✓                           | 079  |
|                  |  | 12CGB | ✓            | ✓                           |      |
|                  |                                                                                     | 14CGB | ✓            | ✓                           |      |
|                  |  | 16CGB | ✓            | ✓                           |      |
|                  |  | 17CGB | ✓            | ✓                           |      |
|                  |                                                                                     | 19CGB | ✓            | ✓                           |      |
|                  |  | 21CGB | ✓            | ✓                           |      |
|                  |                                                                                     |       |              |                             |      |

| Product                    |                                                                                     | Model   | Counter-flow<br>Heat-exchange | Bypass<br>Ventilation | Interlock with<br>Air Conditioning | Voltage/<br>Frequency | Notch | Air Volume<br>[CFM] | Consumption<br>[W] | Exchange Efficiency |         |          |         | Page |
|----------------------------|-------------------------------------------------------------------------------------|---------|-------------------------------|-----------------------|------------------------------------|-----------------------|-------|---------------------|--------------------|---------------------|---------|----------|---------|------|
|                            |                                                                                     |         |                               |                       |                                    |                       |       |                     |                    | Temperature         |         | Enthalpy |         |      |
|                            |                                                                                     |         |                               |                       |                                    |                       |       |                     |                    | Cooling             | Heating | Cooling  | Heating |      |
| Energy Recovery Ventilator |  | E25DZUA | ✓                             | ✓                     | ✓                                  | 220V/60Hz             | SH    | 147                 | 157                | 60                  | 75      | 61       | 67      | 091  |
|                            |                                                                                     |         |                               |                       |                                    |                       | H     | 147                 | 148                | 60                  | 75      | 61       | 67      |      |
|                            |                                                                                     |         |                               |                       |                                    |                       | L     | 88                  | 82                 | 65                  | 77      | 70       | 74      |      |
|                            |                                                                                     | E35DZUA | ✓                             | ✓                     | ✓                                  | 220V/60Hz             | SH    | 206                 | 282                | 53                  | 78      | 66       | 71.5    | 092  |
|                            |                                                                                     |         |                               |                       |                                    |                       | H     | 206                 | 253                | 53                  | 78      | 66       | 71.5    |      |
|                            |                                                                                     |         |                               |                       |                                    |                       | L     | 150                 | 172                | 53                  | 75      | 64       | 70      |      |
|                            |                                                                                     | E50DZUA | ✓                             | ✓                     | ✓                                  | 220V/60Hz             | SH    | 294                 | 376                | 53                  | 78      | 66       | 70      | 093  |
|                            |                                                                                     |         |                               |                       |                                    |                       | H     | 294                 | 349                | 53                  | 78      | 66       | 70      |      |
|                            |                                                                                     |         |                               |                       |                                    |                       | L     | 206                 | 215                | 58                  | 78      | 66       | 69      |      |
|                            |                                                                                     |         |                               |                       |                                    |                       |       |                     |                    |                     |         |          |         |      |
|                            |                                                                                     |         |                               |                       |                                    |                       |       |                     |                    |                     |         |          |         |      |
|                            |                                                                                     |         |                               |                       |                                    |                       |       |                     |                    |                     |         |          |         |      |
|                            |                                                                                     |         |                               |                       |                                    |                       |       |                     |                    |                     |         |          |         |      |

| Product           |                                                                                     | Model | Ventilation | Circulation | Heating | Clothes Drying | Voltage/ Frequency | Air Volume |       | Page |
|-------------------|-------------------------------------------------------------------------------------|-------|-------------|-------------|---------|----------------|--------------------|------------|-------|------|
|                   |                                                                                     |       |             |             |         |                |                    | [CMH]      | [CFM] |      |
| Thermo Ventilator |  | 30BUC | ✓           | ✓           | ✓       | ✓              | 220V/60Hz          | 160        | 94    | 097  |

| Product    | Twin Motor Series                                                                     | Model  | 2-speed Selection | Slim Design | Voltage/ Frequency | Air Volume |       | RPM | Page |
|------------|---------------------------------------------------------------------------------------|--------|-------------------|-------------|--------------------|------------|-------|-----|------|
|            |                                                                                       |        |                   |             |                    | [CMH]      | [CFM] |     |      |
| Range Hood |  | 90HQUA | ✓                 | ✓           | 220V/50Hz (Hi)     | 785        | 462   | 993 | 101  |
|            |                                                                                       |        |                   |             | 220V/50Hz (Lo)     | 484        | 285   | 570 |      |
|            |                                                                                       |        |                   |             | 220V/60Hz (Hi)     | 779        | 459   | 905 |      |
|            |                                                                                       |        |                   |             | 220V/60Hz (Lo)     | 464        | 273   | 594 |      |
|            |                                                                                       |        |                   |             | 240V/50Hz (Hi)     | 775        | 456   | 911 |      |
|            |                                                                                       |        |                   |             | 240V/50Hz (Lo)     | 523        | 308   | -   |      |

| Product    | Standard Series                                                                       | Model | Quick Response Sensor | Lamp Super alleru-buster Filter | ON/OFF Switch for Heater | Safety Check Indicator | Voltage/ Frequency | Air Velocity [m/s] | Page |
|------------|---------------------------------------------------------------------------------------|-------|-----------------------|---------------------------------|--------------------------|------------------------|--------------------|--------------------|------|
| Hand Dryer |  | T09AC | ✓                     | ✓                               | ✓                        | ✓                      | 220V/50Hz          | 90 - 110           | 105  |
|            |                                                                                       |       |                       |                                 |                          |                        | 220V/60Hz          | 90 - 110           |      |
|            |                                                                                       |       |                       |                                 |                          |                        | 230V/50Hz          | 90 - 110           |      |
|            |                                                                                       |       |                       |                                 |                          |                        | 230V/60Hz          | 90 - 110           |      |
|            |  | T09BC | ✓                     | ✓                               | ✓                        | ✓                      | 220V/50Hz          | 90 - 110           |      |
|            |                                                                                       |       |                       |                                 |                          |                        | 220V/60Hz          | 90 - 110           |      |
|            |                                                                                       |       |                       |                                 |                          |                        | 230V/50Hz          | 90 - 110           |      |
|            |                                                                                       |       |                       |                                 |                          |                        | 230V/60Hz          | 90 - 110           |      |



Product Summary

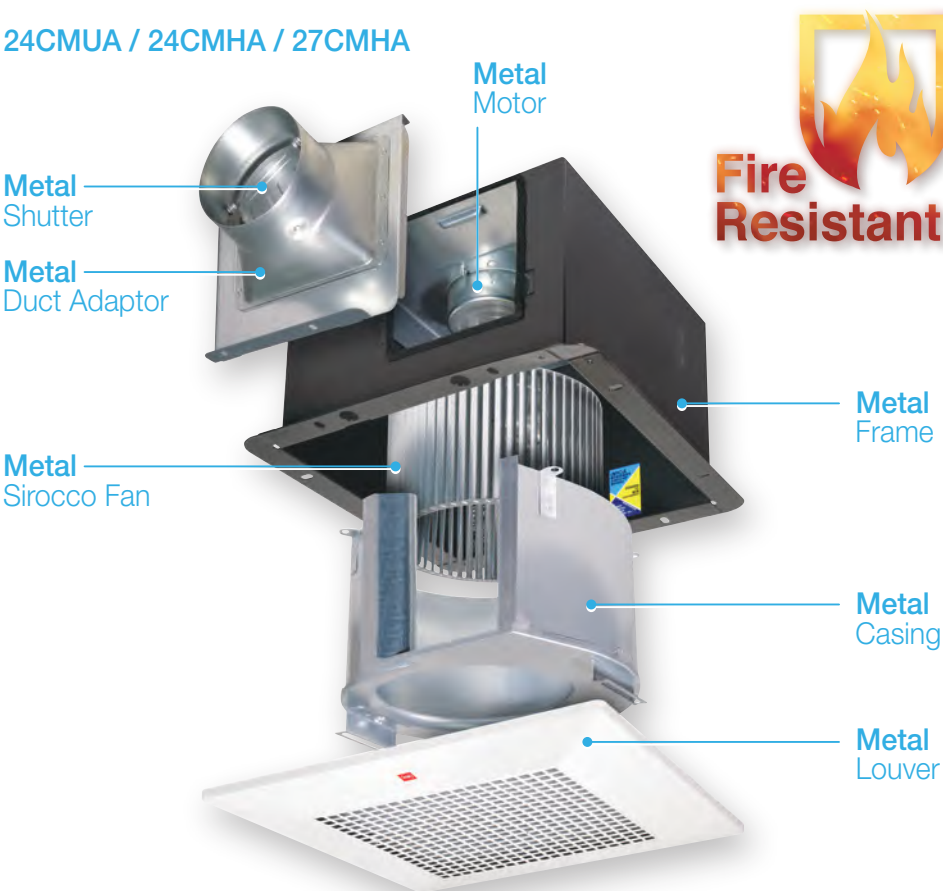
| Product     | Type            | Series                |                                                                                     | Model  | Cross Flow Fan | Sirocco Fan | Meta Blade Bush | Air Deflection Plate | 2-speed Selection | Remote Control | Door Contact Sensor | Push Button Switch | Page |
|-------------|-----------------|-----------------------|-------------------------------------------------------------------------------------|--------|----------------|-------------|-----------------|----------------------|-------------------|----------------|---------------------|--------------------|------|
| Air Curtain | Cross Flow Type | Remote Control Series |    | 3009GA | ✓              | -           | ✓               | ✓                    | ✓                 | ✓              | -                   | -                  | 109  |
|             |                 |                       |                                                                                     | 4009GA | ✓              | -           | ✓               | ✓                    | ✓                 | ✓              | -                   | -                  |      |
|             |                 |                       |                                                                                     | 3012GA | ✓              | -           | ✓               | ✓                    | ✓                 | ✓              | -                   | -                  |      |
|             |                 |                       |                                                                                     | 4012GA | ✓              | -           | ✓               | ✓                    | ✓                 | ✓              | -                   | -                  |      |
|             |                 |                       |                                                                                     | 3015GA | ✓              | -           | ✓               | ✓                    | ✓                 | ✓              | -                   | -                  |      |
|             |                 |                       |                                                                                     | 4015GA | ✓              | -           | ✓               | ✓                    | ✓                 | ✓              | -                   | -                  |      |
|             |                 | Sensor Series         |    | 3009DA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | ✓                   | -                  | 110  |
|             |                 |                       |                                                                                     | 4009DA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | ✓                   | -                  |      |
|             |                 |                       |                                                                                     | 3012DA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | ✓                   | -                  |      |
|             |                 |                       |                                                                                     | 4012DA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | ✓                   | -                  |      |
|             |                 |                       |                                                                                     | 3015DA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | ✓                   | -                  |      |
|             |                 |                       |                                                                                     | 4015DA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | ✓                   | -                  |      |
|             |                 | Standard Series       |  | 3009UA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | -                   | ✓                  | 111  |
|             |                 |                       |                                                                                     | 4009UA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 3012UA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 4012UA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 3015UA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 4015UA | ✓              | -           | ✓               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             | Sirocco Type    | 900 Series            |  | 08ESK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  | 113  |
|             |                 |                       |                                                                                     | 10ESK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 12ESK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 14ESK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 | 1200 Series           |  | 08ELK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  | 114  |
|             |                 |                       |                                                                                     | 10ELK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 12ELK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  |      |
|             |                 |                       |                                                                                     | 14ELK  | -              | ✓           | -               | ✓                    | ✓                 | -              | -                   | ✓                  |      |

| Product      | Series                   |                                                                                       | Model | Remote Control | Regulator Control | Pull Switch | 3-speed Selection | 5-speed Selection | OFF Timer | Metal Blades | 360° Oscillation | Page |
|--------------|--------------------------|---------------------------------------------------------------------------------------|-------|----------------|-------------------|-------------|-------------------|-------------------|-----------|--------------|------------------|------|
| Ceiling Fan  | Remote Control Series    |    | U56PR | ✓              | -                 | -           | ✓                 | -                 | ✓         | ✓            | -                | 117  |
|              |                          |                                                                                       | T48XC | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                | 118  |
|              | Regulator Control Series |    | T56XC | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                |      |
|              |                          |                                                                                       | T48XG | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                | 119  |
|              |                          |    | T56XG | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                |      |
|              |                          |                                                                                       | X48XC | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                | 120  |
|              |                          |    | X56XC | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                |      |
|              |                          |                                                                                       | X48XG | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                | 121  |
|              |                          |  | X56XG | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | -                |      |
|              | Orbital Fan              |  | M40R  | -              | ✓                 | -           | -                 | ✓                 | -         | ✓            | ✓                | 122  |
|              |                          |                                                                                       | M30C  | -              | -                 | ✓           | ✓                 | -                 | -         | -            | -                | 123  |
| Electric Fan | Wall Fan                 |  | M40C  | -              | -                 | ✓           | ✓                 | -                 | -         | ✓            | -                |      |
|              |                          |                                                                                       | M40M  | ✓              | -                 | -           | ✓                 | -                 | ✓         | -            | -                | 124  |
|              |                          |  | YU50X | -              | -                 | ✓           | ✓                 | -                 | ✓         | ✓            | -                | 125  |
|              |                          |                                                                                       |       |                |                   |             |                   |                   |           |              |                  |      |

# Ceiling Mount Type Ventilation Fan



24CMUA / 24CMHA / 27CMHA



24-Hour Ventilation



Long Life



Highly Efficient



Super Low Noise



Easy Installation



High Performance



Easy Installation & Maintenance



Safe\*



Durable

\*Metallic structure can reduce the fire risk spread to other area from fire affected compartment through the ducting.

Scan for more information



DC Motor Series

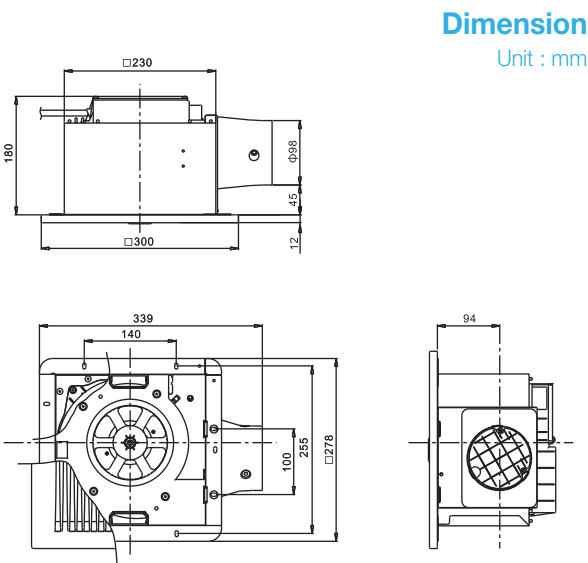
Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

24JRB

24-Hour Ventilation  
Duct Type Ø100mm



- DC (Direct Current) motor
- Auto operation by motion sensor
- Constant airflow
- Automated air volume adjustment
- Delay timer (15 minutes)
- Resonance-Noise-Absorption Structure
- Motor insulation Class E
- IP protection: IPX2

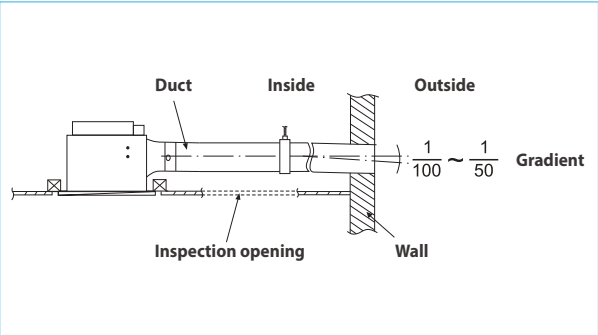


Specification

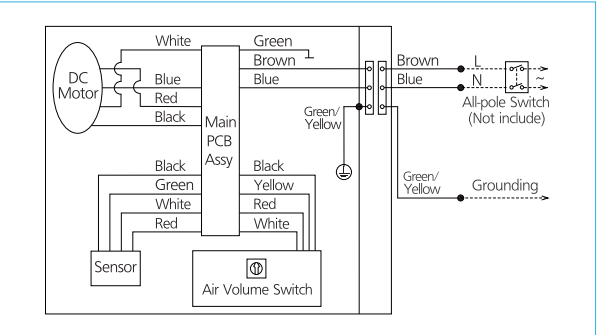
| Model | Voltage [V] | Frequency [Hz] | Speed | Air Volume |       | Consumption [W] | RPM | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------|-------------|----------------|-------|------------|-------|-----------------|-----|---------------|-------------|------------------------|----------------|
|       |             |                |       | [CMH]      | [CFM] |                 |     |               |             |                        |                |
| 24JRB | 220-240     | 60             | Hi    | 160        | 94    | 8               | 742 | 31            | 2.9         | 240 x 240              | Ø100           |
|       |             |                | Lo    | 120        | 71    | 5.2             | 556 | 26            |             |                        |                |
|       |             |                | Lo    | 80         | 47    | 3.6             | 441 | 20            |             |                        |                |
|       | 220-230     | 50             | Hi    | 160        | 94    | 8               | 742 | 31            |             |                        |                |
|       |             |                | Lo    | 120        | 71    | 5.2             | 556 | 26            |             |                        |                |
|       |             |                | Lo    | 80         | 47    | 3.6             | 441 | 20            |             |                        |                |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation Example



Wiring Diagram



DC Motor Series

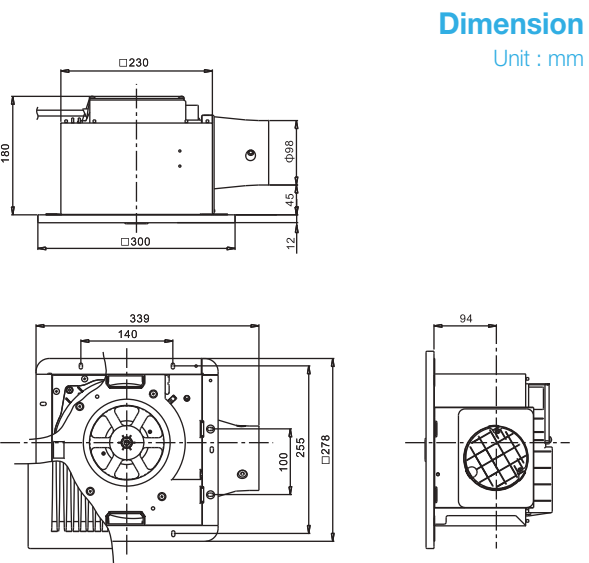
Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

24JAB

24-Hour Ventilation  
Duct Type Ø100mm



- DC (Direct Current) motor
- Constant airflow
- Automated air volume adjustment
- Delay timer (15 minutes)
- Resonance-Noise-Absorption Structure
- Motor insulation Class E
- IP protection: IPX2

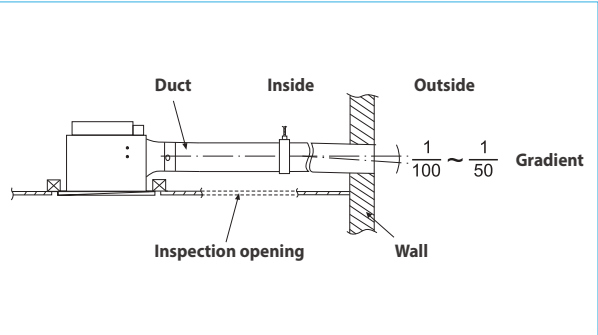


Specification

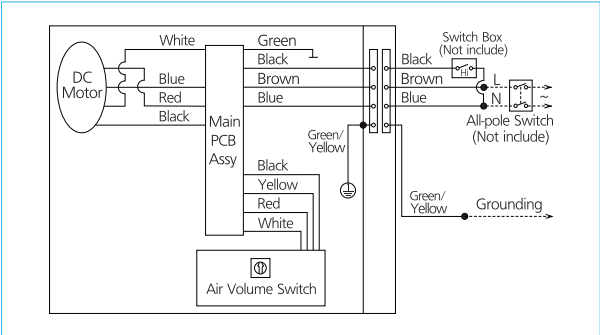
| Model | Voltage [V] | Frequency [Hz] | Speed | Air Volume |       | Consumption [W] | RPM | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------|-------------|----------------|-------|------------|-------|-----------------|-----|---------------|-------------|------------------------|----------------|
|       |             |                |       | [CMH]      | [CFM] |                 |     |               |             |                        |                |
| 24JAB | 220-240     | 60             | Hi    | 160        | 94    | 8               | 742 | 31            | 2.9         | 240 x 240              | Ø100           |
|       |             |                | Lo    | 120        | 71    | 5.2             | 556 | 26            |             |                        |                |
|       |             |                | Lo    | 80         | 47    | 3.6             | 441 | 20            |             |                        |                |
|       | 220-230     | 50             | Hi    | 160        | 94    | 8               | 742 | 31            |             |                        |                |
|       |             |                | Lo    | 120        | 71    | 5.2             | 556 | 26            |             |                        |                |
|       |             |                | Lo    | 80         | 47    | 3.6             | 441 | 20            |             |                        |                |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
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  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation Example



Wiring Diagram



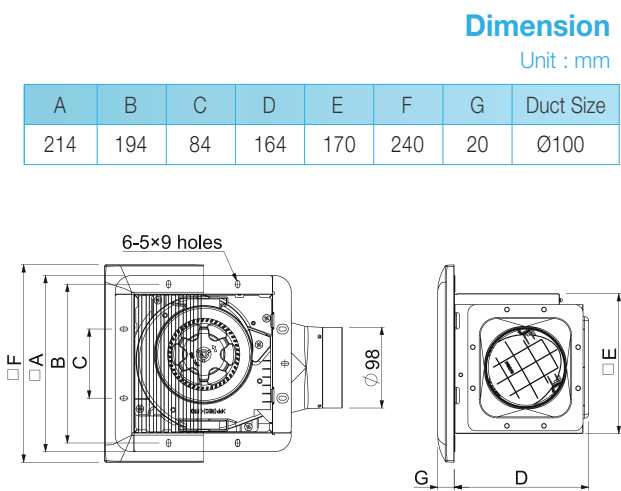


# Super Quiet Series

Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

## 17CUH

24-Hour Ventilation  
Duct Type Ø100mm



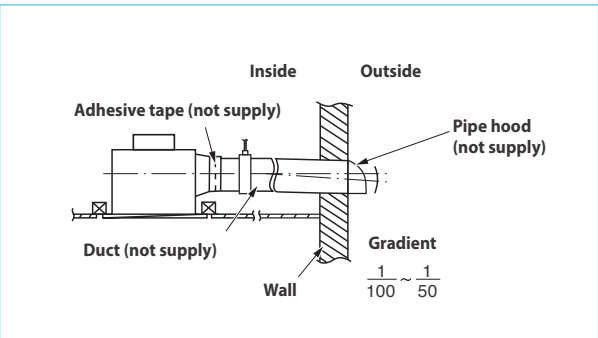
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class B
- IP protection: IPX2

### Specification

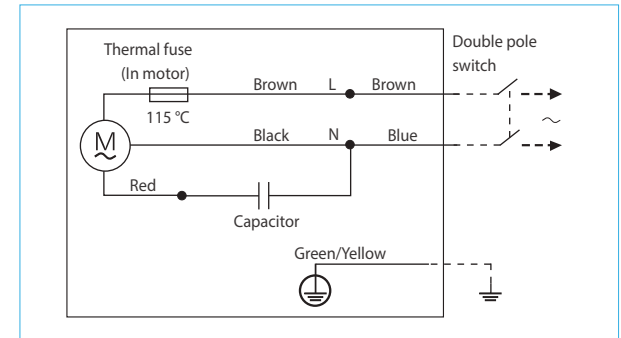
| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                        |                |
| 17CUH | 220         | 50             | 85         | 50    | 7.5             | 23            | 1.7         | 177 x 177              | Ø100           |
|       |             | 60             | 85         | 50    | 10              | 24            |             |                        |                |
|       | 230         | 50             | 85         | 50    | 8.5             | 24.5          |             |                        |                |
|       |             | 60             | 85         | 50    | 10              | 24            |             |                        |                |
|       |             | 50             | 90         | 53    | 9.5             | 26            |             |                        |                |
|       |             | 60             | 90         | 53    | 10              | 26            |             |                        |                |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

### Installation Example



### Wiring Diagram

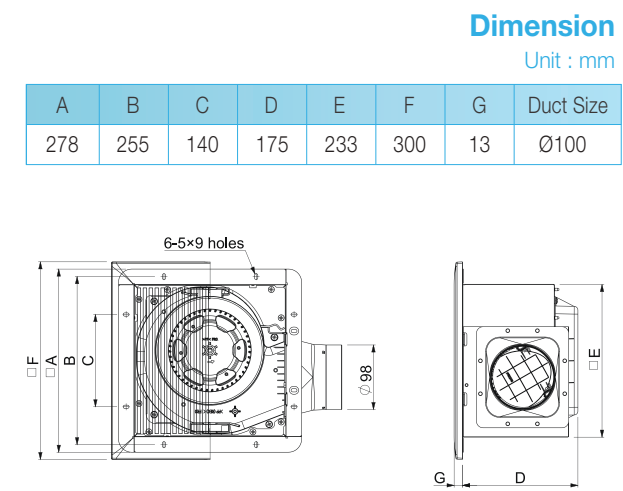


# Super Quiet Series

Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

## 24CUH / 24CDH / 24CHH

24-Hour Ventilation  
Duct Type Ø100mm



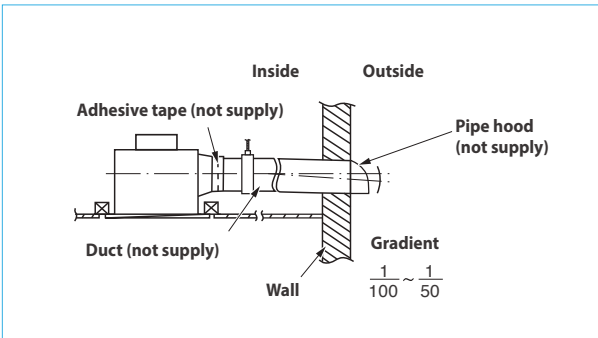
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class B
- IP protection: IPX2

### Specification

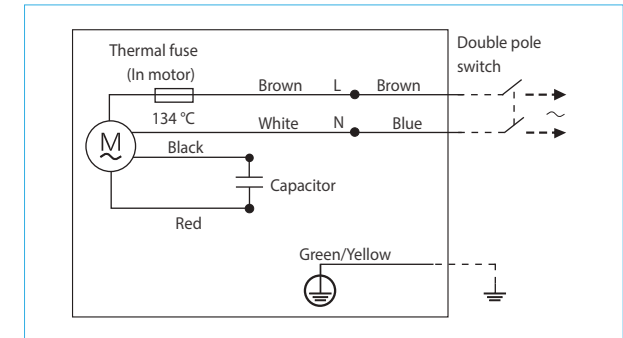
| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                        |                |
| 24CUH | 220         | 50             | 140        | 82    | 10.5            | 25            | 2.7         | 240 x 240              | Ø100           |
|       |             | 60             | 150        | 88    | 13.5            | 26.5          |             |                        |                |
|       | 230         | 50             | 150        | 88    | 11              | 26            |             |                        |                |
|       |             | 60             | 150        | 88    | 13.5            | 26.5          |             |                        |                |
| 24CDH | 220         | 50             | 160        | 94    | 12              | 27            | 2.7         | 240 x 240              | Ø100           |
|       |             | 60             | 170        | 100   | 13.5            | 28.5          |             |                        |                |
|       | 230         | 50             | 180        | 106   | 15              | 30            |             |                        |                |
|       |             | 60             | 180        | 106   | 19              | 31            |             |                        |                |
| 24CHH | 220         | 50             | 190        | 112   | 16.5            | 31.5          | 2.7         | 240 x 240              | Ø100           |
|       |             | 60             | 200        | 118   | 16.5            | 32            |             |                        |                |
|       | 230         | 50             | 210        | 124   | 20.5            | 33.5          |             |                        |                |
|       |             | 60             | 210        | 124   | 18              | 34            |             |                        |                |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

### Installation Example



### Wiring Diagram



Super Quiet Series

Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

24CXH

24-Hour Ventilation  
Duct Type Ø100mm



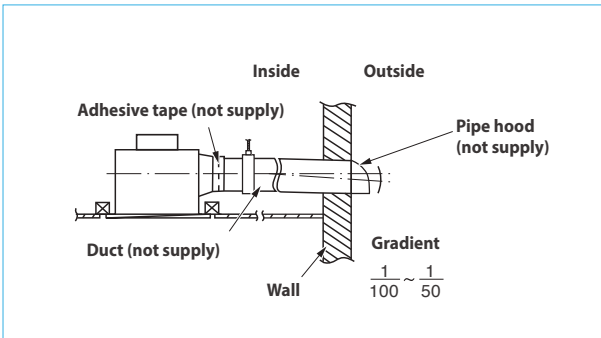
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class B
- IP protection: IPX2

Specification

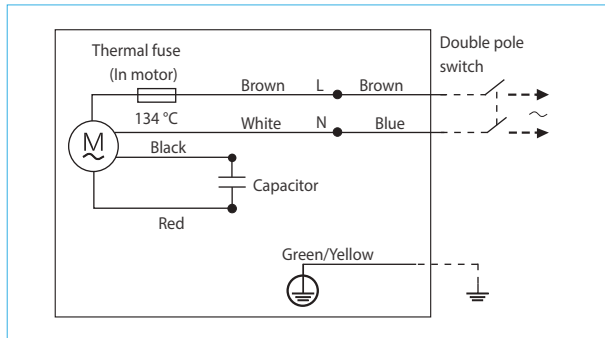
| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                        |                |
| 24CXH | 220         | 50             | 235        | 138   | 24              | 38            | 2.7         | 240 x 240              | Ø100           |
|       |             | 60             | 255        | 150   | 29              | 40            |             |                        |                |
|       | 230         | 50             | 240        | 141   | 26.5            | 39            |             |                        |                |
|       | 240         | 50             | 250        | 147   | 29              | 40            |             |                        |                |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation Example



Wiring Diagram



Super Quiet Series

Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

27CHH

24-Hour Ventilation  
Duct Type Ø150mm



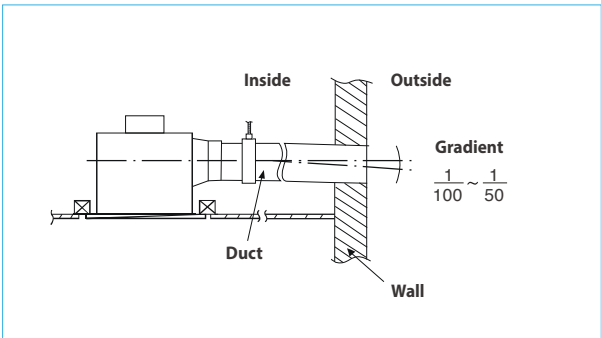
- Super low noise
- Long life ball bearing motor
- Effective control of air turbulence with taper blade
- Resonance-Noise-Absorption Structure
- Pre-installed power cord
- 2 speed selectable
- Motor insulation Class E
- IP protection: IPX2

Specification

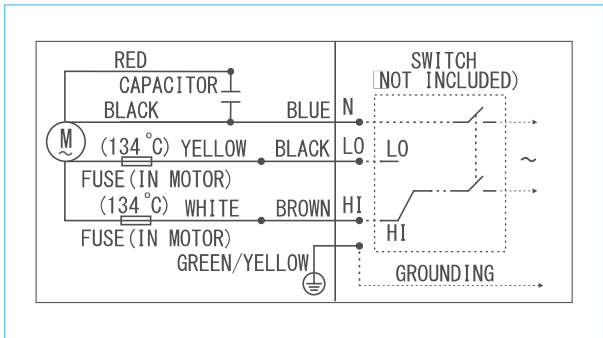
| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                        |                |
| 27CHH | 220         | 50             | Hi         | 330   | 194             | 28            | 4.4         | 270 x 270              | Ø150           |
|       |             |                | Lo         | 260   | 153             | 23            |             |                        |                |
|       |             | 60             | Hi         | 330   | 194             | 33            |             |                        |                |
|       |             |                | Lo         | 270   | 159             | 26            |             |                        |                |
|       | 230         | 50             | Hi         | 340   | 200             | 31.5          |             |                        |                |
|       |             |                | Lo         | 275   | 162             | 25.5          |             |                        |                |
|       |             | 60             | Hi         | 360   | 212             | 34            |             |                        |                |
|       |             |                | Lo         | 290   | 171             | 27.5          |             |                        |                |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation Example



Wiring Diagram



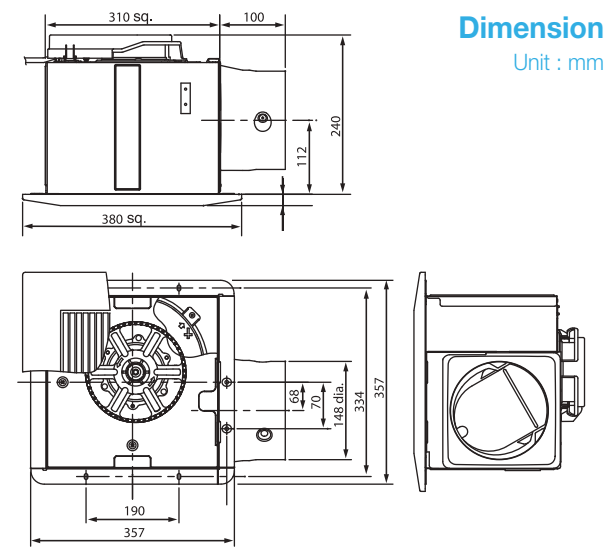
# Super Quiet Series

Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

## 32CDH

24-Hour Ventilation

Duct Type Ø150mm



Dimension  
Unit : mm

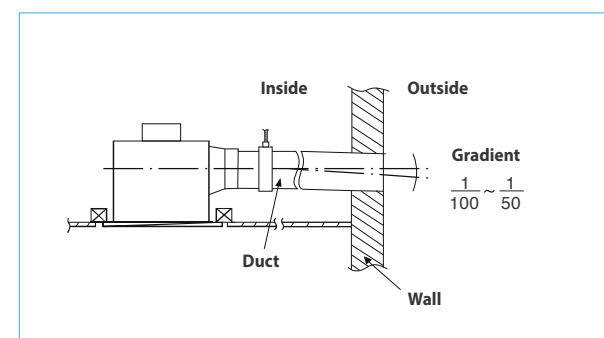
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class E
- IP protection: IPX2

## Specification

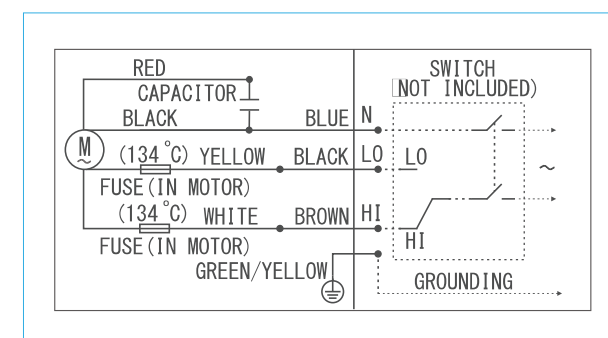
| Model | Voltage [V] | Frequency [Hz] |    | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------|-------------|----------------|----|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|       |             |                |    | [CMH]      | [CFM] |                 |               |             |                        |                |
| 32CDH | 220         | 50             | Hi | 430        | 253   | 42              | 36            | 5.2         | 320 x 320              | Ø150           |
|       |             |                | Lo | 300        | 177   | 32              | 28            |             |                        |                |
|       |             | 60             | Hi | 410        | 241   | 48              | 35.5          |             |                        |                |
|       |             |                | Lo | 285        | 168   | 33              | 27.5          |             |                        |                |
|       | 230         | 50             | Hi | 440        | 259   | 46              | 37.5          |             |                        |                |
|       |             |                | Lo | 315        | 185   | 34              | 29            |             |                        |                |
|       |             | 50             | Hi | 470        | 277   | 50              | 38.5          |             |                        |                |
|       |             |                | Lo | 330        | 194   | 38              | 30            |             |                        |                |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

## Installation Example



## Wiring Diagram



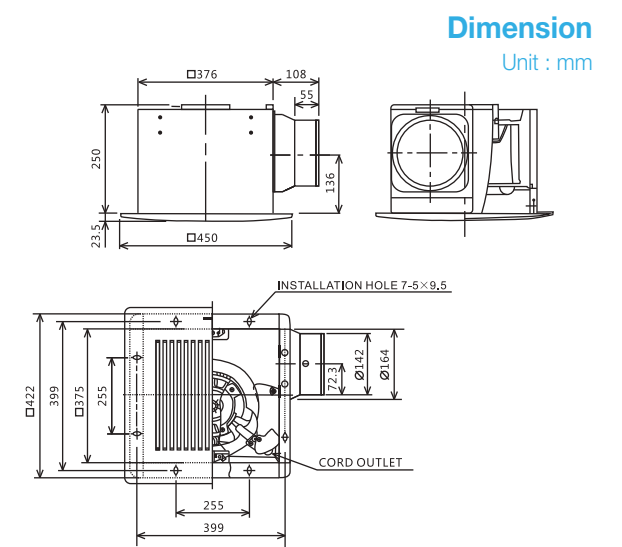
# Standard Series

Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

## 38CDG / 38CDG 05

24-Hour Ventilation

Duct Type Ø150mm



Dimension  
Unit : mm

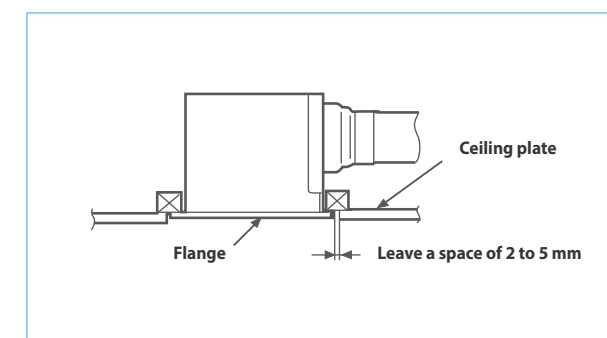
- High-Low speed selectable
- Condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- High performance sirocco fan
- Motor insulation Class E

## Specification

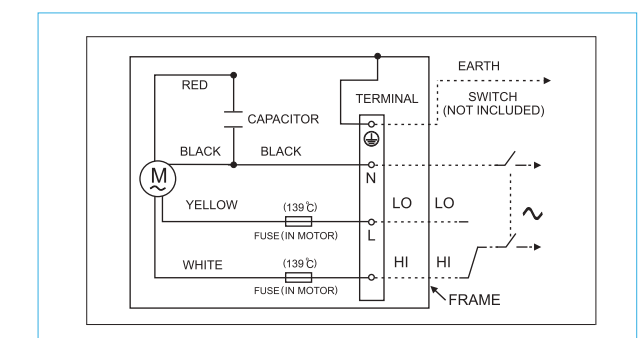
| Model             | Voltage [V] | Frequency [Hz] |    | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-------------------|-------------|----------------|----|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|                   |             |                |    | [CMH]      | [CFM] |                 |               |             |                        |                |
| 38CDG<br>38CDG 05 | 220         | 50             | Hi | 640        | 377   | 90              | 44            | 9.7         | 385 x 385              | Ø150           |
|                   |             |                | Lo | 430        | 253   | 66              | 35            |             |                        |                |
|                   |             | 60             | Hi | 630        | 371   | 98              | 43.5          |             |                        |                |
|                   |             |                | Lo | 410        | 241   | 66.4            | 34.5          |             |                        |                |
|                   | 230         | 50             | Hi | 675        | 397   | 96              | 46            |             |                        |                |
|                   |             |                | Lo | 440        | 259   | 72              | 36            |             |                        |                |
|                   |             | 50             | Hi | 700        | 412   | 104             | 47            |             |                        |                |
|                   |             |                | Lo | 470        | 277   | 78              | 37            |             |                        |                |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

## Installation Example



## Wiring Diagram





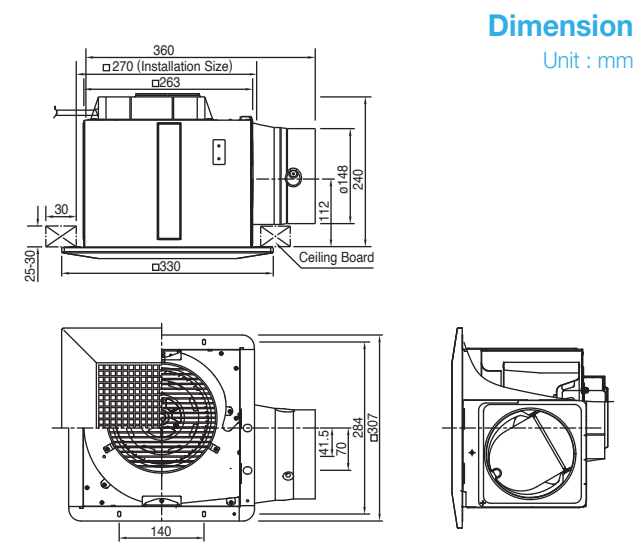


Metal Series

Usage: Bathroom Toilet Living Room / Corridor / Office / Retail Store

27CMHA

- Fire Resistant
- 24-Hour Ventilation
- Duct Type Ø148mm



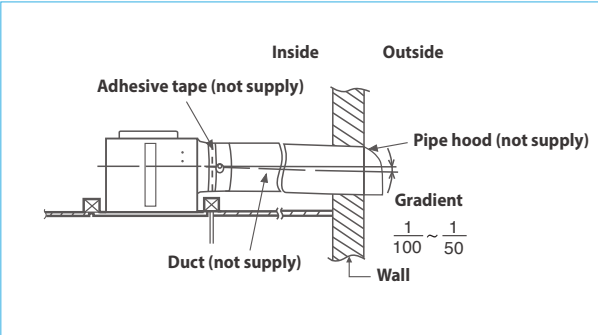
- All-metal structure design
- Well-lubricated ball bearing for long life operation
- Metallic components within air stream provides extra safety against fire
- Reverse flow prevention shutter
- Motor insulation Class E
- IP protection: IPX2

Specification

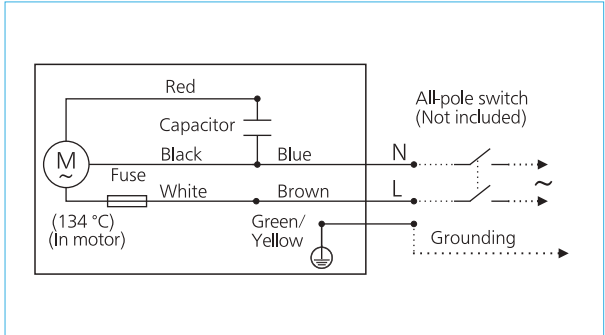
| Model  | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|--------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|        |             |                | [CMH]      | [CFM] |                 |               |             |                        |                |
| 27CMHA | 220         | 50             | 360        | 212   | 35              | 37            | 5.9         | 270 x 270              | Ø150           |
|        |             | 60             | 380        | 224   | 43              | 37.5          |             |                        |                |
|        | 230         | 50             | 380        | 224   | 38              | 37.5          |             |                        |                |
|        |             | 50             | 400        | 235   | 43              | 38            |             |                        |                |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation Example



Wiring Diagram



Ceiling Mount Type Ventilation Fan



# Wall Mount Type Ventilation Fan

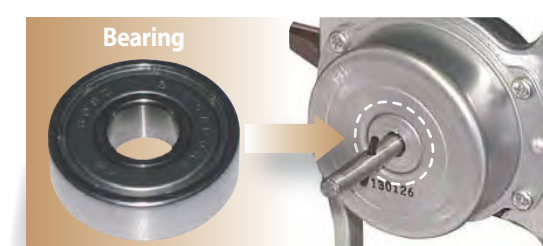


## Features

### Smart Design

The new flat design creates a feeling of floating upon installation on wall. Meanwhile, slim louver is designed for the louver series. Such minimalistic elements integrate seamlessly with the interior space.

Only applicable for model:  
20AUA/25AUA/30AUA  
20ALA/25ALA/30ALA



### Half Pitch Motor & Bearing

All models adopt half pitch capacitor induction motor and long life bearing that prolongs the product durability, with average 30,000 hours life. They also enable energy saving by reducing power consumption down to average 13%.

### Thermal Fuse Equipped

All motors are equipped with thermal fuses which would stop when they are overheated. It can prevent further temperature rise and minimize the risk of fire hazard.



Only applicable for model:  
20AUA/25AUA/30AUA  
20ALA/25ALA/30ALA

### Silent Stream Fan

New blade design applies advanced aerodynamic principle that optimizes the blade shape.



### 3D Sickle Blade

New blade design adopts an increased blade size and airfoil curve optimization. It can increase the air volume by the adjusted blade shape which can match the airflow. Furthermore, it can lower the noise by evening the airflow velocity with the silent wing.

\*Features above are only applicable to some of the models



Metallic Series

Usage: Bathroom Toilet Office / Retail Store

20ASB / 25ASB / 30ASB  
20ASB 05 / 25ASB 05 / 30ASB 05

Metallic Structure



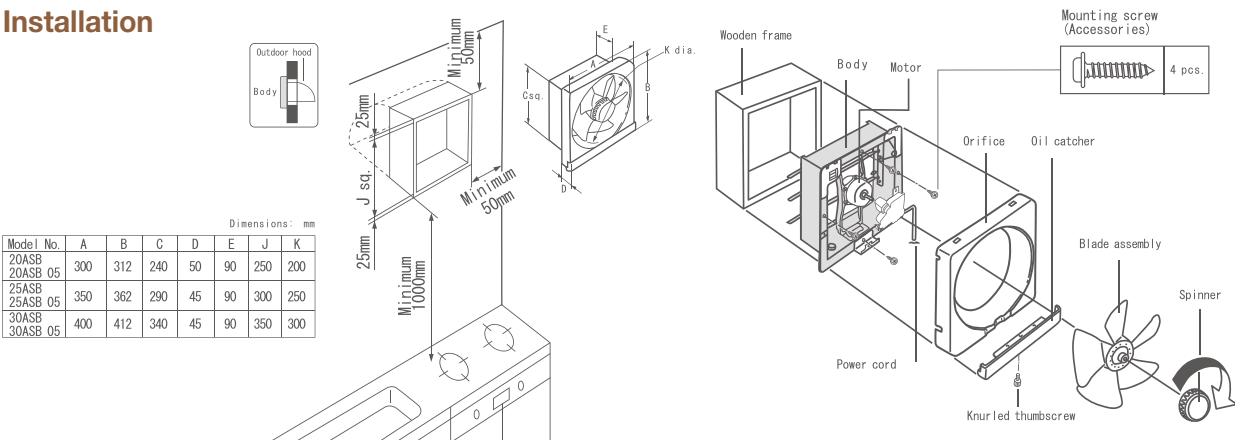
- Condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- High performance propeller fan adopted
- Automatic shutter
- Powder painted metallic orifice, blade and oil cup
- Detachable oil cup
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

| Model             | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Installation Space [mm] |
|-------------------|-------------|----------------|------------|-------|-----------------|---------------|-------------|-------------------------|
|                   |             |                | [CMH]      | [CFM] |                 |               |             |                         |
| 20ASB<br>20ASB 05 | 220         | 50             | 516        | 304   | 17              | 37.5          | 3.3         | 250 x 250               |
|                   |             | 60             | 612        | 360   | 21.5            | 40.6          |             |                         |
|                   | 230         | 50             | 528        | 311   | 18.1            | 38.1          |             |                         |
| 25ASB<br>25ASB 05 | 220         | 50             | 540        | 318   | 19.5            | 38.4          | 3.8         | 300 x 300               |
|                   |             | 60             | 858        | 505   | 25              | 39.1          |             |                         |
|                   | 230         | 50             | 954        | 562   | 30.5            | 40.6          |             |                         |
|                   |             | 60             | 864        | 509   | 27.3            | 39.3          |             |                         |
|                   | 240         | 50             | 888        | 523   | 29.5            | 39.7          |             |                         |
| 30ASB<br>30ASB 05 | 220         | 50             | 1,182      | 696   | 29.5            | 39.2          | 4.4         | 350 x 350               |
|                   |             | 60             | 1,164      | 685   | 34.5            | 39            |             |                         |
|                   | 230         | 50             | 1,248      | 735   | 31.7            | 40.6          |             |                         |
|                   |             | 60             | 1,290      | 759   | 34              | 41.3          |             |                         |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation



Automatic Shutter Series

Usage: Bathroom Toilet Office / Retail Store

15AAQ1

Metallic Structure

Orifice Equipped with Oil Cup



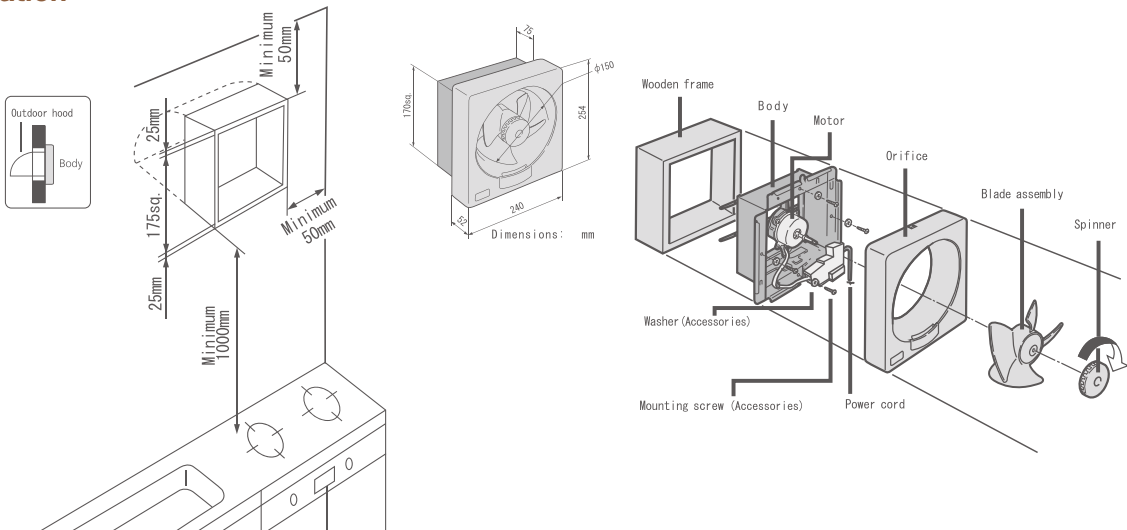
- Condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- High performance propeller fan adopted
- Automatic shutter with plastic cushions
- Orifice equipped with oil cup
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

| Model  | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Installation Space [mm] |
|--------|-------------|----------------|------------|-------|-----------------|---------------|-------------|-------------------------|
|        |             |                | [CMH]      | [CFM] |                 |               |             |                         |
| 15AAQ1 | 220         | 50             | 288        | 170   | 15              | 31            | 1.4         | 175 x 175               |
|        |             | 60             | 306        | 180   | 19              | 34            |             |                         |
|        | 230         | 50             | 294        | 173   | 17              | 33            |             |                         |
|        |             | 60             | 306        | 180   | 19              | 33            |             |                         |

- Note:
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation



Automatic Shutter Series

Usage: Bathroom Toilet Office / Retail Store

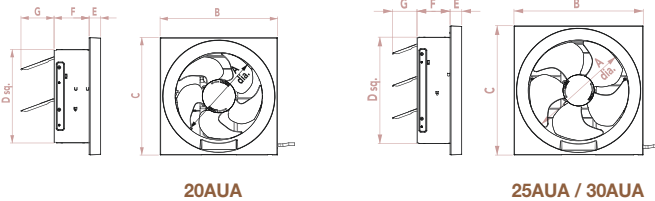
20AUA / 25AUA / 30AUA

Dimension  
Unit : mm

- Silent Stream Fan
- Flat Surface Design
- Automatic Shutter



| Model | A   | B   | C   | D   | E  | F  | G  |
|-------|-----|-----|-----|-----|----|----|----|
| 20AUA | 223 | 302 | 302 | 240 | 30 | 90 | 85 |
| 25AUA | 273 | 352 | 352 | 290 | 32 | 90 | 67 |
| 30AUA | 317 | 402 | 402 | 340 | 32 | 90 | 83 |



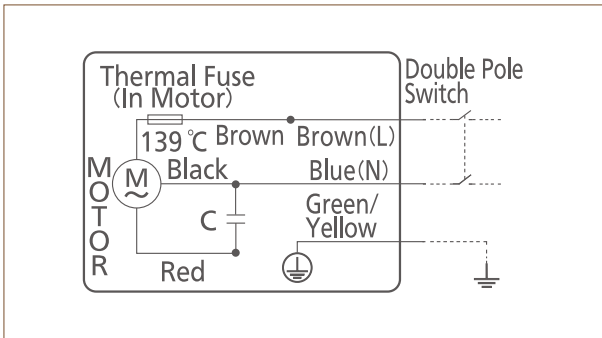
- Flat surface design
- Silent stream fan
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Automatic shutter
- Motor insulation Class B
- IP protection: IPX4 (outside)

Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume  |         | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] |
|-------|-------------|----------------|-------------|---------|-----------------|---------------|-------------|------------------------|
|       |             |                | [CMH]       | [CFM]   |                 |               |             |                        |
| 20AUA | 220-230     | 50             | 590-610     | 347-359 | 18-19.5         | 36-36.5       | 1.9         | 250 x 250              |
|       | 220-240     | 50             | 590-620     | 347-365 | 18-21.5         | 36-37         |             |                        |
|       | 220         | 60             | 680         | 400     | 22              | 39            |             |                        |
|       | 230         | 60             | 710         | 418     | 23.5            | 40            |             |                        |
| 25AUA | 220-230     | 50             | 950-970     | 559-571 | 25-27           | 38-38.5       | 2.3         | 300 x 300              |
|       | 220-240     | 50             | 950-990     | 559-571 | 25-27           | 38-39         |             |                        |
|       | 220         | 60             | 990         | 571     | 31              | 39            |             |                        |
|       | 230         | 60             | 1,040       | 612     | 35              | 41            |             |                        |
| 30AUA | 220-230     | 50             | 1,200-1,250 | 706-736 | 28-30           | 37-38         | 2.6         | 350 x 350              |
|       | 220-240     | 50             | 1,200-1,300 | 706-765 | 28-32.5         | 37-38         |             |                        |
|       | 220         | 60             | 1,200       | 706     | 33              | 37            |             |                        |
|       | 230         | 60             | 1,300       | 765     | 36              | 39            |             |                        |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Wiring Diagram



Automatic Shutter Series

Usage: Bathroom Toilet Office / Retail Store

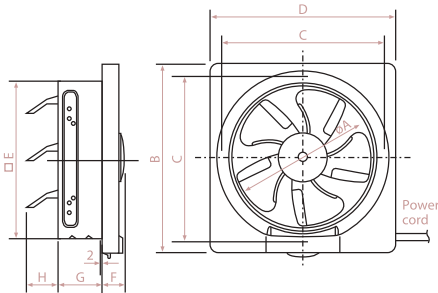
20AUH / 25AUH / 30AUH 11

Dimension  
Unit : mm

- Advanced Blade Design
- Automatic Shutter
- Single Speed



| Model    | A   | B   | C   | D   | E   | F  | G  | H  |
|----------|-----|-----|-----|-----|-----|----|----|----|
| 20AUH    | 200 | 306 | 260 | 302 | 240 | 52 | 90 | 80 |
| 25AUH    | 250 | 356 | 310 | 352 | 290 | 38 | 90 | 63 |
| 30AUH 11 | 300 | 406 | 360 | 402 | 340 | 38 | 90 | 78 |



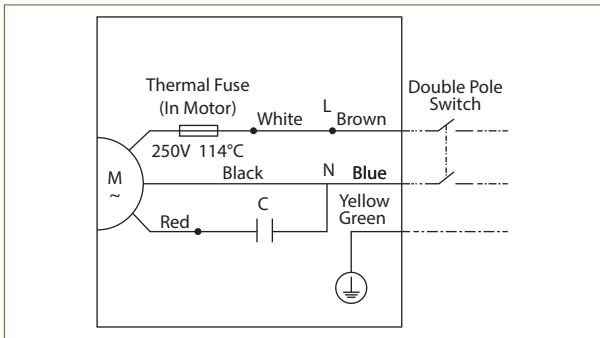
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design (except 30AUH 11)
- Automatic shutter
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

| Model    | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] |
|----------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|
|          |             |                | [CMH]      | [CFM] |                 |               |             |                        |
| 20AUH    | 220         | 50             | 580        | 341   | 22              | 38            | 2.0         | 250 x 250              |
|          |             | 60             | 650        | 383   | 29              | 42            |             |                        |
| 25AUH    | 220         | 50             | 920        | 541   | 29              | 39            | 2.4         | 300 x 300              |
|          |             | 60             | 940        | 553   | 33              | 39            |             |                        |
| 30AUH 11 | 220         | 50             | 1,200      | 706   | 29              | 39            | 2.7         | 350 x 350              |
|          |             | 60             | 1,140      | 671   | 33              | 38            |             |                        |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Wiring Diagram



Automatic Shutter Louver Series

Usage: Bathroom Toilet Office / Retail Store

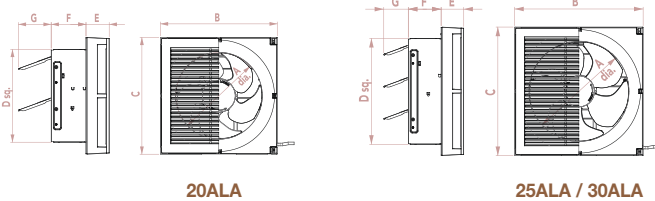
20ALA / 25ALA / 30ALA

Dimension  
Unit : mm

- Louver for Safety Protection
- Silent Stream Fan
- Automatic Shutter



| Model | A   | B   | C   | D   | E  | F  | G  |
|-------|-----|-----|-----|-----|----|----|----|
| 20ALA | 223 | 302 | 302 | 240 | 60 | 90 | 85 |
| 25ALA | 273 | 352 | 352 | 290 | 62 | 90 | 67 |
| 30ALA | 317 | 402 | 402 | 340 | 62 | 90 | 83 |



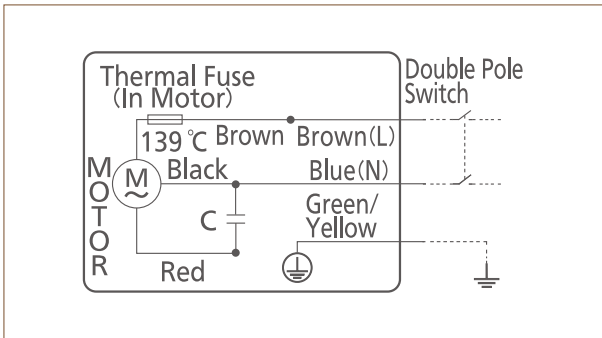
- Slim louver design
- Silent stream fan
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Automatic shutter
- Motor insulation Class B
- IP protection: IPX4 (outside)

Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume  |         | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] |
|-------|-------------|----------------|-------------|---------|-----------------|---------------|-------------|------------------------|
|       |             |                | [CMH]       | [CFM]   |                 |               |             |                        |
| 20ALA | 220-230     | 50             | 550-555     | 324-327 | 18-19.5         | 38-38.5       | 2.0         | 250 x 250              |
|       | 220-240     | 50             | 550-560     | 324-330 | 18-21.5         | 38-39         |             |                        |
|       | 220         | 60             | 610         | 359     | 22              | 42.5          |             |                        |
|       | 230         | 60             | 630         | 371     | 23.5            | 44            |             |                        |
| 25ALA | 220-230     | 50             | 840-860     | 494-506 | 25-27           | 40.5-42       | 2.5         | 300 x 300              |
|       | 220-240     | 50             | 840-880     | 494-518 | 25-30           | 40.5-43       |             |                        |
|       | 220         | 60             | 860         | 506     | 31              | 42            |             |                        |
|       | 230         | 60             | 910         | 536     | 34              | 45            |             |                        |
| 30ALA | 220-230     | 50             | 1,000-1050  | 589-618 | 28-30           | 39-40         | 2.9         | 350 x 350              |
|       | 220-240     | 50             | 1,000-1,100 | 589-647 | 28-32.5         | 39-41         |             |                        |
|       | 220         | 60             | 1,000       | 589     | 33              | 40            |             |                        |
|       | 230         | 60             | 1,050       | 618     | 36              | 41            |             |                        |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Wiring Diagram



Automatic Shutter Louver Series

Usage: Bathroom Toilet Office / Retail Store

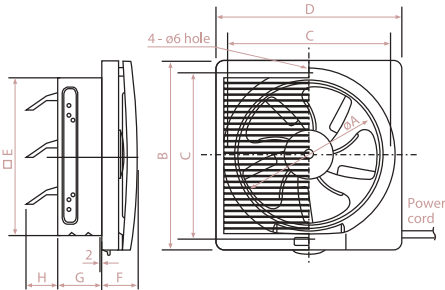
20ALH / 25ALH / 30ALF 11

Dimension  
Unit : mm

- Louver for Safety Protection
- Advanced Blade Design
- Single Speed



| Model    | A   | B   | C   | D   | E   | F  | G  | H  |
|----------|-----|-----|-----|-----|-----|----|----|----|
| 20ALH    | 200 | 306 | 260 | 302 | 240 | 68 | 90 | 80 |
| 25ALH    | 250 | 356 | 310 | 352 | 290 | 63 | 90 | 63 |
| 30ALF 11 | 300 | 406 | 360 | 402 | 340 | 63 | 90 | 78 |



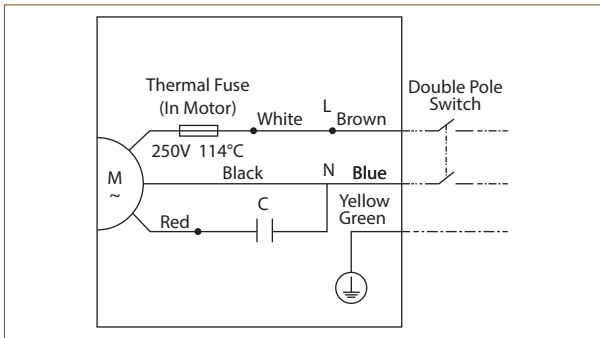
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design (except 30ALF 11)
- Automatic shutter
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

| Model    | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] |
|----------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|
|          |             |                | [CMH]      | [CFM] |                 |               |             |                        |
| 20ALH    | 220         | 50             | 546        | 321   | 22              | 40            | 2.2         | 250 x 250              |
|          |             | 60             | 600        | 353   | 29              | 44            |             |                        |
| 25ALH    | 220         | 50             | 835        | 491   | 29              | 43            | 2.7         | 300 x 300              |
|          |             | 60             | 846        | 498   | 33              | 43            |             |                        |
| 30ALF 11 | 220         | 50             | 935        | 550   | 29              | 43            | 3.1         | 350 x 350              |
|          |             | 60             | 915        | 539   | 33              | 43            |             |                        |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Wiring Diagram





# Automatic Shutter Louver Series

Usage: Bathroom Toilet Office / Retail Store

## 10BAQ1

- Powerful Sirocco Fan
- Louver for Safety Protection
- Long Life Operation



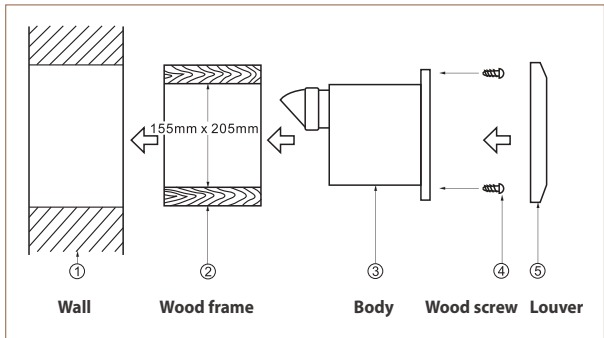
- Condenser motor with thermal cut-off
- Lubricated sintered brush for long life operation
- Highly efficient sirocco fan
- Blind shutter louver to enhance privacy and safety
- Plastic frame, blade and louver
- Motor insulation Class E
- IP protection: IPX4 (outside)

### Specification

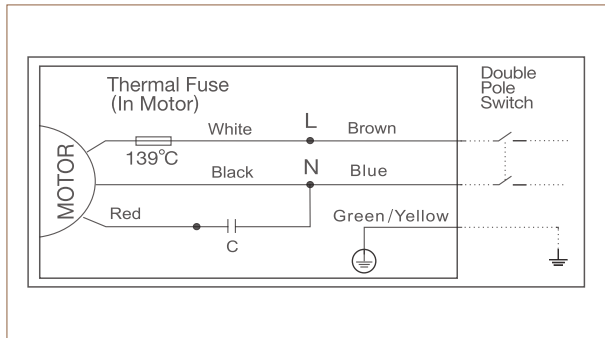
| Model  | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] | Installation Space [mm] |
|--------|-------------|----------------|------------|-------|-----------------|-------|---------------|-------------|-------------------------|
|        |             |                | [CMH]      | [CFM] |                 |       |               |             |                         |
| 10BAQ1 | 220         | 50             | 76.3       | 45    | 15              | 1,250 | 40.1          | 1.7         | 155 x 205               |
|        |             | 60             | 72.9       | 43    | 17              | 1,200 | 39.8          |             |                         |
|        | 230         | 50             | 80.3       | 47    | 16              | 1,300 | 41.2          |             |                         |
|        | 240         | 50             | 84.9       | 50    | 17.5            | 1,385 | 42            |             |                         |

Note: RPM data is for reference only, values may vary subject to different conditions  
Test Condition  
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa  
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance  
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side  
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

### Installation



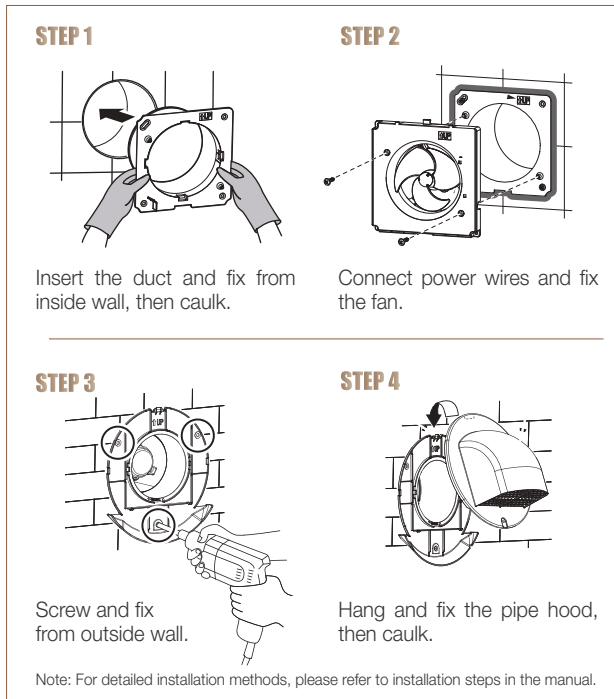
### Wiring Diagram



# Feature of Bathroom Series

## Easy Installation - Pipe Hood Series

With the supplied accessories, it only takes a few steps to complete the installation.



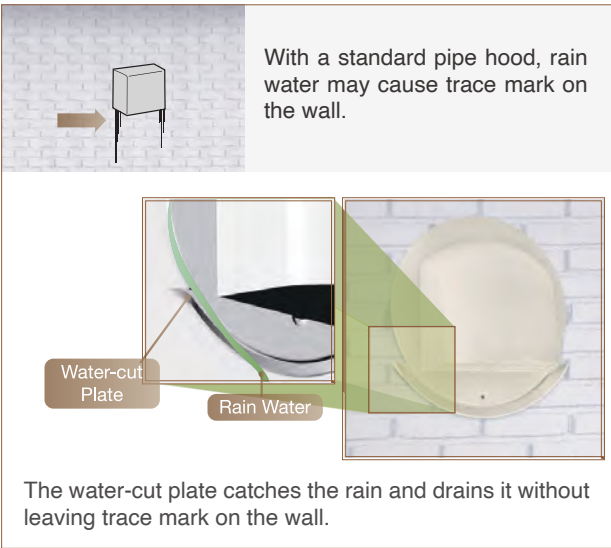
## All Accessories Included

The product comes bundled with all required accessories. It conveniently saves the hassle of seeking necessary accessories around.



## Trace-prevention Pipe Hood Series Only

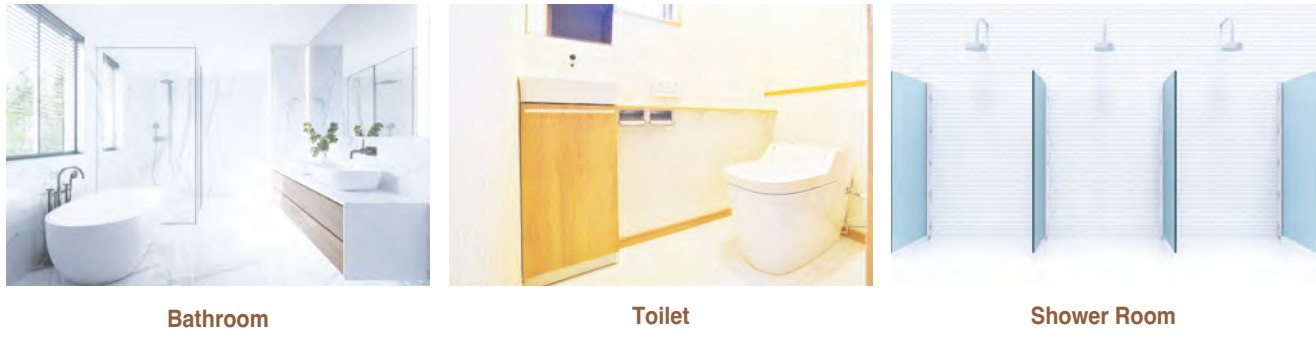
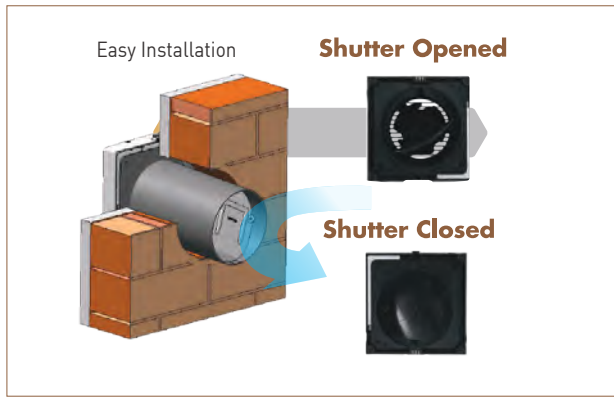
When it rains, rainwater dripping along the side of pipe hood may cause trace marks on wall. The exclusively designed duct ring catches and drains the water away to avoid forming trace marks.



## Back Draft Shutter

Shutter Series (For Vertical Shaft) only

Wind from outside may come indoor through the duct when the fan is not operating. The back draft shutter is designed to cover the duct hole to block wind and water.



Bathroom

Toilet

Shower Room

Bathroom Series

Usage: Bathroom Toilet

10EGKB / 15EGKB

- Advanced Blade Design
- Easy Installation
- Pipe Hood Equipped



- Pipe hood series
- Powerful exhaust of excessive moisture and odour
- Prevent rain water trace by water-cut plate at duct ring
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

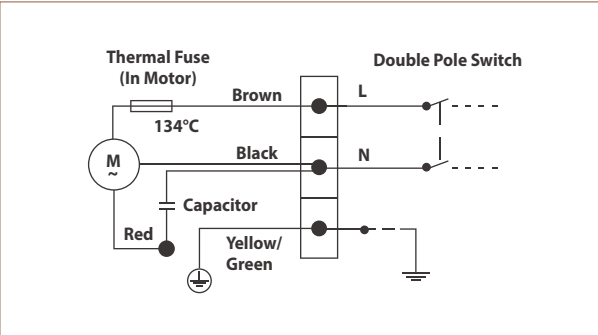
| Model  | Voltage [V] | Frequency [Hz] | Air Volume [CMH] | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] | Wall Installation |                     | Ceiling Installation |
|--------|-------------|----------------|------------------|-----------------|-------|---------------|-------------|-------------------|---------------------|----------------------|
|        |             |                |                  |                 |       |               |             | Hole Size [mm]    | Wall Thickness [mm] | Hole Size [mm]       |
| 10EGKB | 220         | 50             | 76               | 4.3             | 2,660 | 33            | 1.0         | Ø130~140          | 100~150             | Ø130~140             |
|        | 230         | 50             | 77               | 4.6             | 2,675 | 33            |             |                   |                     |                      |
|        | 240         | 50             | 77               | 5.0             | 2,690 | 33            |             |                   |                     |                      |
| 15EGKB | 220         | 50             | 162              | 5.7             | 2,265 | 36            | 1.3         | Ø175~185          | 100~150             | Ø175~185             |
|        | 230         | 50             | 165              | 6.1             | 2,330 | 37            |             |                   |                     |                      |
|        | 240         | 50             | 165              | 6.5             | 2,390 | 37            |             |                   |                     |                      |

Note: RPM data is for reference only, values may vary subject to different conditions

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram



Bathroom Series

Usage: Bathroom Toilet

10EGSB / 15EGSB

- Advanced Blade Design
- Automatic Shutter
- Shutter Equipped



- Shutter series (for vertical shaft)
- Powerful exhaust of excessive moisture and odour
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

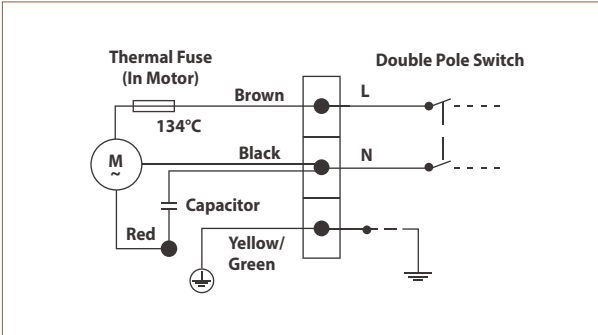
| Model  | Voltage [V] | Frequency [Hz] | Air Volume [CMH] | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] | Wall Installation |                 | Ceiling Installation |
|--------|-------------|----------------|------------------|-----------------|-------|---------------|-------------|-------------------|-----------------|----------------------|
|        |             |                |                  |                 |       |               |             | Hole Size [mm]    | Duct Space [mm] | Hole Size [mm]       |
| 10EGSB | 220         | 50             | 76               | 4.3             | 2,665 | 35            | 0.8         | Ø120-125          | >205            | Ø130~140             |
|        |             | 60             | 87               | 4.7             | 3,140 | 37.5          |             |                   |                 |                      |
|        | 230         | 50             | 77               | 4.6             | 2,670 | 35            |             |                   |                 |                      |
| 15EGSB | 240         | 50             | 77               | 5.0             | 2,685 | 35            | 1.0         | Ø165-170          | >240            | Ø175~185             |
|        | 220         | 50             | 155              | 5.7             | 2,130 | 36            |             |                   |                 |                      |
|        |             | 60             | 180              | 6.1             | 2,470 | 40            |             |                   |                 |                      |
|        | 230         | 50             | 160              | 6.1             | 2,230 | 37            |             |                   |                 |                      |
|        | 240         | 50             | 165              | 6.5             | 2,240 | 37            |             |                   |                 |                      |

Note: RPM data is for reference only, values may vary subject to different conditions

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram





# Window Mount Type Ventilation Fan



24-Hour  
Ventilation



High Performance



Low-noise



Durable



047

Scan for more  
information



Electric Shutter Series  
Able to maintain airtightness



Automatic Shutter Series  
Able to maintain airtightness



Cord-operated Shutter Series  
Can be easily installed in any glass window



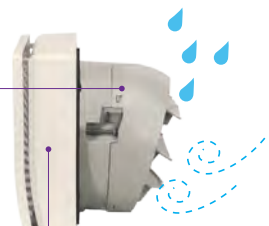
048



Features of Electric Shutter Series

Rain proof and wind resistible

Hood structure for prevention of rain water ingress



The newly designed shutter can keep out entry of rain water effectively



High static pressure blade can prevent ingress of rain and wind during operation

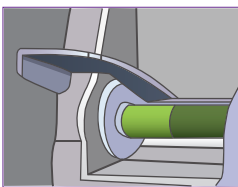


Bent End Structure of the shutter can block the backflow of outside wind

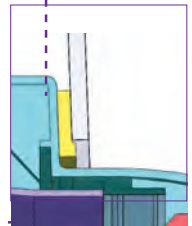


Easy installation

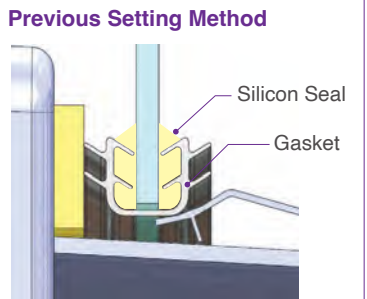
**Mounting Bracket**  
Unique design of mounting bracket can fix the fan on glass plate with simple process



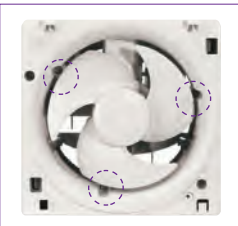
**Packing No Gasket / No Silicon Seal**  
Attached packing is tightly closed to the glass plate that gets rid of water leakage to indoor. Both gasket & silicon seal are not required for 15WHCT/20WHCT

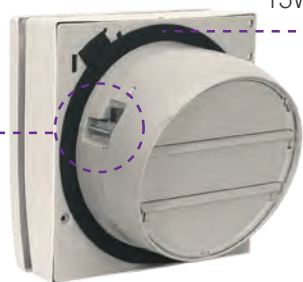


**Previous Setting Method**



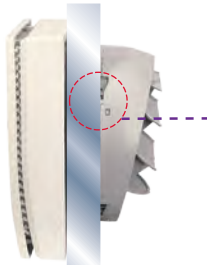
e.g. 15WHCT  
Orifice is not necessary to detach for installation. Simply fix the fan on glass plate by screws at front.



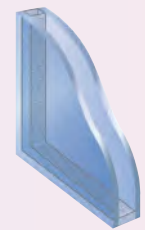


High adaptability

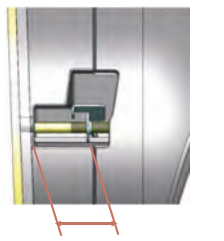
New mounting design allows the fan to be fixed on glass plate of thickness from 3mm up to 25mm with ease

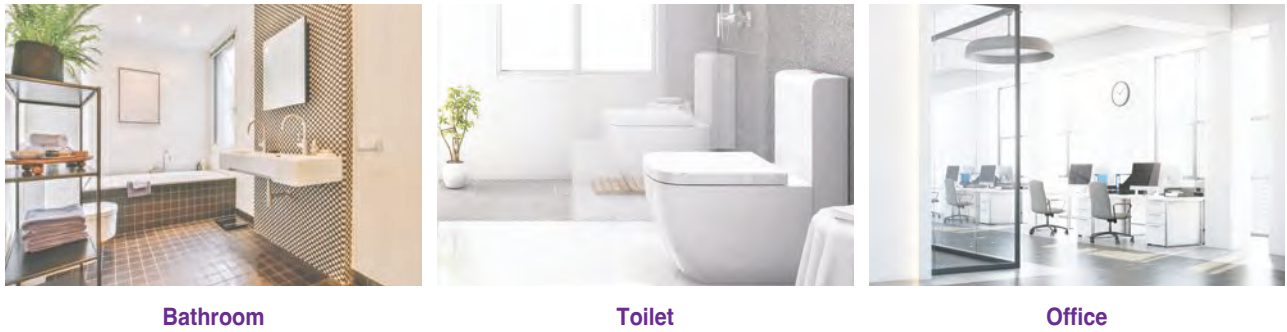


**Double glass**  
Often called insulated glass that consists of two panes of glass set apart to allow airspace in. This airspace acts as a buffer which obstructs the transfer of heat from one side of the glass to the other.



Applicable Glass Thickness 3mm-25mm





Bathroom

Toilet

Office

Electric Shutter Series

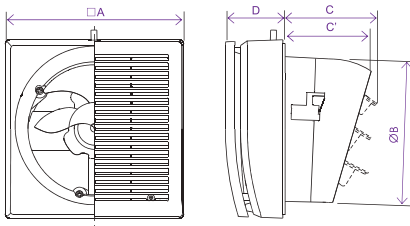
Usage: Bathroom Toilet Office / Retail Store

15WHCT / 20WHCT

- Louver for Protection
- Rain proof and wind resistible
- Prevent Rain and Wind

Dimension  
Unit : mm

| Model  | A   | B   | C   | C'  | D  |
|--------|-----|-----|-----|-----|----|
| 15WHCT | 224 | 182 | 117 | 111 | 72 |
| 20WHCT | 288 | 243 | 120 | 117 | 74 |



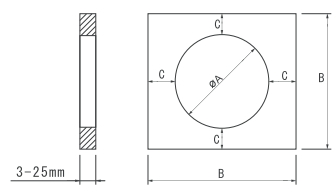
- Electrically operated shutter
- Advanced design hood structure to prevent rain and wind
- Suitable for window glass with thickness from 3mm to 25mm
- Simple and easy installation, no need of any silicon seal or gasket
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

| Model  | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] |
|--------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|
|        |             |                | [CMH]      | [CFM] |                 |               |             |                        |
| 15WHCT | 220         | 50             | 230        | 135   | 13              | 43            | 1.4         | Ø186 - Ø188            |
|        |             | 60             | 230        | 135   | 13              | 44            |             |                        |
|        | 230         | 50             | 230        | 135   | 14              | 43            |             |                        |
|        |             | 240            | 50         | 230   | 15              | 43            |             |                        |
| 20WHCT | 220         | 50             | 445        | 262   | 20              | 42            | 2.6         | Ø247 - Ø250            |
|        |             | 60             | 480        | 283   | 22              | 45            |             |                        |
|        | 230         | 50             | 445        | 262   | 21              | 42            |             |                        |
|        |             | 240            | 50         | 445   | 22              | 42            |             |                        |

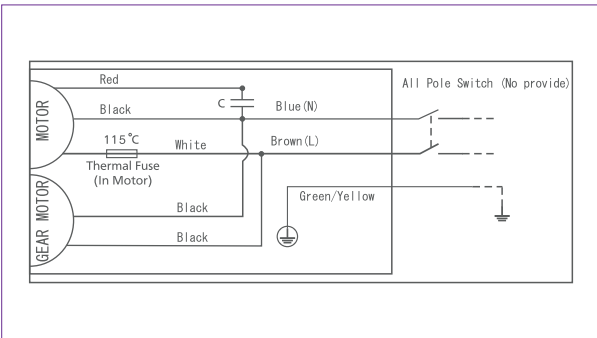
Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Installation Example



| Model No. | A         | B         | C         |
|-----------|-----------|-----------|-----------|
| 15WHCT    | 186~188mm | 390mm Min | 100mm Min |
| 20WHCT    | 247~250mm | 450mm Min | 100mm Min |

Wiring Diagram



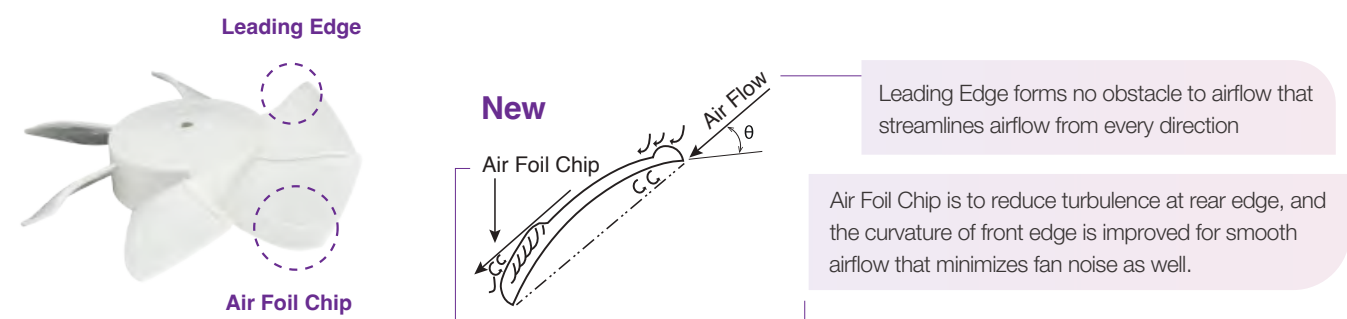
# Features of Automatic Shutter Series

## Auto Shutter

The backdraft shutters will be opened by air pressure during operation and closed automatically for air-tightness when the fan is switched off.



## Advanced Blade Design



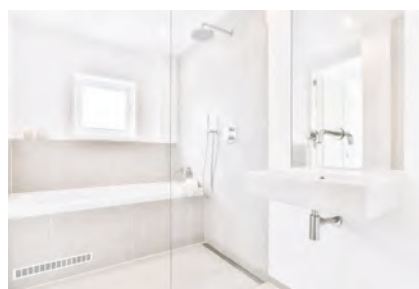
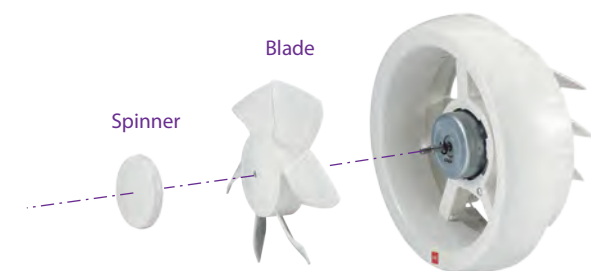
## Half pitch condenser motor with well-lubricated ball bearing

- Low power consumption (50% down VS previous model)
- Low noise level (6% down VS previous model)
- Long life up to 40,000 hours (1.5 time VS previous model)
- Comply with IPX4 (outside)



## Easy Maintenance

The blade can be detached by simply loosening the spinner, that facilitates the periodical maintenance.



Bathroom



Toilet



Office

# Automatic Shutter Series

Usage: Bathroom Toilet Office / Retail Store

15WAA / 15WAAMN  
20WAA / 20WAAMN

Automatic Shutter

Advanced Blade Design

Easy Maintenance

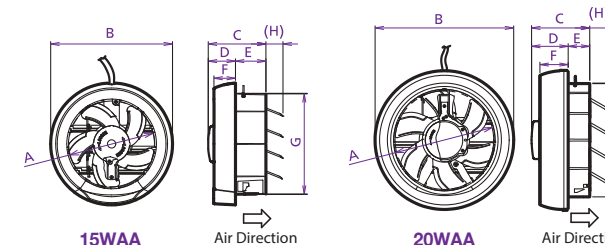


- Automatic shutter
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design
- Removable blade for easy maintenance
- Motor insulation Class E
- IP protection: IPX4 (outside)

## Dimension

Unit : mm

| Model | A   | B   | C   | D  | E  | F  | G   | H(MAX) |
|-------|-----|-----|-----|----|----|----|-----|--------|
| 15WAA | 150 | 212 | 100 | 47 | 53 | 38 | 175 | (30)   |
| 20WAA | 206 | 290 | 122 | 76 | 46 | 59 | 237 | (36)   |



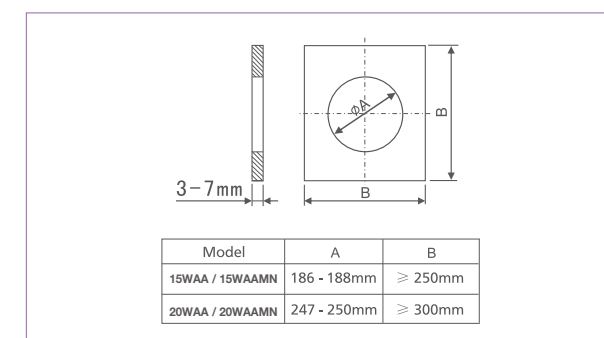
## Specification

| Model           | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Installation Space [mm] |
|-----------------|-------------|----------------|------------|-------|-----------------|---------------|-------------|-------------------------|
|                 |             |                | [CMH]      | [CFM] |                 |               |             |                         |
| 15WAA           | 220         | 50             | 210        | 124   | 14              | 43            | 0.9         | Ø186 - Ø188             |
|                 |             | 60             | 222        | 131   | 18              | 44            |             |                         |
| 15WAA / 15WAAMN | 230         | 50             | 222        | 131   | 15              | 44            | 1.4         | Ø247 - Ø250             |
|                 |             | 240            | 50         | 228   | 16              | 44            |             |                         |
| 20WAA           | 220         | 50             | 380        | 224   | 15              | 42            | 1.4         | Ø247 - Ø250             |
|                 |             | 60             | 380        | 224   | 17              | 42            |             |                         |
| 20WAA / 20WAAMN | 230         | 50             | 390        | 230   | 16              | 43            | 1.4         | Ø247 - Ø250             |
|                 |             | 240            | 50         | 401   | 17.5            | 43            |             |                         |

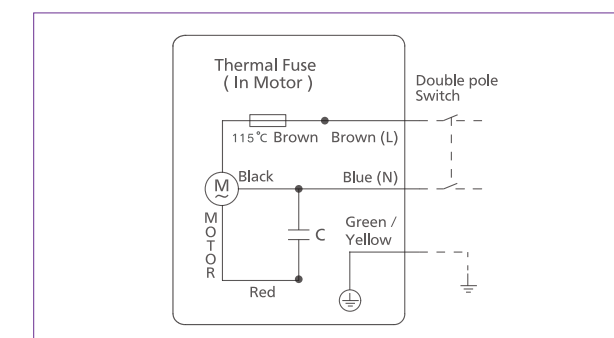
Note:

- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
- 2.The value of air volume is the mean value which is measured by our company.
- 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
- 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

## Installation Example



## Wiring Diagram





# Features of Cord-Operated Shutter Series

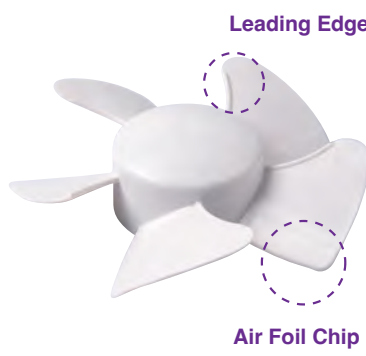
## Strengthened Shutter Structure



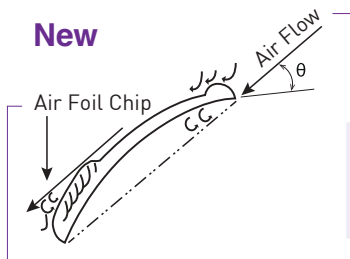
- Durable
- Sustainable to strong wind

Metallic shutter axis is used as the supporter for movement of shutter that provides a better endurance.

## Advanced Blade Design



**New**



Leading Edge forms no obstacle to airflow that streamlines airflow from every direction

Air Foil Chip is to reduce turbulence at rear edge, and the curvature of front edge is improved for smooth airflow that minimizes fan noise as well.

## Easy Maintenance

The blade can be detached by simply loosening the spinner, that facilitates the periodical maintenance.

## Half pitch condenser motor with well-lubricated ball bearing

- Low power consumption (50% down VS previous model)
- Low noise level (6% down VS previous model)
- Long life up to 40,000 hours (1.5 time VS previous model)
- Comply with IPX4 (outside)





Half pitch condenser motor and well-lubricated ball bearing are used



Bathroom



Toilet



Office

# Cord-Operated Shutter Series

Usage: Bathroom Toilet Office / Retail Store

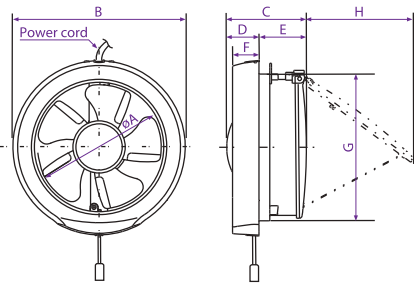
15WUD / 15WUDMN  
20WUD / 20WUDMN

- Cord-operated Shutter
- Advanced Blade Design
- Metallic Shutter Axis



Dimension  
Unit : mm

| Model | A   | B   | C  | D  | E  | F  | G   | H   |
|-------|-----|-----|----|----|----|----|-----|-----|
| 15WUD | 150 | 210 | 97 | 43 | 54 | 37 | 177 | 149 |
| 20WUD | 200 | 271 | 98 | 36 | 62 | 36 | 237 | 201 |



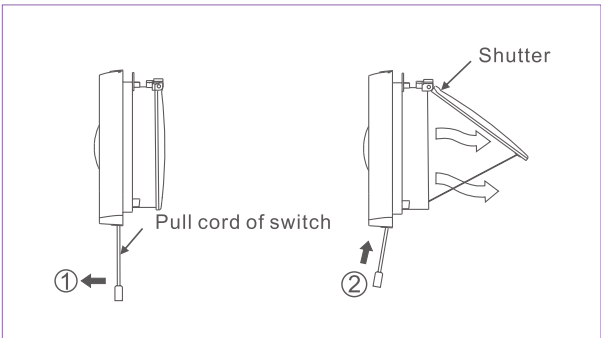
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design
- Shutter operated by pull cord
- Metallic shutter axis
- Motor insulation Class E
- IP protection: IPX4 (outside)

## Specification

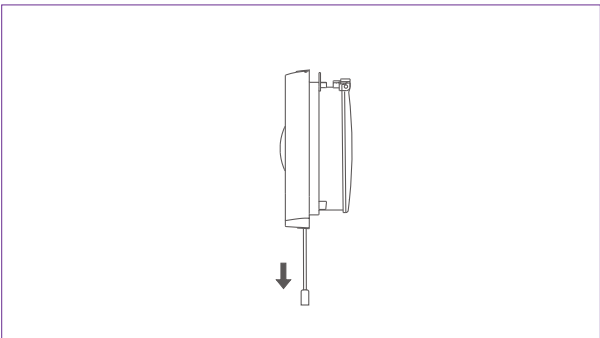
| Model           | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] |
|-----------------|-------------|----------------|------------|-------|-----------------|---------------|-------------|------------------------|
|                 |             |                | [CMH]      | [CFM] |                 |               |             |                        |
| 15WUD           | 220         | 50             | 210        | 124   | 8.1             | 35            | 0.9         | Ø186 - Ø188            |
|                 |             | 60             | 200        | 118   | 8.9             | 34            |             |                        |
| 15WUD / 15WUDMN | 230         | 50             | 220        | 129   | 8.8             | 35            | 1.1         | Ø247 - Ø250            |
|                 |             | 240            | 230        | 135   | 9.5             | 36            |             |                        |
| 20WUD           | 220         | 50             | 360        | 212   | 16.4            | 32            | 1.1         | Ø247 - Ø250            |
|                 |             | 60             | 360        | 212   | 19              | 31            |             |                        |
| 20WUD / 20WUDMN | 230         | 50             | 380        | 224   | 17.9            | 34            |             |                        |
|                 |             | 240            | 400        | 235   | 19.5            | 36            |             |                        |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

## How to Turn On



## How to Turn Off





# Industrial Type Ventilation Fan



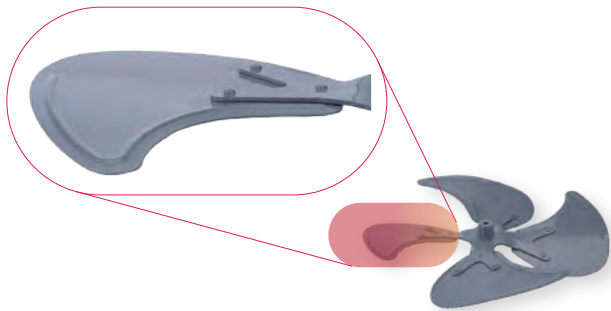
High Performance



Low-noise



Durable



Fans with 3D Wave-shaped Cross Section Blade\*

\*The 3D wave-shaped blade only applicable to some of the models

# Shutter Series

Usage: Factory Warehouse Retail Store Commercial Kitchen

## 40KAQA

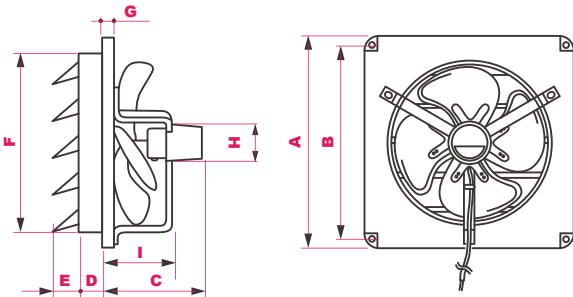
- High Pressure
- Rust Resistant
- Shutter



### Dimension

Unit : mm

| Model  | A   | B   | C   | D  | E  | F   | G  | H   | I   |
|--------|-----|-----|-----|----|----|-----|----|-----|-----|
| 40KAQA | 510 | 480 | 215 | 40 | 55 | 434 | 10 | 126 | 130 |



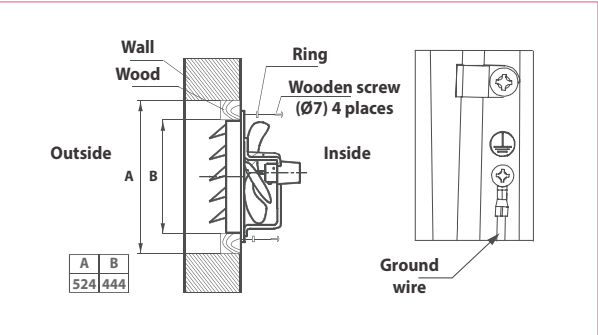
- With shutter
- Durable powder coating for rust resistance
- High performance condenser motor with thermal cut-off
- Operable at an ambient temperature range from -10°C to +50°C
- Motor insulation Class E
- IP protection: IPX4 (outside)

### Specification

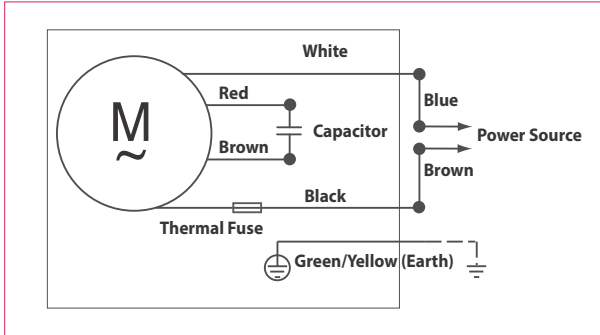
| Model  | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | RPM           | Weight [kg] | Installation Space W x L [mm] |
|--------|-------------|----------------|------------|-------|-----------------|---------------|---------------|-------------|-------------------------------|
|        |             |                | [CMH]      | [CFM] |                 |               |               |             |                               |
| 40KAQA | 220         | 50             | 1,880      | 1,105 | 47.0            | 51.0          | 1,230 ~ 1,370 | 6.4         | 444 x 444                     |
|        | 230         |                | 1,920      | 1,130 | 52.0            | 51.0          | 1,250 ~ 1,390 |             |                               |
|        | 240         |                | 1,960      | 1,155 | 59.0            | 51.0          | 1,270 ~ 1,410 |             |                               |
|        | 230         | 60             | 2,130      | 1,254 | 67.0            | 52.5          | 1,400 ~ 1,540 |             |                               |

Note: RPM data is for reference only. Values may vary depending on different conditions.  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

### Installation



### Wiring Diagram



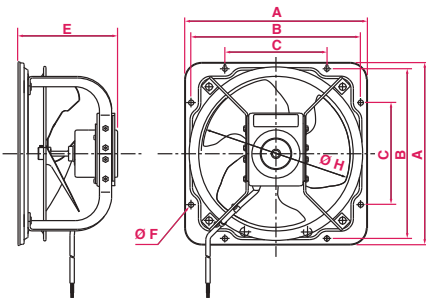
High Pressure Series

Usage: Factory Warehouse Retail Store Commercial Kitchen

25GSE / 30GSE / 35GSE

- Single Phase
- Reversible
- Optional Shutter

| Model | Dimension |     |     |   |     |    |   |     |
|-------|-----------|-----|-----|---|-----|----|---|-----|
|       | Unit : mm |     |     |   |     |    |   |     |
| 25GSE | A         | B   | C   | D | E   | F  | G | H   |
| 25GSE | 327       | 298 | 165 | - | 171 | 10 | - | 250 |
| 30GSE | 378       | 349 | 210 | - | 200 | 10 | - | 300 |
| 35GSE | 467       | 434 | 250 | - | 235 | 12 | - | 350 |



- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10°C to +50°C
- Possible to install horizontally or vertically
- Motor insulation Class E
- IP protection: IPX4 (outside)

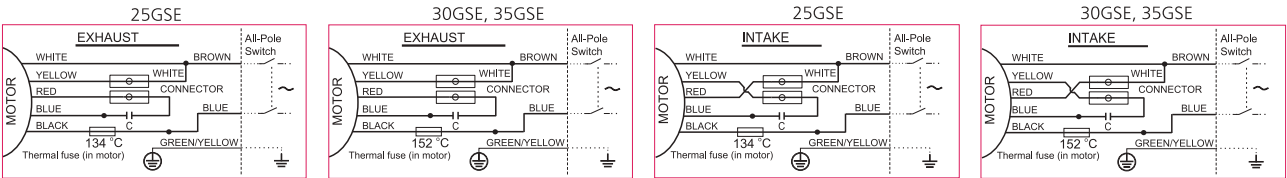
Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |
| 25GSE | 220         | 50             | 1,280      | 753   | 41              | 44            | 2.0         |
|       |             | 60             | 1,440      | 848   | 57              | 46            |             |
|       | 230         | 50             | 1,280      | 753   | 43              | 44            |             |
| 30GSE | 220         | 50             | 1,280      | 753   | 44              | 44            | 2.5         |
|       |             | 60             | 2,150      | 1,265 | 87              | 49            |             |
|       | 230         | 50             | 2,390      | 1,407 | 119             | 51            |             |
| 35GSE | 220         | 50             | 2,150      | 1,265 | 92              | 49            | 2.9         |
|       |             | 60             | 2,150      | 1,265 | 98              | 50            |             |
|       | 230         | 50             | 2,950      | 1,736 | 113             | 51            |             |
| 35GSE | 220         | 50             | 2,950      | 1,736 | 118             | 51            | 2.9         |
|       |             | 60             | 3,380      | 1,989 | 161             | 54            |             |
|       | 230         | 50             | 2,950      | 1,736 | 118             | 51            |             |
| 35GSE | 220         | 50             | 2,950      | 1,736 | 122             | 51            | 2.9         |
|       |             | 60             | 2,950      | 1,736 | 122             | 51            |             |
|       | 230         | 50             | 2,950      | 1,736 | 122             | 51            |             |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram



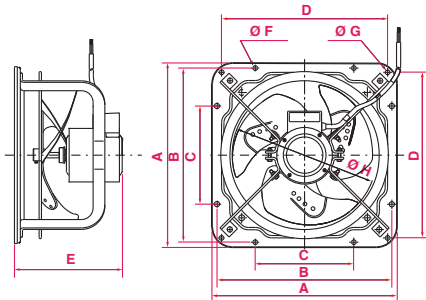
High Pressure Series

Usage: Factory Warehouse Retail Store Commercial Kitchen

40GSE

- Single Phase
- Reversible
- Optional Shutter

| Model | Dimension |     |     |     |     |    |    |     |
|-------|-----------|-----|-----|-----|-----|----|----|-----|
|       | Unit : mm |     |     |     |     |    |    |     |
| 40GSE | A         | B   | C   | D   | E   | F  | G  | H   |
| 40GSE | 518       | 485 | 280 | 460 | 274 | 12 | 12 | 400 |



- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10°C to +50°C
- Possible to install horizontally or vertically
- Motor insulation Class B
- IP protection: IPX4 (outside)

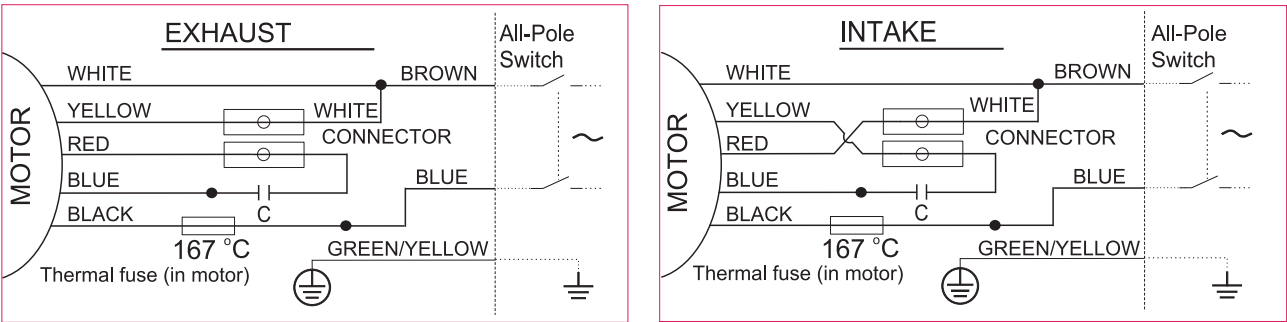
Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |
| 40GSE | 220         | 50             | 3,900      | 2,295 | 141             | 54            | 19.0        |
|       |             | 60             | 4,890      | 2,878 | 270             | 58            |             |
|       | 230         | 50             | 3,900      | 2,295 | 146             | 54            |             |
| 40GSE | 220         | 50             | 3,900      | 2,295 | 151             | 54            | 19.0        |
|       |             | 60             | 3,900      | 2,295 | 151             | 54            |             |
|       | 230         | 50             | 3,900      | 2,295 | 151             | 54            |             |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram



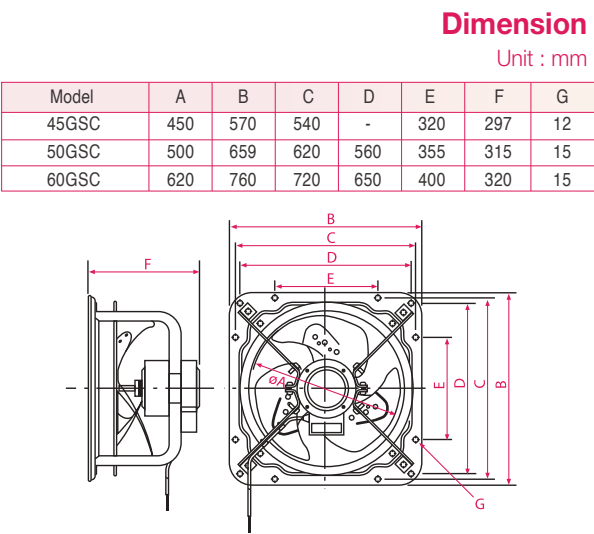


High Pressure Series

Usage: Factory Warehouse Retail Store Commercial Kitchen

45GSC / 50GSC / 60GSC

- Single Phase
- Reversible
- Optional Shutter



- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10°C to +50°C
- Possible to install horizontally or vertically
- Motor insulation Class E

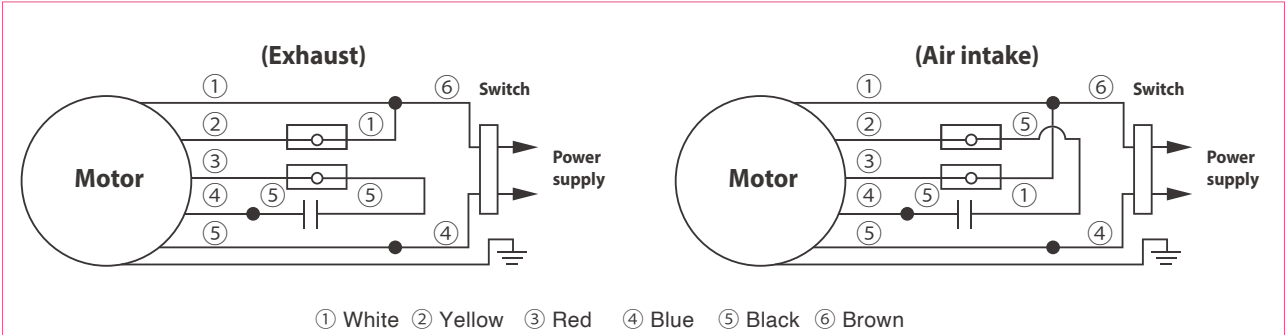
Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |
| 45GSC | 220         | 50             | 5,200      | 3,061 | 227             | 51            | 19.0        |
|       |             | 60             | 5,970      | 3,514 | 325             | 54            |             |
|       | 230         | 50             | 5,430      | 3,196 | 235             | 51            |             |
|       |             | 240            | 5,460      | 3,214 | 241             | 51            |             |
| 50GSC | 220         | 50             | 6,130      | 3,608 | 249             | 47            | 22.5        |
|       |             | 60             | 7,100      | 4,179 | 326             | 51            |             |
|       | 230         | 50             | 6,420      | 3,779 | 258             | 47            |             |
|       |             | 240            | 6,480      | 3,814 | 271             | 47            |             |
| 60GSC | 220         | 50             | 8,040      | 4,732 | 245             | 50            | 34.0        |
|       |             | 60             | 9,410      | 5,539 | 361             | 54            |             |
|       | 230         | 50             | 8,460      | 4,979 | 258             | 50            |             |
|       |             | 240            | 8,490      | 4,997 | 263             | 50            |             |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram

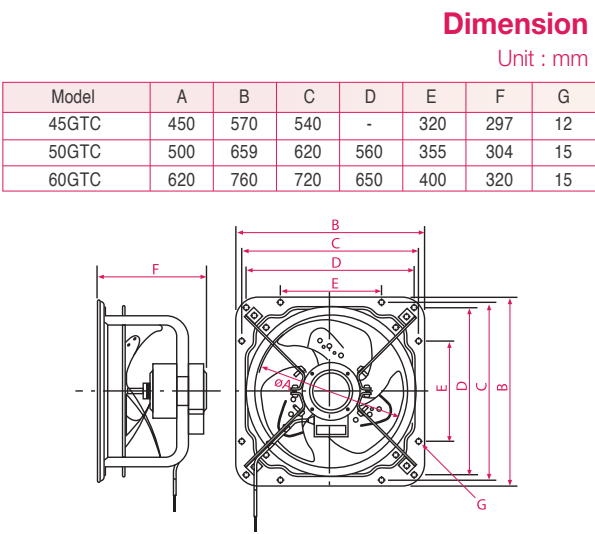


High Pressure Series

Usage: Factory Warehouse Retail Store Commercial Kitchen

45GTC / 50GTC / 60GTC

- Three Phase
- Reversible
- Optional Shutter



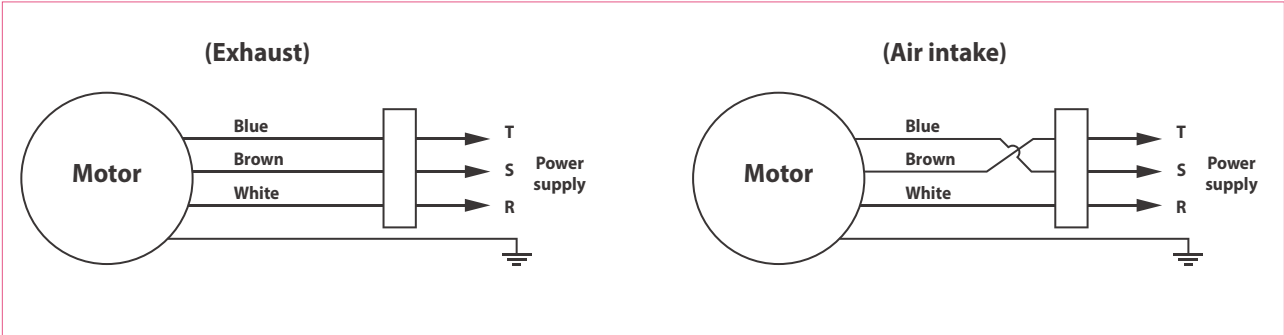
- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10°C to +50°C
- Possible to install horizontally or vertically
- Motor insulation Class E

Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] |
|-------|-------------|----------------|------------|-------|-----------------|-------|---------------|-------------|
|       |             |                | [CMH]      | [CFM] |                 |       |               |             |
| 45GTC | 380         | 50             | 5,520      | 3,249 | 220             | 1,450 | 52            | 18.5        |
|       |             | 60             | 6,420      | 3,779 | 330             | 1,690 | 56            |             |
| 50GTC | 380         | 50             | 6,960      | 4,097 | 320             | 1,400 | 54            | 28.5        |
|       |             | 60             | 8,010      | 4,715 | 475             | 1,590 | 58            |             |
| 60GTC | 380         | 50             | 9,420      | 5,544 | 310             | 940   | 49            | 34          |
|       |             | 60             | 10,920     | 6,427 | 450             | 1,070 | 53            |             |

- Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of an inlet grill and backdraft damper. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H<sub>2</sub>O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
- \*the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H<sub>2</sub>O.
- \*\*the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

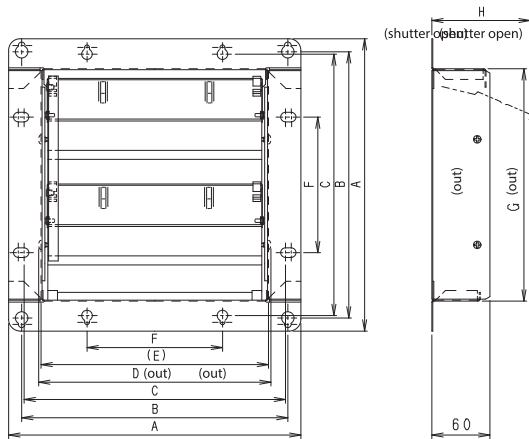
Wiring Diagram





# Optional Accessories

25GASC / 30GASC / 35GASC  
40GASC / 45GASC / 50GASC / 55GASC



- Auto shutter for High Pressure Series
- Steel material
- Durable powder coating
- Available for wall mounting

Dimension Unit : mm

| Model  | Size     | A   | B   | C   | D   | E   | F   | G   | H   | No. of Shutter | Applicable for |
|--------|----------|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------|
| 25GASC | 25cm/10" | 330 | 303 | 298 | 268 | 263 | 165 | 268 | 137 | 2              | 25GSE          |
| 30GASC | 30cm/12" | 381 | 354 | 349 | 319 | 314 | 210 | 319 | 122 | 3              | 30GSE          |
| 35GASC | 35cm/14" | 468 | 433 | 434 | 389 | 384 | 250 | 389 | 137 | 3              | 35GSE          |
| 40GASC | 40cm/16" | 519 | 484 | 485 | 440 | 435 | 280 | 440 | 122 | 4              | 40GSE          |
| 45GASC | 45cm/18" | 574 | 539 | 540 | 492 | 487 | 320 | 492 | 137 | 5              | 45GSC,45GTC    |
| 50GASC | 50cm/20" | 660 | 625 | 620 | 545 | 540 | 355 | 545 | 122 | 5              | 50GSC,50GTC    |
| 55GASC | 60cm/24" | 760 | 725 | 720 | 662 | 657 | 440 | 662 | 122 | 6              | 60GSC,60GTC    |





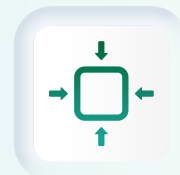
# Cabinet Fan (In-line Fan)



Low-noise



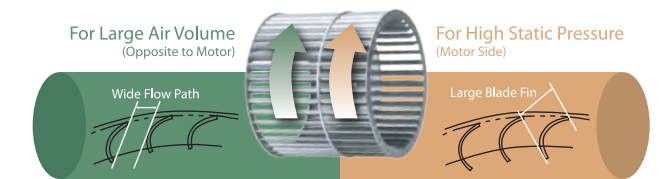
Energy Saving



Compact

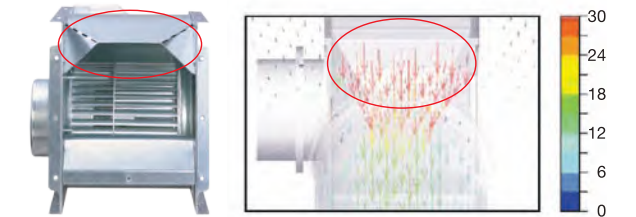
## Low-noise Design

The newly developed twin flow fan achieves a better airflow inside the fan casing. It is divided into two portions which can generate large air volume and high static pressure respectively.



## Tapered Scroll

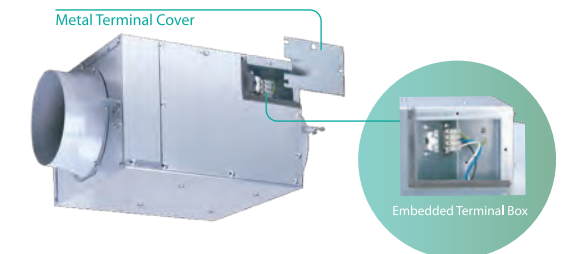
Wind velocity varies according to the shape of the casing. The tapered scroll at the casing minimizes turbulence induced by uneven wind velocity inside the casing.



Internal Wind Velocity Distribution - Airflow Analysis

## Embedded Terminal Box

Terminal box is embedded into the product frame. The wiring to power supply is covered with metal enclosure that enhances the durability and safety level.

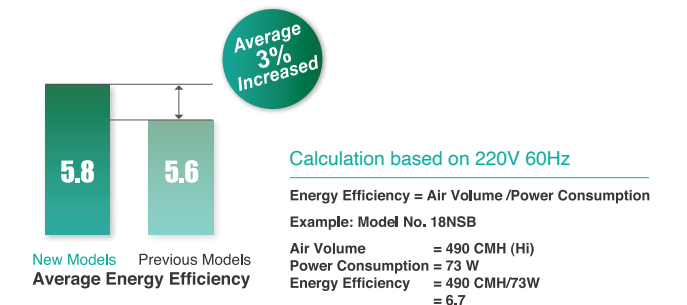


## High Static Pressure

The distinctive design of twin flow fan and fan casing enable operation with high static pressure, which is approximate 10% average increased when compared with previous models. This increases the flexibility in your planning of ventilating system.

## Energy Saving

The new structure design improves fan performance by increasing energy efficiency by 3%. In addition, energy saving is assured by reducing motor power consumption significantly.

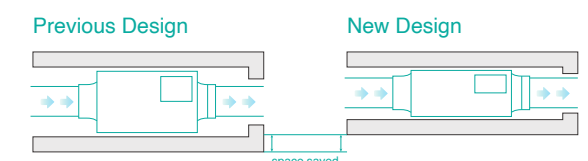


## Noise Reduction

With the twin flow fan and fan casing structure, the new models minimize the transmission of noise and reduce it by 6% while maintaining air volume. This technology creates a more tranquil and pleasant environment.

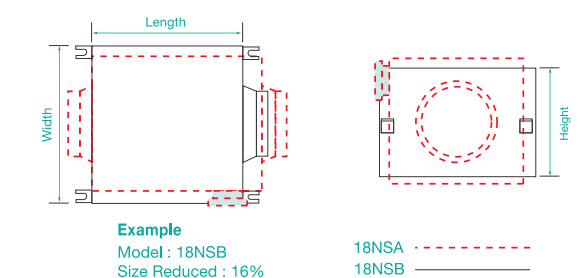
## Easy Installation

A slim, compact and light body allows easy installation in narrow ceiling space, when compared with previous models.



## Compact Size

With the newly designed structure, the product size is reduced by 9%, which increases the flexibility in installation.



Scan for more information

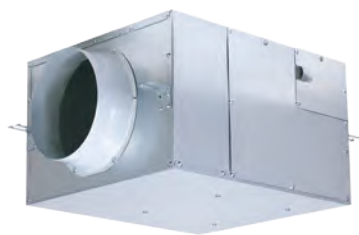


Standard Series

Usage: Living Room Shopping Mall Restaurant

12NSB / 15NSB

- Sirocco Fan
- Low Noise Design
- Compact Size



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

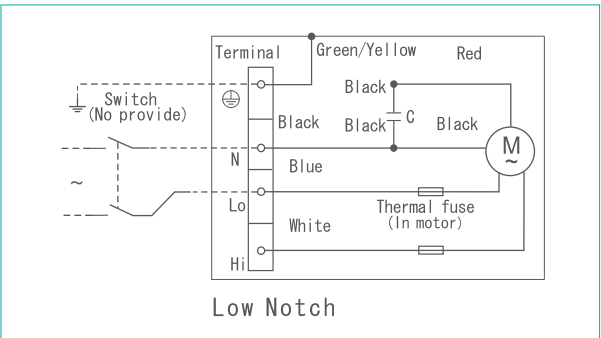
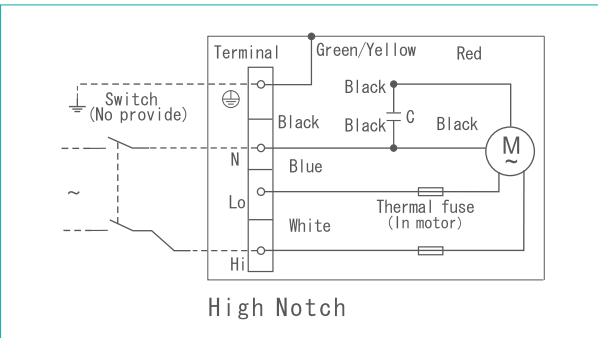
Specification

| Model | Voltage [V] | Frequency [Hz] |    | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Duct Size [mm] | Impeller Diameter [mm] |
|-------|-------------|----------------|----|------------|-------|-----------------|---------------|-------------|----------------|------------------------|
|       |             |                |    | [CMH]      | [CFM] |                 |               |             |                |                        |
| 12NSB | 220         | 50             | Hi | 180        | 106   | 18              | 21            | 5.5         | Ø100           | 128                    |
|       |             |                | Lo | 145        | 85    | 17              | 17            |             |                |                        |
|       |             | 60             | Hi | 190        | 112   | 23              | 22            |             |                |                        |
|       |             |                | Lo | 145        | 85    | 19              | 18            |             |                |                        |
|       | 230         | 50             | Hi | 180        | 106   | 20              | 21            |             |                |                        |
|       |             |                | Lo | 150        | 88    | 18              | 18            |             |                |                        |
| 15NSB | 240         | 50             | Hi | 185        | 109   | 22              | 22            | 6.5         | Ø150           | 128                    |
|       |             |                | Lo | 155        | 91    | 19              | 20            |             |                |                        |
|       | 220         | 50             | Hi | 340        | 200   | 33              | 25            |             |                |                        |
|       |             |                | Lo | 275        | 162   | 29.5            | 22            |             |                |                        |
|       | 230         | 50             | Hi | 370        | 218   | 42              | 27            |             |                |                        |
|       |             |                | Lo | 260        | 153   | 33              | 22            |             |                |                        |
|       | 240         | 50             | Hi | 340        | 200   | 35              | 25            |             |                |                        |
|       |             |                | Lo | 280        | 165   | 31              | 22            |             |                |                        |
|       | 50          |                | Hi | 350        | 206   | 37              | 26            |             |                |                        |
|       |             |                | Lo | 290        | 171   | 33              | 24            |             |                |                        |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1.5 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram

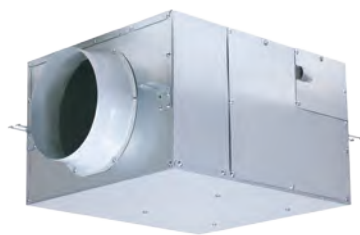


Standard Series

Usage: Living Room Shopping Mall Restaurant

18NSB / 18NFB

- Sirocco Fan
- Low Noise Design
- Compact Size



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

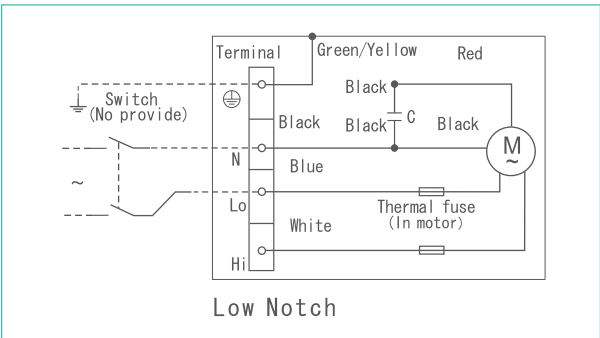
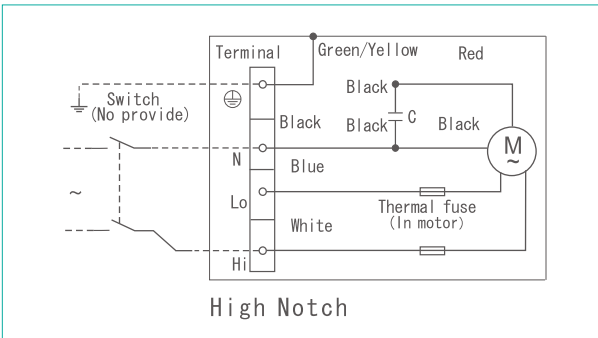
Specification

| Model | Voltage [V] | Frequency [Hz] |    | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Duct Size [mm] | Impeller Diameter [mm] |
|-------|-------------|----------------|----|------------|-------|-----------------|---------------|-------------|----------------|------------------------|
|       |             |                |    | [CMH]      | [CFM] |                 |               |             |                |                        |
| 18NSB | 220         | 50             | Hi | 500        | 294   | 60              | 29            | 8.5         | Ø150           | 158                    |
|       |             |                | Lo | 405        | 238   | 55              | 27            |             |                |                        |
|       |             | 60             | Hi | 490        | 288   | 73              | 30            |             |                |                        |
|       |             |                | Lo | 385        | 277   | 62.5            | 26            |             |                |                        |
|       | 230         | 50             | Hi | 500        | 294   | 65              | 30            |             |                |                        |
|       |             |                | Lo | 420        | 247   | 58.5            | 28            |             |                |                        |
| 18NFB | 240         | 50             | Hi | 510        | 300   | 68              | 31            | 10.0        | Ø200           | 158                    |
|       |             |                | Lo | 430        | 253   | 63.5            | 28            |             |                |                        |
|       | 220         | 50             | Hi | 770        | 453   | 91              | 31            |             |                |                        |
|       |             |                | Lo | 620        | 365   | 80              | 29            |             |                |                        |
|       | 230         | 50             | Hi | 760        | 447   | 119             | 32            |             |                |                        |
|       |             |                | Lo | 580        | 341   | 87              | 28            |             |                |                        |
|       | 240         | 50             | Hi | 770        | 453   | 96              | 32            |             |                |                        |
|       |             |                | Lo | 620        | 365   | 82              | 29            |             |                |                        |
|       | 50          |                | Hi | 780        | 459   | 104             | 33            |             |                |                        |
|       |             |                | Lo | 640        | 377   | 86              | 29            |             |                |                        |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1.5 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram



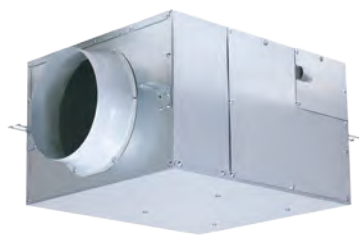


Standard Series

Usage: Living Room Shopping Mall Restaurant

20NSB / 23NLB

- Sirocco Fan
- Low Noise Design
- Compact Size



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

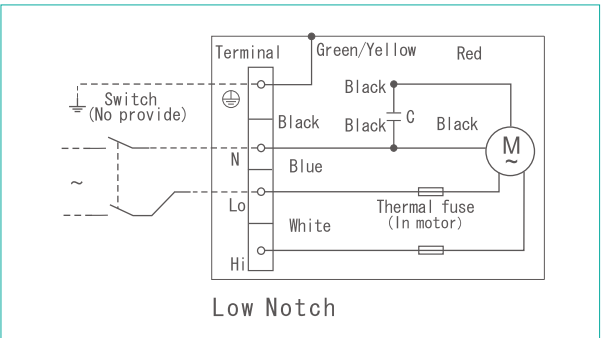
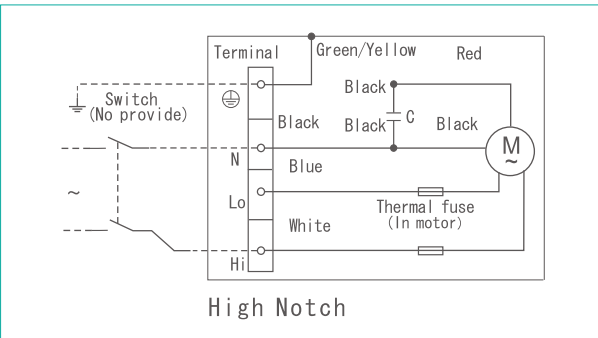
Specification

| Model | Voltage<br>[V] | Frequency<br>[Hz] |    | Air Volume |       | Consumption<br>[W] | Noise<br>[dB(A)] | Weight<br>[kg] | Duct Size<br>[mm] | Impeller Diameter<br>[mm] |
|-------|----------------|-------------------|----|------------|-------|--------------------|------------------|----------------|-------------------|---------------------------|
|       |                |                   |    | [CMH]      | [CFM] |                    |                  |                |                   |                           |
| 20NSB | 220            | 50                | Hi | 920        | 541   | 120                | 32               | 14.0           | Ø200              | 178                       |
|       |                |                   | Lo | 720        | 424   | 113                | 29               |                |                   |                           |
|       |                | 60                | Hi | 860        | 506   | 159                | 32               |                |                   |                           |
|       |                |                   | Lo | 620        | 365   | 128                | 26               |                |                   |                           |
|       | 230            | 50                | Hi | 930        | 547   | 125                | 33               |                |                   |                           |
|       |                |                   | Lo | 750        | 441   | 120                | 30               |                |                   |                           |
|       |                | 60                | Hi | 940        | 553   | 135                | 34               |                |                   |                           |
|       |                |                   | Lo | 790        | 465   | 125                | 31               |                |                   |                           |
| 23NLB | 220            | 50                | Hi | 1,200      | 706   | 230                | 40               | 18.0           | Ø200              | 220                       |
|       |                |                   | Lo | 900        | 530   | 170                | 34               |                |                   |                           |
|       |                | 60                | Hi | 1,100      | 647   | 310                | 40               |                |                   |                           |
|       |                |                   | Lo | 800        | 471   | 190                | 32               |                |                   |                           |
|       | 230            | 50                | Hi | 1,200      | 706   | 250                | 40               |                |                   |                           |
|       |                |                   | Lo | 900        | 530   | 180                | 35               |                |                   |                           |
|       |                | 60                | Hi | 1,250      | 736   | 260                | 41               |                |                   |                           |
|       |                |                   | Lo | 950        | 559   | 190                | 37               |                |                   |                           |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1.5 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram

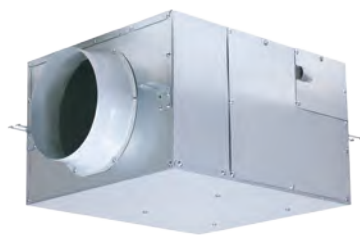


Standard Series

Usage: Living Room Shopping Mall Restaurant

25NSB / 25NFB

- Sirocco Fan
- Low Noise Design
- Compact Size



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

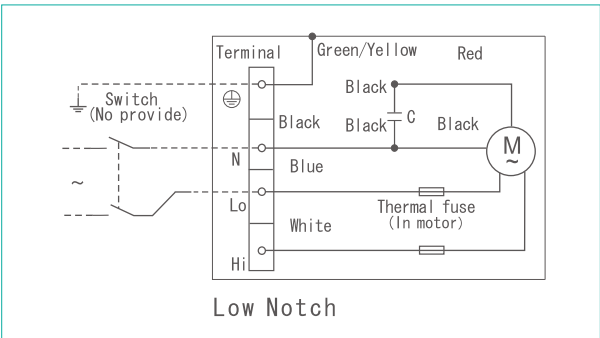
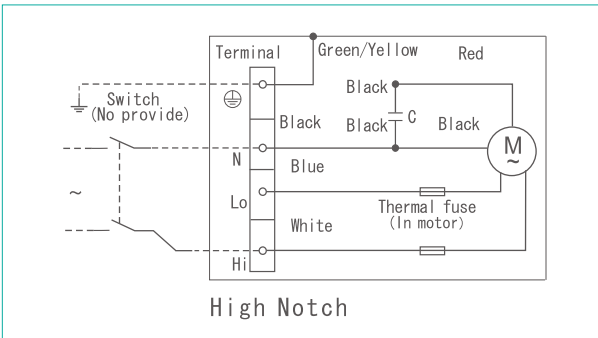
Specification

| Model | Voltage<br>[V] | Frequency<br>[Hz] |    | Air Volume |       | Consumption<br>[W] | Noise<br>[dB(A)] | Weight<br>[kg] | Duct Size<br>[mm] | Impeller Diameter<br>[mm] |    |
|-------|----------------|-------------------|----|------------|-------|--------------------|------------------|----------------|-------------------|---------------------------|----|
|       |                |                   |    | [CMH]      | [CFM] |                    |                  |                |                   |                           |    |
| 25NSB | 220            | 50                | Hi | 1,700      | 1,001 | 345                | 41               | 24.0           | Ø250              | 220                       |    |
|       |                |                   | Lo | 1,380      | 812   | 265                | 38               |                |                   |                           |    |
|       |                | 60                | Hi | 1,650      | 971   | 425                | 41               |                |                   |                           |    |
|       |                |                   | Lo | 1,200      | 706   | 300                | 39               |                |                   |                           |    |
|       | 230            | 50                | Hi | 1,720      | 1,012 | 350                | 42               |                |                   |                           |    |
|       |                |                   | Lo | 1,380      | 812   | 270                | 39               |                |                   |                           |    |
|       |                | 240               | 50 | Hi         | 1,750 | 1,030              | 370              |                |                   |                           | 44 |
|       |                |                   |    | Lo         | 1,450 | 853                | 290              |                |                   |                           | 40 |
| 25NFB | 220            | 50                | Hi | 1,900      | 1,118 | 390                | 43               | 24.0           | Ø250              | 220                       |    |
|       |                |                   | Lo | 1,600      | 942   | 325                | 40               |                |                   |                           |    |
|       |                | 60                | Hi | 1,810      | 1,065 | 520                | 42               |                |                   |                           |    |
|       |                |                   | Lo | 1,400      | 824   | 380                | 41               |                |                   |                           |    |
|       | 230            | 50                | Hi | 1,910      | 1,124 | 410                | 45               |                |                   |                           |    |
|       |                |                   | Lo | 1,600      | 942   | 335                | 41               |                |                   |                           |    |
|       |                | 240               | 50 | Hi         | 1,920 | 1,130              | 430              |                |                   |                           | 46 |
|       |                |                   |    | Lo         | 1,620 | 953                | 360              |                |                   |                           | 42 |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1.5 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram



Standard Series

Usage: Living Room Shopping Mall Restaurant

25SWC / 25SMC

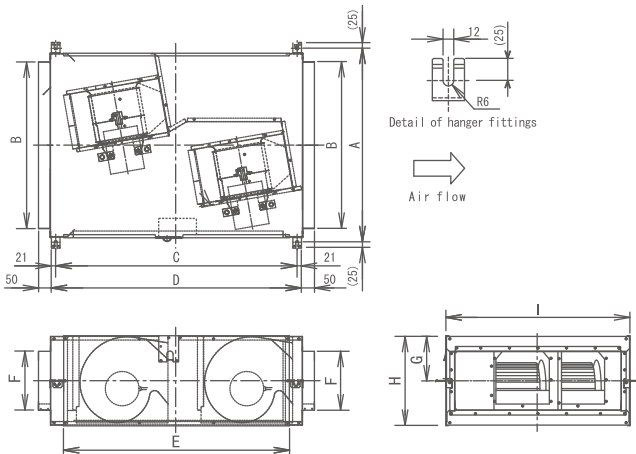
- Sirocco Fan
- Low Noise Design
- Compact Size



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class F
- IP protection: IPX2

Dimension  
Unit : mm

| Model | A   | B   | C     | D     | E   | F   | G   | H   | I   |
|-------|-----|-----|-------|-------|-----|-----|-----|-----|-----|
| 25SWC | 809 | 496 | 1,010 | 1,052 | 942 | 246 | 185 | 370 | 766 |
| 25SMC | 809 | 696 | 1,010 | 1,052 | 942 | 246 | 185 | 370 | 766 |

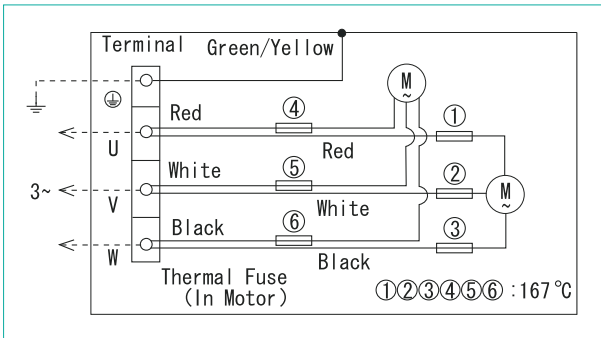


Specification

| Model | Phase | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] | Duct Size [mm] | Impeller Diameter [mm] |
|-------|-------|-------------|----------------|------------|-------|-----------------|-------|---------------|-------------|----------------|------------------------|
|       |       |             |                | [CMH]      | [CFM] |                 |       |               |             |                |                        |
| 25SWC | 3     | 380         | 50             | 4,000      | 2,354 | 940             | 1,375 | 43            | 60          | 250 x 250      | 250                    |
|       |       |             | 60             | 4,500      | 2,648 | 1,450           | 1,530 | 45            |             |                |                        |
| 25SMC | 3     | 380         | 50             | 5,200      | 3,060 | 1,180           | 1,345 | 45            | 60          | 250 x 700      | 250                    |
|       |       |             | 60             | 5,500      | 3,237 | 1,750           | 1,470 | 46            |             |                |                        |

Note:  
- The value in specification tables are representative characteristic value at 380V 50/60Hz.  
- RPM data is for reference only. Values may vary subject to different conditions.

Wiring Diagram



Standard Series

Usage: Living Room Shopping Mall Restaurant

28NXC

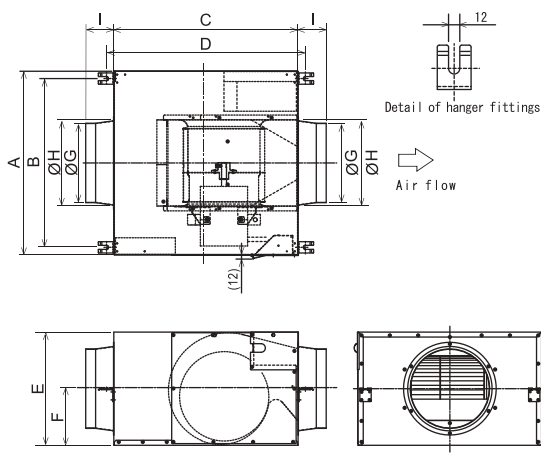
- Sirocco Fan
- Low Noise Design
- Compact Size



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class F
- IP protection: IPX2

Dimension  
Unit : mm

| Model | A   | B   | C   | D   | E   | F   | G   | H   | I  |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 28NXC | 554 | 510 | 557 | 601 | 342 | 171 | 240 | 255 | 85 |

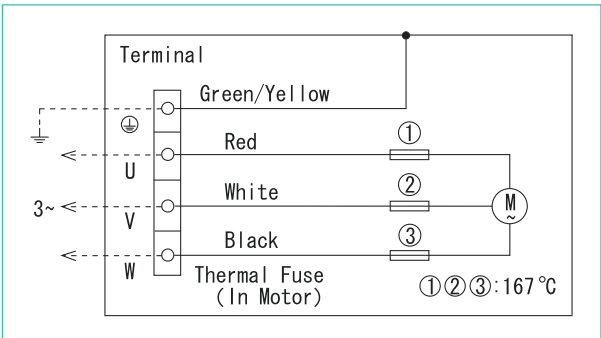


Specification

| Model | Phase | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] | Duct Size [mm] | Impeller Diameter [mm] |
|-------|-------|-------------|----------------|------------|-------|-----------------|-------|---------------|-------------|----------------|------------------------|
|       |       |             |                | [CMH]      | [CFM] |                 |       |               |             |                |                        |
| 28NXC | 3     | 380         | 50             | 2,600      | 1,530 | 600             | 1,295 | 44            | 28          | Ø250           | 280                    |
|       |       |             | 60             | 2,650      | 1,560 | 840             | 1,380 | 45            |             |                |                        |

Note:  
- The value in specification tables are representative characteristic value at 380V 50/60Hz.  
- RPM data is for reference only. Values may vary subject to different conditions.

Wiring Diagram





# In-line Centrifugal Fan



High Performance



Long Life



Low-Noise



Safe



## Features

### High Precision Engineering

Features a high-performance external rotor motor, integrated thermal protector, and premium ball bearings to ensure consistent and dependable operation.



Long Life

### Long Operational Lifespan

Engineered for longevity, supporting continuous use for up to 40,000 hours.

### Low Noise & Vibration

Double-sided dynamically balanced fan blades provide smooth, quiet, and vibration-free performance.



10MMA/12MMA/15MMA/  
16MMA/20MMA/25MMA



31MMA

### Optimized Airflow Design

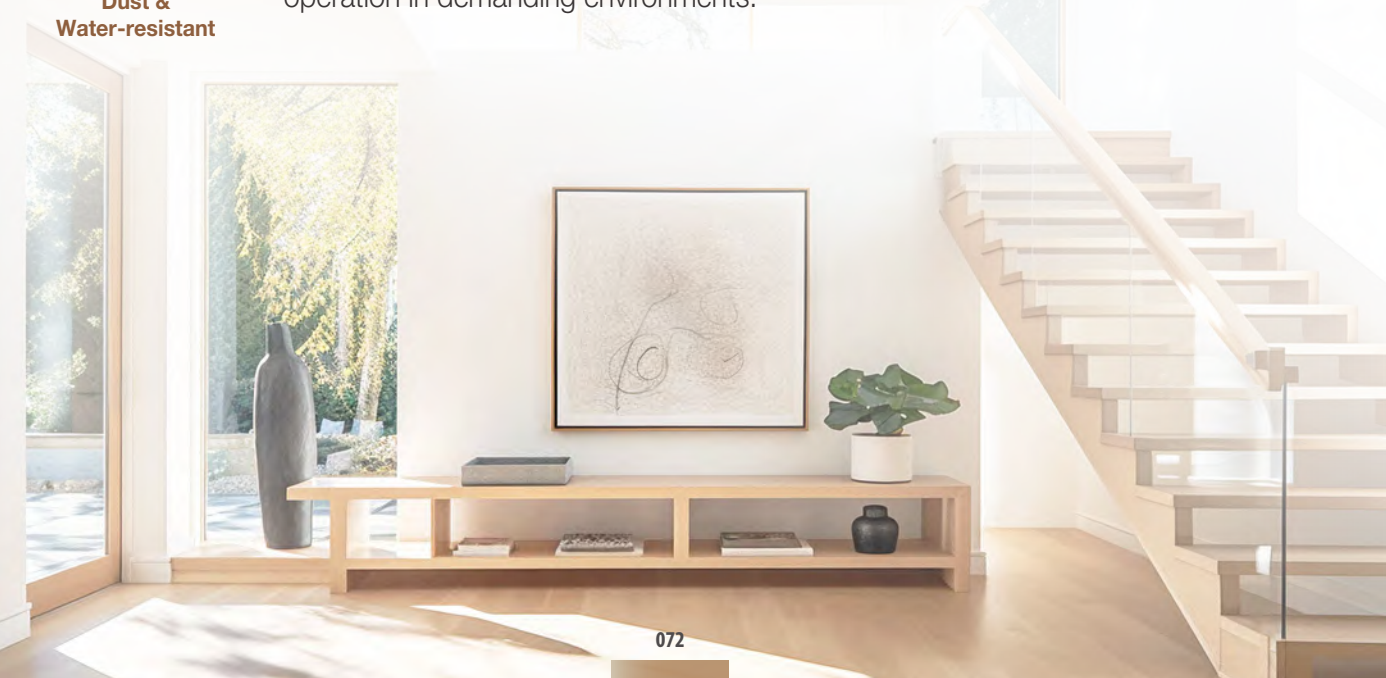
Centrifugal structure with Class F insulation above for enhanced performance and safety.



Dust &  
Water-resistant

### Robust Protection

IP44-rated enclosure safeguards against dust and water ingress for reliable operation in demanding environments.





In-line Centrifugal Fan

Usage: Commercial Residential

10MMA / 12MMA / 15MMA / 16MMA / 20MMA

- Centrifugal Fan
- Low Noise Design
- IP44 Protection



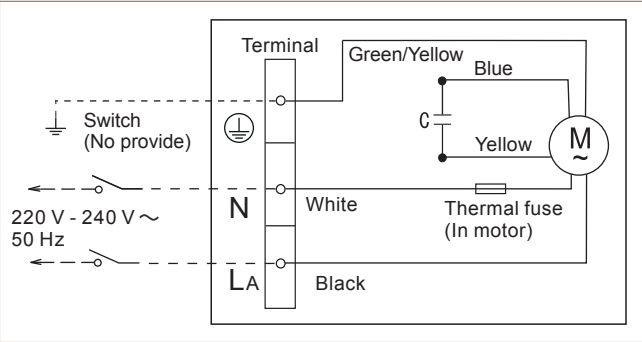
- Equipped with a high-performance external rotor motor
- Premium ball bearings
- Integrated thermal protector
- Long Operational Lifespan
- Low Noise & Vibration
- Optimized Airflow Design
- Motor Insulation Class F
- IP protection: IP44

Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                |
| 10MMA | 220         | 50             | 249        | 146   | 51              | 44            | 3.1         | Ø100           |
|       | 230         |                | 252        | 148   | 54              | 44            |             |                |
|       | 240         |                | 255        | 150   | 57              | 44            |             |                |
| 12MMA | 220         |                | 305        | 179   | 52              | 45            | 3.0         | Ø125           |
|       | 230         |                | 310        | 182   | 55              | 45            |             |                |
|       | 240         |                | 315        | 185   | 58              | 45            |             |                |
| 15MMA | 220         |                | 630        | 370   | 88              | 46            | 4.4         | Ø150           |
|       | 230         |                | 645        | 379   | 92              | 46            |             |                |
|       | 240         |                | 660        | 388   | 97              | 46            |             |                |
| 16MMA | 220         |                | 670        | 394   | 116             | 47            | 4.7         | Ø160           |
|       | 230         |                | 700        | 412   | 122             | 47            |             |                |
|       | 240         |                | 730        | 429   | 128             | 47            |             |                |
| 20MMA | 220         |                | 882        | 519   | 160             | 54            | 5.2         | Ø200           |
|       | 230         |                | 897        | 527   | 166             | 54            |             |                |
|       | 240         |                | 912        | 536   | 174             | 54            |             |                |

- Notes :
- The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.
  - The values of noise level is A weighted average sound pressure level, the mean value are measured by our company.
  - The values of noise level are measured at the 1.5 m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is on the assumption that the noise of fan body propagates to room inside.
  - The values of air volume are the mid-points of results measured by our company.

Wiring Diagram



In-line Centrifugal Fan

Usage: Commercial Residential

25MMA

- Centrifugal Fan
- Low Noise Design
- IP44 Protection



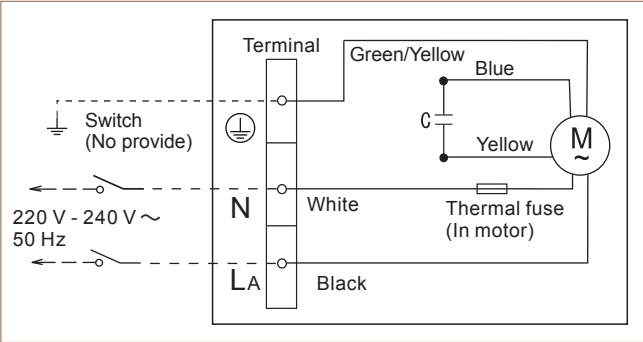
- Equipped with a high-performance external rotor motor
- Premium ball bearings
- Integrated thermal protector
- Long Operational Lifespan
- Low Noise & Vibration
- Optimized Airflow Design
- Motor Insulation Class F
- IP protection: IP44

Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                |
| 25MMA | 220         | 50             | 915        | 538   | 150             | 55            | 5.2         | Ø250           |
|       | 230         |                | 925        | 544   | 157             | 55            |             |                |
|       | 240         |                | 935        | 550   | 165             | 55            |             |                |

- Notes :
- The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.
  - The values of noise level is A weighted average sound pressure level, the mean value are measured by our company.
  - The values of noise level are measured at the 1.5 m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is on the assumption that the noise of fan body propagates to room inside.
  - The values of air volume are the mid-points of results measured by our company.

Wiring Diagram



# In-line Centrifugal Fan

Usage: Commercial Residential

## 31MMA

- Centrifugal Fan
- Low Noise Design
- IP44 Protection



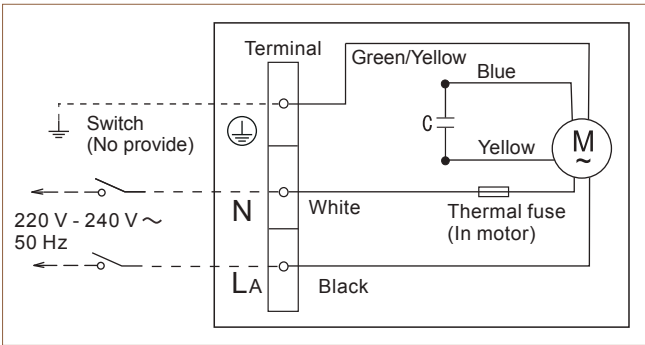
- Equipped with a high-performance external rotor motor
- Premium ball bearings
- Integrated thermal protector
- Long Operational Lifespan
- Low Noise & Vibration
- Optimized Airflow Design
- Motor Insulation Class H
- IP protection: IP44

### Specification

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                |
| 31MMA | 220         | 50             | 1,575      | 927   | 215             | 57            | 6.9         | Ø315           |
|       | 230         |                | 1,595      | 938   | 226             | 57            |             |                |
|       | 240         |                | 1,615      | 950   | 238             | 57            |             |                |

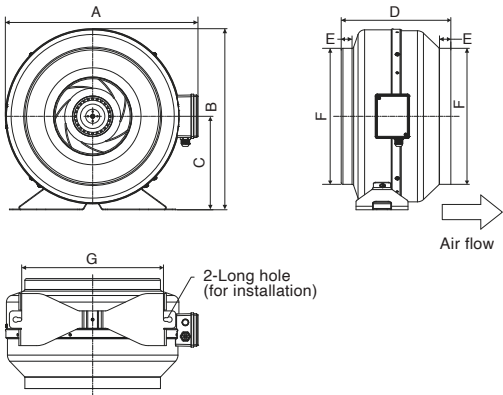
- Notes :
- 1.The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The values of noise level is A weighted average sound pressure level, the mean value are measured by our company.
  - 3.The values of noise level are measured at the 1.5 m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is on the assumption that the noise of fan body propagates to room inside.
  - 4.The values of air volume are the mid-points of results measured by our company.

### Wiring Diagram



Dimension  
Unit : mm

| A   | B   | C   | D   | E  | ØF  | G   |
|-----|-----|-----|-----|----|-----|-----|
| 445 | 416 | 215 | 255 | 26 | 313 | 327 |





# Mini Sirocco Fan



High Performance



Durable



Easy Installation

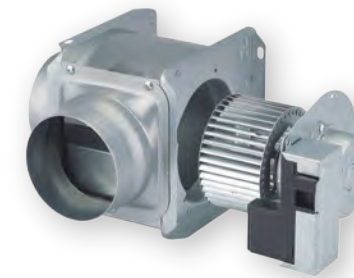
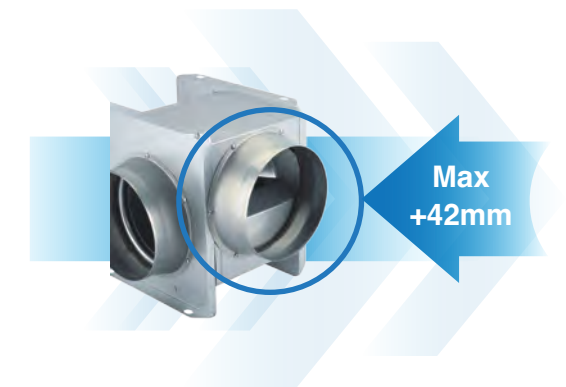
# Mini Sirocco Fan

## More Compact

With the optimal air passage design, the body size is compact. It enables easy installation in narrow and limited space environment.

## Higher Duct Connectivity

After the improvement on the adapter design, the duct connectivity is enhanced with the extended adapter.

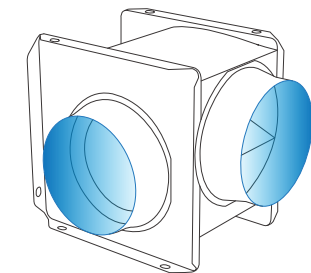


## Simplified Maintenance

By unitizing the fan and motor as one single unit, the impeller can be replaced and cleaned without removing the duct. It facilitates more user-friendly maintenance.

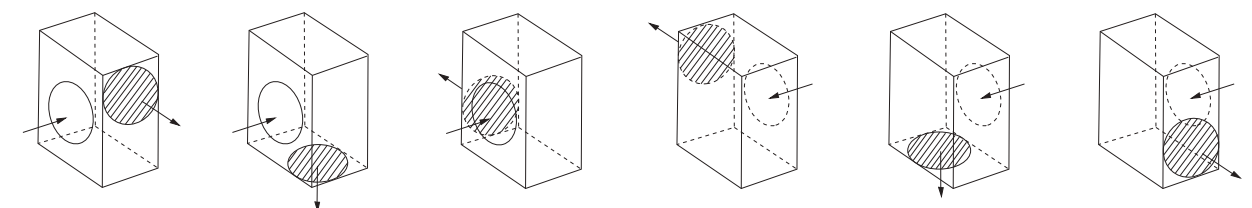
## Easy Installation

The inlet and outlet of the sirocco fan are of the same size for easy connection to a ducted system. The fan can be mounted on the ceiling.



## Adjustable Outlet Direction

With the mounting feet on the fan body, installation has become easier. Outlet direction is adjustable to fit vertical or horizontal position.



Various installing patterns satisfy different installation space

Scan for more information



# Mini Sirocco Fan

Usage: Locations where high air volume is needed

10CGB / 12CGB / 14CGB  
16CGB / 17CGB / 19CGB / 21CGB

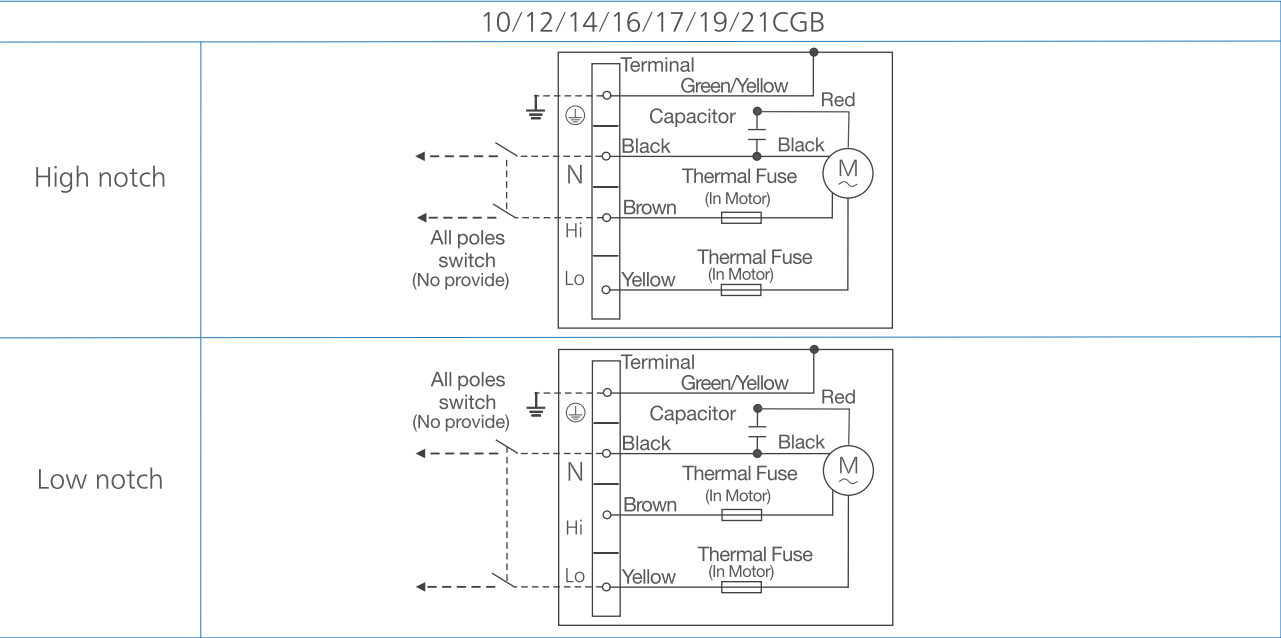
- Optimal Air Passage
- High Duct Connectivity
- Easy Installation



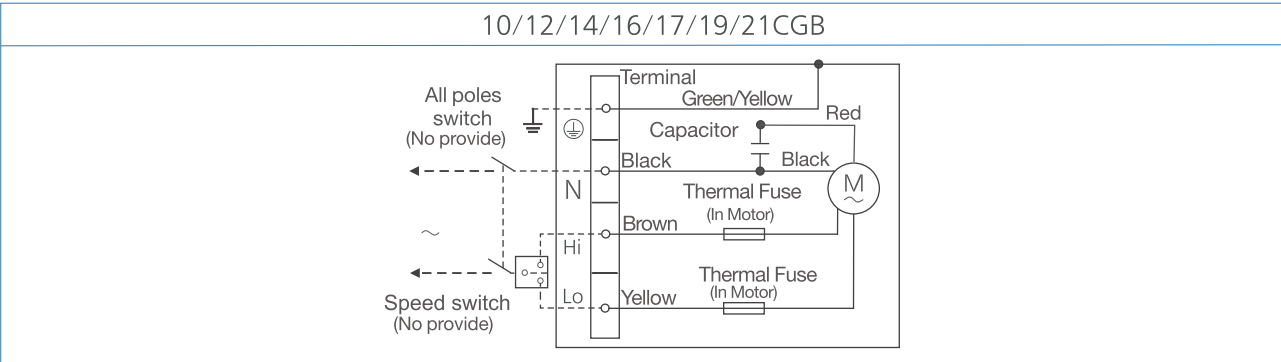
- Forward curve fan
- Galvanized steel
- Compact size for narrow space installation
- Extended adapter for higher connectivity
- Long life induction motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Highly efficient sirocco fan designed for powerful airflow
- Outlet direction adjustable to vertical or horizontal position
- Motor IP rating:  
Class E for 10CGB, 12CGB, 14CGB, 16CGB, 17CGB & 19CGB  
Class F for 21CGB
- Insulation class: IPX2

## Wiring Diagram

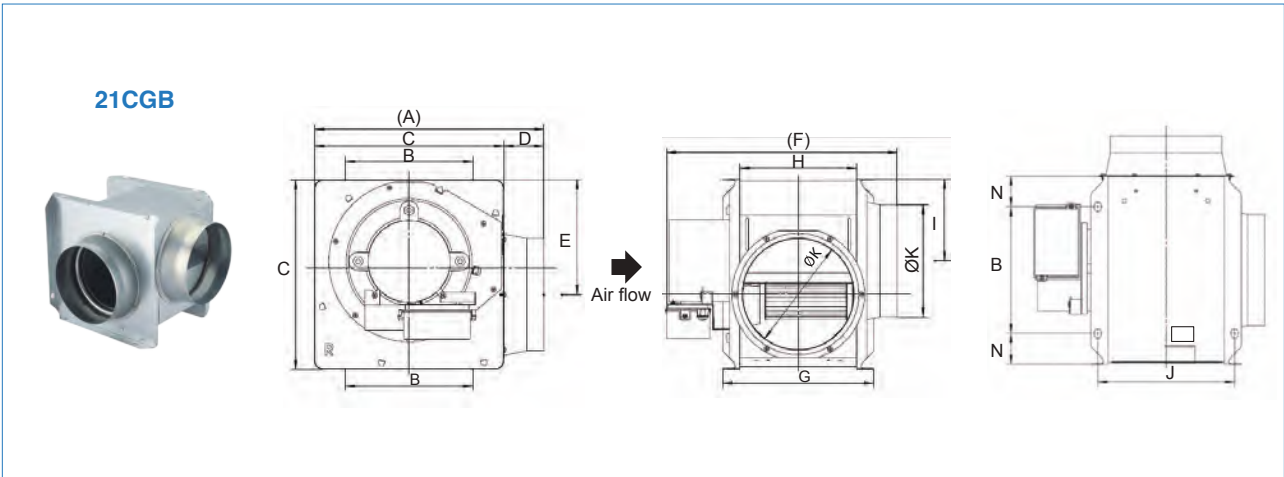
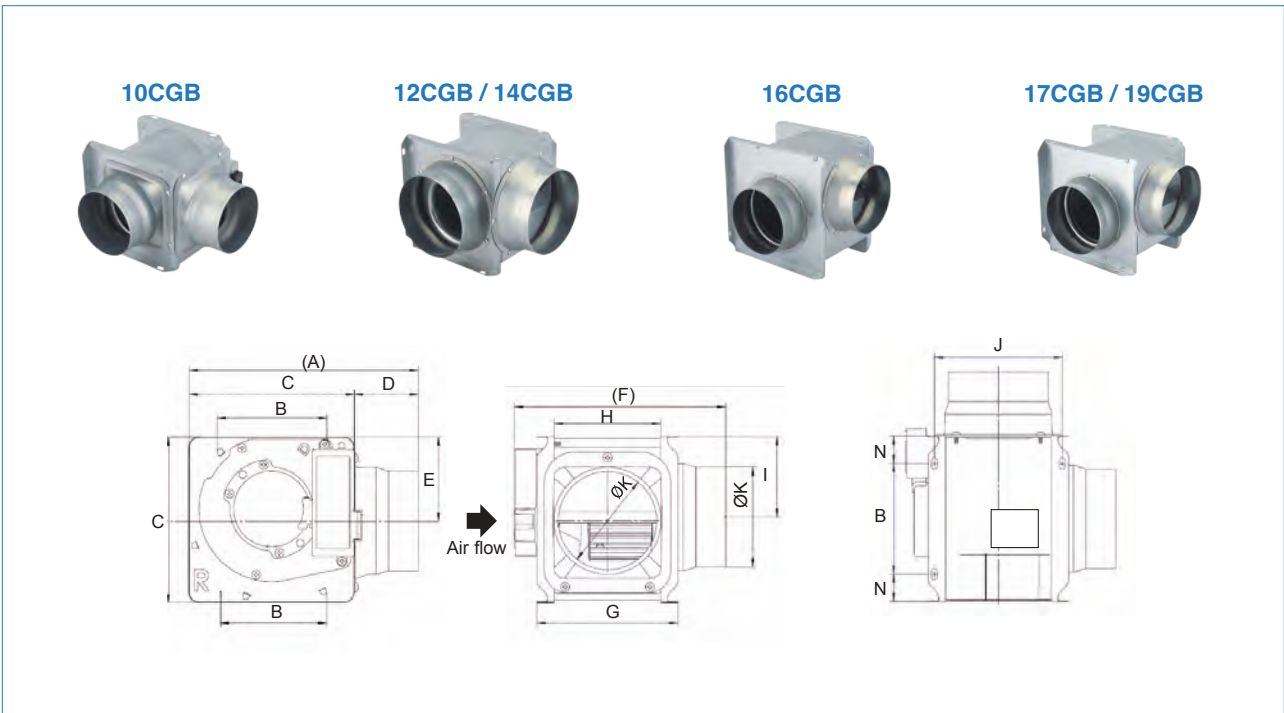
- Wiring connection when not use speed switch.



- Wiring connection when use speed switch.



# Dimensions Unit: mm



| Model | A   | B   | C   | D  | E   | F   | G   | H   | I   | J   | K   | N  | Connector Duct Dimension (mm) |
|-------|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|----|-------------------------------|
| 10CGB | 226 | 109 | 163 | 63 | 83  | 207 | 138 | 104 | 79  | 126 | 98  | 27 | Ø100                          |
| 12CGB | 269 | 145 | 209 | 60 | 112 | 236 | 170 | 136 | 101 | 158 | 146 | 32 | Ø150                          |
| 14CGB |     |     |     |    |     |     |     |     |     |     |     |    |                               |
| 16CGB | 330 | 196 | 270 | 60 | 170 | 264 | 189 | 155 | 117 | 177 | 146 | 37 | Ø150                          |
| 17CGB | 400 | 222 | 330 | 71 | 200 | 332 | 263 | 203 | 142 | 239 | 195 | 55 | Ø200                          |
| 19CGB |     |     |     |    |     |     |     |     |     |     |     |    |                               |
| 21CGB | 400 | 222 | 330 | 71 | 200 | 403 | 263 | 203 | 142 | 239 | 195 | 55 | Ø200                          |



Specification

| Model | Voltage [V] | Frequency [Hz] | Speed | Air Volume [CMH] | Consumption [W] | Noise Level [dB] |           | Net Weight [kg] |
|-------|-------------|----------------|-------|------------------|-----------------|------------------|-----------|-----------------|
|       |             |                |       |                  |                 | Inlet            | Side      |                 |
| 10CGB | 220         | 50             | Hi    | 154              | 15              | 41.0             | 28.0      | 1.9             |
|       |             |                | Lo    | 115              | 12              | 35.5             | 24.0      |                 |
|       |             | 60             | Hi    | 133              | 12              | 36.5             | 24.0      |                 |
|       |             |                | Lo    | 93               | 9               | 28.5             | 20.0      |                 |
|       | 230         | 60             | Hi    | 143              | 13              | 38.0             | 25.0      |                 |
|       |             |                | Lo    | 100              | 10              | 30.5             | 20.0      |                 |
|       | 220-240     | 50             | Hi    | 134-143          | 10-11           | 37.0-39.0        | 23.0-25.0 |                 |
|       |             |                | Lo    | 110-125          | 9-10            | 32.0-35.0        | 20.0-23.0 |                 |
| 12CGB | 220         | 50             | Hi    | 250              | 22              | 44.0             | 29.0      | 2.5             |
|       |             |                | Lo    | 175              | 16              | 32.0             | 19.0      |                 |
|       |             | 60             | Hi    | 225              | 25              | 42.5             | 29.0      |                 |
|       |             |                | Lo    | 145              | 18              | 32.0             | 21.0      |                 |
|       | 230         | 60             | Hi    | 242              | 27              | 44.0             | 30.0      |                 |
|       |             |                | Lo    | 153              | 19              | 34.0             | 21.5      |                 |
|       | 220-240     | 50             | Hi    | 233-262          | 23-28           | 44.5-46.5        | 29.0-32.0 |                 |
|       |             |                | Lo    | 156-175          | 19-23           | 33.0-36.0        | 18.0-20.0 |                 |
| 14CGB | 220         | 50             | Hi    | 332              | 35              | 50.0             | 34.0      | 2.8             |
|       |             |                | Lo    | 226              | 28              | 40.0             | 26.0      |                 |
|       |             | 60             | Hi    | 260              | 30              | 43.0             | 30.0      |                 |
|       |             |                | Lo    | 200              | 25              | 35.5             | 25.0      |                 |
|       | 230         | 60             | Hi    | 275              | 33              | 44.5             | 31.5      |                 |
|       |             |                | Lo    | 212              | 28              | 37.5             | 26.0      |                 |
|       | 220-240     | 50             | Hi    | 280-315          | 28-32           | 44.5-46.5        | 31.0-33.0 |                 |
|       |             |                | Lo    | 227-265          | 26-30           | 40.0-44.0        | 27.0-31.0 |                 |
| 16CGB | 220         | 50             | Hi    | 509              | 50              | 49.0             | 35.0      | 5.6             |
|       |             |                | Lo    | 405              | 43              | 43.5             | 30.0      |                 |
|       |             | 60             | Hi    | 483              | 57              | 48.0             | 32.0      |                 |
|       |             |                | Lo    | 372              | 44              | 41.0             | 27.0      |                 |
|       | 230         | 60             | Hi    | 503              | 61              | 49.0             | 34.5      |                 |
|       |             |                | Lo    | 393              | 48              | 42.5             | 29.0      |                 |
|       | 220-240     | 50             | Hi    | 509-542          | 50-56           | 49.0-51.5        | 35.0-38.0 |                 |
|       |             |                | Lo    | 405-450          | 43-48           | 43.5-46.0        | 30.0-32.0 |                 |

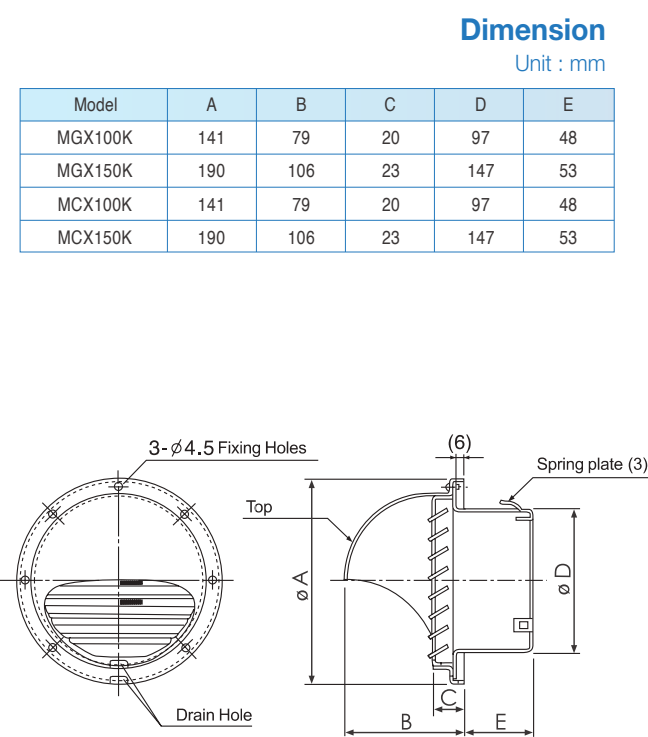
Specification

| Model | Voltage [V] | Frequency [Hz] | Speed | Air Volume [CMH] | Consumption [W] | Noise Level [dB] |           | Net Weight [kg] |
|-------|-------------|----------------|-------|------------------|-----------------|------------------|-----------|-----------------|
|       |             |                |       |                  |                 | Inlet            | Side      |                 |
| 17CGB | 220         | 50             | Hi    | 791              | 86              | 50.0             | 36.0      | 10.1            |
|       |             |                | Lo    | 640              | 70              | 44.0             | 31.0      |                 |
|       |             | 60             | Hi    | 752              | 95              | 49.0             | 34.0      |                 |
|       |             |                | Lo    | 612              | 73              | 43.5             | 29.0      |                 |
|       | 230         | 60             | Hi    | 789              | 104             | 50.0             | 35.0      |                 |
|       |             |                | Lo    | 641              | 80              | 44.0             | 31.0      |                 |
|       | 220-240     | 50             | Hi    | 791-875          | 86-101          | 50.0-52.5        | 36.0-39.0 |                 |
|       |             |                | Lo    | 640-705          | 70-83           | 44.0-47.0        | 31.0-32.0 |                 |
| 19CGB | 220         | 50             | Hi    | 947              | 121             | 55.0             | 41.0      | 10.2            |
|       |             |                | Lo    | 857              | 105             | 51.5             | 37.0      |                 |
|       |             | 60             | Hi    | 885              | 127             | 52.0             | 39.0      |                 |
|       |             |                | Lo    | 760              | 107             | 48.0             | 37.0      |                 |
|       | 230         | 60             | Hi    | 931              | 140             | 53.5             | 40.0      |                 |
|       |             |                | Lo    | 791              | 117             | 49.5             | 36.5      |                 |
|       | 220-240     | 50             | Hi    | 919-997          | 113-130         | 52.0-54.0        | 40.0-42.0 |                 |
|       |             |                | Lo    | 804-880          | 99-115          | 50.0-52.0        | 38.0-40.0 |                 |
| 21CGB | 220         | 50             | Hi    | 1420             | 238             | 67.0             | 54.0      | 14.6            |
|       |             |                | Lo    | 1143             | 182             | 60.0             | 47.0      |                 |
|       |             | 60             | Hi    | 1500             | 328             | 68.0             | 57.0      |                 |
|       |             |                | Lo    | 1042             | 215             | 58.0             | 47.0      |                 |
|       | 230         | 60             | Hi    | 1550             | 342             | 69.0             | 57.5      |                 |
|       |             |                | Lo    | 1100             | 230             | 59.5             | 48.0      |                 |
|       | 220-240     | 50             | Hi    | 1420-1435        | 238-247         | 66.0-67.0        | 54.0-55.0 |                 |
|       |             |                | Lo    | 1143-1220        | 182-197         | 60.0-62.5        | 47.0-51.0 |                 |

Notes:  
① The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.  
② The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 and -7 tolerance.  
③ The values of noise level are measured at the 1.5m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is based on the assumption that the noise of fan body propagates to room inside.  
④ The values of air volume are the mid-points of results measured by our company, with ±10% tolerance.

Accessories - Pipe Hood

MGX100K / MGX150K  
MCX100K / MCX150K



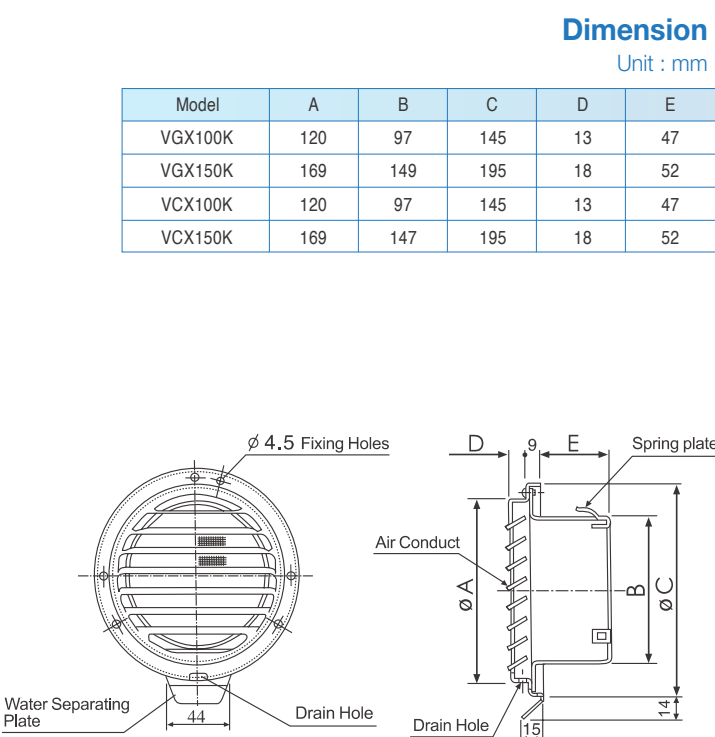
- High strength - adopt 0.5mm thickness SUS 304 Stainless steel
- Excellent anti-rust capability - hood part coated with metallic silver paint prevents oxidation of material
- Easy installation - 3pcs of spring clip facilitate duct/pipe connection
- 2.5x2.5mm net keep out ingress of small particles and insects from outside (MGX100K & MGX150K)
- It is recommended to use pipe hood with net at intake terminal while with-out net at exhaust

Specification

| Model   | Diameter of Applicable Pipe [mm] | Material        | Dimension of Net [mm] |
|---------|----------------------------------|-----------------|-----------------------|
| MGX100K | 100                              | Stainless Steel | 2.5 x 2.5             |
| MGX150K | 150                              | Stainless Steel | 2.5 x 2.5             |
| MCX100K | 100                              | Stainless Steel | -                     |
| MCX150K | 150                              | Stainless Steel | -                     |

Accessories - Vent Cap

VGX100K / VGX150K  
VCX100K / VCX150K



- High strength and excellent anti-rust capability - adopt 0.5mm thickness SUS 304 Stainless steel
- Easy installation - 3pcs of spring clip facilitate duct/pipe connection
- 2.5x2.5mm net keep out ingress of small particles and insects from outside (VGX100K & VGX150K)
- It is recommended to use pipe cap with net at intake terminal while with-out net at exhaust

Specification

| Model   | Diameter of Applicable Pipe [mm] | Material        | Dimension of Net [mm] |
|---------|----------------------------------|-----------------|-----------------------|
| VGX100K | 100                              | Stainless Steel | 2.5 x 2.5             |
| VGX150K | 150                              | Stainless Steel | 2.5 x 2.5             |
| VCX100K | 100                              | Stainless Steel | -                     |
| VCX150K | 150                              | Stainless Steel | -                     |



# Energy Recovery Ventilator



24-Hour  
Ventilation



Energy Saving



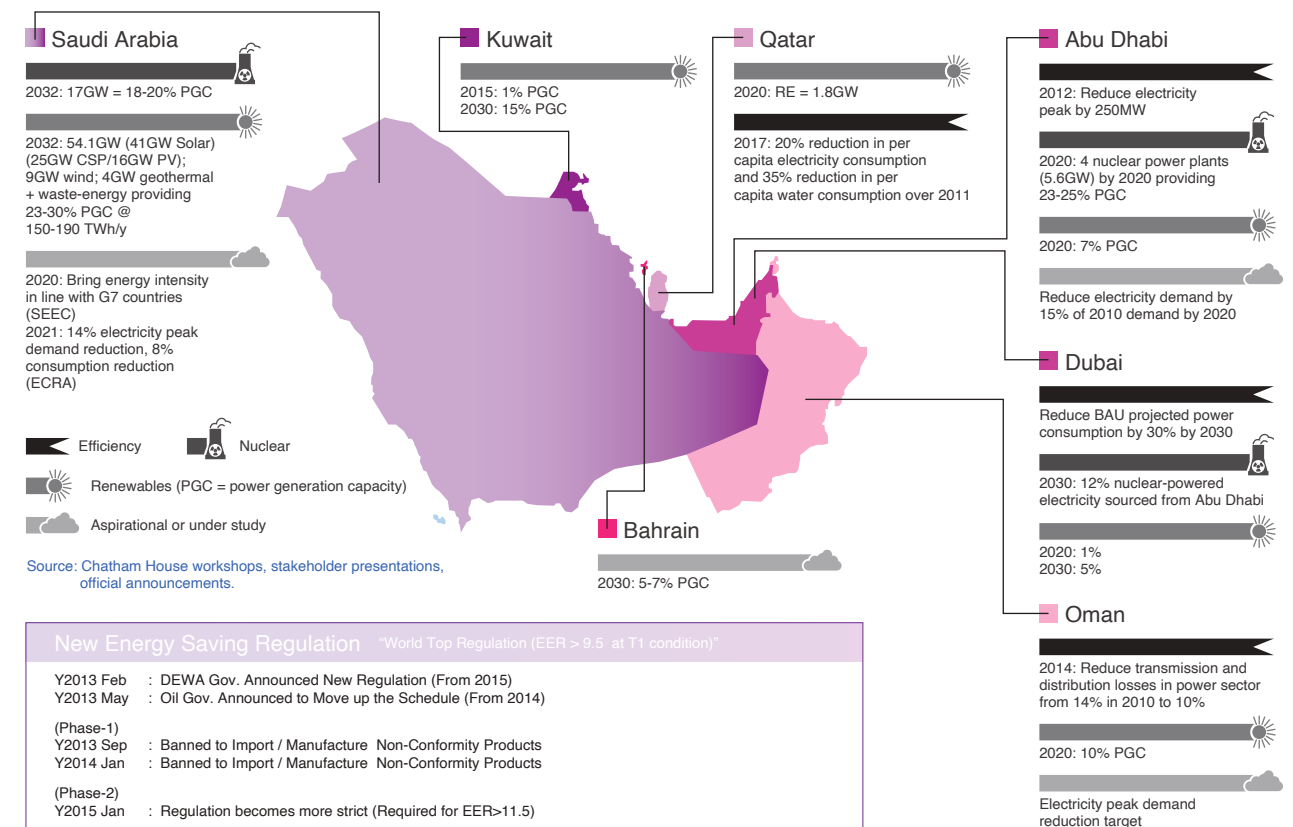
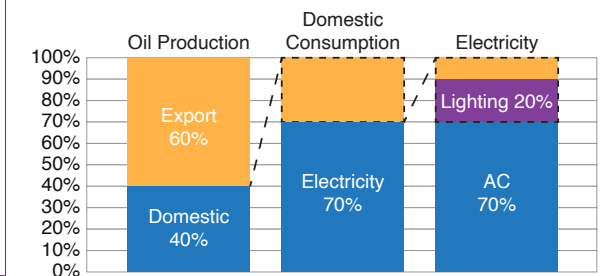
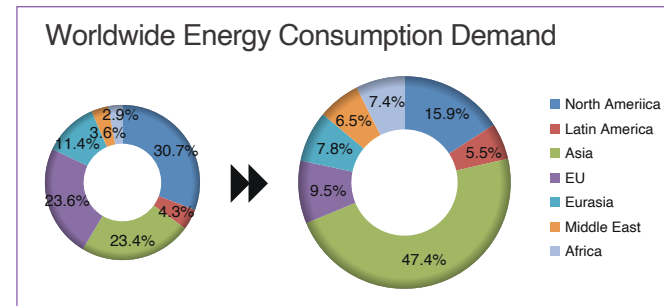
Filtration



Powerful

# Energy Consumption Demand

There is a significant increase in the energy consumption demand globally, which is illustrated as in below charts.



## Energy Saving Label Regulation

Significant energy saving could be achieved by using energy efficient appliances which help reducing the emission of greenhouse gases and other air pollutants from the power plants. To further facilitate the public in choosing energy efficient appliances and to raise public awareness on energy saving, Energy Labelling Schemes have been introduced.



Scan for more  
information

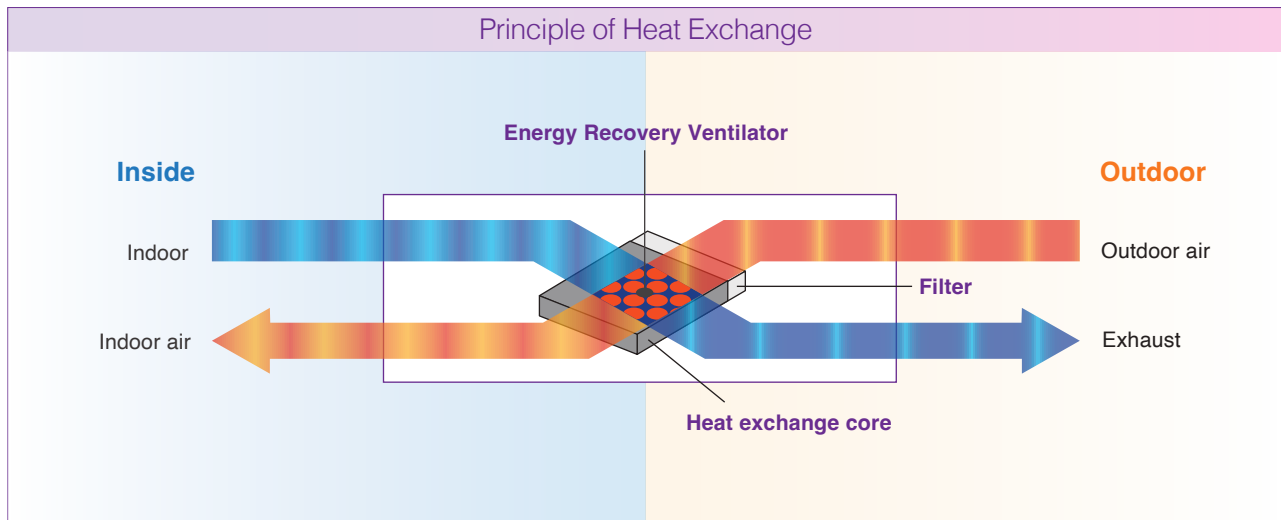
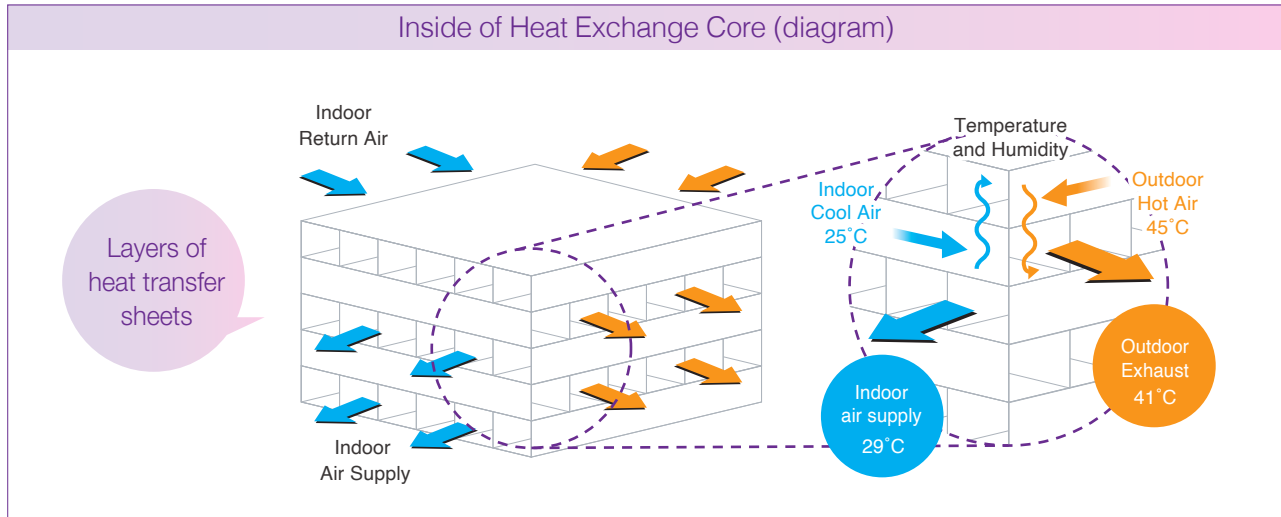




# Feature of Energy Recovery Ventilator

KDK Energy Recovery Ventilator is equipped with heat exchange core element. When outdoor fresh air and indoor foul air pass through the heat exchange core element, heat carried by the air is exchanged through air flow and heat conduction at the heat transfer sheets. Meanwhile, humidity exchange occurs from high humidity to low humidity as moisture is transferred due to the difference in pressure of water vapour.

## Energy Saving

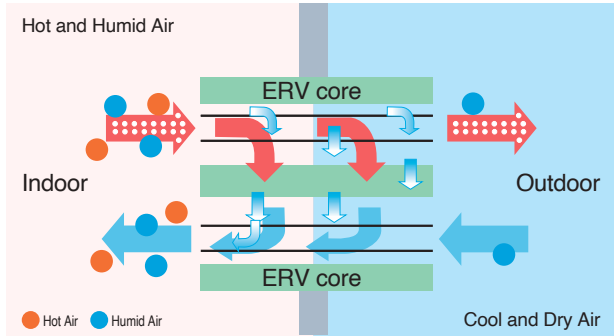
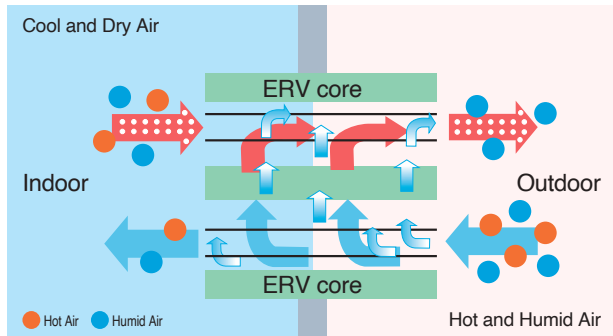


**Summer**

In summer, the indoor cool air discharged can be used to precool outdoor warm air before it gets delivered indoor and so reduces the cooling effort.

**Winter**

Whereas in winter, indoor warm air discharged can be used to preheat outdoor cool air before it is released indoor and so saves some energy of heating.



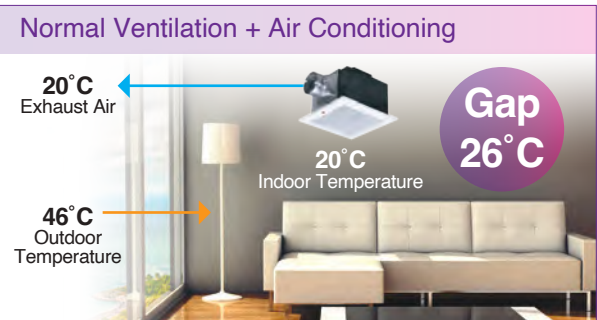
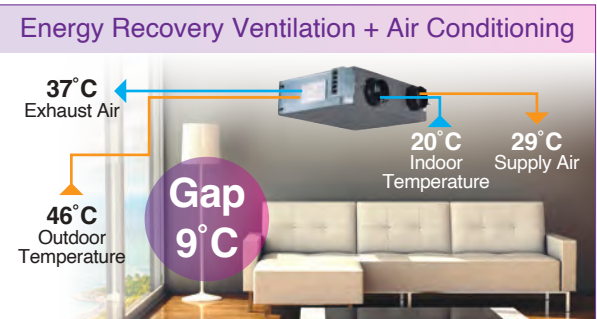
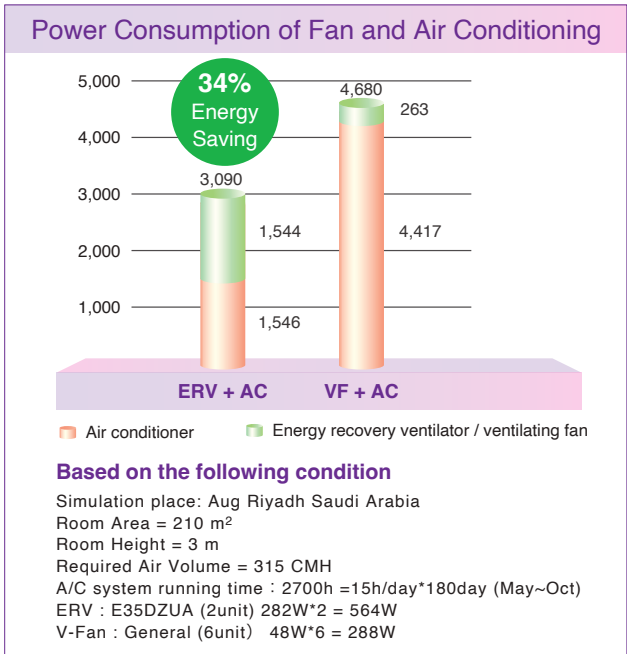
# Cost Efficient

Highly efficient energy recovery reduces energy loss during ventilation, and hence achieves energy saving.

## Long Term Energy Consumption Comparison

Comparison of the energy consumption over 180 days between using energy recovery ventilator and ventilating fan, in cooperation with air conditioning.

**Summer** By utilizing the returned indoor cool air to cool down the outdoor air before it enters indoor, the indoor cooling cost can be reduced.



Energy saving while holding down the air-conditioning cost

ERV can pre-cool (in summer) or pre-heat (in winter) the incoming air through the heat exchange mechanism with the outgoing air. This can largely save the cost of indoor air conditioning.

Keeping comfortable indoor temperature regardless the condition outdoor

When it is cold outside, the incoming air is preheated by the outgoing warmed air before entering indoor.

When it is hot outside, the incoming air is pre-cooled by the outgoing cooled air before entering indoor.

Aiding effective soundproof

Energy recovery ventilator operates in an airtight indoor environment while keeping high performance of ventilation. As a result, indoor sound like night music and video can be enjoyed without worrying sound leakage to the outside.

Likewise, airtight houses can effectively block the noise from outside entering indoor while energy recovery ventilator keeps up high performance of ventilation.

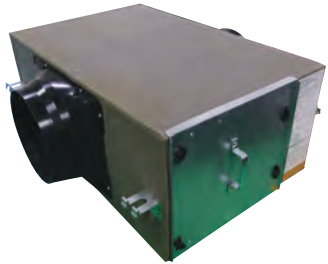
# Filter Box Specially for Middle East Region to Bring You Clean Air

KDK filter box is part of the ERV designed to make the indoor spaces insect free, dustproof and pollen free, such that fresh air can be circulated.

There are two filters, Primary Filter and PM2.5 Filter in one box. Incoming air firstly passes through Primary Filter which filters large particles like sand and insect. Then the tiny and invisible particles are further trapped by PM2.5 Filter. The ERV can bring you clean, fresh and comfortable air with these two layers of filters.

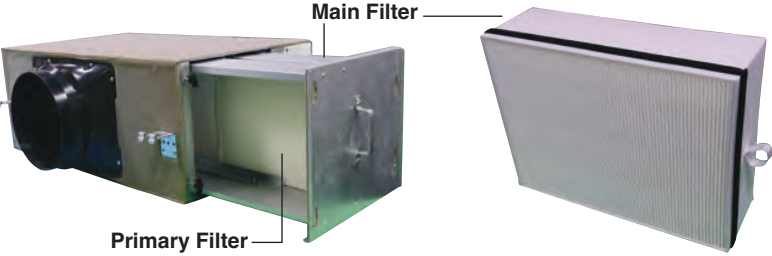
## Filter Box

Filter Box Unit

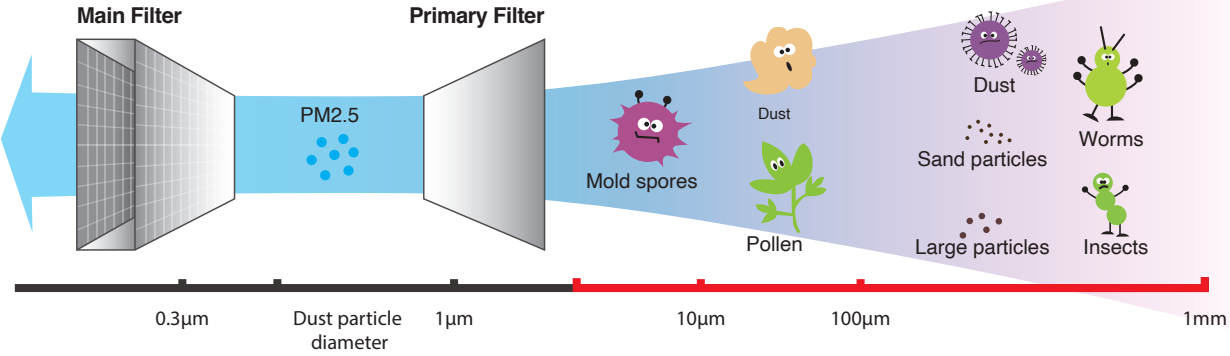


Outside Air Filter

Recommend to change every 2-4 months

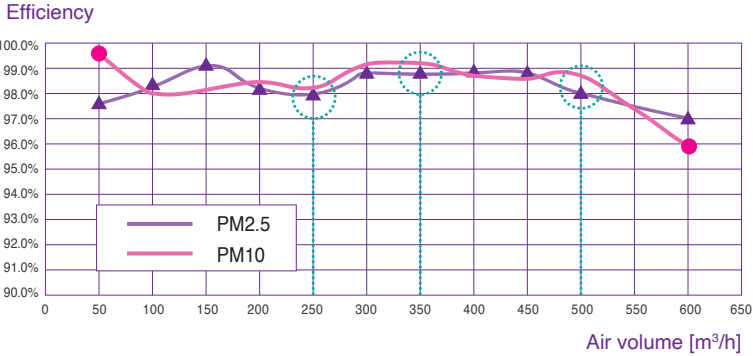


PM2.5 and PM10 Filter



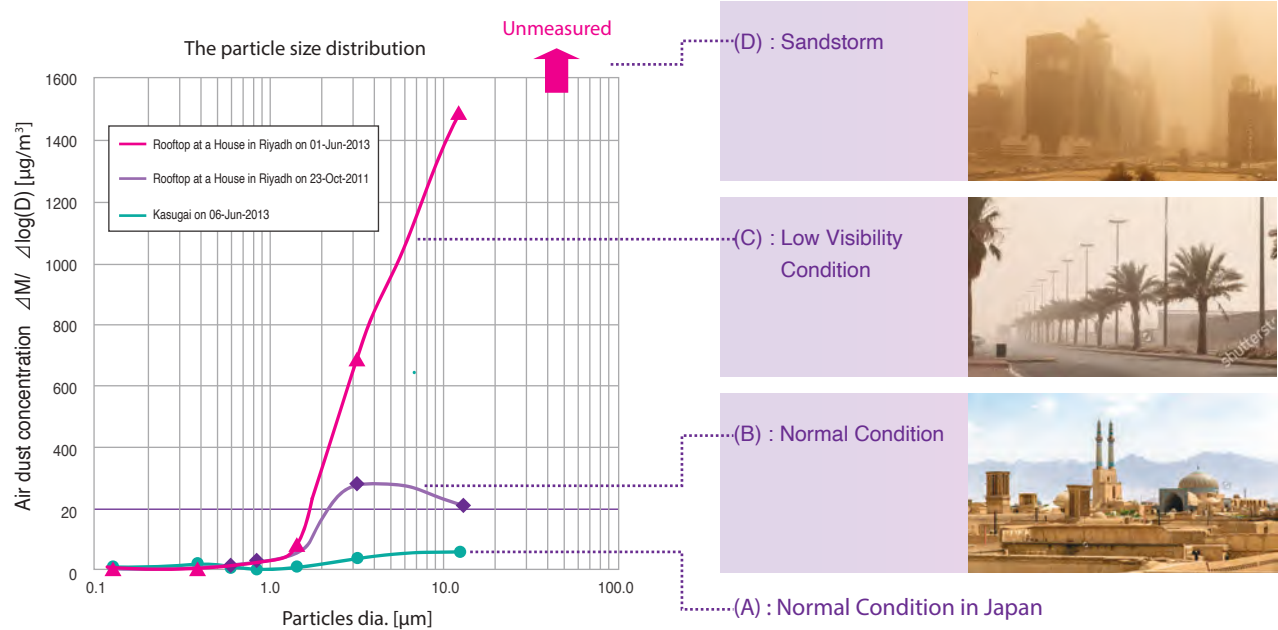
Filter Efficiency - Effectively capture PM2.5 and PM10 particles to deliver clean air to indoor

| Model   | Air Volume | PM 2.5 | PM 10 |
|---------|------------|--------|-------|
| E25DZUA | 250        | 98%    | 98.2% |
| E35DZUA | 350        | 99%    | 99.2% |
| E50DZUA | 500        | 98%    | 98.8% |



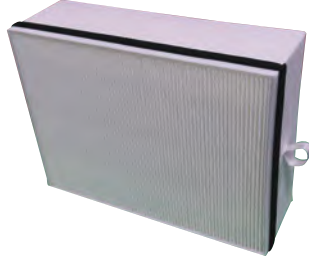
## Dust Polluted Air in Riyadh

Comparison of the particle size distribution of air dust (At a House in Riyadh)



## Field test result in Saudi Arabia

Sand dust carries large number of 2-10 micrometre particles. KDK ERV is well equipped with filter box specially designed for Middle East environment.



New, Clean PM 2.5 Filter



Dirty PM 2.5 Filter after 1 month field test

KDK PM 2.5 Filter has high efficiency to capture PM 2.5 and PM 10.

Field Test Period: 4th Nov 2014 – 15th Dec 2014

## Ignition Loss Test\* result in Saudi Arabia

Large particle can be effectively trapped by the filter. There are many pollutants can be obtained by filters.

Standard Pre-filter

|                       |      |
|-----------------------|------|
| Collection amount (g) | 13.2 |
| Moisture (%)          | 2.5  |
| Inorganic matter (%)  | 60.7 |



PM 2.5 Filter

|                       |      |
|-----------------------|------|
| Collection amount (g) | 2.5  |
| Moisture (%)          | 3.0  |
| Inorganic matter (%)  | 61.7 |



\* Test Period: 2014/11/04~2014/12/15 Test Filter: FY-FBG25C



Standard Series

Usage: Living Room Shopping Mall Office

E25DZUA

- Energy Exchange
- Speedy Exhaust
- Interlocking with A/C



- Counter-flow heat-exchange element adopted for compact size
- Ease of maintenance through a single inspection hole
- Equipped with Extra-High setting
- Bypass ventilation for speedy exhaust
- Interlocking with air conditioning
- Motor insulation Class E
- IP protection: IPX2

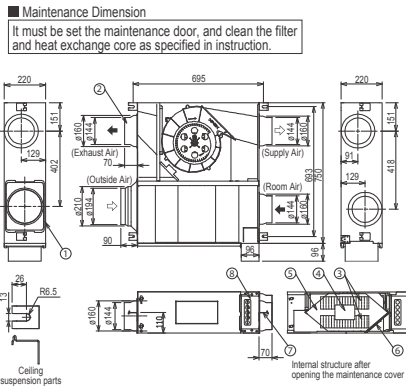
Specification

| Model   | Voltage [V] | Frequency [Hz] | Notch | Air Volume |       | Consumption [W] | External Static Pressure [Pa] | Exchange Efficiency |         |                  |         | Noise [dB(A)] | Weight [kg] |
|---------|-------------|----------------|-------|------------|-------|-----------------|-------------------------------|---------------------|---------|------------------|---------|---------------|-------------|
|         |             |                |       | [CMH]      | [CFM] |                 |                               | Temperature Cooling | Heating | Enthalpy Cooling | Heating |               |             |
| E25DZUA | 220         | 60             | SH    | 250        | 147   | 157             | 90                            | 60                  | 75      | 61               | 67      | 33            | 30          |
|         |             |                | H     | 250        | 147   | 148             | 40                            | 60                  | 75      | 61               | 67      | 33            |             |
|         |             |                | L     | 150        | 88    | 82              | 0                             | 65                  | 77      | 70               | 74      | 26            |             |

Test Condition

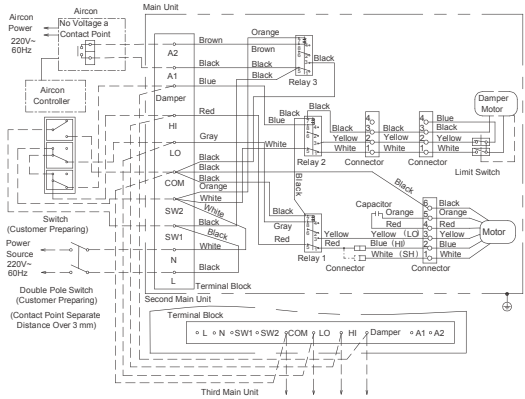
- The input power, current and exchange efficiency are measured at the standard air volume
- The input power indicated in name plate is the maximum value at the static pressure of 0 Pa
- The noise is measured 1.5 m away from the bottom face of the unit. The noise value measured at the total acoustic room is more than the indicated value in actual operation
- The above parameters are measured according to standard JIS B 8628

Dimension Unit : mm

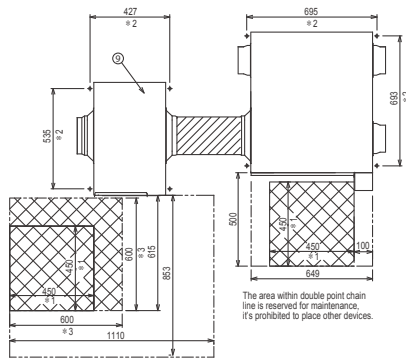


| No. | Part name          | Qty | Material                |
|-----|--------------------|-----|-------------------------|
| 1   | Frame              | 1   | Galvanized Steel Sheet  |
| 2   | Adapter            | 4   | ABS                     |
| 3   | Impeller           | 2   | PP                      |
| 4   | Fan Motor          | 1   | /                       |
| 5   | Heat Exchange Core | 1   | Special Paper and Resin |
| 6   | Indoor Filter      | 1   | /                       |
| 7   | Ceiling Suspension | 4   | Galvanized Steel Sheet  |
| 8   | Switch Box         | 1   | Galvanized Steel Sheet  |
| 9   | Filter Box Unit    | -   | /                       |

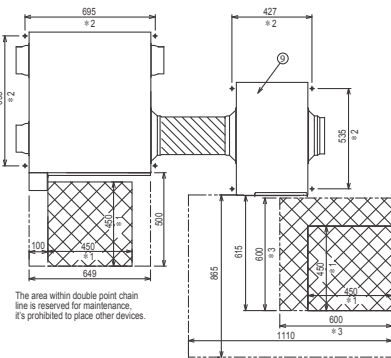
Wiring Diagram



Installation method for case 1



Installation method for case 2



Standard Series

Usage: Living Room Shopping Mall Office

E35DZUA

- Energy Exchange
- Speedy Exhaust
- Interlocking with A/C



- Counter-flow heat-exchange element adopted for compact size
- Ease of maintenance through a single inspection hole
- Equipped with Extra-High setting
- Bypass ventilation for speedy exhaust
- Interlocking with air conditioning
- Motor insulation Class E
- IP protection: IPX2

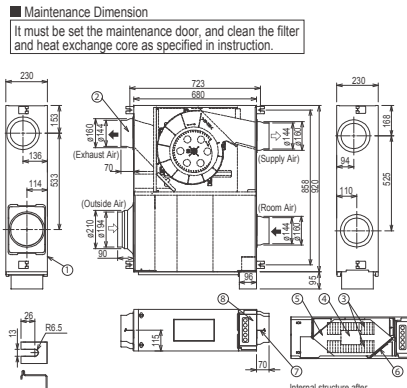
Specification

| Model   | Voltage [V] | Frequency [Hz] | Notch | Air Volume |       | Consumption [W] | External Static Pressure [Pa] | Exchange Efficiency |         |                  |         | Noise [dB(A)] | Weight [kg] |
|---------|-------------|----------------|-------|------------|-------|-----------------|-------------------------------|---------------------|---------|------------------|---------|---------------|-------------|
|         |             |                |       | [CMH]      | [CFM] |                 |                               | Temperature Cooling | Heating | Enthalpy Cooling | Heating |               |             |
| E35DZUA | 220         | 60             | SH    | 350        | 206   | 282             | 100                           | 53                  | 78      | 66               | 71.5    | 37            | 39          |
|         |             |                | H     | 350        | 206   | 253             | 18                            | 53                  | 78      | 66               | 71.5    | 36.5          |             |
|         |             |                | L     | 255        | 150   | 172             | 0                             | 53                  | 75      | 63               | 70      | 30.5          |             |

Test Condition

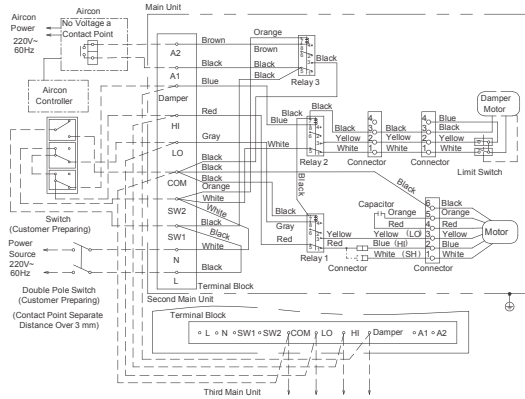
- The input power, current and exchange efficiency are measured at the standard air volume
- The input power indicated in name plate is the maximum value at the static pressure of 0 Pa
- The noise is measured 1.5 m away from the bottom face of the unit. The noise value measured at the total acoustic room is more than the indicated value in actual operation
- The above parameters are measured according to standard JIS B 8628

Dimension Unit : mm

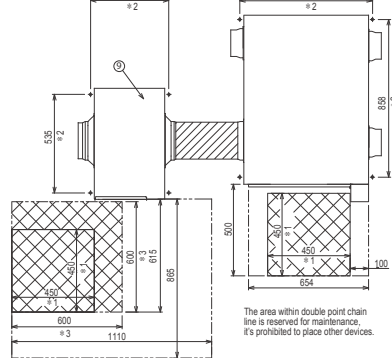


| No. | Part name          | Qty | Material                |
|-----|--------------------|-----|-------------------------|
| 1   | Frame              | 1   | Galvanized Steel Sheet  |
| 2   | Adapter            | 4   | ABS                     |
| 3   | Impeller           | 2   | PP                      |
| 4   | Fan Motor          | 1   | /                       |
| 5   | Heat Exchange Core | 1   | Special Paper and Resin |
| 6   | Indoor Filter      | 1   | /                       |
| 7   | Ceiling Suspension | 4   | Galvanized Steel Sheet  |
| 8   | Switch Box         | 1   | Galvanized Steel Sheet  |
| 9   | Filter Box Unit    | -   | /                       |

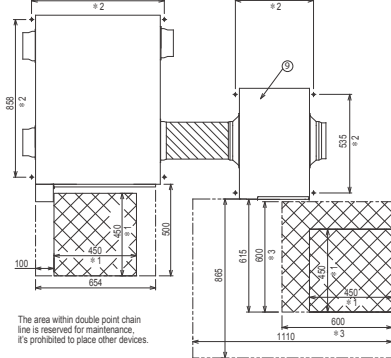
Wiring Diagram



Installation method for case 1



Installation method for case 2



Standard Series

Usage: Living Room Shopping Mall Office

E50DZUA

- Energy Exchange
- Speedy Exhaust
- Interlocking with A/C



- Counter-flow heat-exchange element adopted for compact size
- Ease of maintenance through a single inspection hole
- Equipped with Extra-High setting
- Bypass ventilation for speedy exhaust
- Interlocking with air conditioning
- Motor insulation Class E
- IP protection: IPX2

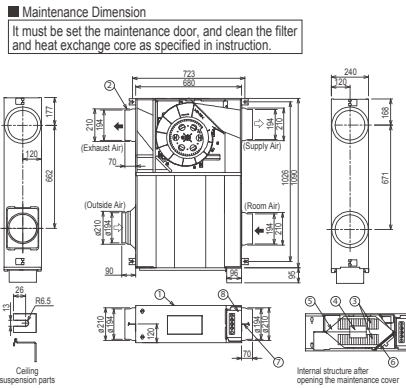
Specification

| Model   | Voltage [V] | Frequency [Hz] | Notch | Air Volume |       | Consumption [W] | External Static Pressure [Pa] | Exchange Efficiency |                     |                  |                  | Noise [dB(A)] | Weight [kg] |
|---------|-------------|----------------|-------|------------|-------|-----------------|-------------------------------|---------------------|---------------------|------------------|------------------|---------------|-------------|
|         |             |                |       | [CMH]      | [CFM] |                 |                               | Temperature Cooling | Temperature Heating | Enthalpy Cooling | Enthalpy Heating |               |             |
| E50DZUA | 220         | 60             | SH    | 500        | 294   | 376             | 60                            | 53                  | 78                  | 66               | 70               | 38            | 45          |
|         |             |                | H     | 500        | 294   | 349             | 0                             | 53                  | 78                  | 66               | 70               | 37.5          |             |
|         |             |                | L     | 350        | 206   | 215             | 0                             | 58                  | 78                  | 66               | 69               | 32            |             |

Test Condition

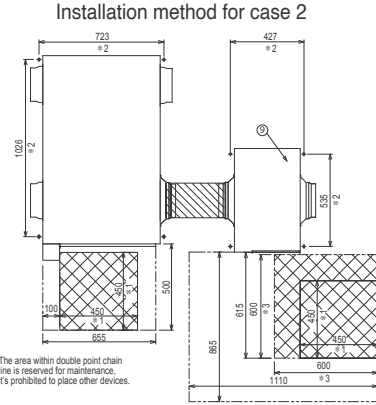
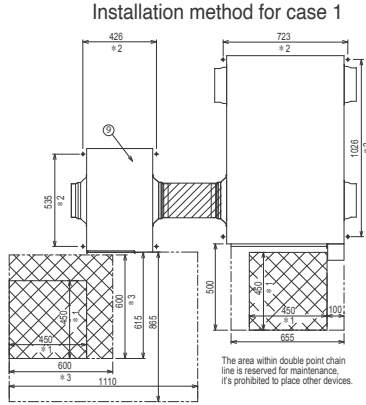
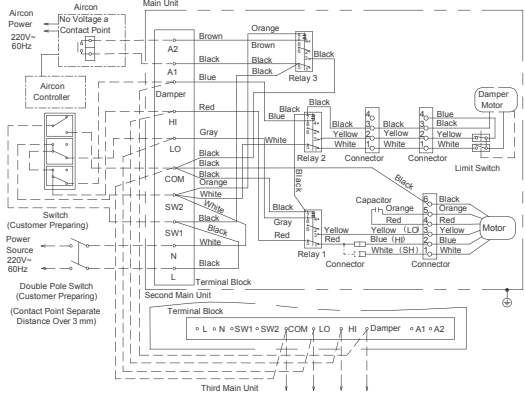
- The input power, current and exchange efficiency are measured at the standard air volume
- The input power indicated in name plate is the maximum value at the static pressure of 0 Pa
- The noise is measured 1.5 m away from the bottom face of the unit. The noise value measured at the total acoustic room is more than the indicated value in actual operation
- The above parameters are measured according to standard JIS B 8628

Dimension Unit : mm



| No. | Part name          | Qty | Material                |
|-----|--------------------|-----|-------------------------|
| 1   | Frame              | 1   | Galvanized Steel Sheet  |
| 2   | Adapter            | 4   | ABS                     |
| 3   | Impeller           | 2   | PP                      |
| 4   | Fan Motor          | 1   | /                       |
| 5   | Heat Exchange Core | 2   | Special Paper and Resin |
| 6   | Indoor Filter      | 1   | /                       |
| 7   | Ceiling Suspension | 4   | Galvanized Steel Sheet  |
| 8   | Switch Box         | 1   | Galvanized Steel Sheet  |
| 9   | Filter Box Unit    | -   | /                       |

Wiring Diagram



Accessory

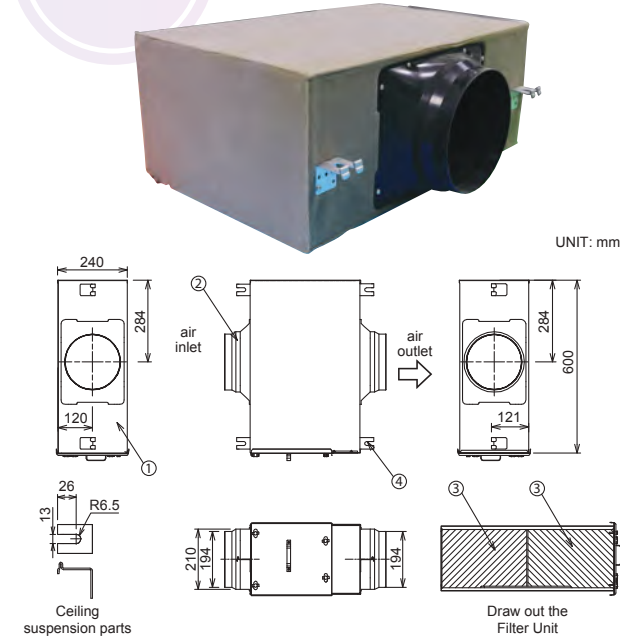
EB90SA (Applicable to series DZUA)

- Power : 220V / 60Hz
- Rate voltage : 3.6W
- Outter size : 86x86x40mm



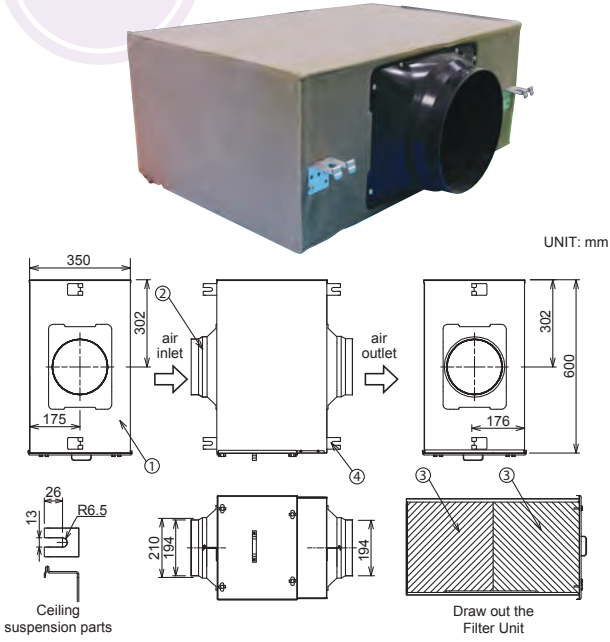
Filter Box Unit

BE25DZUA For E25DZUA, E35DZUA



| No. | Part name          | Qty | Material               |
|-----|--------------------|-----|------------------------|
| 1   | Frame              | 1   | Galvanized Steel Sheet |
| 2   | Adapter            | 2   | ABS                    |
| 3   | Outdoor filter     | 2   | Nonwoven Fabric        |
| 4   | Ceiling Suspension | 4   | Galvanized Steel Sheet |

BE50DZUA For E50DZUA



| No. | Part name          | Qty | Material               |
|-----|--------------------|-----|------------------------|
| 1   | Frame              | 1   | Galvanized Steel Sheet |
| 2   | Adapter            | 2   | ABS                    |
| 3   | Outdoor filter     | 2   | Nonwoven Fabric        |
| 4   | Ceiling Suspension | 4   | Galvanized Steel Sheet |

Replacement Filter

| Product name                           | Filter Model | Filter(s) Included | Applicable Model | Service life of the filter | Remarks       |
|----------------------------------------|--------------|--------------------|------------------|----------------------------|---------------|
| Replacement filter for Filter Box Unit | FP25DZUA     | 2                  | BE25DZUA         | 2-4 months                 | Clean monthly |
|                                        | FP50DZUA     | 2                  | BE50DZUA         |                            |               |
| Replacement filter for ERV             | FB25DZUA     | 1                  | E25DZUA          | 6 months                   |               |
|                                        | FB35DZUA     | 1                  | E35DZUA          |                            |               |
|                                        | FB50DZUA     | 1                  | E50DZUA          |                            |               |

The service life of the filters varies with service environment, and the filters should be replaced with the new one.

The air volume and filter efficiency will drop to different levels because of different service environments and service time. If the whole area indicated by the arrow turns black, please replace the filter.



# Thermo Ventilator

# Feature of Thermo Ventilator

## Multi-functional

**Ventilation** - Exhaust foul smell and excessive moisture

**Circulation** - Provide circulation of air to avoid uncomfortable feeling due to stagnant air

**Heating** - Warm up the room for pleasant bathing

**Clothes Drying** - Enable to dry large sized garments and bedclothes.



Ventilation



Circulation



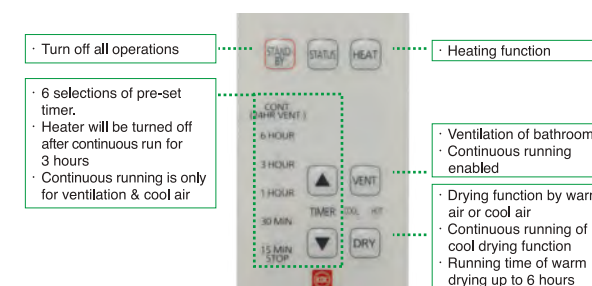
Heating



Clothes Drying

## Remote Control

All functions can be operated through wireless remote control.

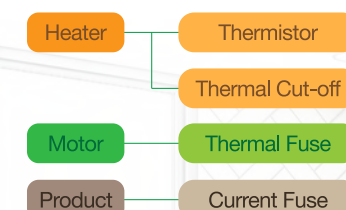


## Filter Equipped

Equipped with dust filter to trap the dust.



## Safety Protection



Multi-level safety structure protects you and your property from any accidents

## Easy Installation

Specially designed compact size allows easy installation on most households' ceilings.

Structure is improved for easy wiring as compared with previous model.



Scan for more information





# Ceiling Mount Series

Usage: Bathroom Toilet

## 30BUC

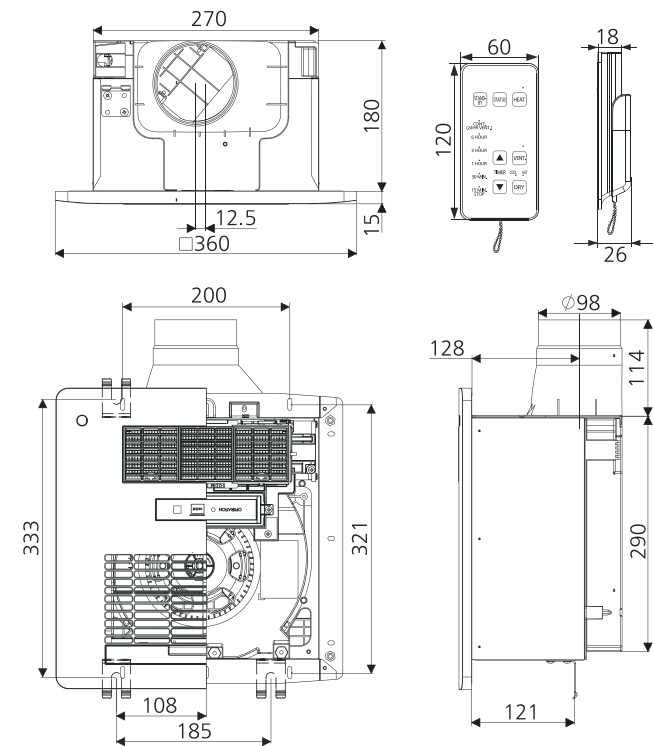
- Multi-functional
- Wireless Remote
- Compact Design



- Multi-function: Ventilation, Circulation, Heating and Clothes Drying
- PTC heating element for effective heating
- Multi-level safety protection
- 5-step off timer
- Motor insulation Class E
- IP protection: IPX2

### Dimension

Unit : mm



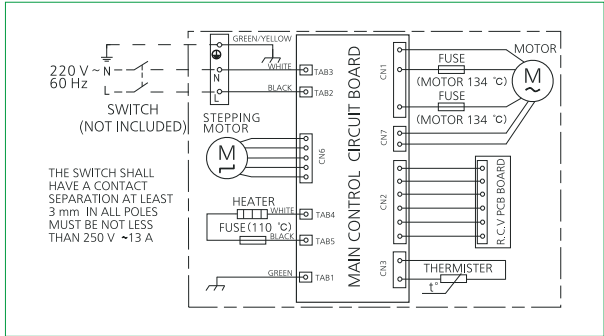
### Specification

| Model | Voltage |      | Air Volume |       | Consumption [W] |      |          |         | Noise [dB(A)] |      |          |         | Weight [kg] | Installation Space [mm] |
|-------|---------|------|------------|-------|-----------------|------|----------|---------|---------------|------|----------|---------|-------------|-------------------------|
|       | [V]     | [Hz] | [CMH]      | [CFM] | Heat            | Vent | Dry Cool | Dry Hot | Heat          | Vent | Dry Cool | Dry Hot |             |                         |
| 30BUC | 220     | 60   | 160        | 95    | 1,650           | 24   | 33       | 1,550   | 46            | 39   | 46       | 46      | 5.0         | 300 x 300               |

Test Condition

- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

### Wiring Diagram





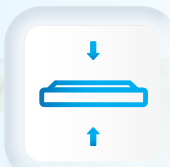
Range Hood



Powerful



Easy to Clean

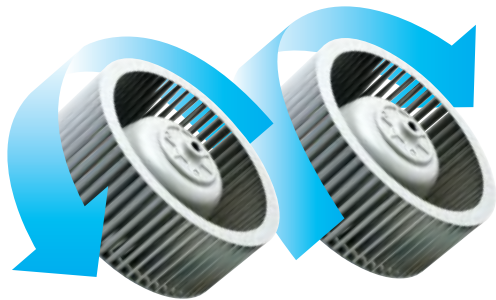


Slim Design

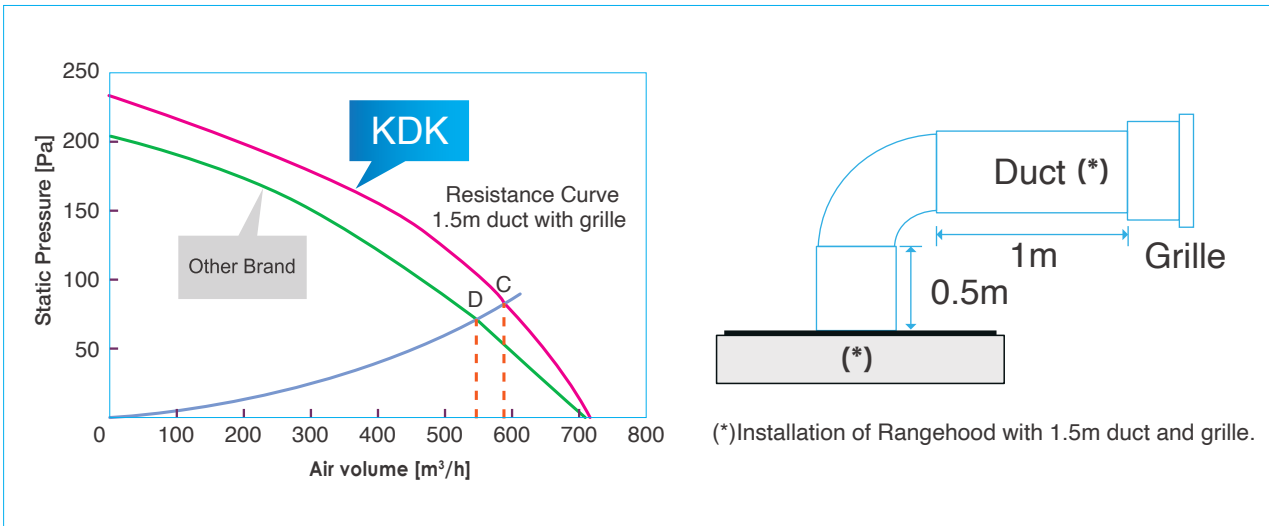
Feature of Range Hood

Sirocco Fan

The adopted sirocco fans can outperform the turbo fans while keeping the noise level low.



A typical range hood installation involves a long duct with at least one bending like the diagram below. Under a condition of adopting 1.5m long duct with a grille that results a static pressure of 80Pa, KDK range hood's air volume can reach 580 m³/h at Point C while some other brands can only reach 530 m³/h at Point D as illustrated in the graph on the left.



(\*)Installation of Rangehood with 1.5m duct and grille.

Example

| Comparison of Suction Power | Air Volume [m³/h] |         |     |          |     |          |     |                   |
|-----------------------------|-------------------|---------|-----|----------|-----|----------|-----|-------------------|
|                             | without duct      | 5m duct |     | 10m duct |     | 15m duct |     | *1.5m duct grille |
| KDK                         | 720               | 650     | 89% | 610      | 84% | 560      | 77% | 580 (C) 79%       |
| Other Brand                 | 720               | 610     | 85% | 540      | 75% | 480      | 67% | 530 (D) 74%       |

Scan for more information





# Ceiling Mount Series

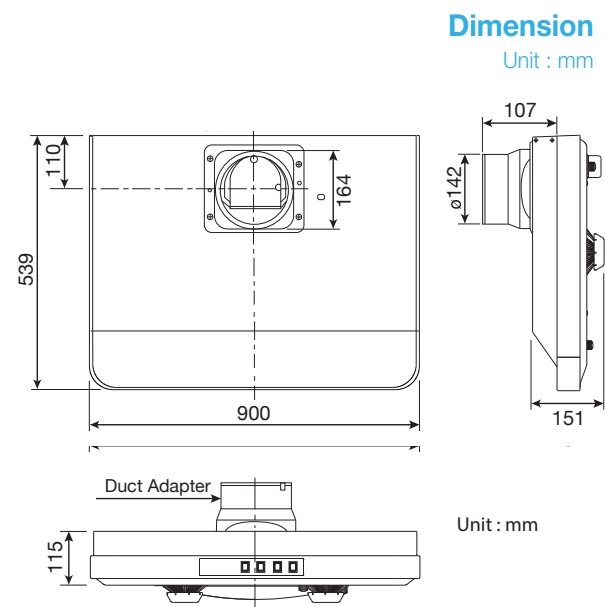
Usage: Kitchen

## 90HQUA

- 2-speed Selection
- Easy Maintenance
- Slim Design



- 2 motors with 2 sirocco fans adopted
- Individual control of motors with 2-speed selection
- Rocker switch
- Easy detachable for cleaning
- Slim designed main body with only 115mm thickness
- Colour option: silver / dark gray
- Motor insulation Class E

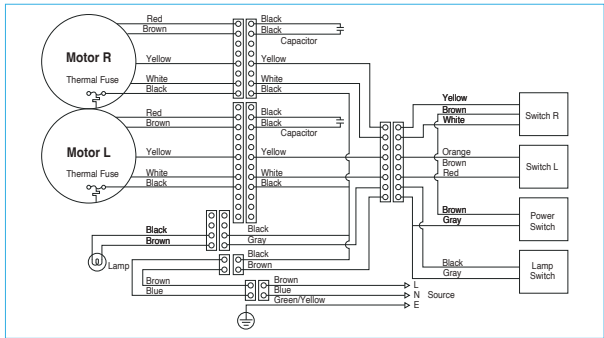


### Specification

| Model  | Voltage |      |    | Air Volume |       | Consumption | RPM | Noise<br>[dB(A)] | Weight<br>[kg] | Duct Size<br>[mm] |
|--------|---------|------|----|------------|-------|-------------|-----|------------------|----------------|-------------------|
|        | [V]     | [Hz] |    | [CMH]      | [CFM] |             |     |                  |                |                   |
| 90HQUA | 220     | 50   | Hi | 785        | 462   | 152         | 993 | 52               | 18.0           | Ø150              |
|        |         |      | Lo | 484        | 285   | 75          | 570 | 38               |                |                   |
|        |         | 60   | Hi | 779        | 459   | 127         | 905 | 53               |                |                   |
|        |         |      | Lo | 464        | 273   | 69          | 594 | 41               |                |                   |
|        | 240     | 50   | Hi | 775        | 456   | 136         | 911 | 52.7             |                |                   |
|        |         |      | Lo | 523        | 308   | 80          | 653 | 43               |                |                   |

- Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
  - The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
  - The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
  - The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

### Wiring Diagram





# Hand Dryer



Quick Drying



Anti-bacterial



Safe



Scan for more information



# Feature of Hand Dryer



## Safe Operation

- Eco Dry will stop after 60 seconds of continuous operation
- "Check" indicator will light up when the unit detects overheated

## Quick Response Sensor

Automatic sensor operation, no physical contact is required to activate the unit

## Heater ON/OFF Switch

Heater can be switched off for energy saving in hot season

## Quick Drying with 3-way Airflow



## Wide Nozzle

Blow off water droplets on the whole palm with wide airflow

## Spot Nozzle

Dry fine water droplets by rubbing hands with spot airflow

2 kinds of nozzle, wide nozzle and spot nozzle, are equipped at front and rear of drying chamber respectively for efficient drying. The structure realizes quick drying in only 4~9 seconds



## Super Allergu-buster Filter

The filter is equipped to ensure the air blow to your hand is clean

## Anti-bacteria Material as it is installed

The product body is adopted with anti-bacteria material to prevent the growth of bacteria and germs in the warm and humid environment of wash-room

(T09AC only)

## Drain Pan

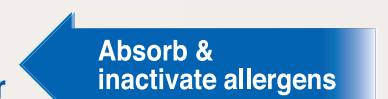
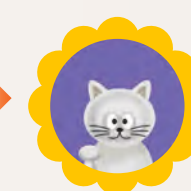
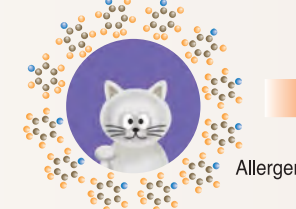
Drain pan can reduce water dripping on the floor to avoid slippery



## What is Super allergu-buster?

Super allergu-buster can inhibit up to several types of allergen

Phenolic Polymer • Polyphenol



## Full Tank Indicator

Remind you for cleaning up

Testing Organization: The Osaka Municipal Technical Research Institute.

Testing Method: To measure the level of reduction in cat's dandruff by Enzyme-linked Immuno Sorbent Assay.

# Standard Series

Usage: Toilet

## T09AC / T09BC

- Anti-bacterial Body
- Auto Sensor
- IPX1 Protection

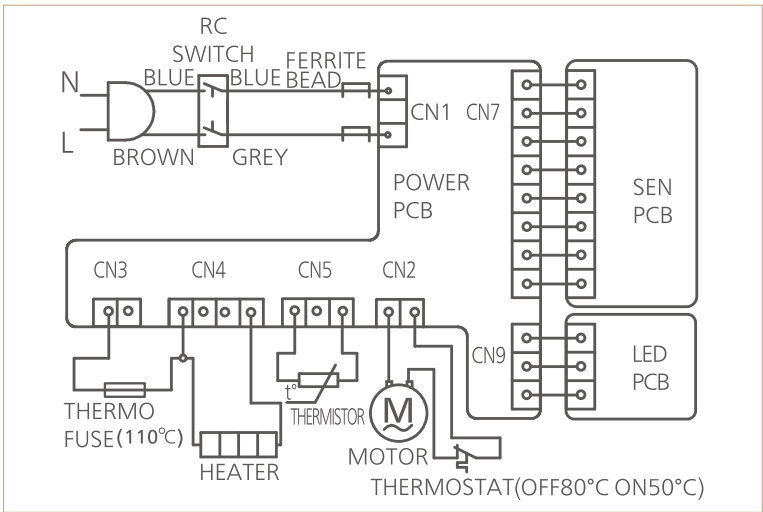


- Powerful air velocity
- Automatic operation by infra-red motion sensor
- Super alleru-buster filter equipped
- Anti-bacteria material used on product body
- ON/OFF switch for heater
- Safety check indicator
- Auto stop after 60 seconds of continuous operation
- Motor insulation Class E
- IP protection: IPX1
- T09AC only: Drain pan and water tank equipped with full tank indicator

### Specification

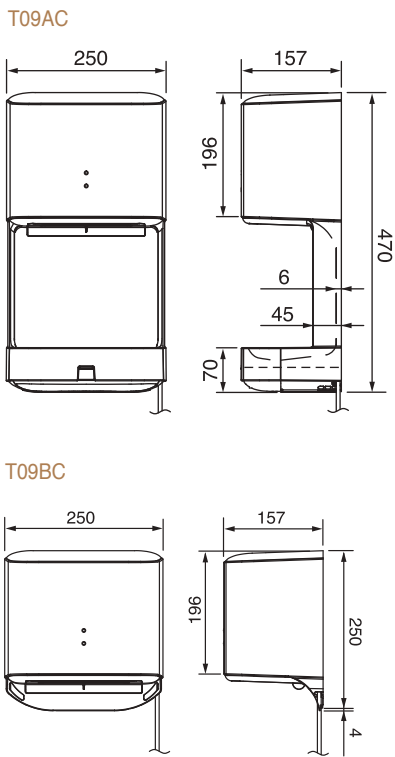
| Model | Voltage |       | Consumption [W] |            | Air Velocity [m/s] | Noise [dB(A)] | Weight [kg] |
|-------|---------|-------|-----------------|------------|--------------------|---------------|-------------|
|       | [V]     | [Hz]  | Heater ON       | Heater OFF |                    |               |             |
| T09AC | 220     | 50/60 | 1,020           | 650        | 90-110             | 62            | 4.0         |
|       | 230     |       | 1,070           | 700        |                    |               |             |
| T09BC | 220     |       | 1,020           | 650        |                    |               | 3.5         |
|       | 230     |       | 1,070           | 700        |                    |               |             |

### Wiring Diagram



### Dimension

Unit : mm





# Air Curtain



Effective



Durable

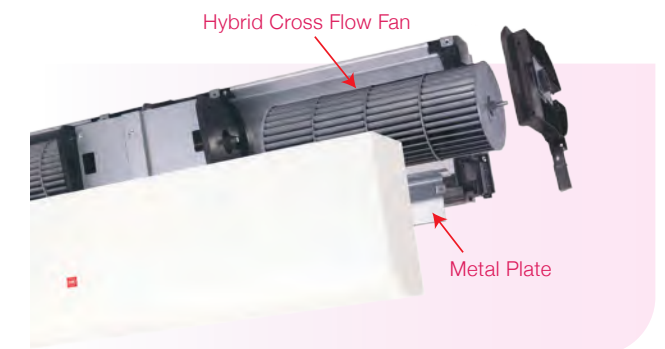


Easy Maintenance

# Feature of Cross Flow Type Air Curtain

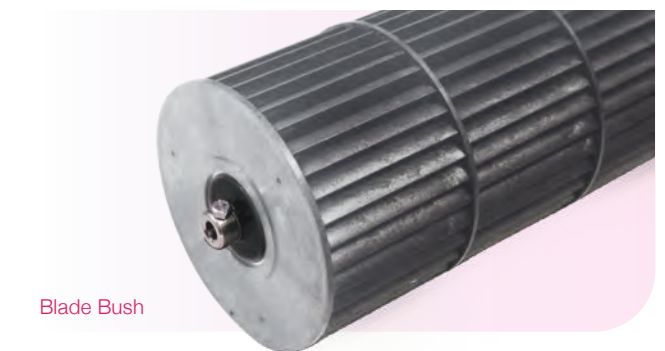
## Efficient Barrier Effect

- The Cross Flow Fan enables wide and uniform airflow distribution while keeping up the required air volume at a low noise level.
- Unique Auxiliary Air Inlet allows more air intake at lower front that enhances airflow output.



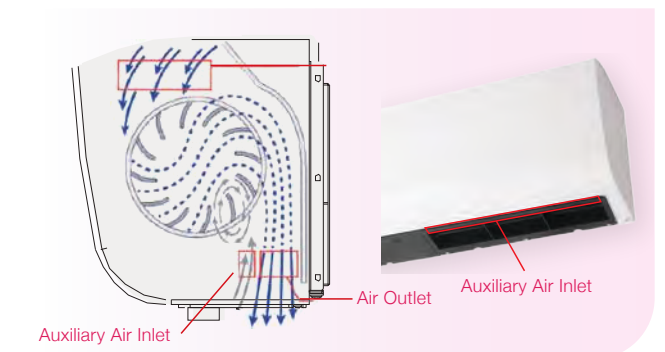
## Highly Durable

- Resin with glass fiber material is used in the Hybrid Cross Flow Fan.
- Incorporated with the metal bush, the durability is prolonged significantly.



## Easy Maintenance

- The Cross Flow Fan can generate air current between the fan and front cover. It forms the movement of dust that reduces dust accumulation on the fan blade.
- Simple structure allows convenient cleaning of the fan – just detach the front cover and metal plate to clean product interior.



## Contemporary Design

Its modern and sleek outlook with the air inlet on top well fits to the contemporary interior, delivering a clean and neat image.

## Convenient Control

- For remote controlled series, Stand-by and Hi/Lo speed can be simply switched by handheld remote control.
- For sensor series, it operates when the door is sensed open. It then automatically stops after 10 seconds once the door is sensed closed.



Scan for more information



Cross Flow Type - Remote Control Series

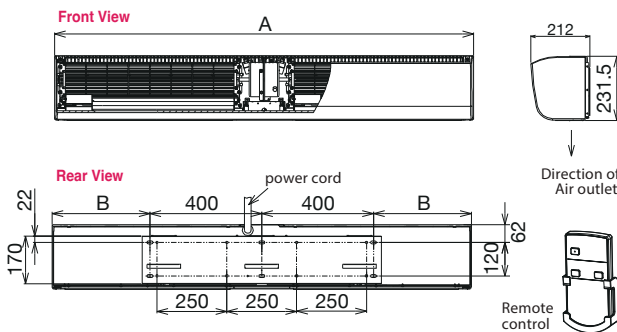
Usage: Shopping Mall Retail Store

3009GA / 3012GA / 3015GA  
4009GA / 4012GA / 4015GA

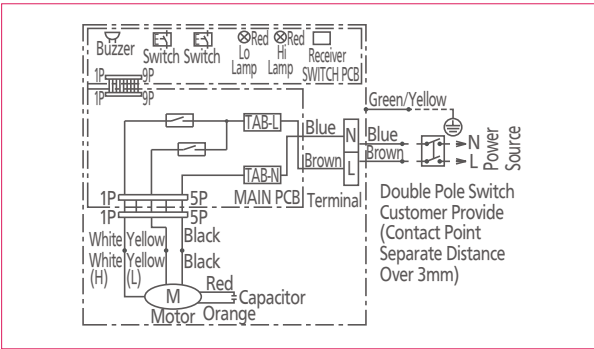
- Wide and Uniform Airflow
- Resin with Glass Fibre Fan Blade
- 2-speed Selection



| Model | Dimension<br>Unit : mm |        |        |
|-------|------------------------|--------|--------|
|       | 3009GA                 | 3012GA | 3015GA |
| A     | 900                    | 1,200  | 1,500  |
| B     | 50                     | 200    | 350    |



Wiring Diagram



- Cross flow fan adopted for side and uniform airflow
- Thick air stream to provide high airflow momentum
- Fan blade made of resin with glass fibre and metal bush
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Soft touch switch panel with 2-speed selection
- Motor insulation Class B (4015GA: F)

Specification

| Model  | Voltage |      |    | Air Volume |       | Consumption [W] | Current [A] | Outlet Velocity [m/s] | Noise [dB(A)] | Weight [kg] |
|--------|---------|------|----|------------|-------|-----------------|-------------|-----------------------|---------------|-------------|
|        | [V]     | [Hz] |    | [CMH]      | [CFM] |                 |             |                       |               |             |
| 3009GA | 220     | 50   | Hi | 1,100      | 647   | 76              | 0.35        | 10.5                  | 48.5          | 12.5        |
|        |         |      | Lo | 920        | 541   | 70              | 0.32        | 8.5                   | 45.0          |             |
|        | 240     | 60   | Hi | 1,100      | 647   | 92              | 0.42        | 10.5                  | 49.5          |             |
|        |         |      | Lo | 900        | 530   | 78              | 0.36        | 8.5                   | 45.0          |             |
| 4009GA | 220     | 50   | Hi | 1,150      | 677   | 86              | 0.37        | 10.5                  | 50.5          | 13.5        |
|        |         |      | Lo | 960        | 565   | 80              | 0.35        | 9.0                   | 47.5          |             |
|        | 240     | 60   | Hi | 1,340      | 789   | 110             | 0.50        | 12.0                  | 54.5          |             |
|        |         |      | Lo | 1,190      | 700   | 94              | 0.43        | 10.0                  | 51.0          |             |
| 3012GA | 220     | 50   | Hi | 1,340      | 789   | 141             | 0.64        | 12.0                  | 55.5          | 15.0        |
|        |         |      | Lo | 1,100      | 647   | 111             | 0.51        | 10.0                  | 51.0          |             |
|        | 240     | 60   | Hi | 1,360      | 800   | 122             | 0.51        | 12.5                  | 56.5          |             |
|        |         |      | Lo | 1,200      | 706   | 100             | 0.43        | 11.0                  | 53.5          |             |
| 4012GA | 220     | 50   | Hi | 1,400      | 824   | 94              | 0.43        | 9.5                   | 48.5          | 16.0        |
|        |         |      | Lo | 1,270      | 747   | 85              | 0.40        | 8.0                   | 45.0          |             |
|        | 240     | 60   | Hi | 1,400      | 824   | 109             | 0.51        | 9.5                   | 48.5          |             |
|        |         |      | Lo | 1,250      | 736   | 94              | 0.46        | 8.0                   | 45.0          |             |
| 3015GA | 220     | 50   | Hi | 1,500      | 883   | 107             | 0.46        | 10.0                  | 50.5          | 18.5        |
|        |         |      | Lo | 1,320      | 777   | 95              | 0.43        | 9.0                   | 47.0          |             |
|        | 240     | 60   | Hi | 1,700      | 1,001 | 126             | 0.59        | 12.0                  | 52.5          |             |
|        |         |      | Lo | 1,530      | 901   | 105             | 0.49        | 10.0                  | 49.0          |             |
| 4015GA | 220     | 50   | Hi | 1,700      | 1,001 | 153             | 0.70        | 12.0                  | 52.5          | 18.5        |
|        |         |      | Lo | 1,450      | 853   | 118             | 0.55        | 10.0                  | 49.0          |             |
|        | 240     | 60   | Hi | 1,800      | 1,059 | 139             | 0.60        | 12.5                  | 54.5          |             |
|        |         |      | Lo | 1,580      | 930   | 110             | 0.49        | 11.0                  | 51.0          |             |

Test Condition  
Note : The parameters shown above are measured at ambient temperature of 20°C  
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value  
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

Cross Flow Type - Sensor Series

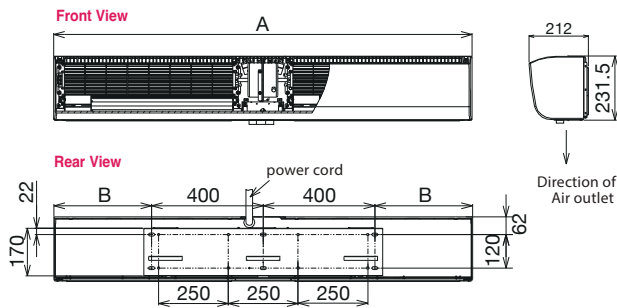
Usage: Shopping Mall Retail Store

3009DA / 3012DA / 3015DA  
4009DA / 4012DA / 4015DA

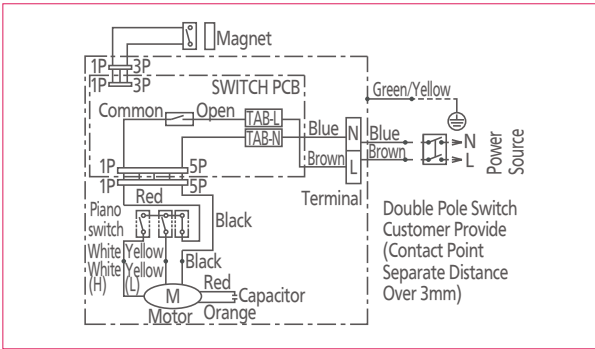
- Wide and Uniform Airflow
- Resin with Glass Fibre Fan Blade
- 2-speed Selection



| Model | Dimension<br>Unit : mm |        |        |
|-------|------------------------|--------|--------|
|       | 3009DA                 | 3012DA | 3015DA |
| A     | 900                    | 1,200  | 1,500  |
| B     | 50                     | 200    | 350    |



Wiring Diagram



- Cross flow fan adopted for side and uniform airflow
- Thick air stream to provide high airflow momentum
- Fan blade made of resin with glass fibre and metal bush
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Soft touch switch panel with 2-speed selection
- Motor insulation Class B (4015DA: F)

Specification

| Model  | Voltage |      |    | Air Volume |       | Consumption [W] | Current [A] | Outlet Velocity [m/s] | Noise [dB(A)] | Weight [kg] |
|--------|---------|------|----|------------|-------|-----------------|-------------|-----------------------|---------------|-------------|
|        | [V]     | [Hz] |    | [CMH]      | [CFM] |                 |             |                       |               |             |
| 3009DA | 220     | 50   | Hi | 1,100      | 647   | 76              | 0.35        | 10.5                  | 48.5          | 12.5        |
|        |         |      | Lo | 920        | 541   | 70              | 0.32        | 8.5                   | 45.0          |             |
|        | 240     | 60   | Hi | 1,100      | 647   | 92              | 0.42        | 10.5                  | 49.5          |             |
|        |         |      | Lo | 900        | 530   | 78              | 0.36        | 8.5                   | 45.0          |             |
| 4009DA | 220     | 50   | Hi | 1,150      | 677   | 86              | 0.37        | 10.5                  | 50.5          | 13.5        |
|        |         |      | Lo | 960        | 565   | 80              | 0.35        | 9.0                   | 47.5          |             |
|        | 240     | 60   | Hi | 1,340      | 789   | 110             | 0.50        | 12.0                  | 54.5          |             |
|        |         |      | Lo | 1,190      | 700   | 94              | 0.43        | 10.0                  | 51.0          |             |
| 3012DA | 220     | 50   | Hi | 1,340      | 789   | 141             | 0.64        | 12.0                  | 55.5          | 15.0        |
|        |         |      | Lo | 1,100      | 647   | 111             | 0.51        | 10.0                  | 51.0          |             |
|        | 240     | 60   | Hi | 1,360      | 800   | 122             | 0.51        | 12.5                  | 56.5          |             |
|        |         |      | Lo | 1,200      | 706   | 100             | 0.43        | 11.0                  | 53.5          |             |
| 4012DA | 220     | 50   | Hi | 1,400      | 824   | 94              | 0.43        | 9.5                   | 48.5          | 16.0        |
|        |         |      | Lo | 1,270      | 747   | 85              | 0.40        | 8.0                   | 45.0          |             |
|        | 240     | 60   | Hi | 1,400      | 824   | 109             | 0.51        | 9.5                   | 48.5          |             |
|        |         |      | Lo | 1,250      | 736   | 94              | 0.46        | 8.0                   | 45.0          |             |
| 3015DA | 220     | 50   | Hi | 1,500      | 883   | 107             | 0.46        | 10.0                  | 50.5          | 18.5        |
|        |         |      | Lo | 1,320      | 777   | 95              | 0.43        | 9.0                   | 47.0          |             |
|        | 240     | 60   | Hi | 1,700      | 1,001 | 126             | 0.59        | 12.0                  | 52.5          |             |
|        |         |      | Lo | 1,530      | 901   | 105             | 0.49        | 10.0                  | 49.0          |             |
| 4015DA | 220     | 50   | Hi | 1,700      | 1,001 | 153             | 0.70        | 12.0                  | 52.5          | 18.5        |
|        |         |      | Lo | 1,450      | 853   | 118             | 0.55        | 10.0                  | 49.0          |             |
|        | 240     | 60   | Hi | 1,800      | 1,059 | 139             | 0.60        | 12.5                  | 54.5          |             |
|        |         |      | Lo | 1,580      | 930   | 110             | 0.49        | 11.0                  | 51.0          |             |

Test Condition  
Note : The parameters shown above are measured at ambient temperature of 20°C  
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value  
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage



Cross Flow Type - Standard Series

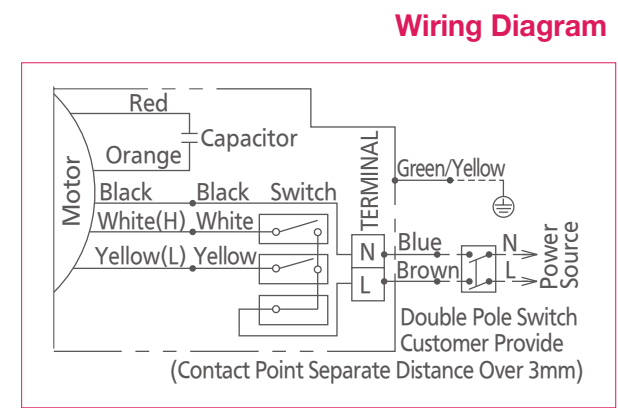
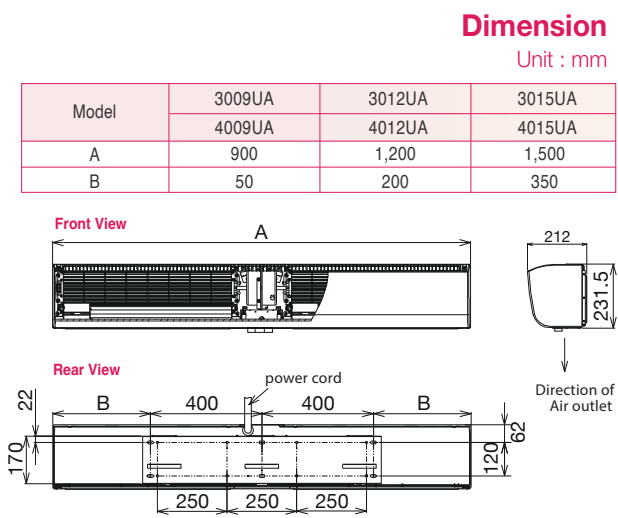
Usage: Shopping Mall    Retail Store

3009UA / 3012UA / 3015UA  
4009UA / 4012UA / 4015UA

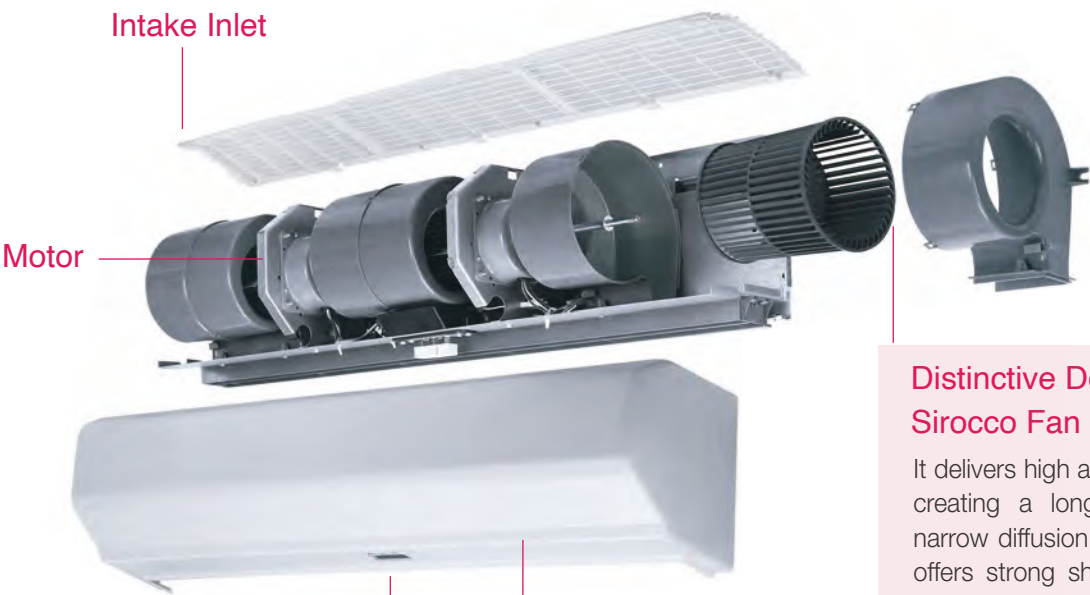
- Wide and Uniform Airflow
- Resin with Glass Fibre Fan Blade
- 2-speed Selection



- Cross flow fan adopted for side and uniform airflow
- Thick air stream to provide high airflow momentum
- Fan blade made of resin with glass fibre and metal bush
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Soft touch switch panel with 2-speed selection
- Motor insulation Class B (4015UA: F)



Feature of Sirocco Type Air Curtain



**Distinctive Design of Sirocco Fan**

It delivers high air velocity, yet creating a long reach and narrow diffusion of airflow. It offers strong shut out ability while allowing people passing through comfortably.

**2-speed Function**

**ABS Resin Casing**

ABS is a material highly resistant to rust and with high bending flexibility, that enables a sleek, simple design fitting to modern interiors.

Specification

| Model  | Voltage |      |    | Air Volume |       | Consumption [W] | Current [A] | Outlet Velocity [m/s] | Noise [dB(A)] | Weight [kg] |
|--------|---------|------|----|------------|-------|-----------------|-------------|-----------------------|---------------|-------------|
|        | [V]     | [Hz] |    | [CMH]      | [CFM] |                 |             |                       |               |             |
| 3009UA | 220     | 50   | Hi | 1,100      | 647   | 76              | 0.35        | 10.5                  | 48.5          | 12.5        |
|        |         | 60   | Lo | 920        | 541   | 70              | 0.32        | 8.5                   | 45.0          |             |
|        | 240     | 50   | Hi | 1,100      | 647   | 92              | 0.42        | 10.5                  | 49.5          |             |
|        |         | 60   | Lo | 900        | 530   | 78              | 0.36        | 8.5                   | 45.0          |             |
| 4009UA | 220     | 50   | Hi | 1,150      | 677   | 86              | 0.37        | 10.5                  | 50.5          | 13.5        |
|        |         | 60   | Lo | 960        | 565   | 80              | 0.35        | 9.0                   | 47.5          |             |
|        | 240     | 50   | Hi | 1,340      | 789   | 110             | 0.50        | 12.0                  | 54.5          |             |
|        |         | 60   | Lo | 1,190      | 700   | 94              | 0.43        | 10.0                  | 51.0          |             |
| 3012UA | 220     | 50   | Hi | 1,340      | 789   | 141             | 0.64        | 12.0                  | 55.5          | 15.0        |
|        |         | 60   | Lo | 1,100      | 647   | 111             | 0.51        | 10.0                  | 51.0          |             |
|        | 240     | 50   | Hi | 1,360      | 800   | 122             | 0.51        | 12.5                  | 56.5          |             |
|        |         | 60   | Lo | 1,200      | 706   | 100             | 0.43        | 11.0                  | 53.5          |             |
| 4012UA | 220     | 50   | Hi | 1,400      | 824   | 94              | 0.43        | 9.5                   | 48.5          | 16.0        |
|        |         | 60   | Lo | 1,270      | 747   | 85              | 0.40        | 8.0                   | 45.0          |             |
|        | 240     | 50   | Hi | 1,400      | 824   | 109             | 0.51        | 9.5                   | 48.5          |             |
|        |         | 60   | Lo | 1,250      | 736   | 94              | 0.46        | 8.0                   | 45.0          |             |
| 3015UA | 220     | 50   | Hi | 1,500      | 883   | 107             | 0.46        | 10.0                  | 50.5          | 18.5        |
|        |         | 60   | Lo | 1,320      | 777   | 95              | 0.43        | 9.0                   | 47.0          |             |
|        | 240     | 50   | Hi | 1,700      | 1,001 | 126             | 0.59        | 12.0                  | 52.5          |             |
|        |         | 60   | Lo | 1,530      | 901   | 105             | 0.49        | 10.0                  | 49.0          |             |
| 4015UA | 220     | 50   | Hi | 1,700      | 1,001 | 153             | 0.70        | 12.0                  | 52.5          | 18.5        |
|        |         | 60   | Lo | 1,450      | 853   | 118             | 0.55        | 10.0                  | 49.0          |             |
|        | 240     | 50   | Hi | 1,800      | 1,059 | 139             | 0.60        | 12.5                  | 54.5          |             |
|        |         | 60   | Lo | 1,580      | 930   | 110             | 0.49        | 11.0                  | 51.0          |             |
| 4015UA | 220     | 50   | Hi | 2,000      | 1,177 | 131             | 0.59        | 10.5                  | 51.5          | 18.5        |
|        |         | 60   | Lo | 1,800      | 1,059 | 110             | 0.50        | 9.5                   | 48.0          |             |
|        | 240     | 50   | Hi | 2,000      | 1,177 | 150             | 0.68        | 10.5                  | 51.5          |             |
|        |         | 60   | Lo | 1,750      | 1,030 | 118             | 0.54        | 9.5                   | 48.0          |             |
| 4015UA | 220     | 50   | Hi | 2,100      | 1,236 | 145             | 0.60        | 11.0                  | 53.5          | 18.5        |
|        |         | 60   | Lo | 1,850      | 1,089 | 115             | 0.50        | 10.0                  | 50.5          |             |
|        | 240     | 50   | Hi | 2,450      | 1,442 | 177             | 0.81        | 13.0                  | 56.0          |             |
|        |         | 60   | Lo | 2,000      | 1,177 | 147             | 0.68        | 10.0                  | 52.0          |             |
| 4015UA | 220     | 50   | Hi | 2,300      | 1,354 | 220             | 1.01        | 13.0                  | 56.0          | 18.5        |
|        |         | 60   | Lo | 1,780      | 1,048 | 160             | 0.74        | 9.5                   | 52.0          |             |
|        | 240     | 50   | Hi | 2,500      | 1,471 | 200             | 0.86        | 13.5                  | 58.0          |             |
|        |         | 60   | Lo | 2,050      | 1,207 | 160             | 0.68        | 11.0                  | 54.5          |             |

Test Condition  
Note : The parameters shown above are measured at ambient temperature of 20°C  
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value  
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

| Length of unit                 | 900mm (3 feet)<br>08ESK | 1200mm (4 feet)<br>08ELK | 900mm (3 feet)<br>10ESK | 1200mm (4 feet)<br>10ELK | 900mm (3 feet)<br>12ESK | 1200mm (4 feet)<br>12ELK | 900mm (3 feet)<br>14ESK | 1200mm (4 feet)<br>14ELK |
|--------------------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|
| Air velocity chart (m/s)       |                         |                          |                         |                          |                         |                          |                         |                          |
| Maximum value at HI speed 50Hz | 3.5 - 4.5               |                          | 4.5 - 5.5               |                          | 6.0 - 7.0               |                          | 7.5 - 8.5               |                          |
| Efficient distance             | 2.5m (8 feet)           |                          | 3.0m (10 feet)          |                          | 3.5m (12 feet)          |                          | 4.0m (14 feet)          |                          |

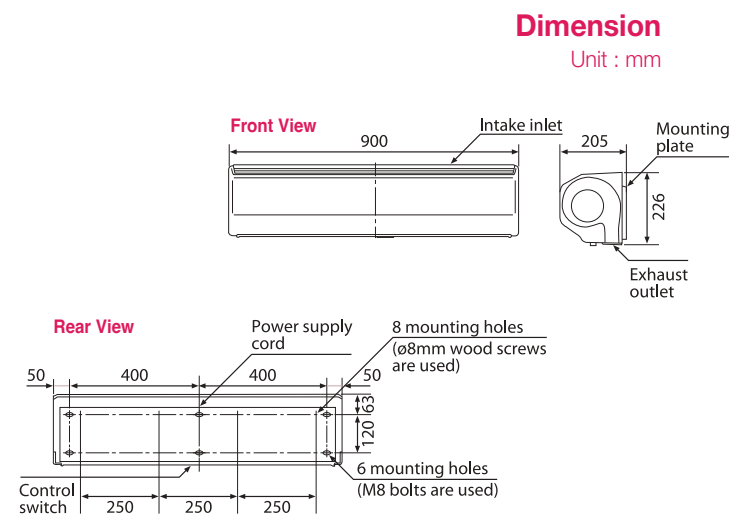


Sirocco Type - 900 Series

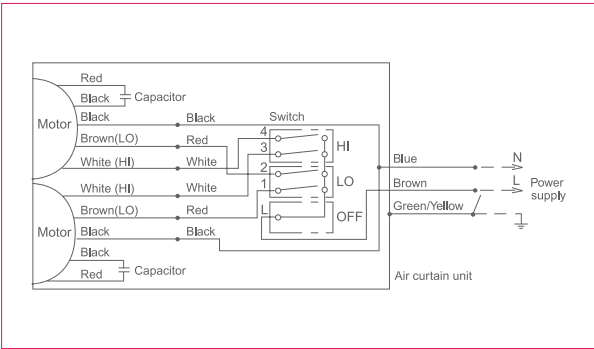
Usage: Shopping Mall Retail Store

08ESK / 10ESK  
12ESK / 14ESK

- Push Button Switch
- ABS Resin Casing
- 2-speed Selection



Wiring Diagram



- Sirocco fan adopted for long reach and narrow diffusion of airflow
- ABS resin casing to provide better weather resistance
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Push button switch
- 2-speed selection
- Motor insulation Class E

Specification

| Model | Voltage |      |    | Air Volume |       | Consumption [W] | Current [A] | Outlet Velocity [m/s] | Noise [dB(A)] | Weight [kg] |
|-------|---------|------|----|------------|-------|-----------------|-------------|-----------------------|---------------|-------------|
|       | [V]     | [Hz] |    | [CMH]      | [CFM] |                 |             |                       |               |             |
| 08ESK | 220     | 50   | Hi | 650        | 383   | 46              | 0.23        | 11.5                  | 42            | 12.0        |
|       |         |      | Lo | 580        | 341   | 42              | 0.21        | 10.3                  | 39            |             |
|       |         | 60   | Hi | 690        | 406   | 57              | 0.28        | 12.1                  | 43            |             |
|       |         |      | Lo | 560        | 330   | 49              | 0.25        | 9.9                   | 38            |             |
|       | 240     | 50   | Hi | 680        | 400   | 51              | 0.24        | 11.9                  | 43            |             |
|       |         |      | Lo | 620        | 365   | 47              | 0.23        | 10.9                  | 41            |             |
| 10ESK | 220     | 50   | Hi | 750        | 441   | 72              | 0.40        | 13.0                  | 46            | 12.0        |
|       |         |      | Lo | 630        | 371   | 62              | 0.29        | 11.1                  | 42            |             |
|       |         | 60   | Hi | 860        | 506   | 88              | 0.42        | 14.9                  | 50            |             |
|       |         |      | Lo | 600        | 353   | 72              | 0.33        | 10.9                  | 40            |             |
|       | 240     | 50   | Hi | 750        | 441   | 84              | 0.46        | 13.2                  | 46            |             |
|       |         |      | Lo | 630        | 371   | 66              | 0.30        | 11.7                  | 43            |             |
| 12ESK | 220     | 50   | Hi | 1,050      | 618   | 176             | 0.82        | 16.9                  | 55            | 13.0        |
|       |         |      | Lo | 960        | 565   | 155             | 0.69        | 15.8                  | 50            |             |
|       |         | 60   | Hi | 990        | 583   | 202             | 0.94        | 16.1                  | 54            |             |
|       |         |      | Lo | 940        | 553   | 170             | 0.75        | 15.3                  | 49            |             |
|       | 240     | 50   | Hi | 1,120      | 659   | 200             | 0.86        | 17.9                  | 57            |             |
|       |         |      | Lo | 1,040      | 612   | 169             | 0.75        | 16.8                  | 54            |             |
| 14ESK | 220     | 50   | Hi | 1,340      | 789   | 257             | 1.14        | 21.9                  | 62            | 13.0        |
|       |         |      | Lo | 1,168      | 687   | 218             | 0.99        | 19.1                  | 59            |             |
|       |         | 60   | Hi | 1,303      | 767   | 312             | 1.43        | 21.3                  | 61            |             |
|       |         |      | Lo | 1,083      | 637   | 255             | 1.16        | 17.7                  | 57            |             |
|       | 240     | 50   | Hi | 1,395      | 821   | 281             | 1.18        | 22.8                  | 63            |             |
|       |         |      | Lo | 1,272      | 749   | 238             | 1.00        | 20.8                  | 60            |             |

Test Condition

Note : The parameters shown above are measured at ambient temperature of 20°C

- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value

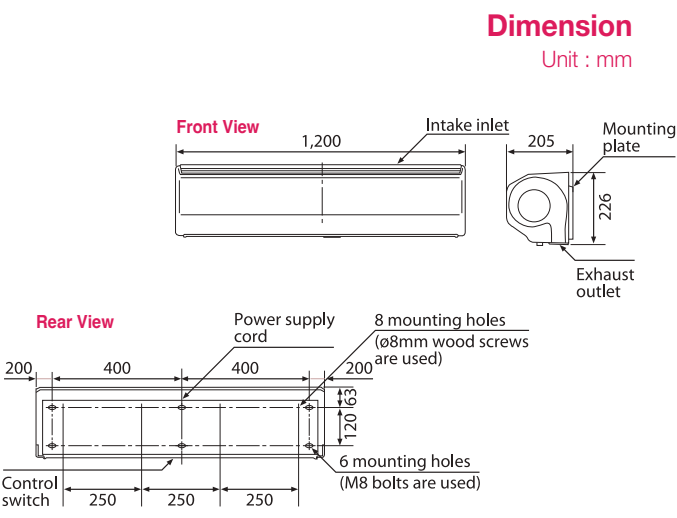
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

Sirocco Type - 1200 Series

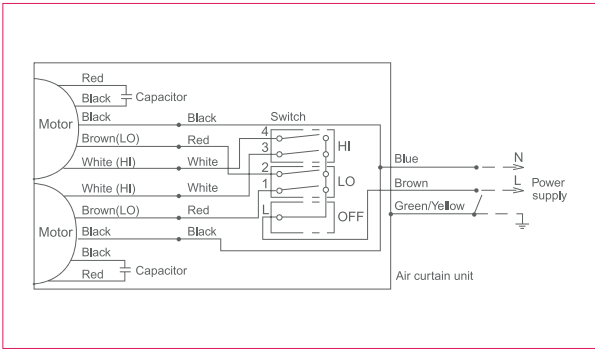
Usage: Shopping Mall Retail Store

08ELK / 10ELK  
12ELK / 14ELK

- Push Button Switch
- ABS Resin Casing
- 2-speed Selection



Wiring Diagram



- Sirocco fan adopted for long reach and narrow diffusion of airflow
- ABS resin casing to provide better weather resistance
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Push button switch
- 2-speed selection
- Motor insulation Class E

Specification

| Model | Voltage |      |    | Air Volume |       | Consumption [W] | Current [A] | Outlet Velocity [m/s] | Noise [dB(A)] | Weight [kg] |
|-------|---------|------|----|------------|-------|-----------------|-------------|-----------------------|---------------|-------------|
|       | [V]     | [Hz] |    | [CMH]      | [CFM] |                 |             |                       |               |             |
| 08ELK | 220     | 50   | Hi | 880        | 518   | 57              | 0.28        | 11.6                  | 43            | 14.0        |
|       |         |      | Lo | 800        | 471   | 53              | 0.27        | 10.6                  | 41            |             |
|       |         | 60   | Hi | 940        | 553   | 74              | 0.36        | 12.4                  | 45            |             |
|       |         |      | Lo | 790        | 465   | 62              | 0.32        | 10.5                  | 40            |             |
|       | 240     | 50   | Hi | 920        | 541   | 65              | 0.29        | 12.1                  | 44            |             |
|       |         |      | Lo | 850        | 500   | 59              | 0.28        | 11.2                  | 42            |             |
| 10ELK | 220     | 50   | Hi | 1,000      | 589   | 96              | 0.54        | 13.1                  | 46            | 14.0        |
|       |         |      | Lo | 830        | 489   | 74              | 0.35        | 11.0                  | 42            |             |
|       |         | 60   | Hi | 1,150      | 677   | 116             | 0.56        | 15.1                  | 50            |             |
|       |         |      | Lo | 790        | 465   | 85              | 0.41        | 10.5                  | 41            |             |
|       | 240     | 50   | Hi | 1,010      | 594   | 116             | 0.66        | 13.2                  | 47            |             |
|       |         |      | Lo | 880        | 518   | 86              | 0.38        | 11.6                  | 43            |             |
| 12ELK | 220     | 50   | Hi | 1,420      | 836   | 224             | 1.04        | 17.0                  | 56            | 15.0        |
|       |         |      | Lo | 1,320      | 777   | 200             | 0.90        | 15.8                  | 51            |             |
|       |         | 60   | Hi | 1,340      | 789   | 258             | 1.21        | 16.2                  | 55            |             |
|       |         |      | Lo | 1,290      | 759   | 220             | 1.04        | 15.4                  | 50            |             |
|       | 240     | 50   | Hi | 1,510      | 889   | 252             | 1.10        | 17.9                  | 58            |             |
|       |         |      | Lo | 1,410      | 830   | 218             | 0.98        | 16.7                  | 56            |             |
| 14ELK | 220     | 50   | Hi | 1,867      | 1,099 | 333             | 1.52        | 22.5                  | 63            | 15.0        |
|       |         |      | Lo | 1,668      | 982   | 290             | 1.32        | 20.1                  | 61            |             |
|       |         | 60   | Hi | 1,826      | 1,075 | 423             | 1.93        | 22.0                  | 63            |             |
|       |         |      | Lo | 1,552      | 913   | 339             | 1.55        | 18.7                  | 59            |             |
|       | 240     | 50   | Hi | 1,942      | 1,143 | 364             | 1.53        | 23.4                  | 64            |             |
|       |         |      | Lo | 1,818      | 1,070 | 320             | 1.33        | 21.9                  | 62            |             |

Test Condition

Note : The parameters shown above are measured at ambient temperature of 20°C

- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value

- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage



# Ceiling Fan / Electric Fan



High Breeze



Quiet



Safe



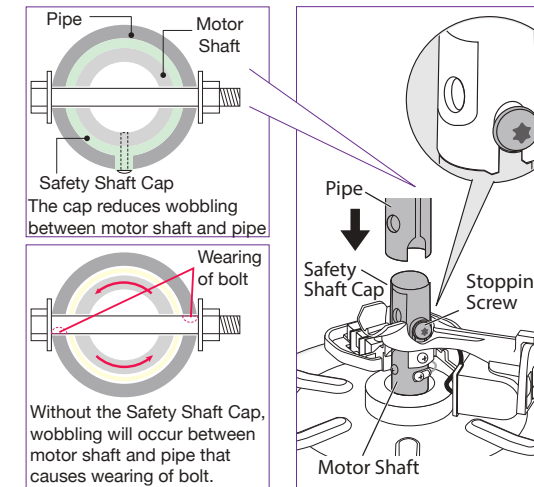
Scan for more information  
Ceiling Fan    Electric Fan



# Safety Feature of Ceiling Fan

In pursuit of high quality of life, ceiling fans are expected with multiple functions and more value-added features. Safety and reliability have become the major concerns when selecting a ceiling fan.

## Safety Shaft Cap



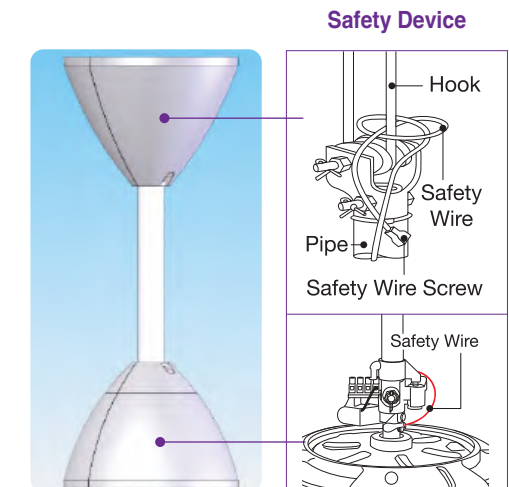
### Problem

Improper movement causes friction between bolt, motor shaft and pipe that increases wear and tear and cause fracture.

### Our solution

Safety Shaft Cap can reduce movement between bolt, motor shaft and pipe. This minimizes wearing of motor shaft and bolt, thus prevent falling of fan.

## Safety Wire



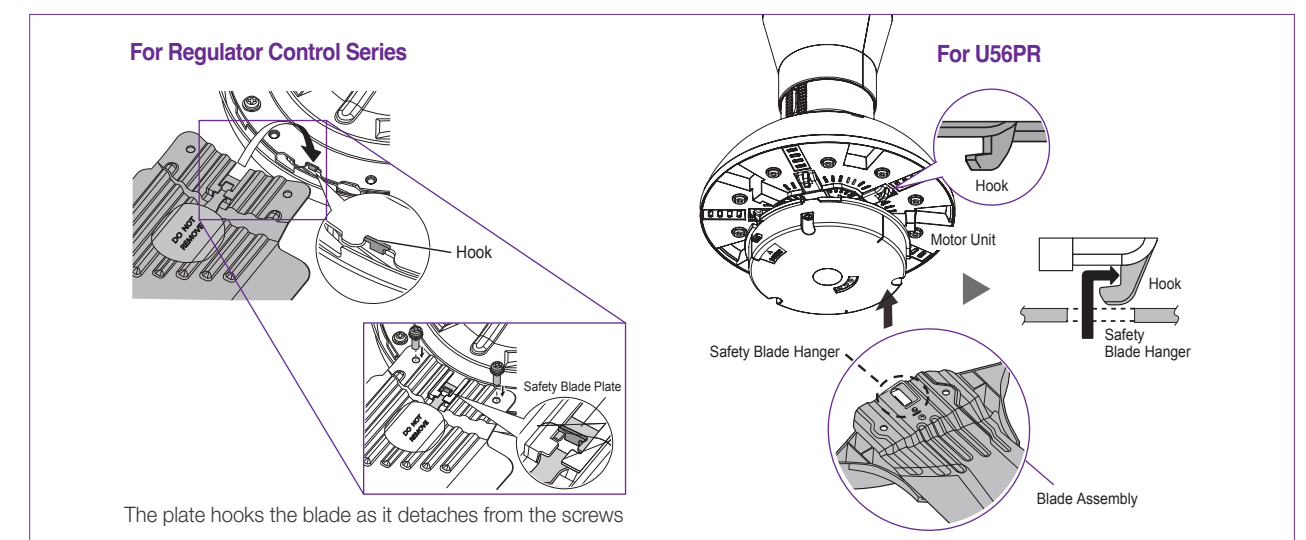
### Problem

Fan motor may fall from the pipe rod accidentally due to factors such as wearing of shaft, bolt etc.

### Our solution

Safety wire helps to secure fan motor with ceiling hook. This prevents falling of motor in case it detaches from the pipe rod.

## Safety Blade Plate / Hanger



### Problem

Blade may break and fall off from fan motor in case fatigue failure of material occurs.

### Our solution

An exclusively designed fall prevention plate / hanger is equipped to hold blade to the motor in case of breakage. This mechanism secures against falling of blade.

Remote Control Series

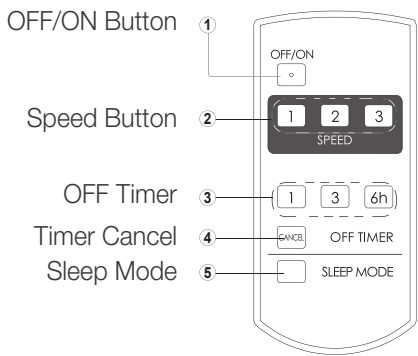
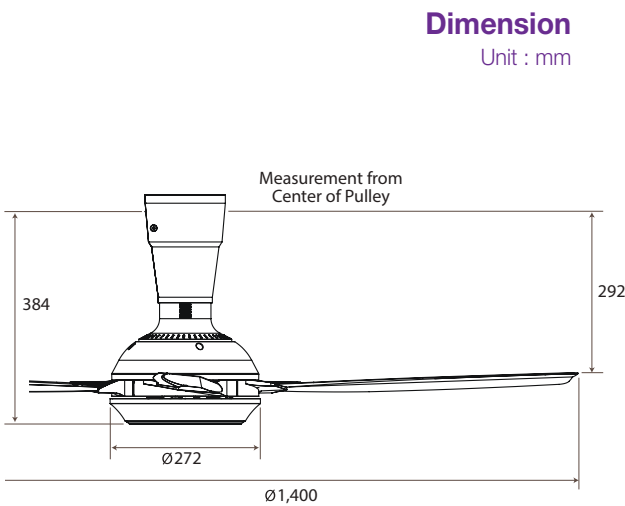
Usage: Living Room Bedroom Restaurant Lobby

U56PR

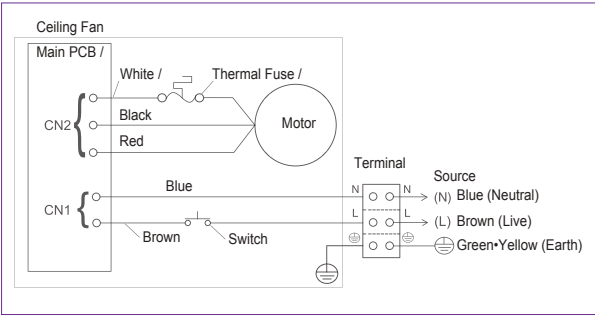
- Remote Control
- Fall Prevention Measures
- Metal Blades



- 3-speed selection
- Off Timer with LED indicator (1, 3, 6 hours)
- Sleep mode
- Thermal fuse to prevent overheating
- Current fuse to secure against power surge
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Motor insulation Class E
- Colour: White body with golden ring



Wiring Diagram



Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|-----|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |     | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| U56PR | 220         | 50             | Hi | 62              | 175 | 137          | 449      | 181        | 6,392     | 6.7         |
|       |             |                | Lo | 20              | 87  | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 74              | 182 | 146          | 479      | 194        | 6,851     |             |
|       |             |                | Lo | 21              | 89  | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 66              | 182 | 146          | 479      | 194        | 6,851     |             |
|       |             |                | Lo | 19              | 89  | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 73              | 188 | 153          | 502      | 204        | 7,204     |             |
|       |             |                | Lo | 20              | 94  | -            | -        | -          | -         |             |

\*Hi - Notch 3 / Lo - Notch 1

Regulator Control Series

Usage: Living Room Bedroom Restaurant Lobby

T48XC / T56XC

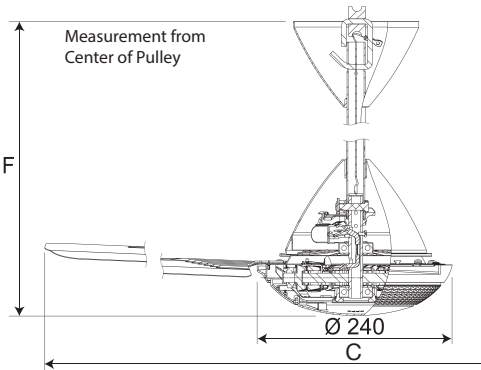
- Slim Panel Regulator
- Fall Prevention Measures
- Metal Blades



- 5-speed selection
- Thermal fuse to prevent overheating
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Motor insulation Class E
- Colour option: Gray body with silver ring  
White body with golden ring

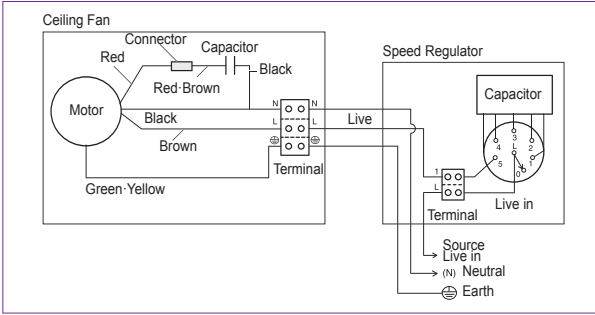
Dimension  
Unit : mm

| Model       | 9 inch | 12 inch | 16 inch | 18 inch | 22 inch |
|-------------|--------|---------|---------|---------|---------|
| Pipe Length | 229    | 305     | 406     | 457     | 559     |
| F           | 437    | 513     | 614     | 665     | 764     |



| Model : | C      |
|---------|--------|
| T48XC   | Ø1,200 |
| T48XGMN | Ø1,200 |
| T56XC   | Ø1,400 |
| T56XGMN | Ø1,400 |

Wiring Diagram



Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|-----|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |     | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| T48XC | 220         | 50             | Hi | 45              | 285 | 160          | 525      | 155        | 5,474     | 5.3         |
|       |             |                | Lo | 15              | 137 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 55              | 311 | 175          | 574      | 170        | 6,003     |             |
|       |             |                | Lo | 15              | 129 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 49              | 296 | 165          | 541      | 170        | 6,003     |             |
|       |             |                | Lo | 16              | 146 | -            | -        | -          | -         |             |
| T56XC | 220         | 50             | Hi | 51              | 303 | 170          | 558      | 165        | 5,827     | 5.6         |
|       |             |                | Lo | 18              | 154 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 70              | 268 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 14              | 103 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 76              | 268 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 17              | 106 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 75              | 275 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 15              | 109 | -            | -        | -          | -         |             |
|       | 240         | 50             | Hi | 76              | 273 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 17              | 115 | -            | -        | -          | -         |             |

\*Hi - Notch 5 / Lo - Notch 1



Regulator Control Series

Usage: Living Room Bedroom Restaurant Lobby

T48XG / T56XG

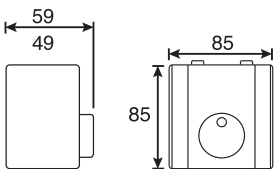
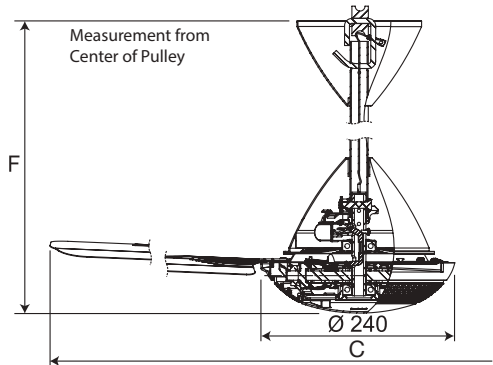
- Compact Regulator
- Fall Prevention Measures
- Metal Blades



- 5-speed selection
- Thermal fuse to prevent overheating
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Glossy diamond-pattern fan ring
- Motor insulation Class E
- Colour option: White body with golden ring  
Gray body with silver ring

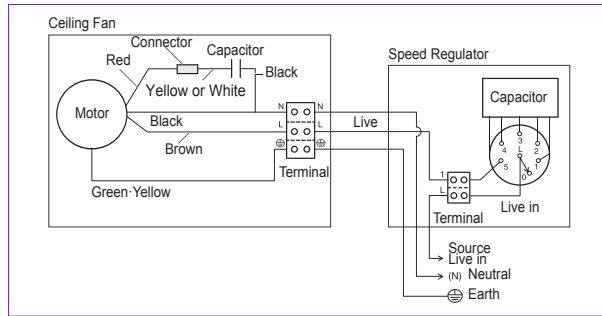
Dimension  
Unit : mm

| Model       | 9 inch | 12 inch | 16 inch | 18 inch | 22 inch |
|-------------|--------|---------|---------|---------|---------|
| Pipe Length | 229    | 305     | 406     | 457     | 559     |
| F           | 437    | 513     | 614     | 665     | 764     |



|         |        |
|---------|--------|
| Model : | C      |
| T48XG   | Ø1,200 |
| T56XG   | Ø1,400 |

Wiring Diagram



Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|-----|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |     | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| T48XG | 220         | 50             | Hi | 45              | 285 | 160          | 525      | 155        | 5,474     | 5.3         |
|       |             |                | Lo | 15              | 137 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 55              | 311 | 175          | 574      | 170        | 6,003     |             |
|       |             |                | Lo | 15              | 129 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 49              | 296 | 165          | 541      | 170        | 6,003     |             |
|       |             |                | Lo | 16              | 146 | -            | -        | -          | -         |             |
| T56XG | 220         | 50             | Hi | 51              | 303 | 170          | 558      | 165        | 5,827     | 5.6         |
|       |             |                | Lo | 18              | 154 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 70              | 268 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 14              | 103 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 76              | 268 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 17              | 106 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 75              | 275 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 15              | 109 | -            | -        | -          | -         |             |
|       | 240         | 50             | Hi | 76              | 273 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 17              | 115 | -            | -        | -          | -         |             |

\*Hi - Notch 5 / Lo - Notch 1

Regulator Control Series

Usage: Living Room Bedroom Restaurant Lobby

X48XC / X56XC

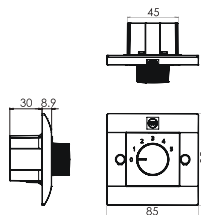
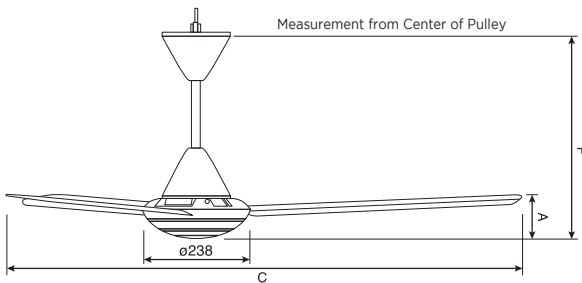
- Slim Panel Regulator
- Fall Prevention Measures
- Metal Blades



- 5-speed selection
- Thermal fuse to prevent overheating
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Motor insulation Class E
- Colour: White body with silver ring

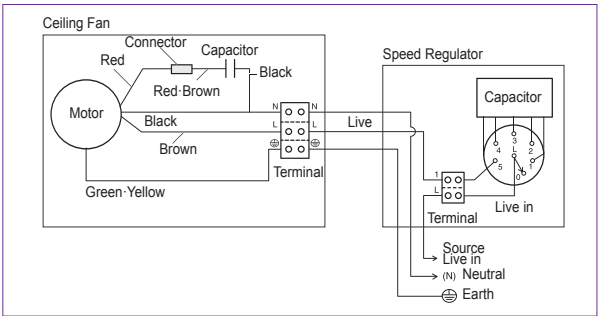
Dimension  
Unit : mm

| Model       | 9 inch | 12 inch | 16 inch | 18 inch | 22 inch |
|-------------|--------|---------|---------|---------|---------|
| Pipe Length | 229    | 305     | 406     | 457     | 559     |
| F           | 437    | 513     | 614     | 665     | 764     |



|         |      |        |
|---------|------|--------|
| Model : | A    | C      |
| X48XC   | 78.2 | Ø1,200 |
| X56XC   | 82.2 | Ø1,400 |

Wiring Diagram



Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|-----|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |     | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| X48XC | 220         | 50             | Hi | 45              | 285 | 160          | 525      | 155        | 5,474     | 5.3         |
|       |             |                | Lo | 15              | 137 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 55              | 311 | 175          | 574      | 170        | 6,003     |             |
|       |             |                | Lo | 15              | 129 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 49              | 296 | 165          | 541      | 170        | 6,003     |             |
|       |             |                | Lo | 16              | 146 | -            | -        | -          | -         |             |
| X56XC | 220         | 50             | Hi | 51              | 303 | 170          | 558      | 165        | 5,827     | 5.6         |
|       |             |                | Lo | 18              | 154 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 70              | 268 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 14              | 103 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 76              | 268 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 17              | 106 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 75              | 275 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 15              | 109 | -            | -        | -          | -         |             |
|       | 240         | 50             | Hi | 76              | 273 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 17              | 115 | -            | -        | -          | -         |             |

\*Hi - Notch 5 / Lo - Notch 1

# Regulator Control Series

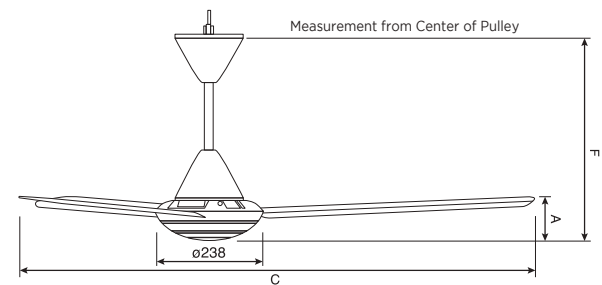
Usage: Living Room Bedroom Restaurant Lobby

## X48XG / X56XG

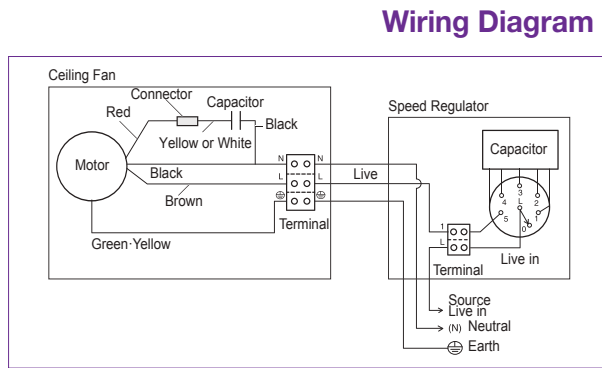
- Compact Regulator
- Fall Prevention Measures
- Metal Blades

Dimension  
Unit : mm

| Model       | 9 inch | 12 inch | 16 inch | 18 inch | 22 inch |
|-------------|--------|---------|---------|---------|---------|
| Pipe Length | 229    | 305     | 406     | 457     | 559     |
| F           | 437    | 513     | 614     | 665     | 764     |



| Model : | A    | C      |
|---------|------|--------|
| X48XG   | 78.2 | Ø1,200 |
| X56XG   | 82.2 | Ø1,400 |



### Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|-----|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |     | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| X48XG | 220         | 50             | Hi | 45              | 285 | 160          | 525      | 155        | 5,474     | 5.3         |
|       |             |                | Lo | 15              | 137 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 55              | 311 | 175          | 574      | 170        | 6,003     |             |
|       |             |                | Lo | 15              | 129 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 49              | 296 | 165          | 541      | 170        | 6,003     |             |
|       |             |                | Lo | 16              | 146 | -            | -        | -          | -         |             |
| X56XG | 220         | 50             | Hi | 51              | 303 | 170          | 558      | 165        | 5,827     | 5.6         |
|       |             |                | Lo | 18              | 154 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 70              | 268 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 14              | 103 | -            | -        | -          | -         |             |
|       | 230         | 50             | Hi | 76              | 268 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 17              | 106 | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 75              | 275 | 170          | 558      | 225        | 7,946     |             |
|       |             |                | Lo | 15              | 109 | -            | -        | -          | -         |             |
|       | 240         | 50             | Hi | 76              | 273 | 165          | 541      | 220        | 7,769     |             |
|       |             |                | Lo | 17              | 115 | -            | -        | -          | -         |             |

\*Hi - Notch 5 / Lo - Notch 1

# Cycle Fan

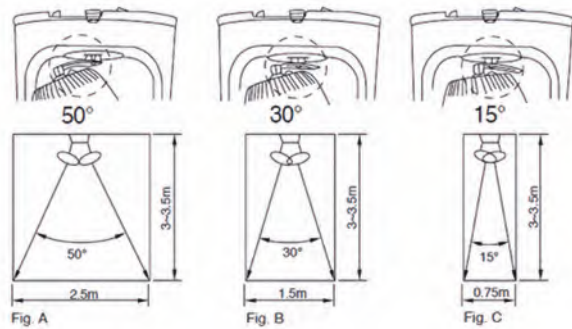
Usage: Living Room Bedroom Restaurant School

## M40R

- 360° Oscillation
- Regulator
- Metal Blades

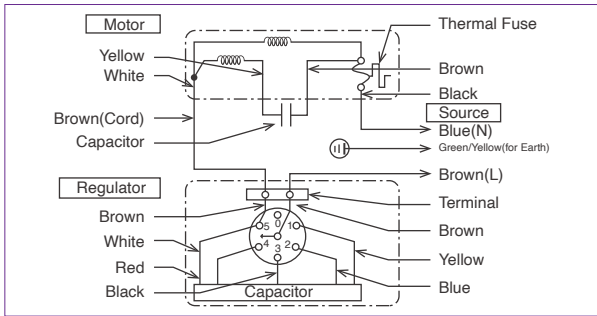
### Adjustment of Circulating Angle

The oscillation angle can be adjusted to 15, 30, 50 degrees.



- 5-speed selection
- Oscillation over 360°
- Speed and ON/OFF controlled by regulator
- Easy adjustment for circulating angle (15°, 30°, 50°)
- Thermal fuse to prevent overheating
- Safety wire provided
- Permanently lubricated ball bearing equipped
- Painted metal blades
- Colour option: Blue
- Gray

### Wiring Diagram



### Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM           | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|---------------|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |               | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| M40R  | 220         | 50             | Hi | 46.8 - 57.2     | 1,080 - 1,320 | 256          | 840      | 79         | 2,790     | 4.3         |
|       |             |                | Lo | 22.5 - 27.5     | 690 - 850     | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 57.7 - 70.5     | 1,160 - 1,410 | 277          | 909      | 86         | 3,037     |             |
|       |             |                | Lo | 26.6 - 32.5     | 710 - 860     | -            | -        | -          | -         |             |

\*Hi - Notch 5 / Lo - Notch 1



Wall Fan - Cord-Operated Series

Usage: Living Room Bedroom Restaurant School

M30C / M40C

- Pull Switch
- Easy Angle Adjustment
- 3-speed Selection

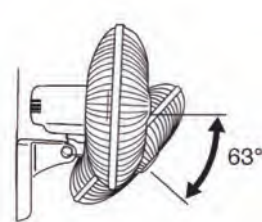


- 3-speed selection
- Speed and ON/OFF controlled by pull switch
- Speed and Oscillation change by pull cord
- Easy adjustment for tilt angle and oscillation angle
- Thermal fuse to prevent overheating
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Colour option: Blue (M30C and M40C)  
Gold (M40C only)

Adjustment of Tilt Angle and Oscillation Angle

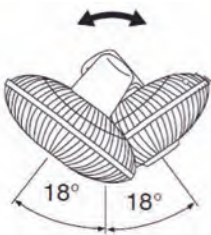
“One-touch” adjustment of tilt

The airflow can be adjusted upward or downward by simply moving the guard up or down as shown in the figure. Adjust the angle of the fan only after first confirming that it has stopped rotating.

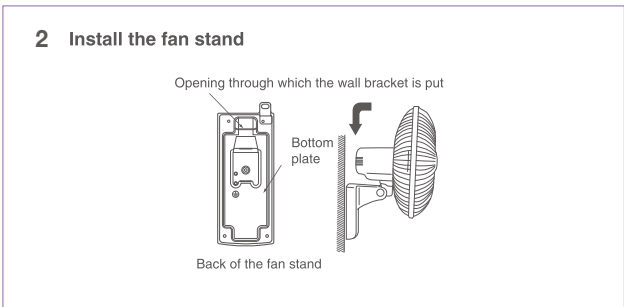
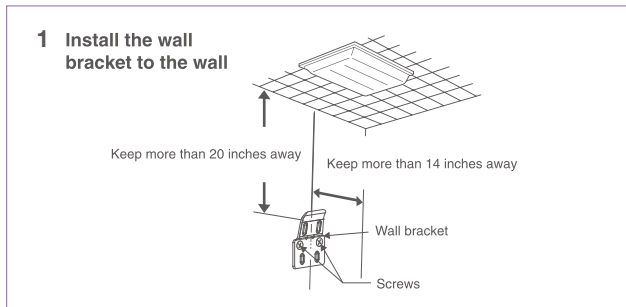


Double oscillation

To change the direction of the air flow, simply push the fan guard to the desired position.



Installation



Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM           | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|---------------|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |               | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| M30C  | 220         | 50             | Hi | 34.0 - 41.6     | 1,124 - 1,374 | 215          | 705      | 45         | 1,589     | 3.4         |
|       |             |                | Lo | 26.3 - 32.1     | 779 - 952     | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 39.5 - 48.3     | 1,244 - 1,520 | 237          | 778      | 50         | 1,766     |             |
|       |             |                | Lo | 27.3 - 33.3     | 714 - 872     | -            | -        | -          | -         |             |
| M40C  | 220         | 50             | Hi | 42.5 - 51.9     | 1,097 - 1,341 | 226          | 741      | 63         | 2,225     | 4.4         |
|       |             |                | Lo | 33.5 - 40.9     | 744 - 910     | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 52.8 - 64.6     | 1,166 - 1,425 | 241          | 791      | 67         | 2,366     |             |
|       |             |                | Lo | 34.7 - 42.5     | 676 - 826     | -            | -        | -          | -         |             |

\*Hi - Notch 3 / Lo - Notch 1

Wall Fan - Remote Control Series

Usage: Living Room Bedroom Restaurant School

M40M

- Remote Control
- Easy Angle Adjustment
- 3-speed Selection

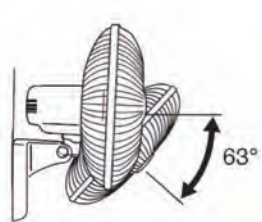


- 3-speed selection
- Remote control for speed, oscillation and off timer
- Soft touch switch panel with LED indicator
- Off timer (1, 3, 6 hours)
- Easy adjustment for tilt angle and oscillation angle
- Thermal fuse to prevent overheating
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Transparent plastic blade
- Colour option: Gray or Black

Adjustment of Tilt Angle and Oscillation Angle

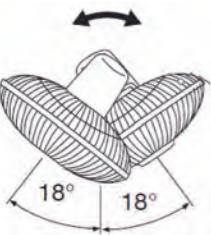
“One-touch” adjustment of tilt

The airflow can be adjusted upward or downward by simply moving the guard up or down as shown in the figure. Adjust the angle of the fan only after first confirming that it has stopped rotating.

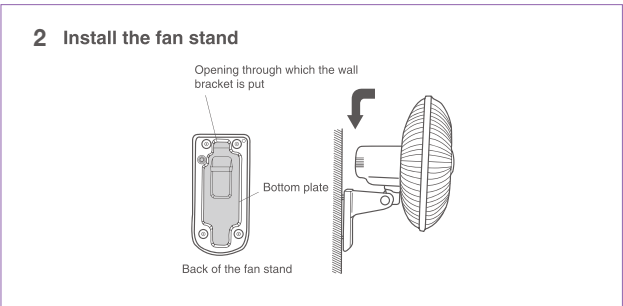
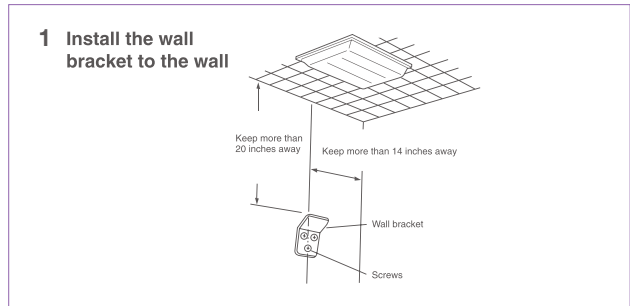


Double oscillation

To change the direction of the air flow, simply push the fan guard to the desired position.



Installation



Specification

| Model | Voltage [V] | Frequency [Hz] | *  | Consumption [W] | RPM           | Air Velocity |          | Air Volume |           | Weight [kg] |
|-------|-------------|----------------|----|-----------------|---------------|--------------|----------|------------|-----------|-------------|
|       |             |                |    |                 |               | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |             |
| M40M  | 220         | 50             | Hi | 46.8 - 57.2     | 1,055 - 1,289 | 228          | 748      | 63         | 2,225     | 4.4         |
|       |             |                | Lo | 37.9 - 46.3     | 688 - 840     | -            | -        | -          | -         |             |
|       |             | 60             | Hi | 56.1 - 68.5     | 1,094 - 1,337 | 237          | 778      | 65         | 2,295     |             |
|       |             |                | Lo | 37.9 - 46.3     | 625 - 763     | -            | -        | -          | -         |             |

\*Hi - Notch 3 / Lo - Notch 1



# Wall Fan - Big Wall Fan

Usage: Restaurant School Wet Market Shopping Street

## YU50X

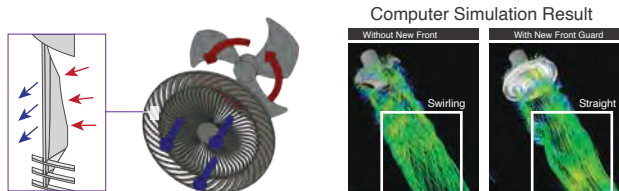
- Guide Vane Design
- Aluminium Blades
- 3-speed Selection



- Guide Vane design generates strong and focus air flow up to 10 m distance
- Aluminum blades for stronger air flow and durability
- Added angle adjust bolt for extra stability on the fan's knee joint
- Full automatic oscillation
- 3-speed ON/OFF pull switch
- New and modern Front Guard Design

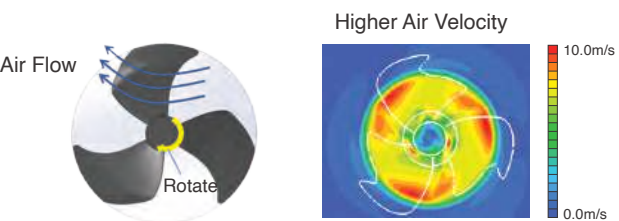
### New Guide Vane

Guide Vane shape is matched to intake flow, minimizing pressure loss.

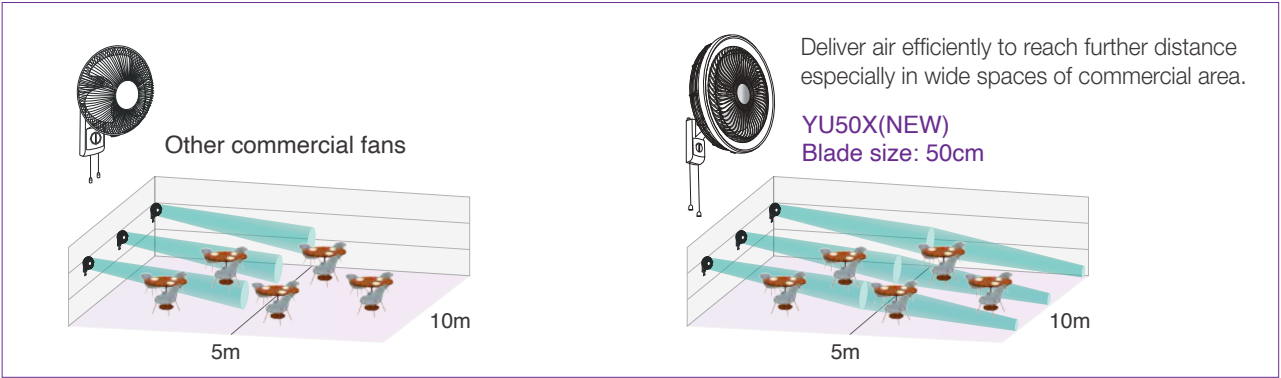


Guide Vane  
Change swirling flow to straight restrain flow spreading

### New Metal Blade Design



New Guide Vane and metal blade design bring larger air volume and higher air velocity to reach further distance.



### Specification

| Model | Voltage<br>[V] | Frequency<br>[Hz] | *  | Consumption<br>[W] | RPM   | Air Velocity |          | Air Volume |           | Weight<br>[kg] |
|-------|----------------|-------------------|----|--------------------|-------|--------------|----------|------------|-----------|----------------|
|       |                |                   |    |                    |       | [m/min]      | [ft/min] | [m³/min]   | [ft³/min] |                |
| YU50X | 220            | 50                | Hi | 63                 | 1,230 | 280          | 919      | 100        | 3,531     | 4.4            |
|       |                |                   | Lo | 53                 | 850   | -            | -        | -          | -         |                |
|       | 230            |                   | Hi | 67                 | 1,260 | 290          | 951      | 105        | 3,708     |                |
|       |                |                   | Lo | 56                 | 880   | -            | -        | -          | -         |                |
|       | 240            |                   | Hi | 70                 | 1,280 | 300          | 984      | 110        | 3,885     |                |
|       |                |                   | Lo | 60                 | 940   | -            | -        | -          | -         |                |
|       | 220            | 50                | Hi | 60                 | 1,200 | 290          | 951      | 115        | 4,061     |                |
|       |                |                   | Lo | 51                 | 920   | -            | -        | -          | -         |                |
|       | 220            | 60                | Hi | 76                 | 1,220 | 295          | 968      | 120        | 4,238     |                |
|       |                |                   | Lo | 53                 | 800   | -            | -        | -          | -         |                |

\*Hi - Notch 3 / Lo - Notch 1





# Ventilation Product Specification Summary

## ■ Ceiling Mount Type Ventilation Fan

| Series             | Model | Voltage [V] | Frequency [Hz] | Speed | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|--------------------|-------|-------------|----------------|-------|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|                    |       |             |                |       | [CMH]      | [CFM] |                 |               |             |                        |                |
| DC Motor Series    | 24JRB | 220-240     | 60             | Hi    | 160        | 94    | 8               | 31            | 2.9         | 240 x 240              | Ø100           |
|                    |       |             |                | Lo    | 120        | 71    | 5.2             | 26            |             |                        |                |
|                    |       |             |                |       | 80         | 47    | 3.6             | 20            |             |                        |                |
|                    |       | 220-230     | 50             | Hi    | 160        | 94    | 8               | 31            |             |                        |                |
|                    |       |             |                | Lo    | 120        | 71    | 5.2             | 26            |             |                        |                |
|                    |       |             |                |       | 80         | 47    | 3.6             | 20            |             |                        |                |
|                    | 24JAB | 220-240     | 50             | Hi    | 160        | 94    | 8               | 31            | 2.9         | 240 x 240              | Ø100           |
|                    |       |             |                | Lo    | 120        | 71    | 5.2             | 26            |             |                        |                |
|                    |       |             |                |       | 80         | 47    | 3.6             | 20            |             |                        |                |
|                    |       | 220-230     | 60             | Hi    | 160        | 94    | 8               | 31            |             |                        |                |
|                    |       |             |                | Lo    | 120        | 71    | 5.2             | 26            |             |                        |                |
|                    |       |             |                |       | 80         | 47    | 3.6             | 20            |             |                        |                |
| Super Quiet Series | 17CUH | 220         | 50             | -     | 85         | 50    | 7.5             | 23            | 1.7         | 177 x 177              | Ø100           |
|                    |       |             | 60             | -     | 85         | 50    | 10              | 24            |             |                        |                |
|                    |       | 230         | 50             | -     | 85         | 50    | 8.5             | 24.5          |             |                        |                |
|                    |       |             | 60             | -     | 85         | 50    | 10              | 24            |             |                        |                |
|                    |       | 240         | 50             | -     | 90         | 53    | 9.5             | 26            |             |                        |                |
|                    |       |             |                |       |            |       |                 |               |             |                        |                |
|                    | 24CUH | 220         | 50             | -     | 140        | 82    | 10.5            | 25            | 2.7         | 240 x 240              | Ø100           |
|                    |       |             | 60             | -     | 150        | 88    | 13.5            | 26.5          |             |                        |                |
|                    |       | 230         | 50             | -     | 150        | 88    | 11              | 26            |             |                        |                |
|                    |       |             | 60             | -     | 150        | 88    | 13.5            | 26.5          |             |                        |                |
|                    |       | 240         | 50             | -     | 160        | 94    | 12              | 27            |             |                        |                |
|                    |       |             |                |       |            |       |                 |               |             |                        |                |
|                    | 24CDH | 220         | 50             | -     | 170        | 100   | 13.5            | 28.5          | 2.7         | 240 x 240              | Ø100           |
|                    |       |             | 50             | -     | 180        | 106   | 15              | 30            |             |                        |                |
|                    |       | 230         | 50             | -     | 180        | 106   | 19              | 31            |             |                        |                |
|                    |       |             | 60             | -     | 180        | 106   | 19              | 31            |             |                        |                |
|                    | 24CHH | 220         | 50             | -     | 200        | 118   | 16.5            | 32            | 2.7         | 240 x 240              | Ø100           |
|                    |       |             | 60             | -     | 200        | 118   | 20.5            | 33.5          |             |                        |                |
|                    |       | 230         | 50             | -     | 210        | 124   | 18              | 34            |             |                        |                |
|                    |       |             | 60             | -     | 200        | 118   | 22.5            | 34            |             |                        |                |
|                    |       | 240         | 50             | -     | 210        | 124   | 19.5            | 35            |             |                        |                |
|                    |       |             |                |       |            |       |                 |               |             |                        |                |
|                    | 24CXH | 220         | 50             | -     | 235        | 138   | 24              | 38            | 2.7         | 240 x 240              | Ø100           |
|                    |       |             | 60             | -     | 255        | 150   | 29              | 40            |             |                        |                |
|                    |       | 230         | 50             | -     | 240        | 141   | 26.5            | 39            |             |                        |                |
|                    |       |             | 50             | -     | 250        | 147   | 29              | 40            |             |                        |                |
|                    | 27CHH | 220         | 50             | Hi    | 330        | 194   | 28              | 34            | 4.4         | 270 x 270              | Ø150           |
|                    |       |             |                | Lo    | 260        | 153   | 23              | 30            |             |                        |                |
|                    |       |             | 60             | Hi    | 330        | 194   | 33              | 34            |             |                        |                |
|                    |       |             |                | Lo    | 270        | 159   | 26              | 31            |             |                        |                |
|                    |       | 230         | 50             | Hi    | 340        | 200   | 31.5            | 35            |             |                        |                |
|                    |       |             |                | Lo    | 275        | 162   | 25.5            | 31.5          |             |                        |                |
|                    |       | 240         | 50             | Hi    | 360        | 212   | 34              | 36.5          |             |                        |                |
|                    |       |             |                | Lo    | 290        | 171   | 27.5            | 32            |             |                        |                |
|                    | 32CDH | 220         | 50             | Hi    | 430        | 253   | 42              | 36            | 5.2         | 320 x 320              | Ø150           |
|                    |       |             |                | Lo    | 300        | 177   | 32              | 28            |             |                        |                |
|                    |       |             | 60             | Hi    | 410        | 241   | 48              | 35.5          |             |                        |                |
|                    |       |             |                | Lo    | 285        | 168   | 33              | 27.5          |             |                        |                |
|                    |       | 230         | 50             | Hi    | 440        | 259   | 46              | 37.5          |             |                        |                |
|                    |       |             |                | Lo    | 315        | 185   | 34              | 29            |             |                        |                |
|                    |       | 240         | 50             | Hi    | 470        | 277   | 50              | 38.5          |             |                        |                |
|                    |       |             |                | Lo    | 330        | 194   | 38              | 30            |             |                        |                |

## ■ Ceiling Mount Type Ventilation Fan

| Series          | Model             | Voltage [V] | Frequency [Hz] | Speed | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] | Duct Size [mm] |
|-----------------|-------------------|-------------|----------------|-------|------------|-------|-----------------|---------------|-------------|------------------------|----------------|
|                 |                   |             |                |       | [CMH]      | [CFM] |                 |               |             |                        |                |
| Standard Series | 38CDG<br>38CDG 05 | 220         | 50             | Hi    | 640        | 377   | 90              | 44            | 9.7         | 385 x 385              | Ø150           |
|                 |                   |             |                | Lo    | 430        | 253   | 66              | 35            |             |                        |                |
|                 |                   |             | 60             | Hi    | 630        | 371   | 98              | 43.5          |             |                        |                |
|                 |                   |             |                | Lo    | 410        | 241   | 66.4            | 34.5          |             |                        |                |
|                 |                   | 230         | 50             | Hi    | 675        | 397   | 96              | 46            |             |                        |                |
|                 |                   |             |                | Lo    | 440        | 259   | 72              | 36            |             |                        |                |
|                 |                   | 240         | 50             | Hi    | 700        | 412   | 104             | 47            |             |                        |                |
|                 |                   |             |                | Lo    | 470        | 277   | 78              | 37            |             |                        |                |
|                 | 38CHG             | 220         | 50             | Hi    | 800        | 471   | 122             | 49.5          | 10.4        | 385 x 385              | Ø150           |
|                 |                   |             |                | Lo    | 525        | 309   | 89              | 39.5          |             |                        |                |
|                 |                   |             | 60             | Hi    | 790        | 465   | 138             | 49            |             |                        |                |
|                 |                   |             |                | Lo    | 500        | 294   | 90              | 39            |             |                        |                |
|                 |                   | 230         | 50             | Hi    | 800        | 471   | 122             | 49            |             |                        |                |
|                 |                   |             |                | Lo    | 470        | 277   | 84              | 37            |             |                        |                |
|                 |                   | 240         | 50             | Hi    | 835        | 491   | 132             | 50            |             |                        |                |
|                 |                   |             |                | Lo    | 490        | 288   | 90              | 38            |             |                        |                |
| Metal Series    | 24CMUA            | 220         | 50             | -     | 90         | 53    | 11              | 25            | 3.9         | 240 x 240              | Ø100           |
|                 |                   |             | 60             | -     | 100        | 59    | 12              | 26            |             |                        |                |
|                 |                   | 230         | 50             | -     | 95         | 56    | 12              | 25.5          |             |                        |                |
|                 |                   |             | 60             | -     | 100        | 59    | 13              | 26            |             |                        |                |
|                 | 24CMHA            | 220         | 50             | -     | 180        | 106   | 20              | 37            | 3.9         | 240 x 240              | Ø100           |
|                 |                   |             | 60             | -     | 180        | 106   | 23              | 37            |             |                        |                |
|                 |                   | 230         | 50             | -     | 190        | 112   | 22              | 37.5          |             |                        |                |
|                 |                   |             | 60             | -     | 200        | 118   | 25              | 38            |             |                        |                |
|                 | 27CMHA            | 220         | 50             | -     | 360        | 212   | 35              | 37            | 5.9         | 270 x 270              | Ø150           |
|                 |                   |             | 60             | -     | 380        | 224   | 43              | 37.5          |             |                        |                |
|                 |                   | 230         | 50             | -     | 380        | 224   | 38              | 37.5          |             |                        |                |
|                 |                   |             | 50             | -     | 400        | 235   | 43              | 38            |             |                        |                |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

# Ventilation Product Specification Summary

## Cabinet Fan (In-line Fan)

| Model | Voltage [V] | Frequency [Hz] |    | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Duct Size [mm] | Impeller Diameter [mm] |
|-------|-------------|----------------|----|------------|-------|-----------------|---------------|-------------|----------------|------------------------|
|       |             |                |    | [CMH]      | [CFM] |                 |               |             |                |                        |
| 12NSB | 220         | 50             | Hi | 180        | 106   | 18              | 21            | 5.5         | Ø100           | 128                    |
|       |             |                | Lo | 145        | 85    | 17              | 17            |             |                |                        |
|       |             | 60             | Hi | 190        | 112   | 23              | 22            |             |                |                        |
|       |             |                | Lo | 145        | 85    | 19              | 18            |             |                |                        |
|       | 230         | 50             | Hi | 180        | 106   | 20              | 21            |             |                |                        |
|       |             |                | Lo | 150        | 88    | 18              | 18            |             |                |                        |
|       |             | 50             | Hi | 185        | 109   | 22              | 22            |             |                |                        |
|       |             |                | Lo | 155        | 91    | 19              | 20            |             |                |                        |
| 15NSB | 220         | 50             | Hi | 340        | 200   | 33              | 25            | 6.5         | Ø150           | 128                    |
|       |             |                | Lo | 275        | 162   | 29.5            | 22            |             |                |                        |
|       |             | 60             | Hi | 370        | 218   | 42              | 27            |             |                |                        |
|       |             |                | Lo | 260        | 153   | 33              | 22            |             |                |                        |
|       | 230         | 50             | Hi | 340        | 200   | 35              | 25            |             |                |                        |
|       |             |                | Lo | 280        | 165   | 31              | 22            |             |                |                        |
|       |             | 50             | Hi | 350        | 206   | 37              | 26            |             |                |                        |
|       |             |                | Lo | 290        | 171   | 33              | 24            |             |                |                        |
| 18NSB | 220         | 50             | Hi | 500        | 294   | 60              | 29            | 8.5         | Ø150           | 158                    |
|       |             |                | Lo | 405        | 238   | 55              | 27            |             |                |                        |
|       |             | 60             | Hi | 490        | 288   | 73              | 30            |             |                |                        |
|       |             |                | Lo | 385        | 277   | 62.5            | 26            |             |                |                        |
|       | 230         | 50             | Hi | 500        | 294   | 65              | 30            |             |                |                        |
|       |             |                | Lo | 420        | 247   | 58.5            | 28            |             |                |                        |
|       |             | 50             | Hi | 510        | 300   | 68              | 31            |             |                |                        |
|       |             |                | Lo | 430        | 253   | 63.5            | 28            |             |                |                        |
| 18NFB | 220         | 50             | Hi | 770        | 453   | 91              | 31            | 10.0        | Ø200           | 158                    |
|       |             |                | Lo | 620        | 365   | 80              | 29            |             |                |                        |
|       |             | 60             | Hi | 760        | 447   | 119             | 32            |             |                |                        |
|       |             |                | Lo | 580        | 341   | 87              | 28            |             |                |                        |
|       | 230         | 50             | Hi | 770        | 453   | 96              | 32            |             |                |                        |
|       |             |                | Lo | 620        | 365   | 82              | 29            |             |                |                        |
|       |             | 50             | Hi | 780        | 459   | 104             | 33            |             |                |                        |
|       |             |                | Lo | 640        | 377   | 86              | 29            |             |                |                        |
| 20NSB | 220         | 50             | Hi | 920        | 541   | 120             | 32            | 14.0        | Ø200           | 178                    |
|       |             |                | Lo | 720        | 424   | 113             | 29            |             |                |                        |
|       |             | 60             | Hi | 860        | 506   | 159             | 32            |             |                |                        |
|       |             |                | Lo | 620        | 365   | 128             | 26            |             |                |                        |
|       | 230         | 50             | Hi | 930        | 547   | 125             | 33            |             |                |                        |
|       |             |                | Lo | 750        | 441   | 120             | 30            |             |                |                        |
|       |             | 60             | Hi | 940        | 553   | 135             | 34            |             |                |                        |
|       |             |                | Lo | 790        | 465   | 125             | 31            |             |                |                        |
| 23NLB | 220         | 50             | Hi | 1,200      | 706   | 230             | 40            | 18.0        | Ø200           | 220                    |
|       |             |                | Lo | 900        | 530   | 170             | 34            |             |                |                        |
|       |             | 60             | Hi | 1,100      | 647   | 310             | 40            |             |                |                        |
|       |             |                | Lo | 800        | 471   | 190             | 32            |             |                |                        |
|       | 230         | 50             | Hi | 1,200      | 706   | 250             | 40            |             |                |                        |
|       |             |                | Lo | 900        | 530   | 180             | 35            |             |                |                        |
|       |             | 50             | Hi | 1,250      | 736   | 260             | 41            |             |                |                        |
|       |             |                | Lo | 950        | 559   | 190             | 37            |             |                |                        |
| 25NSB | 220         | 50             | Hi | 1,700      | 1,001 | 345             | 41            | 24.0        | Ø250           | 220                    |
|       |             |                | Lo | 1,380      | 812   | 265             | 38            |             |                |                        |
|       |             | 60             | Hi | 1,650      | 971   | 425             | 41            |             |                |                        |
|       |             |                | Lo | 1,200      | 706   | 300             | 39            |             |                |                        |
|       | 230         | 50             | Hi | 1,720      | 1,012 | 350             | 42            |             |                |                        |
|       |             |                | Lo | 1,380      | 812   | 270             | 39            |             |                |                        |
|       |             | 50             | Hi | 1,750      | 1,030 | 370             | 44            |             |                |                        |
|       |             |                | Lo | 1,450      | 853   | 290             | 40            |             |                |                        |
| 25NFB | 220         | 50             | Hi | 1,900      | 1,118 | 390             | 43            | 24.0        | Ø250           | 220                    |
|       |             |                | Lo | 1,600      | 942   | 325             | 40            |             |                |                        |
|       |             | 60             | Hi | 1,810      | 1,065 | 520             | 42            |             |                |                        |
|       |             |                | Lo | 1,400      | 824   | 380             | 41            |             |                |                        |
|       | 230         | 50             | Hi | 1,910      | 1,124 | 410             | 45            |             |                |                        |
|       |             |                | Lo | 1,600      | 942   | 335             | 41            |             |                |                        |
|       |             | 50             | Hi | 1,920      | 1,130 | 430             | 46            |             |                |                        |
|       |             |                | Lo | 1,620      | 953   | 360             | 42            |             |                |                        |

Low Noise Type Cabinet Fan (Three Phase Series) Model Comparison

| Model | Phase | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] | Duct Size [mm] | Impeller Diameter [mm] |
|-------|-------|-------------|----------------|------------|-------|-----------------|-------|---------------|-------------|----------------|------------------------|
|       |       |             |                | [CMH]      | [CFM] |                 |       |               |             |                |                        |
| 25SWC | 3     | 380         | 50             | 4,000      | 2,354 | 940             | 1,375 | 43            | 60          | 250 x 250      | 250                    |
|       |       |             | 60             | 4,500      | 2,648 | 1,450           | 1,530 | 45            |             |                |                        |
| 25SMC | 3     | 380         | 50             | 5,200      | 3,060 | 1,180           | 1,345 | 45            | 60          | 250 x 700      | 250                    |
|       |       |             | 60             | 5,500      | 3,237 | 1,750           | 1,470 | 46            |             |                |                        |
| 28NXC | 3     | 380         | 50             | 2,600      | 1,530 | 600             | 1,295 | 44            | 28          | Ø250           | 280                    |
|       |       |             | 60             | 2,650      | 1,560 | 840             | 1,380 | 45            |             |                |                        |

- Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
  - The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
  - The values of noise level are measured at 1.5 m apart from the side of fan body when ducts are connected on outlet side
  - The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

## Industrial Type Ventilation Fan

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |
| 25GSE | 220         | 50             | 1,280      | 753   | 41              | 44            | 2.0         |
|       |             | 60             | 1,440      | 848   | 57              | 46            |             |
|       | 230         | 50             | 1,280      | 753   | 43              | 44            |             |
|       | 240         | 50             | 1,280      | 753   | 44              | 44            |             |
| 30GSE | 220         | 50             | 2,150      | 1,265 | 87              | 49            | 2.5         |
|       |             | 60             | 2,390      | 1,407 | 119             | 51            |             |
|       | 230         | 50             | 2,150      | 1,265 | 92              | 49            |             |
|       | 240         | 50             | 2,150      | 1,265 | 98              | 50            |             |
| 35GSE | 220         | 50             | 2,950      | 1,736 | 113             | 51            | 2.9         |
|       |             | 60             | 3,380      | 1,989 | 161             | 54            |             |
|       | 230         | 50             | 2,950      | 1,736 | 118             | 51            |             |
|       | 240         | 50             | 2,950      | 1,736 | 122             | 51            |             |
| 40GSE | 220         | 50             | 3,900      | 2,295 | 141             | 54            | 19.0        |
|       |             | 60             | 4,890      | 2,878 | 270             | 58            |             |
|       | 230         | 50             | 3,900      | 2,295 | 146             | 54            |             |
|       | 240         | 50             | 3,900      | 2,295 | 151             | 54            |             |
| 45GSC | 220         | 50             | 5,200      | 3,061 | 227             | 51            | 19.0        |
|       |             | 60             | 5,970      | 3,514 | 325             | 54            |             |
|       | 230         | 50             | 5,430      | 3,196 | 235             | 51            |             |
|       | 240         | 50             | 5,460      | 3,214 | 241             | 51            |             |
| 50GSC | 220         | 50             | 6,130      | 3,608 | 249             | 47            | 22.5        |
|       |             | 60             | 7,100      | 4,179 | 326             | 51            |             |
|       | 230         | 50             | 6,420      | 3,779 | 258             | 47            |             |
|       | 240         | 50             | 6,480      | 3,814 | 271             | 47            |             |
| 60GSC | 220         | 50             | 8,040      | 4,732 | 245             | 50            | 34.0        |
|       |             | 60             | 9,410      | 5,539 | 361             | 54            |             |
|       | 230         | 50             | 8,460      | 4,979 | 258             | 50            |             |
|       | 240         | 50             | 8,490      | 4,997 | 263             | 50            |             |
| 45GTC | 380         | 50             | 5,520      | 3,249 | 220             | 52            | 18.5        |
|       |             | 60             | 6,420      | 3,779 | 330             | 56            |             |
| 50GTC | 380         | 50             | 6,960      | 4,097 | 320             | 54            | 28.5        |
|       |             | 60             | 8,010      | 4,715 | 475             | 58            |             |
| 60GTC | 380         | 50             | 9,420      | 5,544 | 310             | 49            | 34          |
|       |             | 60             | 10,920     | 6,427 | 450             | 53            |             |

- Note: RPM data is for reference only. Values may vary depending on different conditions.
- 1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
  - 2.The value of air volume is the mean value which is measured by our company.
  - 3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
  - 4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.



# Ventilation Product Specification Summary

## I Wall Mount Type Ventilation Fan

| Series                          | Model             | Voltage [V] | Frequency [Hz] | Air Volume  |         | Consumption [W] | Noise [dB(A)] | Weight [kg] | Intallation Space [mm] |
|---------------------------------|-------------------|-------------|----------------|-------------|---------|-----------------|---------------|-------------|------------------------|
|                                 |                   |             |                | [CMH]       | [CFM]   |                 |               |             |                        |
| Metallic Series                 | 20ASB<br>20ASB 05 | 220         | 50             | 516         | 304     | 17              | 37.5          | 3.3         | 250 x 250              |
|                                 |                   |             | 60             | 612         | 360     | 21.5            | 40.6          |             |                        |
|                                 |                   | 230         | 50             | 528         | 311     | 18.1            | 38.1          |             |                        |
|                                 |                   |             | 50             | 540         | 318     | 19.5            | 38.4          |             |                        |
|                                 | 25ASB<br>25ASB 05 | 220         | 50             | 858         | 505     | 25              | 39.1          | 3.8         | 300 x 300              |
|                                 |                   |             | 60             | 954         | 562     | 30.5            | 40.6          |             |                        |
|                                 |                   | 230         | 50             | 864         | 509     | 27.3            | 39.3          |             |                        |
|                                 |                   |             | 50             | 888         | 523     | 29.5            | 39.7          |             |                        |
|                                 | 30ASB<br>30ASB 05 | 220         | 50             | 1,182       | 696     | 29.5            | 39.2          | 4.4         | 350 x 350              |
|                                 |                   |             | 60             | 1,164       | 685     | 34.5            | 39            |             |                        |
|                                 |                   | 230         | 50             | 1,248       | 735     | 31.7            | 40.6          |             |                        |
|                                 |                   |             | 50             | 1,290       | 759     | 34              | 41.3          |             |                        |
| Automatic Shutter Series        | 15AAQ1            | 220         | 50             | 288         | 170     | 15              | 31            | 1.4         | 175 x 175              |
|                                 |                   |             | 60             | 306         | 180     | 19              | 34            |             |                        |
|                                 |                   | 230         | 50             | 294         | 173     | 17              | 33            |             |                        |
|                                 |                   |             | 50             | 306         | 180     | 19              | 33            |             |                        |
|                                 | 20AUA             | 220-230     | 50             | 590-610     | 347-359 | 18-19.5         | 36-36.5       | 1.9         | 250 x 250              |
|                                 |                   |             | 50             | 590-620     | 347-365 | 18-21.5         | 36-37         |             |                        |
|                                 |                   | 220         | 60             | 680         | 400     | 22              | 39            |             |                        |
|                                 |                   |             | 60             | 710         | 418     | 23.5            | 40            |             |                        |
|                                 | 25AUA             | 220-230     | 50             | 950-970     | 559-571 | 25-27           | 38-38.5       | 2.3         | 300 x 300              |
|                                 |                   |             | 50             | 950-990     | 559-571 | 25-27           | 38-39         |             |                        |
|                                 |                   | 220         | 60             | 990         | 571     | 31              | 39            |             |                        |
|                                 |                   |             | 60             | 1,040       | 612     | 35              | 41            |             |                        |
|                                 | 30AUA             | 220-230     | 50             | 1,200-1,250 | 706-736 | 28-30           | 37-38         | 2.6         | 350 x 350              |
|                                 |                   |             | 50             | 1,200-1,300 | 706-765 | 28-32.5         | 37-38         |             |                        |
|                                 |                   | 220         | 60             | 1,200       | 706     | 33              | 37            |             |                        |
|                                 |                   |             | 60             | 1,300       | 765     | 36              | 39            |             |                        |
|                                 | 20AUH             | 220         | 50             | 580         | 341     | 22              | 38            | 2.0         | 250 x 250              |
|                                 |                   |             | 60             | 650         | 383     | 29              | 42            |             |                        |
|                                 | 25AUH             | 220         | 50             | 920         | 541     | 29              | 39            | 2.4         | 300 x 300              |
|                                 |                   |             | 60             | 940         | 553     | 33              | 39            |             |                        |
|                                 | 30AUH 11          | 220         | 50             | 1,200       | 706     | 29              | 39            | 2.7         | 350 x 350              |
|                                 |                   |             | 60             | 1,140       | 671     | 33              | 38            |             |                        |
| Automatic Shutter Louver Series | 20ALA             | 220-230     | 50             | 550-555     | 324-327 | 18-19.5         | 38-38.5       | 2.0         | 250 x 250              |
|                                 |                   |             | 50             | 550-560     | 324-330 | 18-21.5         | 38-39         |             |                        |
|                                 |                   | 220         | 60             | 610         | 359     | 22              | 42.5          |             |                        |
|                                 |                   |             | 60             | 630         | 371     | 23.5            | 44            |             |                        |
|                                 | 25ALA             | 220-230     | 50             | 840-860     | 494-506 | 25-27           | 40.5-42       | 2.5         | 300 x 300              |
|                                 |                   |             | 50             | 840-880     | 494-518 | 25-30           | 40.5-43       |             |                        |
|                                 |                   | 220         | 60             | 860         | 506     | 31              | 42            |             |                        |
|                                 |                   |             | 60             | 910         | 536     | 34              | 45            |             |                        |
|                                 | 30ALA             | 220-230     | 50             | 1,000-1050  | 589-618 | 28-30           | 39-40         | 2.9         | 350 x 350              |
|                                 |                   |             | 50             | 1,000-1,100 | 589-647 | 28-32.5         | 39-41         |             |                        |
|                                 |                   | 220         | 60             | 1,000       | 589     | 33              | 40            |             |                        |
|                                 |                   |             | 60             | 1,050       | 618     | 36              | 41            |             |                        |
|                                 | 20ALH             | 220         | 50             | 546         | 321     | 22              | 40            | 2.2         | 250 x 250              |
|                                 |                   |             | 60             | 600         | 353     | 29              | 44            |             |                        |
|                                 | 25ALH             | 220         | 50             | 835         | 491     | 29              | 43            | 2.7         | 300 x 300              |
|                                 |                   |             | 60             | 846         | 498     | 33              | 43            |             |                        |
|                                 | 30ALF 11          | 220         | 50             | 935         | 550     | 29              | 43            | 3.1         | 350 x 350              |
|                                 |                   |             | 60             | 915         | 539     | 33              | 43            |             |                        |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

## I Wall Mount Type Ventilation Fan

| Series          | Model  | Voltage |      | Air Volume [CMH] | Consumption [W] | RPM   | Noise [dB(A)] | Weight [kg] | Installation Space [mm] | Wall Thickness [mm] |
|-----------------|--------|---------|------|------------------|-----------------|-------|---------------|-------------|-------------------------|---------------------|
|                 |        | [V]     | [Hz] |                  |                 |       |               |             |                         |                     |
| Bathroom Series | 10EGKB | 220     | 50   | 76               | 4.3             | 2,660 | 33            | 1.0         | Ø130~140                | 100-150             |
|                 |        |         | 50   | 77               | 4.6             | 2,675 | 33            |             |                         |                     |
|                 |        | 240     | 50   | 77               | 5.0             | 2,690 | 33            |             |                         |                     |
|                 |        |         |      |                  |                 |       |               |             |                         |                     |
|                 | 15EGKB | 220     | 50   | 162              | 5.7             | 2,265 | 36            | 1.3         | Ø175~185                | 100-150             |
|                 |        |         | 50   | 165              | 6.1             | 2,330 | 37            |             |                         |                     |
|                 |        | 240     | 50   | 165              | 6.5             | 2,390 | 37            |             |                         |                     |
|                 |        |         |      |                  |                 |       |               |             |                         |                     |
|                 | 10EGSB | 220     | 50   | 76               | 4.3             | 2,665 | 35            | 0.8         | Ø120~125                | >205                |
|                 |        |         | 60   | 87               | 4.7             | 3,140 | 37.5          |             |                         |                     |
|                 |        | 230     | 50   | 77               | 4.6             | 2,670 | 35            |             |                         |                     |
|                 |        |         | 50   | 77               | 5.0             | 2,685 | 35            |             |                         |                     |
|                 | 15EGSB | 220     | 50   | 155              | 5.7             | 2,130 | 36            | 1.0         | Ø165~170                | >240                |
|                 |        |         | 60   | 180              | 6.1             | 2,470 | 40            |             |                         |                     |
|                 |        | 230     | 50   | 160              | 6.1             | 2,230 | 37            |             |                         |                     |
|                 |        |         | 50   | 165              | 6.5             | 2,240 | 37            |             |                         |                     |
|                 | 10BAQ1 | 220     | 50   | 76.3             | 15              | 1,250 | 40.1          | 1.7         | 155 x 205               | -                   |
|                 |        |         | 60   | 72.9             | 17              | 1,200 | 39.8          |             |                         |                     |
|                 |        | 230     | 50   | 80.3             | 16              | 1,300 | 41.2          |             |                         |                     |
|                 |        |         | 50   | 84.9             | 17.5            | 1,385 | 42            |             |                         |                     |

Note: RPM data is for reference only, values may vary subject to different conditions  
Test Condition  
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa  
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance  
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side  
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

# Ventilation Product Specification Summary

## Window Mount Type Ventilation Fan

| Series                       | Model           | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Installation Space [mm] |
|------------------------------|-----------------|-------------|----------------|------------|-------|-----------------|---------------|-------------|-------------------------|
|                              |                 |             |                | [CMH]      | [CFM] |                 |               |             |                         |
| Electric Shutter Series      | 15WHCT          | 220         | 50             | 230        | 135   | 13              | 43            | 1.4         | Ø186 - Ø188             |
|                              |                 |             | 60             | 230        | 135   | 13              | 44            |             |                         |
|                              |                 | 230         | 50             | 230        | 135   | 14              | 43            |             |                         |
|                              |                 |             | 50             | 230        | 135   | 15              | 43            |             |                         |
|                              | 20WHCT          | 220         | 50             | 445        | 262   | 20              | 42            | 2.6         | Ø247 - Ø250             |
|                              |                 |             | 60             | 480        | 283   | 22              | 45            |             |                         |
|                              |                 | 230         | 50             | 445        | 262   | 21              | 42            |             |                         |
|                              |                 |             | 50             | 445        | 262   | 22              | 42            |             |                         |
| Automatic Shutter Series     | 15WAA           | 220         | 50             | 210        | 124   | 14              | 43            | 0.9         | Ø186 - Ø188             |
|                              |                 |             | 60             | 222        | 131   | 18              | 44            |             |                         |
|                              |                 | 230         | 50             | 222        | 131   | 15              | 44            |             |                         |
|                              | 15WAA / 15WAAMN | 240         | 50             | 228        | 134   | 16              | 44            |             |                         |
|                              | 20WAA           | 220         | 50             | 380        | 224   | 15              | 42            | 1.4         | Ø247 - Ø250             |
|                              |                 |             | 60             | 380        | 224   | 17              | 42            |             |                         |
|                              |                 | 230         | 50             | 390        | 230   | 16              | 43            |             |                         |
|                              | 20WAA / 20WAAMN | 240         | 50             | 401        | 237   | 17.5            | 43            |             |                         |
| Cord-Operated Shutter Series | 15WUD           | 220         | 50             | 210        | 124   | 8.1             | 35            | 0.9         | Ø186 - Ø188             |
|                              |                 |             | 60             | 200        | 118   | 8.9             | 34            |             |                         |
|                              |                 | 230         | 50             | 220        | 129   | 8.8             | 35            |             |                         |
|                              | 15WUD / 15WUDMN | 240         | 50             | 230        | 135   | 9.5             | 36            |             |                         |
|                              | 20WUD           | 220         | 50             | 360        | 212   | 16.4            | 32            | 1.1         | Ø247 - Ø250             |
|                              |                 |             | 60             | 360        | 212   | 19              | 31            |             |                         |
|                              |                 | 230         | 50             | 380        | 224   | 17.9            | 34            |             |                         |
|                              | 20WUD / 20WUDMN | 240         | 50             | 400        | 235   | 19.5            | 36            |             |                         |

Note:  
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.  
2.The value of air volume is the mean value which is measured by our company.  
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.  
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

## Energy Recovery Ventilator

| Model   | Voltage [V] | Frequency [Hz] | Notch | Air Volume |       | Consumption [W] | External Static Pressure [Pa] | Exchange Efficiency |         |          |         | Noise [dB(A)] | Weight [kg] |
|---------|-------------|----------------|-------|------------|-------|-----------------|-------------------------------|---------------------|---------|----------|---------|---------------|-------------|
|         |             |                |       | [CMH]      | [CFM] |                 |                               | Temperature         |         | Enthalpy |         |               |             |
|         |             |                |       |            |       |                 |                               | Cooling             | Heating | Cooling  | Heating |               |             |
| E25DZUA | 220         | 60             | SH    | 250        | 147   | 157             | 90                            | 60                  | 75      | 61       | 67      | 33            | 30          |
|         |             |                | H     | 250        | 147   | 148             | 40                            | 60                  | 75      | 61       | 67      | 33            |             |
|         |             |                | L     | 150        | 88    | 82              | 0                             | 65                  | 77      | 70       | 74      | 26            |             |
| E35DZUA | 220         | 60             | SH    | 350        | 206   | 282             | 100                           | 53                  | 78      | 66       | 71.5    | 37            | 39          |
|         |             |                | H     | 350        | 206   | 253             | 18                            | 53                  | 78      | 66       | 71.5    | 36.5          |             |
|         |             |                | L     | 255        | 150   | 172             | 0                             | 53                  | 75      | 63       | 70      | 30.5          |             |
| E50DZUA | 220         | 60             | SH    | 500        | 294   | 376             | 60                            | 53                  | 78      | 66       | 70      | 38            | 45          |
|         |             |                | H     | 500        | 294   | 349             | 0                             | 53                  | 78      | 66       | 70      | 37.5          |             |
|         |             |                | L     | 350        | 206   | 215             | 0                             | 58                  | 78      | 66       | 69      | 32            |             |

Test Condition  
-The input power, current and exchange efficiency are measured at the standard air volume  
-The input power indicated in name plate is the maximum value at the static pressure of 0 Pa  
-The noise is measured 1.5 m away from the bottom face of the unit. The noise value measured at the total acoustic room is more than the indicated value in actual operation  
-The above parameters are measured according to standard JIS B 8628

|           |                        |                 |                 |                  |
|-----------|------------------------|-----------------|-----------------|------------------|
| Main Body | Size (mm)              | 650 x 750 x 220 | 680 x 920 x 230 | 680 x 1090 x 240 |
|           | Weight                 | 30              | 39              | 45               |
|           | OA Side Duct Diameter  | Ø200            |                 |                  |
|           | Duct Diameter RA/SA/EA | Ø150            |                 |                  |

|                           |                           |
|---------------------------|---------------------------|
| Up-Side Down Installation | Up-Side Down Installation |
|---------------------------|---------------------------|

|            |               |                 |  |                 |
|------------|---------------|-----------------|--|-----------------|
| Filter Box | Duct Diameter | Ø200            |  |                 |
|            | Size (mm)     | 600 x 385 x 240 |  | 600 x 385 x 350 |



# Ventilation Product Specification Summary

## In-line Centrifugal Fan

| Model | Voltage [V] | Frequency [Hz] | Air Volume |       | Consumption [W] | Noise [dB(A)] | Weight [kg] | Duct Size [mm] |
|-------|-------------|----------------|------------|-------|-----------------|---------------|-------------|----------------|
|       |             |                | [CMH]      | [CFM] |                 |               |             |                |
| 10MMA | 220         | 50             | 249        | 146   | 51              | 44            | 3.1         | Ø100           |
|       | 230         |                | 252        | 148   | 54              | 44            |             |                |
|       | 240         |                | 255        | 150   | 57              | 44            |             |                |
| 12MMA | 220         |                | 305        | 179   | 52              | 45            | 3.0         | Ø125           |
|       | 230         |                | 310        | 182   | 55              | 45            |             |                |
|       | 240         |                | 315        | 185   | 58              | 45            |             |                |
| 15MMA | 220         |                | 630        | 370   | 88              | 46            | 4.4         | Ø150           |
|       | 230         |                | 645        | 379   | 92              | 46            |             |                |
|       | 240         |                | 660        | 388   | 97              | 46            |             |                |
| 16MMA | 220         |                | 670        | 394   | 116             | 47            | 4.7         | Ø160           |
|       | 230         |                | 700        | 412   | 122             | 47            |             |                |
|       | 240         |                | 730        | 429   | 128             | 47            |             |                |
| 20MMA | 220         |                | 882        | 519   | 160             | 54            | 5.2         | Ø200           |
|       | 230         |                | 897        | 527   | 166             | 54            |             |                |
|       | 240         |                | 912        | 536   | 174             | 54            |             |                |
| 25MMA | 220         |                | 915        | 538   | 150             | 55            | 5.2         | Ø250           |
|       | 230         |                | 925        | 544   | 157             | 55            |             |                |
|       | 240         |                | 935        | 550   | 165             | 55            |             |                |
| 31MMA | 220         |                | 1,575      | 927   | 215             | 57            | 6.9         | Ø315           |
|       | 230         |                | 1,595      | 938   | 226             | 57            |             |                |
|       | 240         |                | 1,615      | 950   | 238             | 57            |             |                |

Notes :

1.The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.

2.The values of noise level is A weighted average sound pressure level, the mean value are measured by our company.

3.The values of noise level are measured at the 1.5 m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is on the assumption that the noise of fan body propagates to room inside.

4.The values of air volume are the mid-points of results measured by our company.

## Mini Sirocco Fan

| Model | Voltage [V] | Frequency [Hz] | Speed    | Air Volume [CMH]           | Consumption [W]    | Noise Level [dB]       |                        | Net Weight [kg] |
|-------|-------------|----------------|----------|----------------------------|--------------------|------------------------|------------------------|-----------------|
|       |             |                |          |                            |                    | Inlet                  | Side                   |                 |
| 10CGB | 220         | 50             | Hi<br>Lo | 154<br>115                 | 15<br>12           | 41.0<br>35.5           | 28.0<br>24.0           | 1.9             |
|       |             | 60             | Hi<br>Lo | 133<br>93                  | 12<br>9            | 36.5<br>28.5           | 24.0<br>20.0           |                 |
|       | 230         | 60             | Hi<br>Lo | 143<br>100                 | 13<br>10           | 38.0<br>30.5           | 25.0<br>20.0           |                 |
|       | 220-240     | 50             | Hi<br>Lo | 134-143<br>110-125         | 10-11<br>9-10      | 37.0-39.0<br>32.0-35.0 | 23.0-25.0<br>20.0-23.0 |                 |
| 12CGB | 220         | 50             | Hi<br>Lo | 250<br>175                 | 22<br>16           | 44.0<br>32.0           | 29.0<br>19.0           | 2.5             |
|       |             | 60             | Hi<br>Lo | 225<br>145                 | 25<br>18           | 42.5<br>32.0           | 29.0<br>21.0           |                 |
|       | 230         | 60             | Hi<br>Lo | 242<br>153                 | 27<br>19           | 44.0<br>34.0           | 30.0<br>21.5           |                 |
|       | 220-240     | 50             | Hi<br>Lo | 233-262<br>156-175         | 23-28<br>19-23     | 44.5-46.5<br>33.0-36.0 | 29.0-32.0<br>18.0-20.0 |                 |
| 14CGB | 220         | 50             | Hi<br>Lo | 332<br>226                 | 35<br>28           | 50.0<br>40.0           | 34.0<br>26.0           | 2.8             |
|       |             | 60             | Hi<br>Lo | 260<br>200                 | 30<br>25           | 43.0<br>35.5           | 30.0<br>25.0           |                 |
|       | 230         | 60             | Hi<br>Lo | 275<br>212                 | 33<br>28           | 44.5<br>37.5           | 31.5<br>26.0           |                 |
|       | 220-240     | 50             | Hi<br>Lo | 280-315<br>227-265         | 28-32<br>26-30     | 44.5-46.5<br>40.0-44.0 | 31.0-33.0<br>27.0-31.0 |                 |
| 16CGB | 220         | 50             | Hi<br>Lo | 509<br>405                 | 50<br>43           | 49.0<br>43.5           | 35.0<br>30.0           | 5.6             |
|       |             | 60             | Hi<br>Lo | 483<br>372                 | 57<br>44           | 48.0<br>41.0           | 32.0<br>27.0           |                 |
|       | 230         | 60             | Hi<br>Lo | 503<br>393                 | 61<br>48           | 49.0<br>42.5           | 34.5<br>29.0           |                 |
|       | 220-240     | 50             | Hi<br>Lo | 509-542<br>405-450         | 50-56<br>43-48     | 49.0-51.5<br>43.5-46.0 | 35.0-38.0<br>30.0-32.0 |                 |
| 17CGB | 220         | 50             | Hi<br>Lo | 791<br>640                 | 86<br>70           | 50.0<br>44.0           | 36.0<br>31.0           | 10.1            |
|       |             | 60             | Hi<br>Lo | 752<br>612                 | 95<br>73           | 49.0<br>43.5           | 34.0<br>29.0           |                 |
|       | 230         | 60             | Hi<br>Lo | 789<br>641                 | 104<br>80          | 50.0<br>44.0           | 35.0<br>31.0           |                 |
|       | 220-240     | 50             | Hi<br>Lo | 791-875<br>640-705         | 86-101<br>70-83    | 50.0-52.5<br>44.0-47.0 | 36.0-39.0<br>31.0-32.0 |                 |
| 19CGB | 220         | 50             | Hi<br>Lo | 947<br>857                 | 121<br>105         | 55.0<br>51.5           | 41.0<br>37.0           | 10.2            |
|       |             | 60             | Hi<br>Lo | 885<br>760                 | 127<br>107         | 52.0<br>48.0           | 39.0<br>37.0           |                 |
|       | 230         | 60             | Hi<br>Lo | 931<br>791                 | 140<br>117         | 53.5<br>49.5           | 40.0<br>36.5           |                 |
|       | 220-240     | 50             | Hi<br>Lo | 919-997<br>804-880         | 113-130<br>99-115  | 52.0-54.0<br>50.0-52.0 | 40.0-42.0<br>38.0-40.0 |                 |
| 21CGB | 220         | 50             | Hi<br>Lo | 1,420<br>1,143             | 238<br>182         | 67.0<br>60.0           | 54.0<br>47.0           | 14.6            |
|       |             | 60             | Hi<br>Lo | 1,500<br>1,042             | 328<br>215         | 68.0<br>58.0           | 57.0<br>47.0           |                 |
|       | 230         | 60             | Hi<br>Lo | 1,550<br>1,100             | 342<br>230         | 69.0<br>59.5           | 57.5<br>48.0           |                 |
|       | 220-240     | 50             | Hi<br>Lo | 1,420-1,435<br>1,14301,220 | 238-247<br>182-197 | 66.0-67.0<br>60.0-62.5 | 54.0-55.0<br>47.0-51.0 |                 |

Notes:

① The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.

② The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 and -7 tolerance.

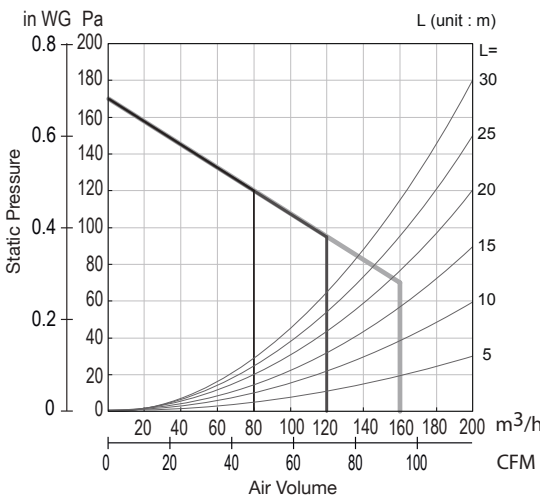
③ The values of noise level are measured at the 1.5m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is based on the assumption that the noise of fan body propagates to room inside.

④ The values of air volume are the mid-points of results measured by our company, with ±10% tolerance.

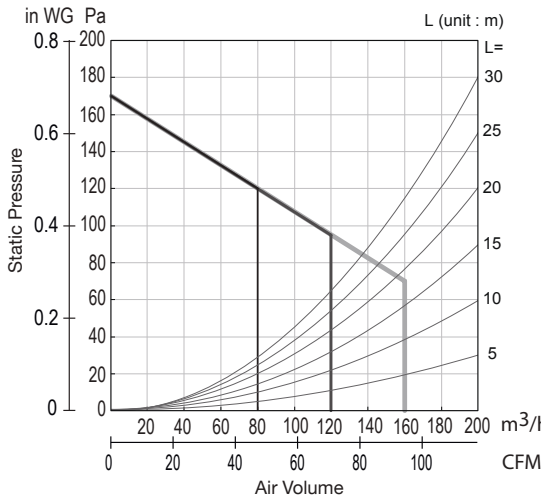
# Performance Data Summary

## Ceiling Mount Type Ventilation Fan

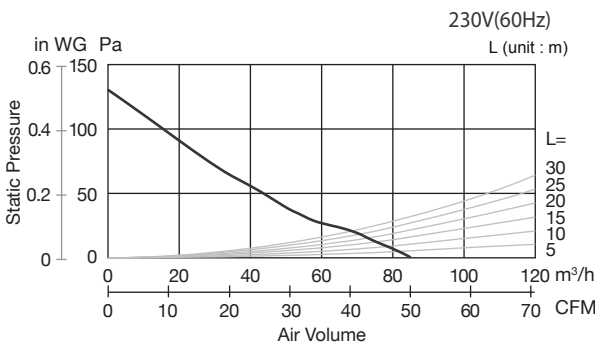
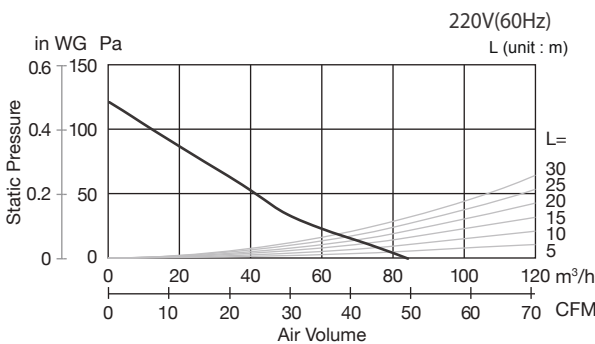
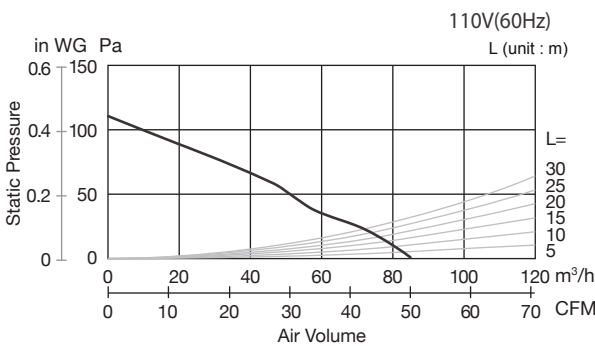
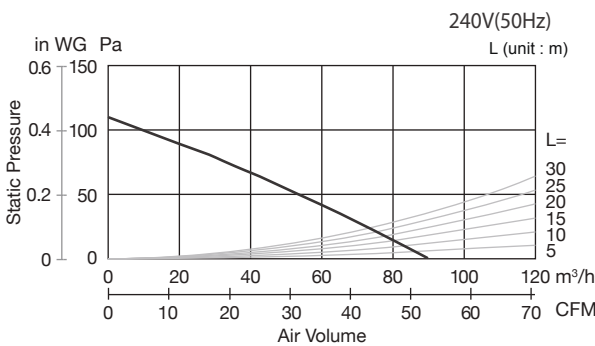
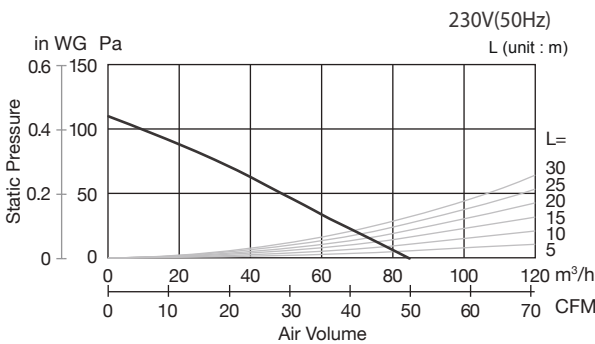
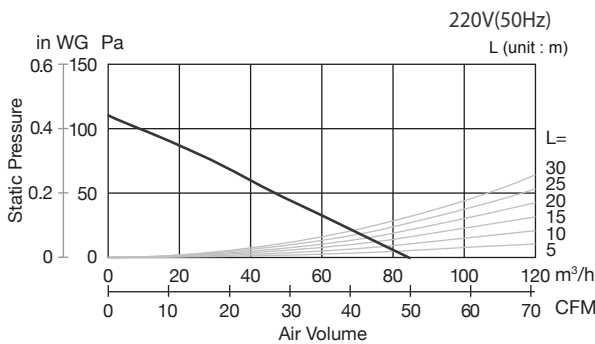
DC Motor Series: 24JRB



DC Motor Series: 24JAB

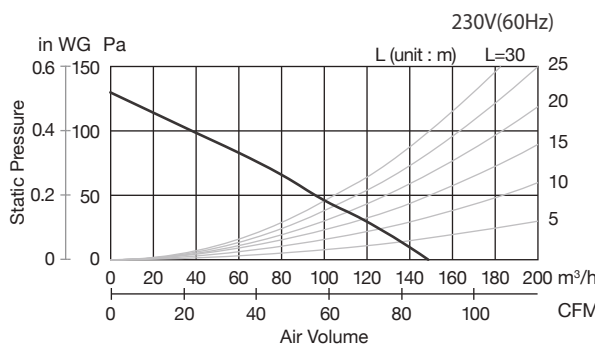
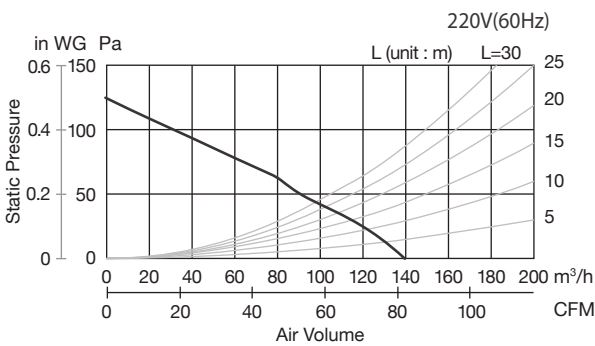
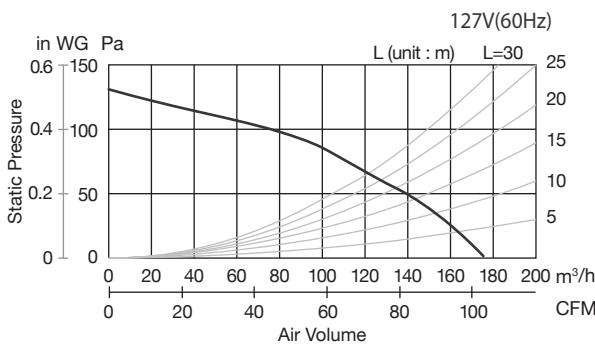
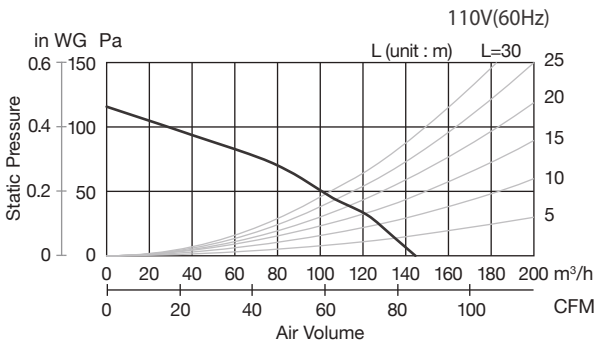
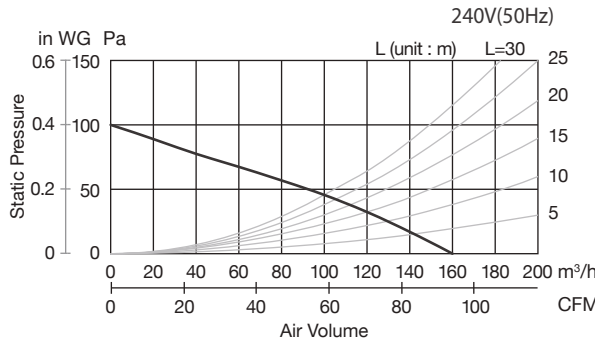
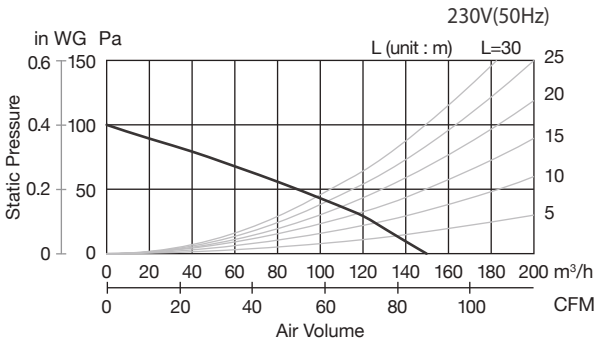
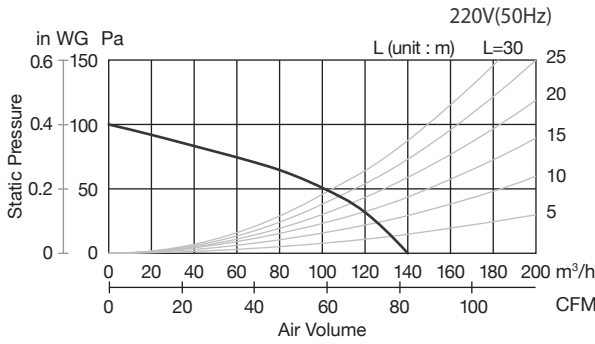


Super Quiet Series: 17CUH



## Ceiling Mount Type Ventilation Fan

Super Quiet Series: 24CUH

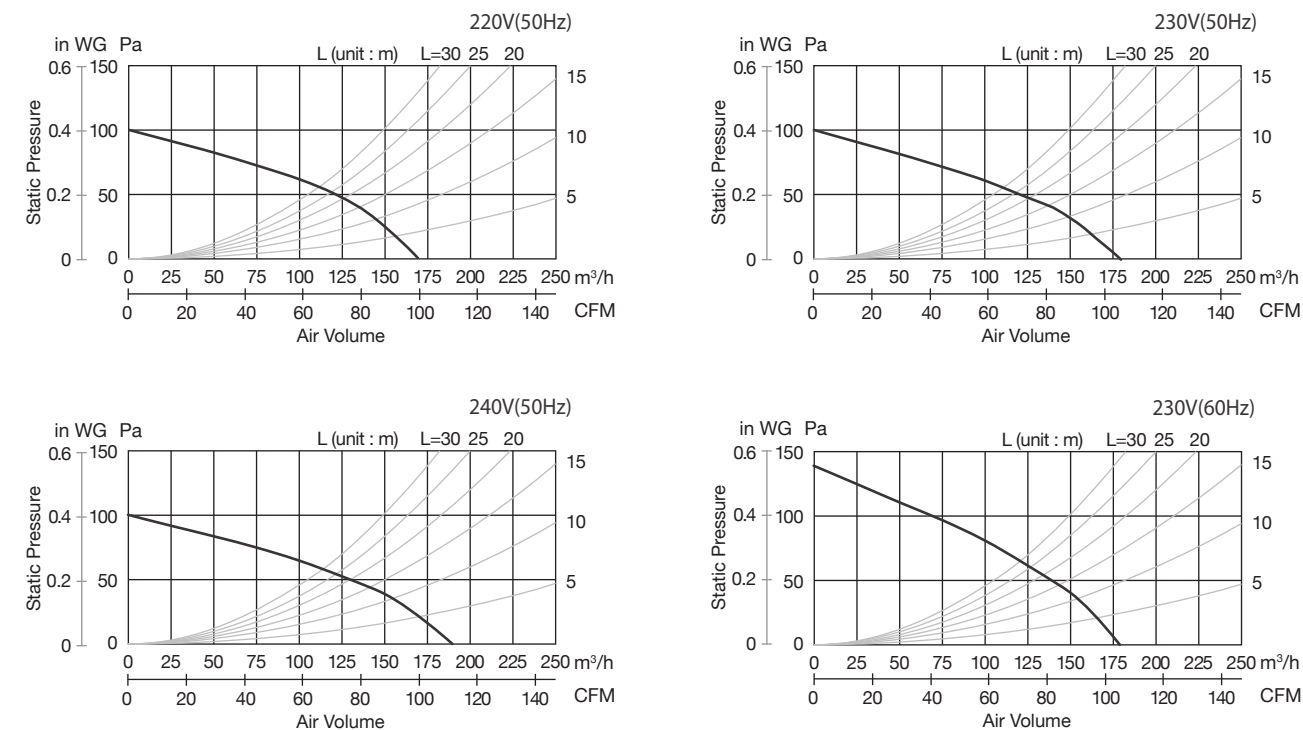




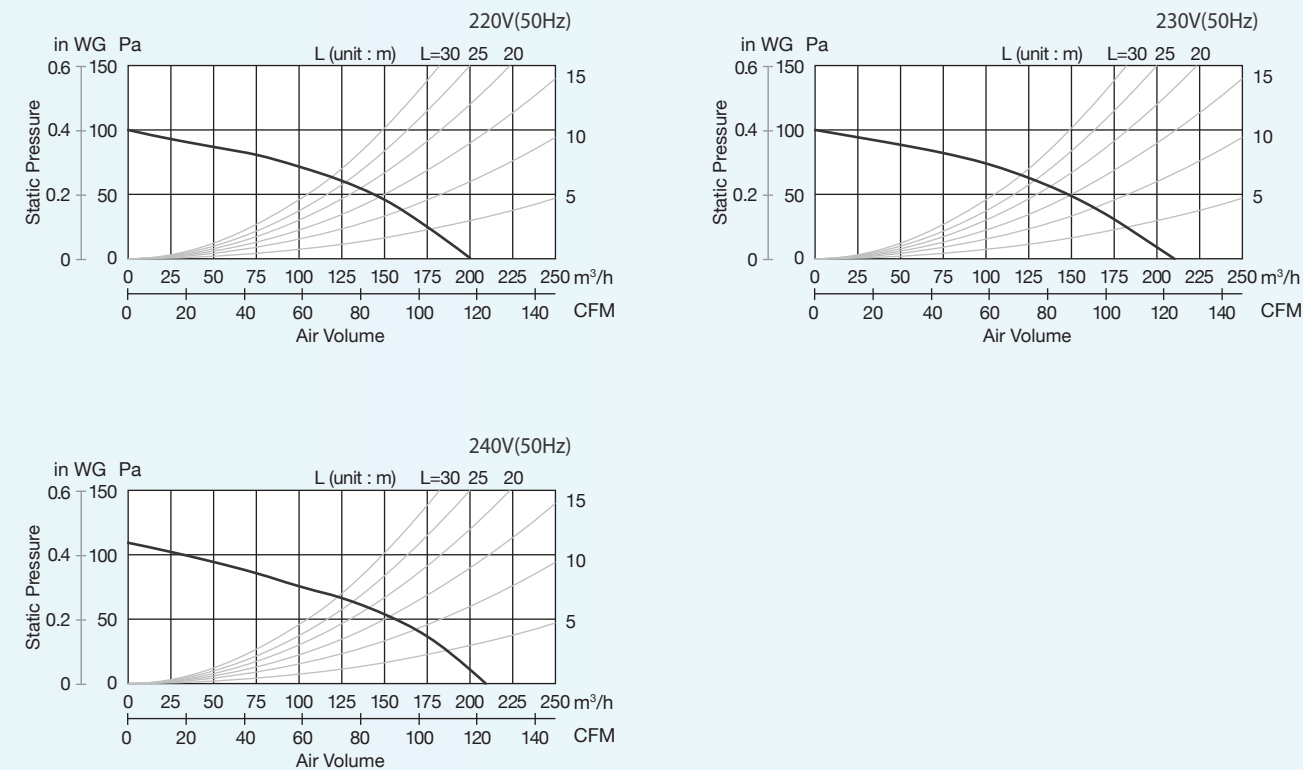
# Performance Data Summary

## Ceiling Mount Type Ventilation Fan

### Super Quiet Series: 24CDH

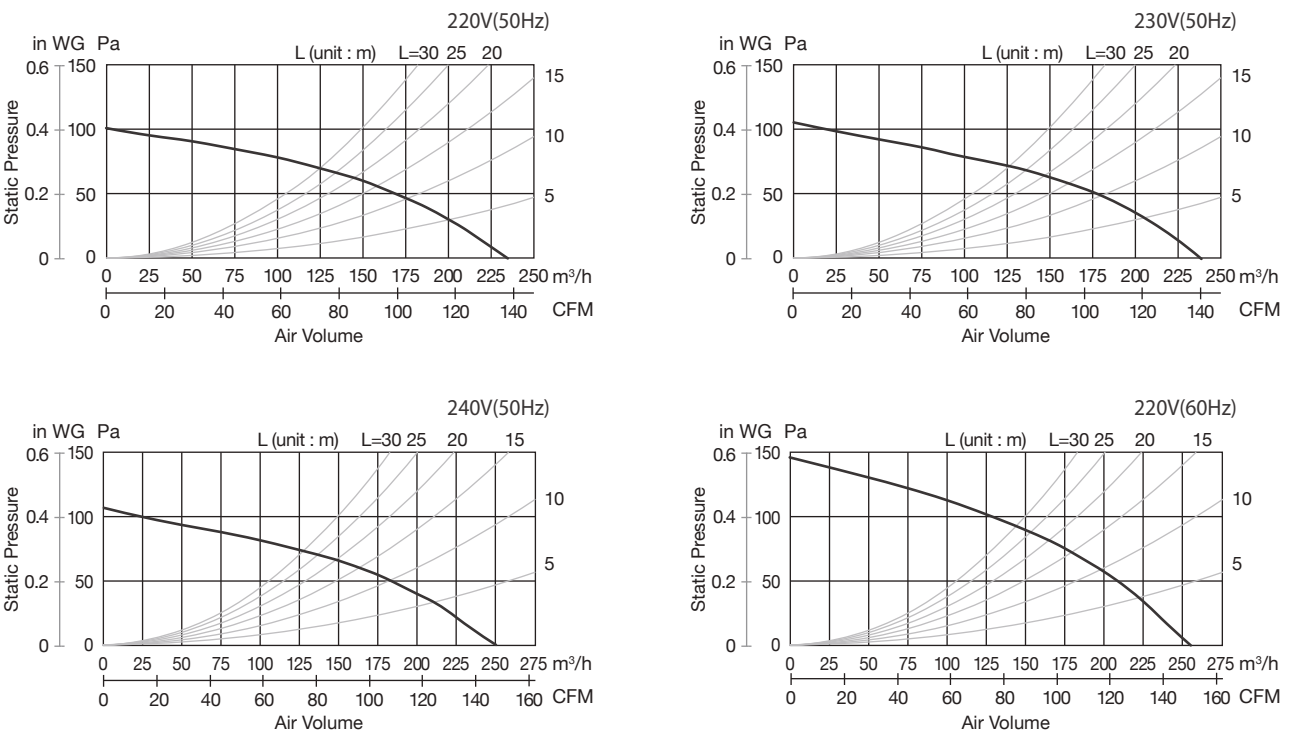


### Super Quiet Series: 24CHH

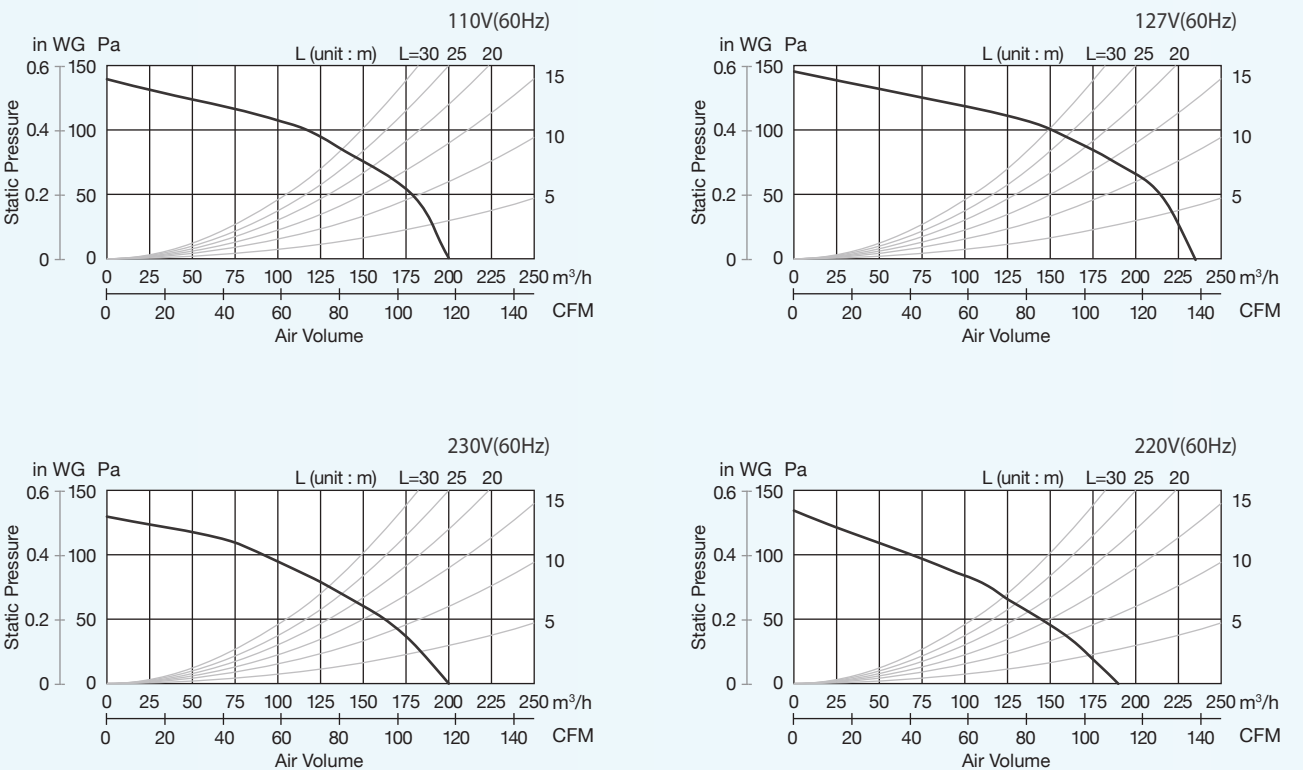


## Ceiling Mount Type Ventilation Fan

### Super Quiet Series: 24CXH



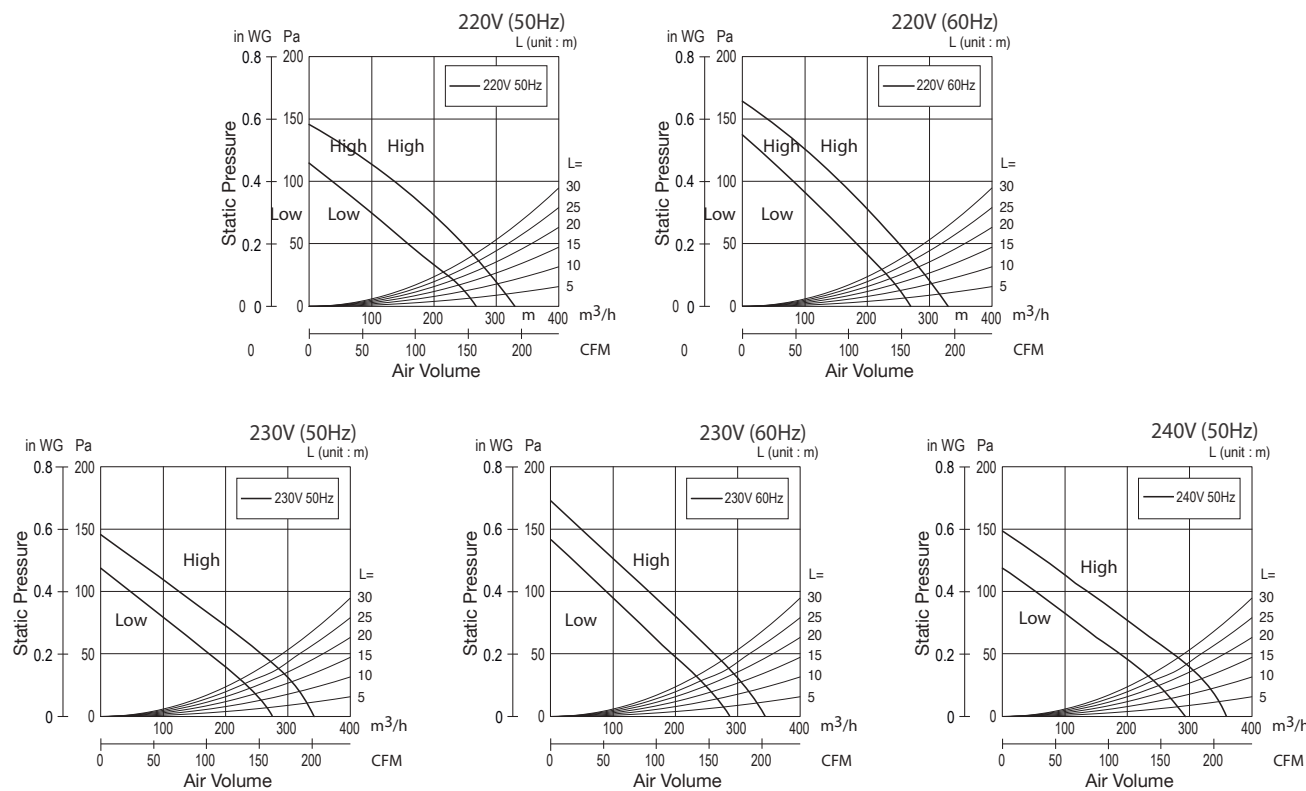
### Super Quiet Series: 24CHH



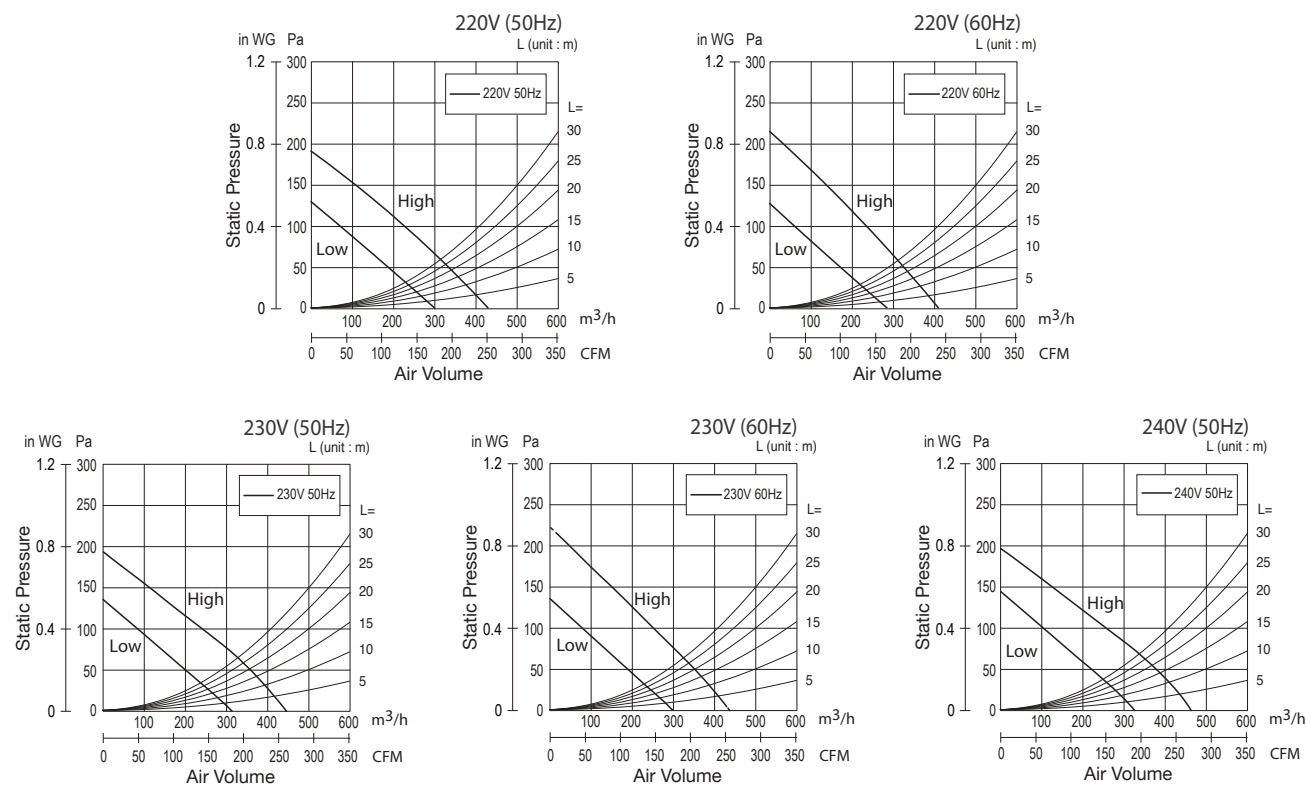
# Performance Data Summary

## Ceiling Mount Type Ventilation Fan

### Super Quiet Series: 27CHH

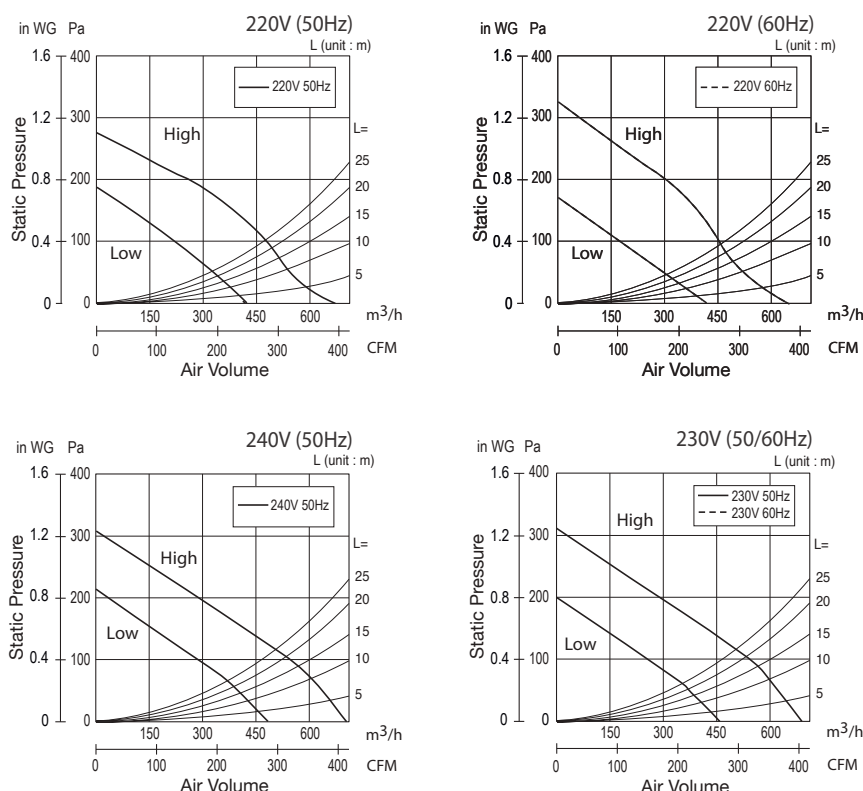


### Super Quiet Series: 32CDH

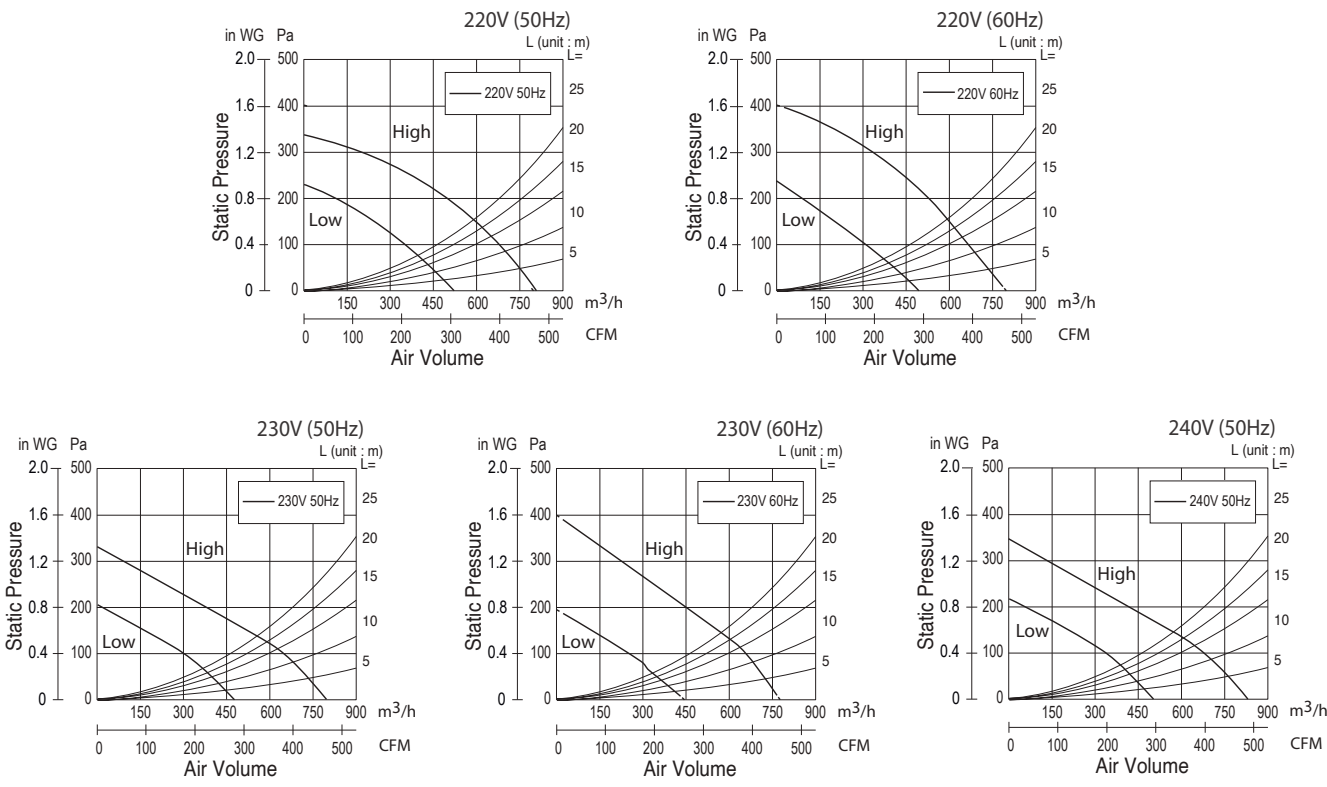


## Ceiling Mount Type Ventilation Fan

### Standard Series: 38CDG / 38CDG 05



### Standard Series: 38CHG

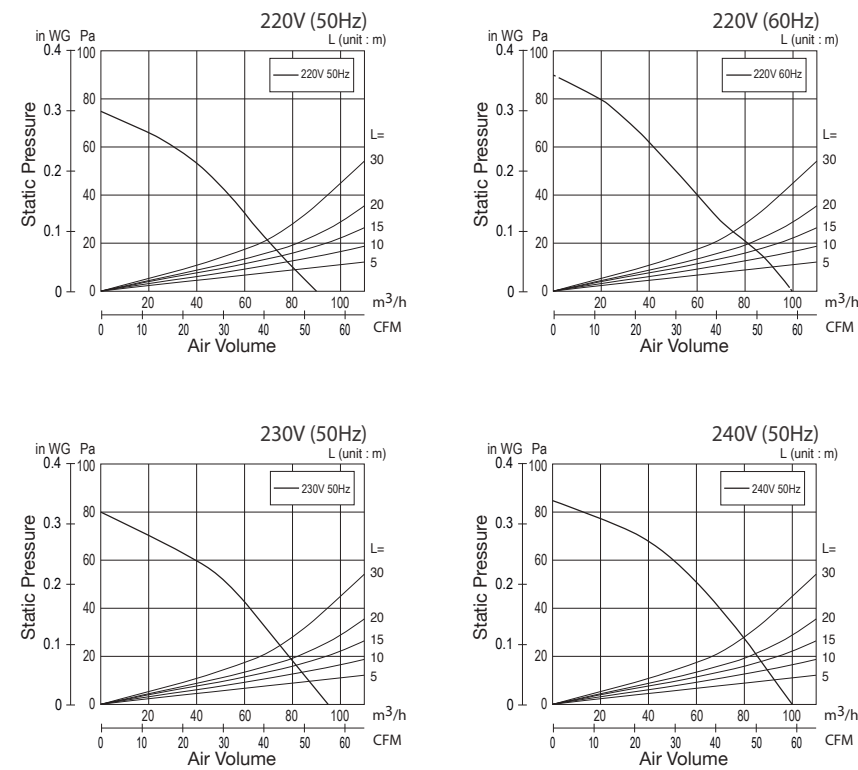




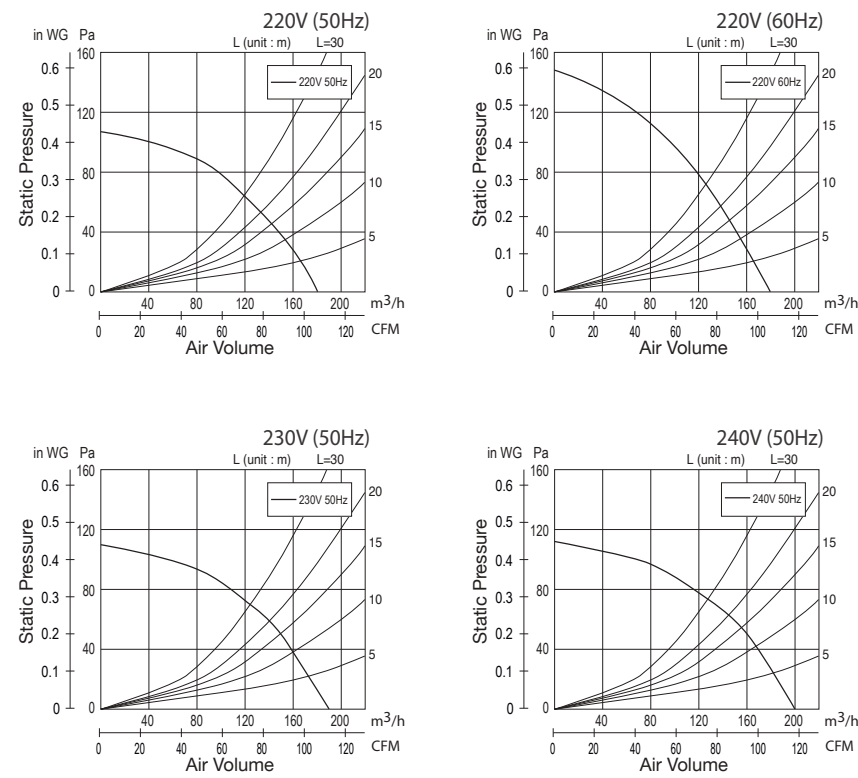
# Performance Data Summary

## Ceiling Mount Type Ventilation Fan

### Metal Series: 24CMUA

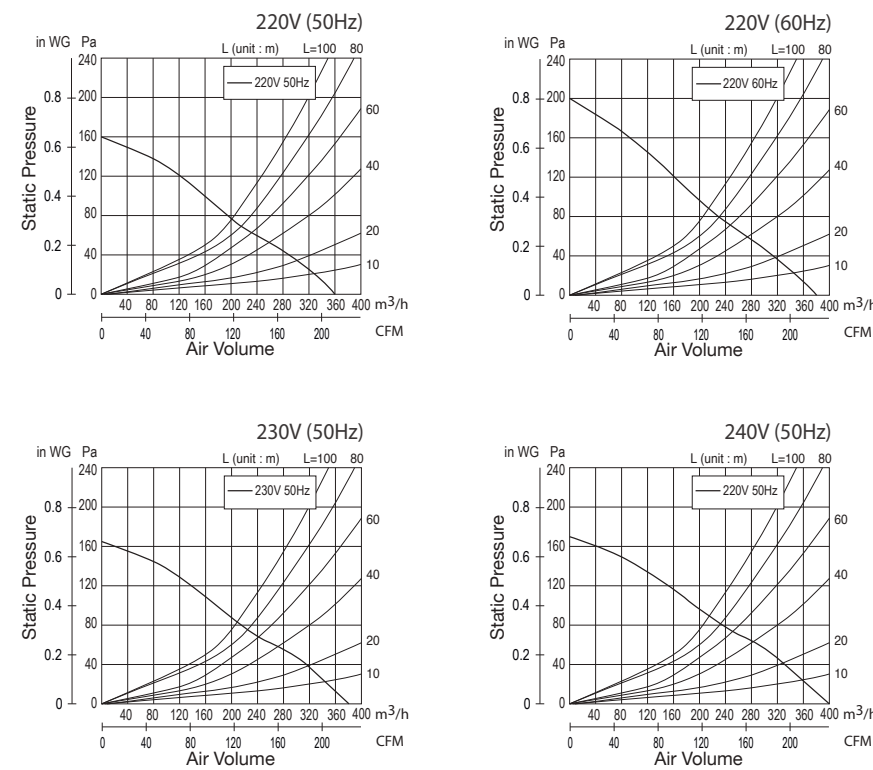


### Metal Series: 24CMHA



## Ceiling Mount Type Ventilation Fan

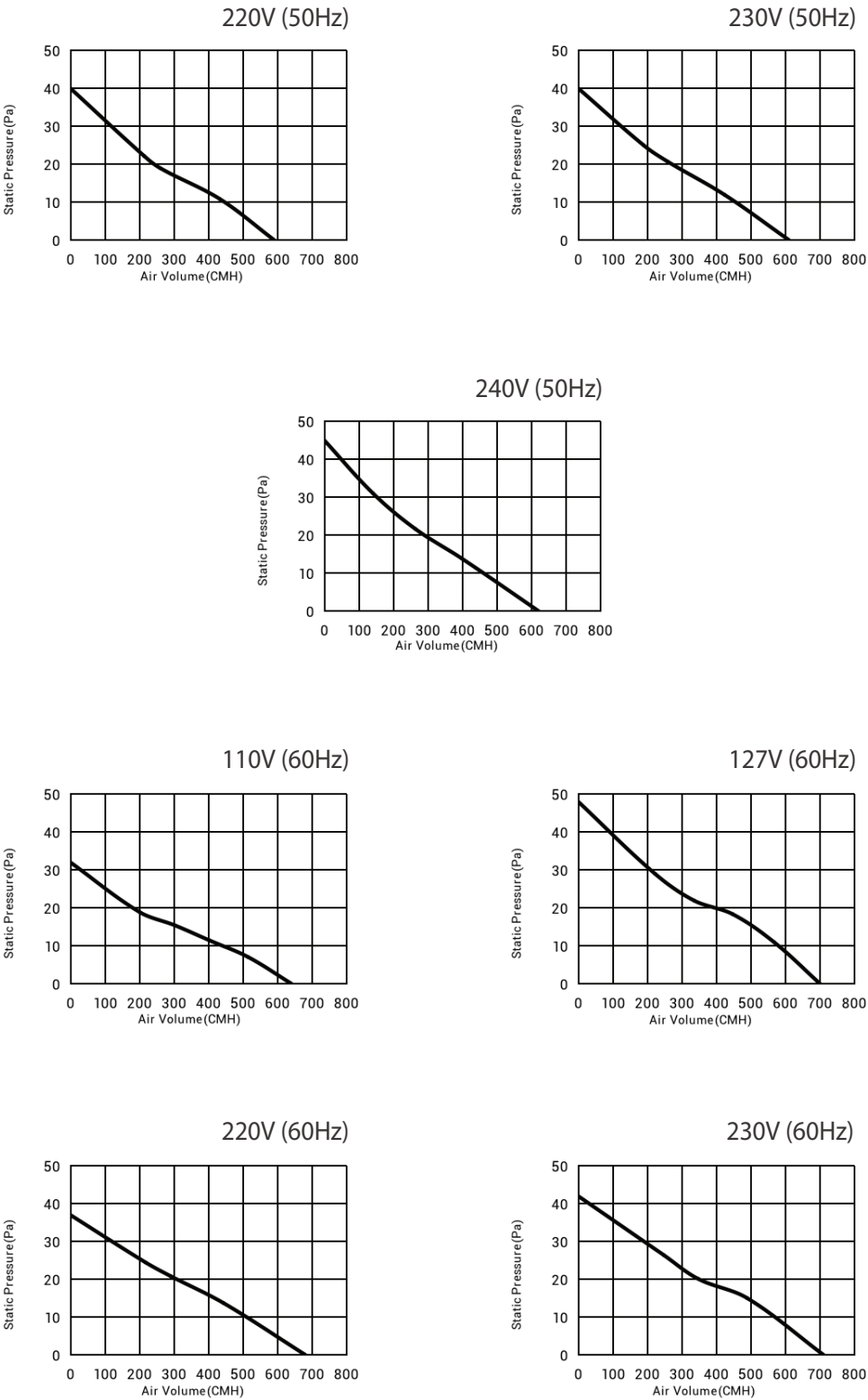
### Metal Series: 27CMHA



# Performance Data Summary

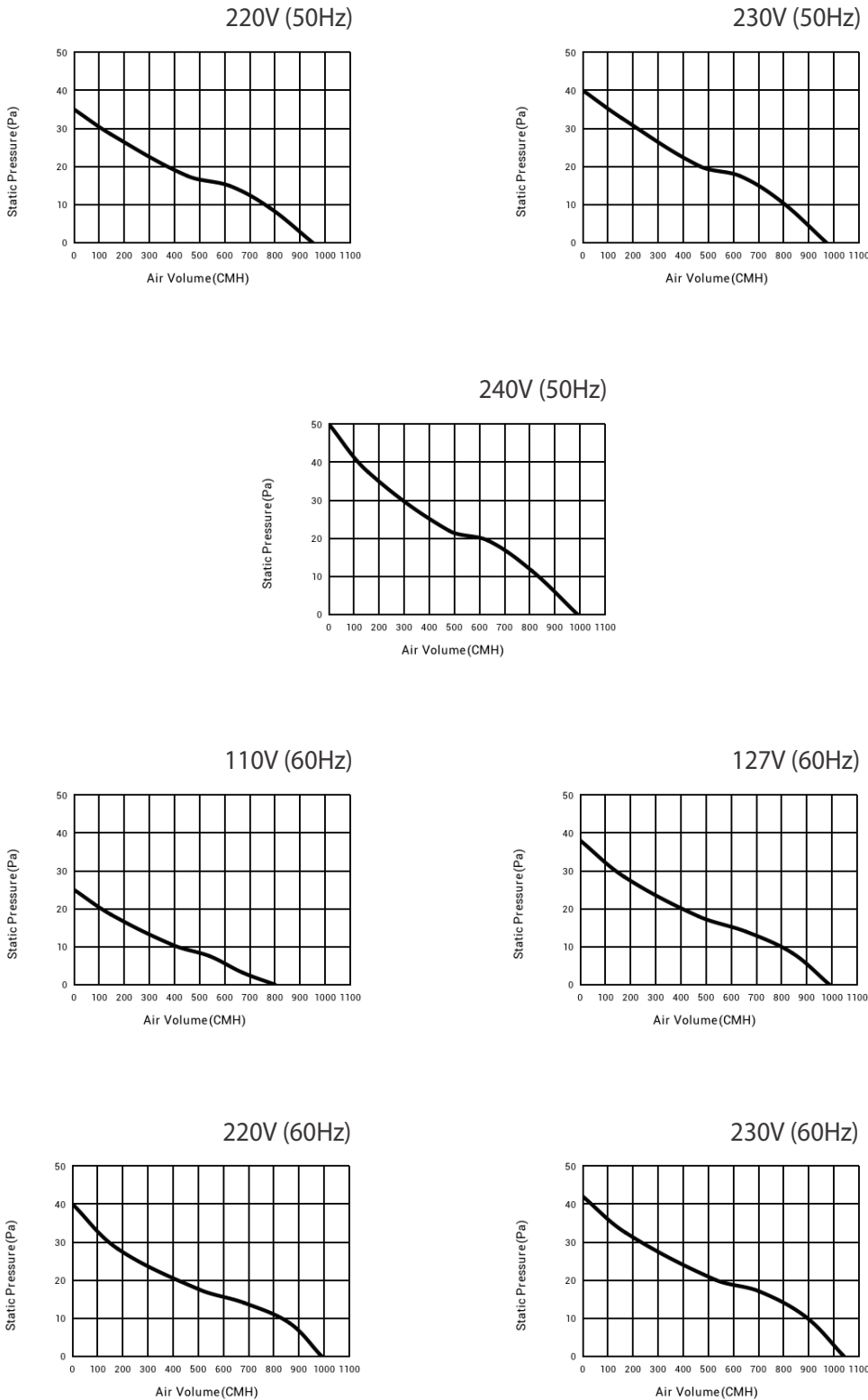
## Wall Mount Type Ventilation Fan

### Automatic Shutter Series: 20AUA



## Wall Mount Type Ventilation Fan

### Automatic Shutter Series: 25AUA

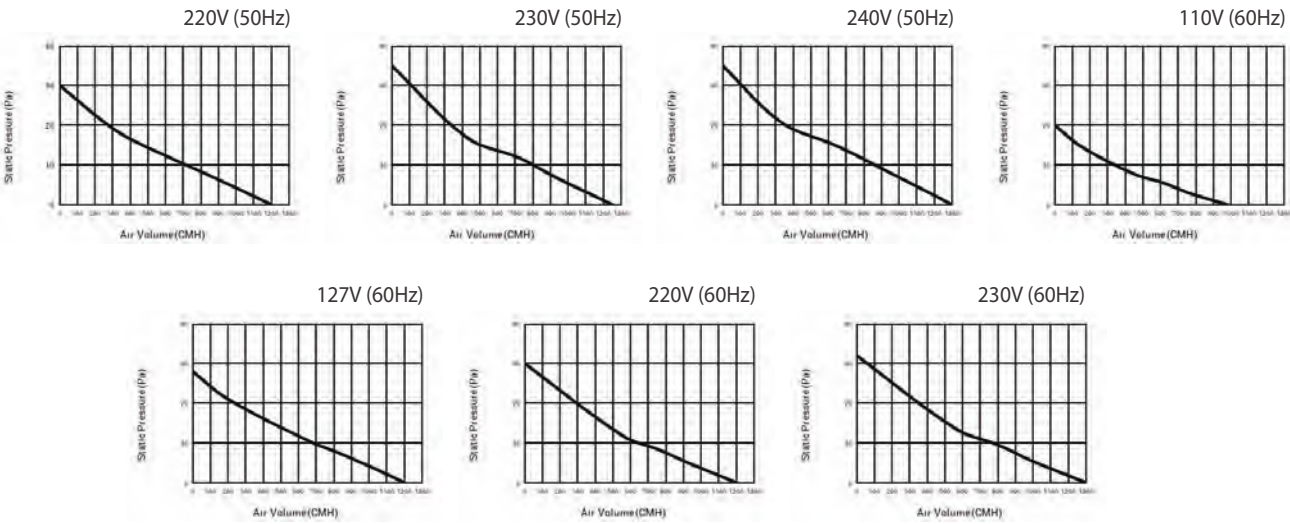




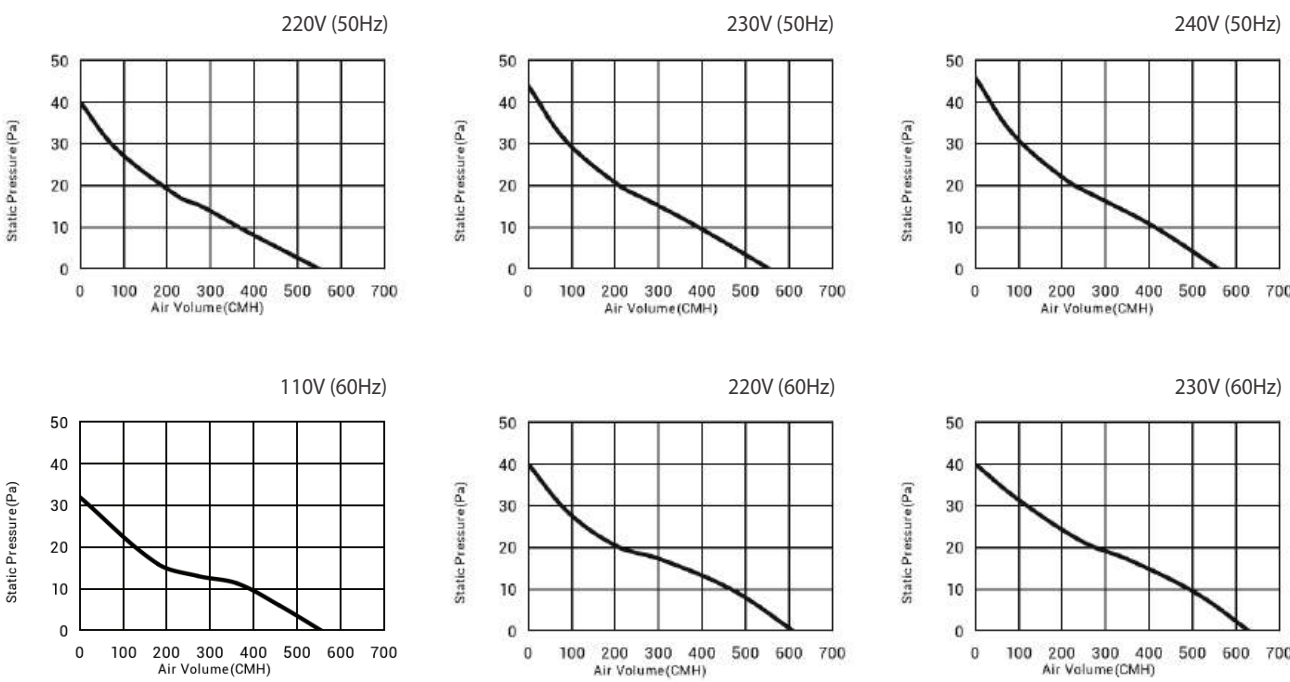
# Performance Data Summary

## Wall Mount Type Ventilation Fan

### Automatic Shutter Series: 30AUA

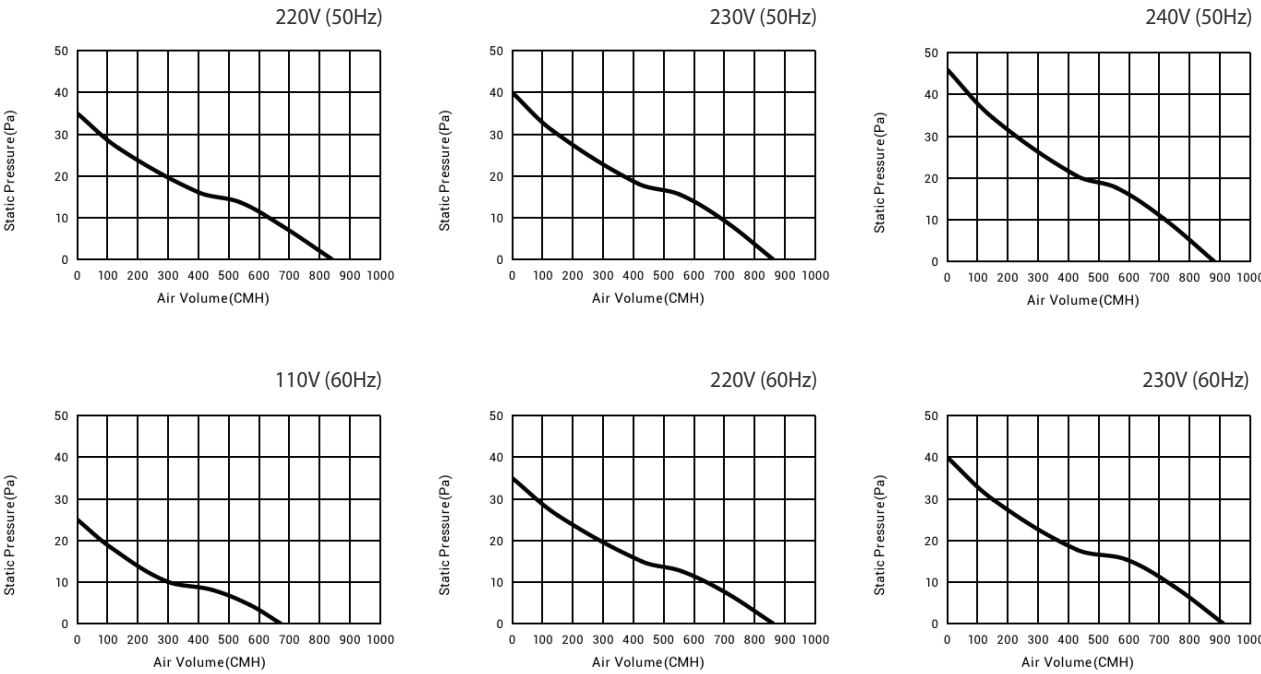


### Automatic Shutter Louver Series: 20ALA

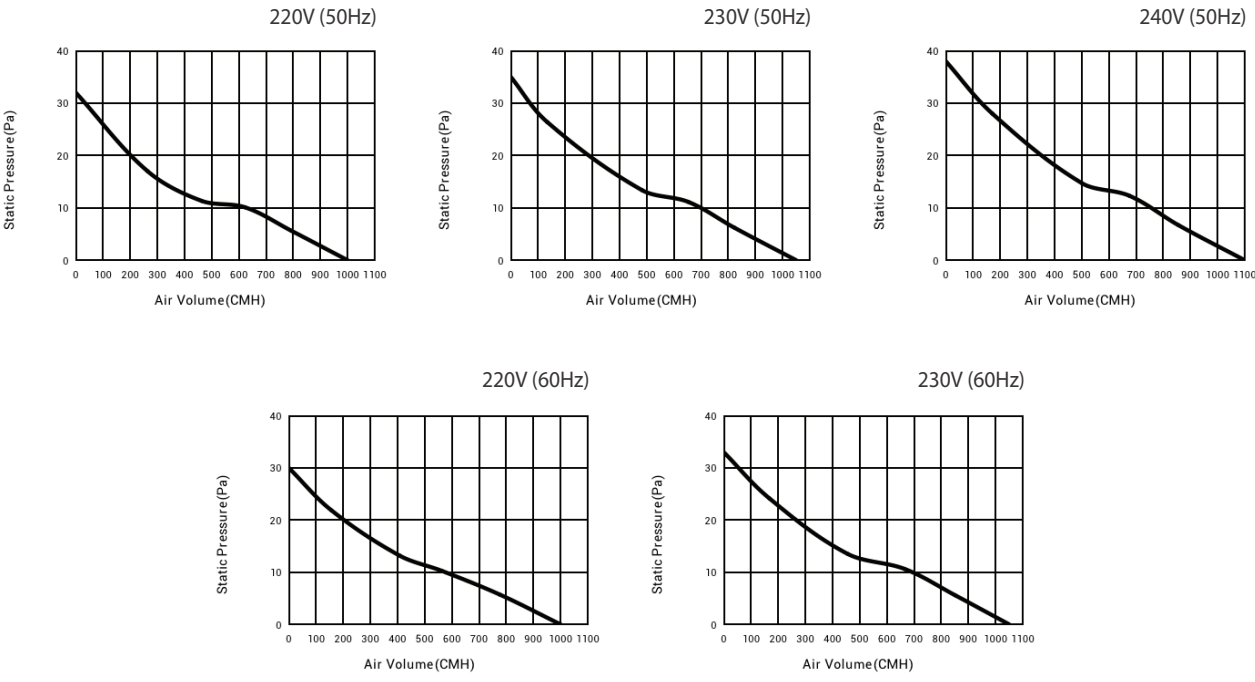


## Wall Mount Type Ventilation Fan

### Automatic Shutter Louver Series: 25ALA



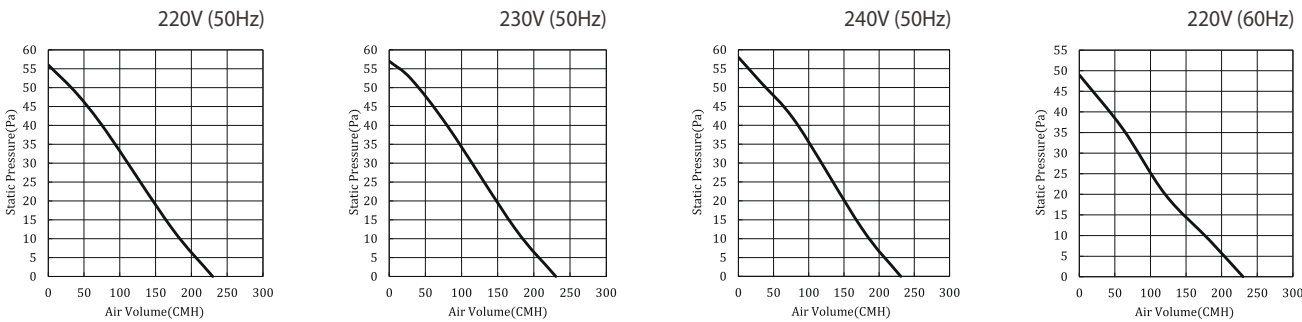
### Automatic Shutter Louver Series: 30ALA



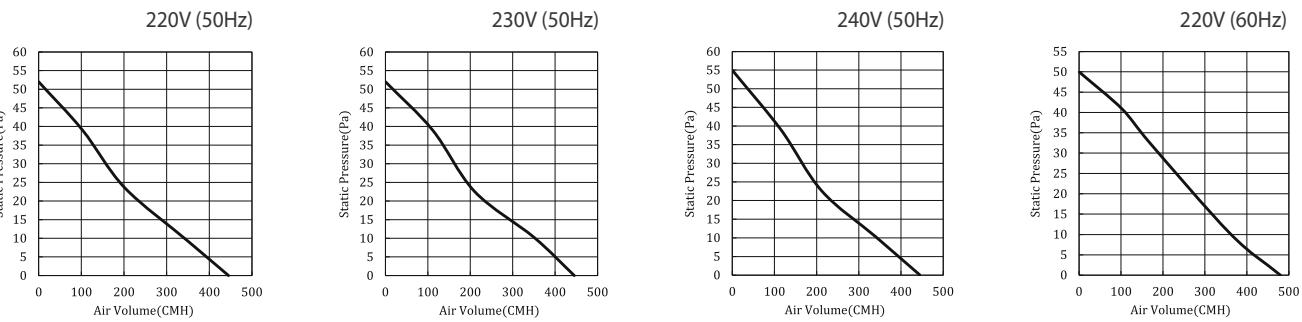
# Performance Data Summary

## Window Mount Type Ventilation Fan

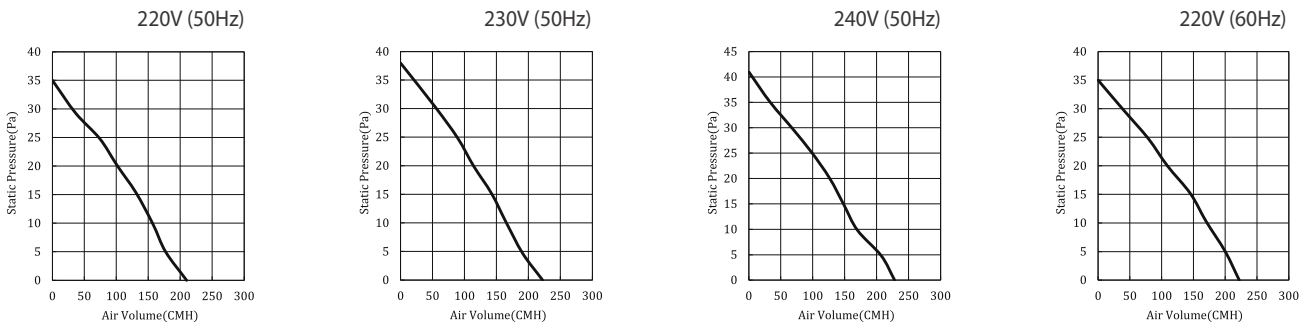
### Electric Shutter Series: 15WHCT



### Electric Shutter Series: 20WHCT

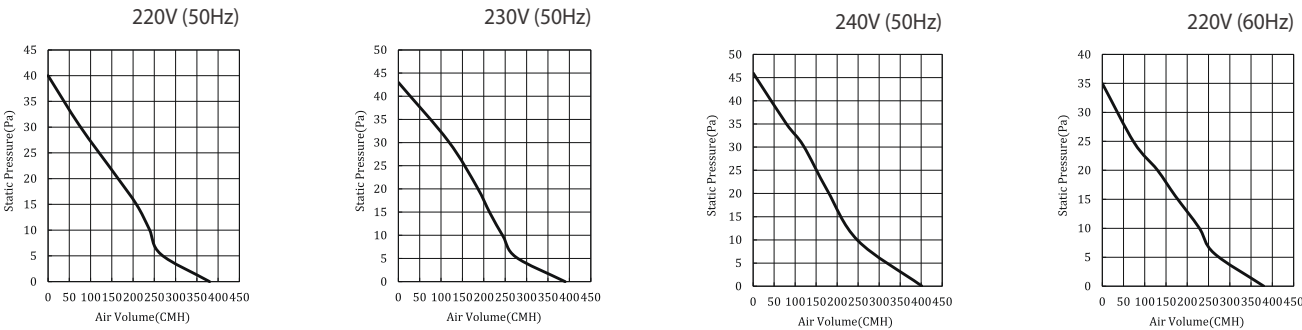


### Automatic Shutter Series: 15WAA

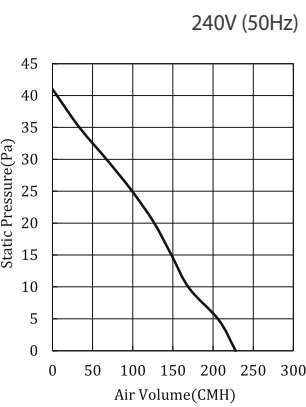


## Window Mount Type Ventilation Fan

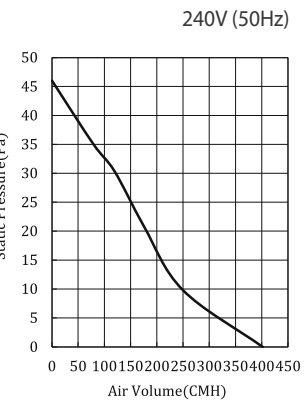
### Automatic Shutter Series: 20WAA



### Automatic Shutter Series: 15WAAMN



### Automatic Shutter Series: 20WAAMN

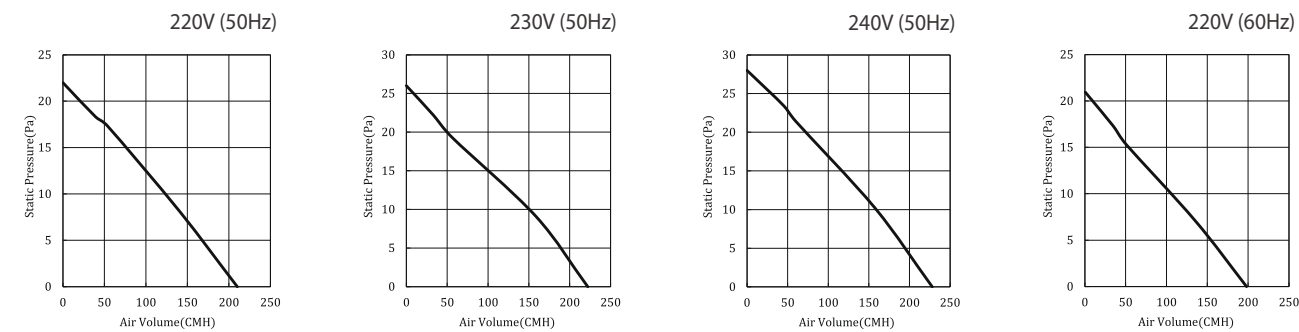




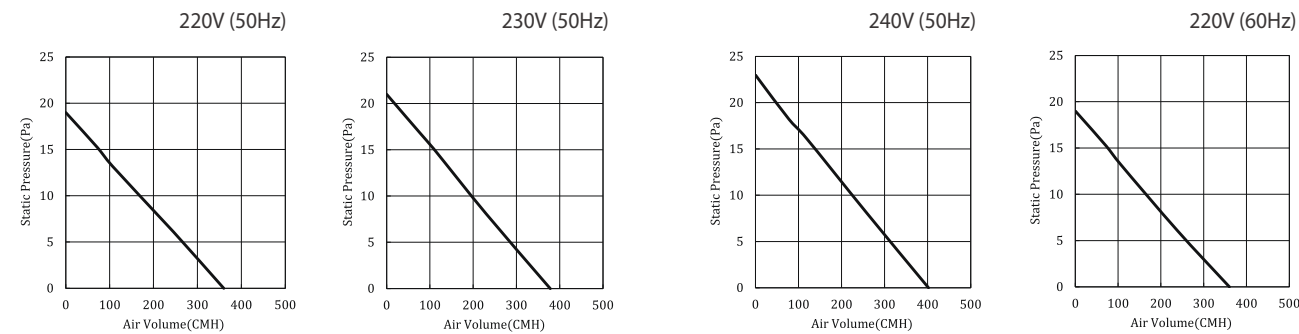
# Performance Data Summary

## Window Mount Type Ventilation Fan

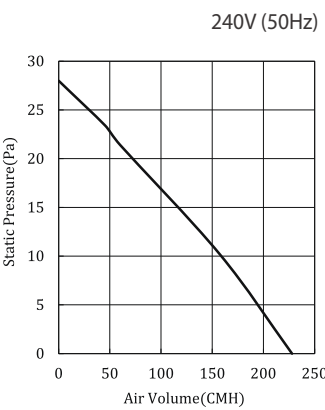
### Cord-operated Shutter Series: 15WUD



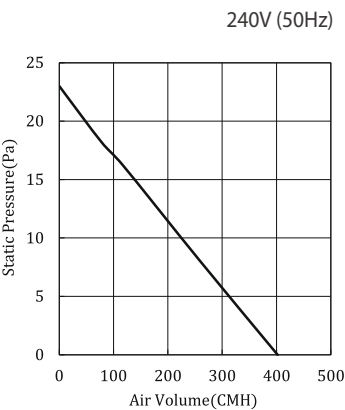
### Cord-operated Shutter Series: 20WUD



### Cord-operated Shutter Series: 15WUDMN

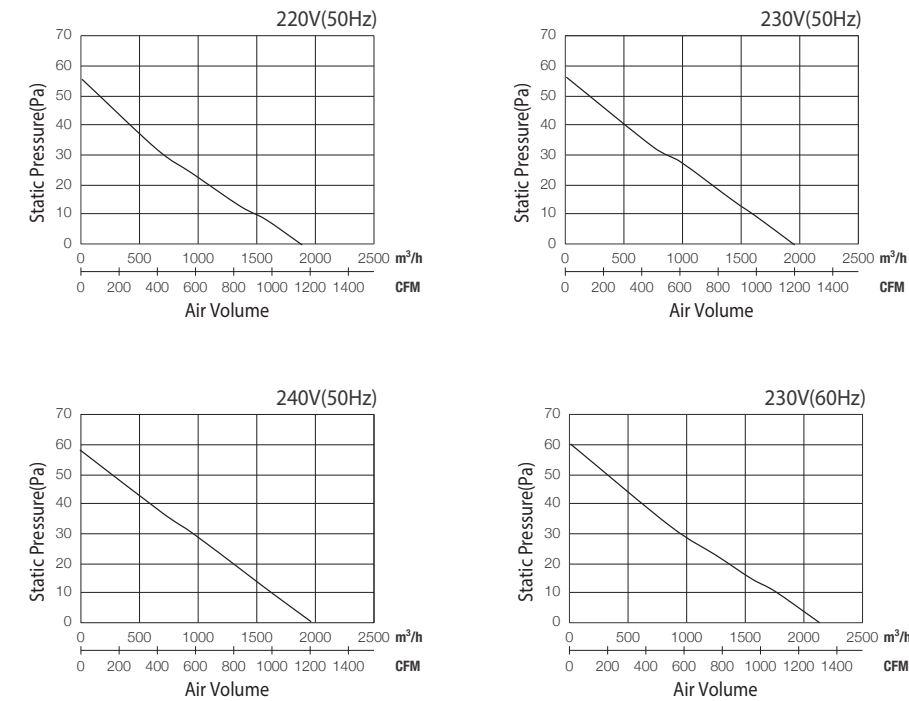


### Cord-operated Shutter Series: 20WUDMN

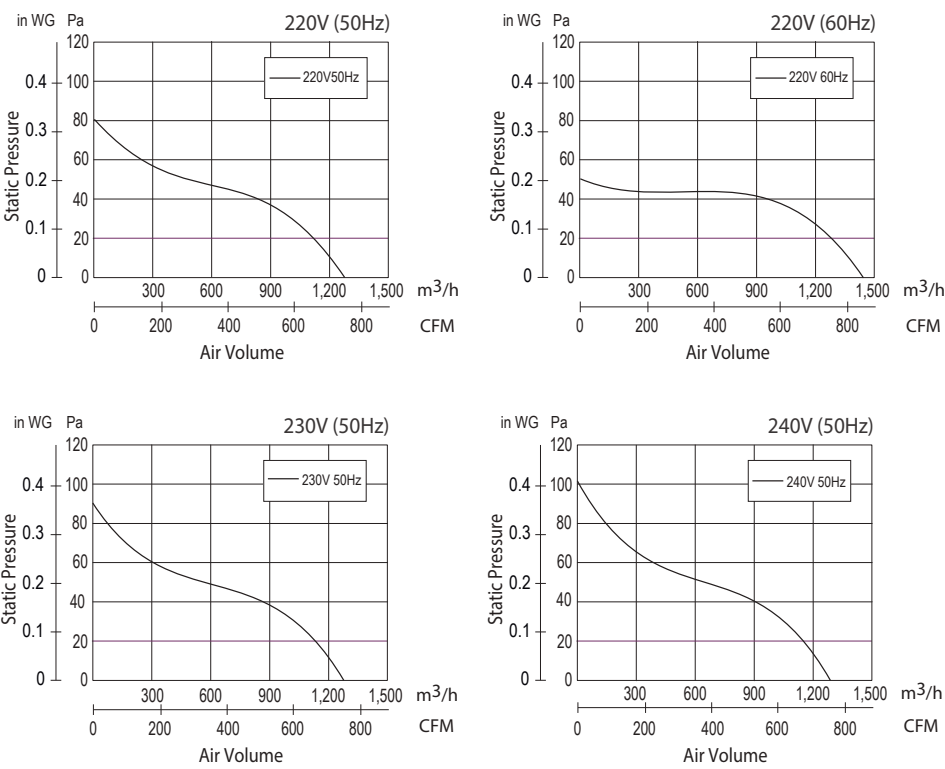


## Industrial Type Ventilation Fan

### Shutter Series: 40KAQA



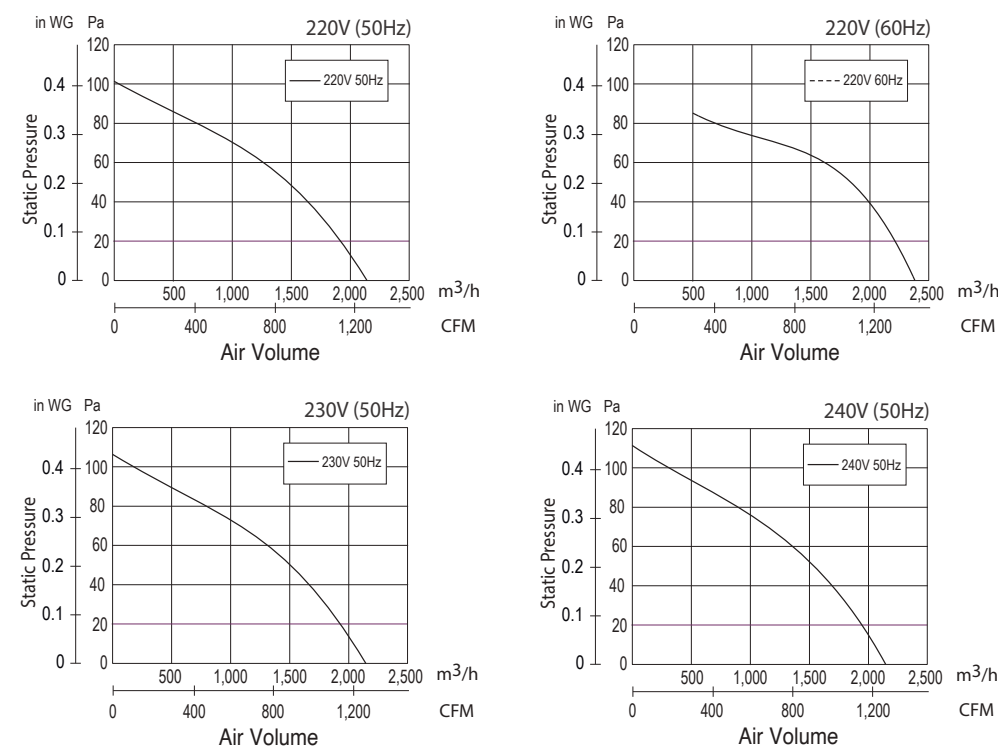
### High Pressure Series: 25GSE



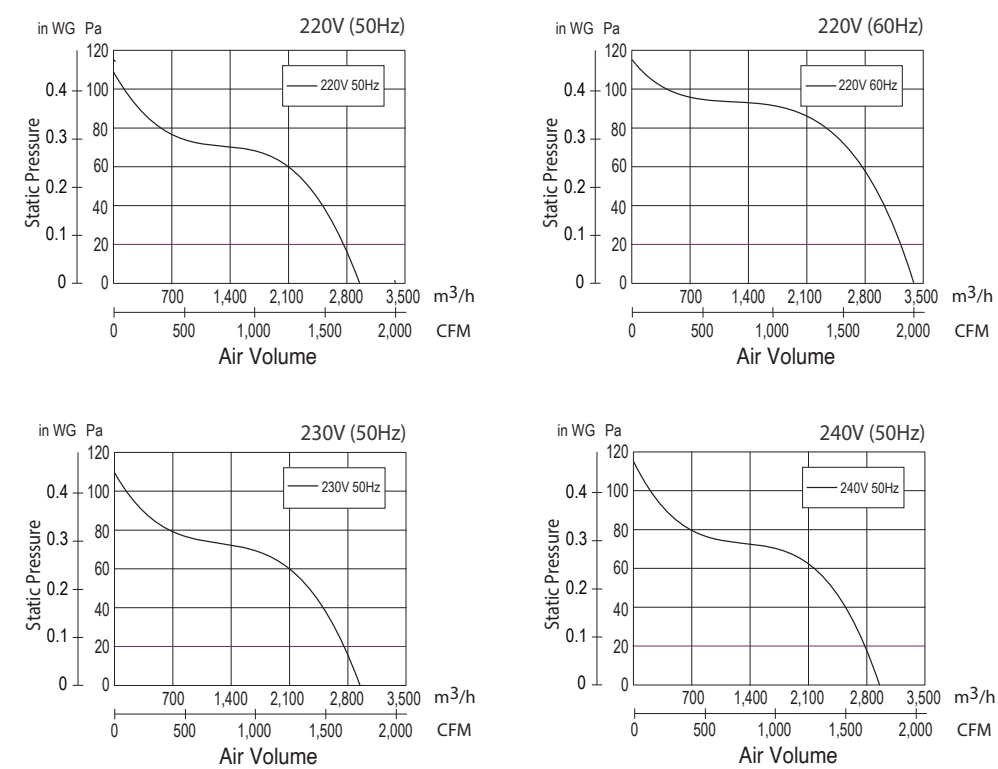
# Performance Data Summary

## Industrial Type Ventilation Fan

### High Pressure Series: 30GSE

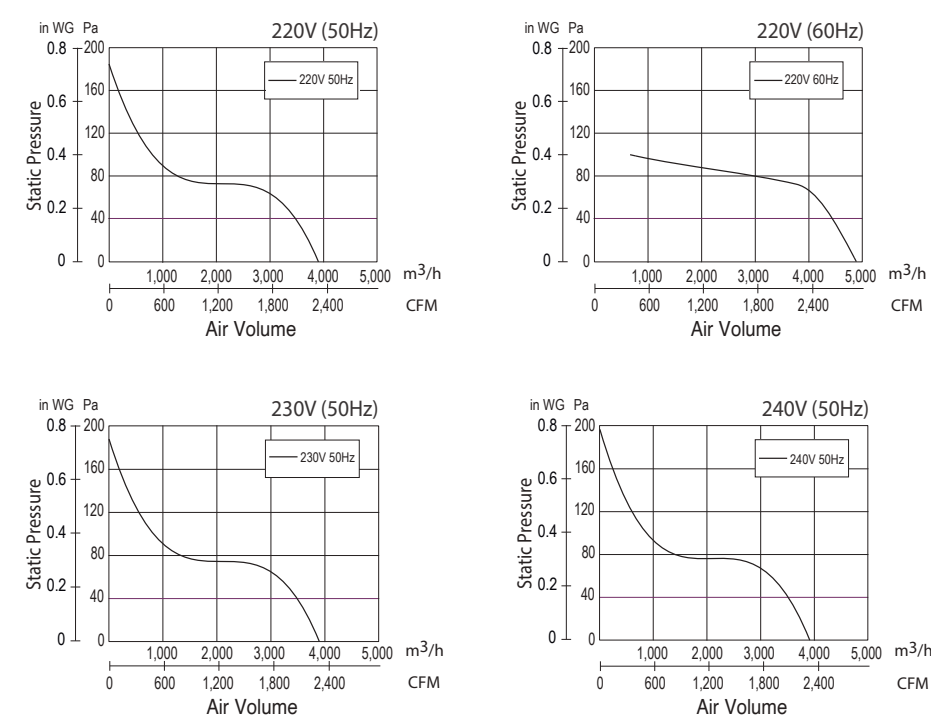


### High Pressure Series: 35GSE

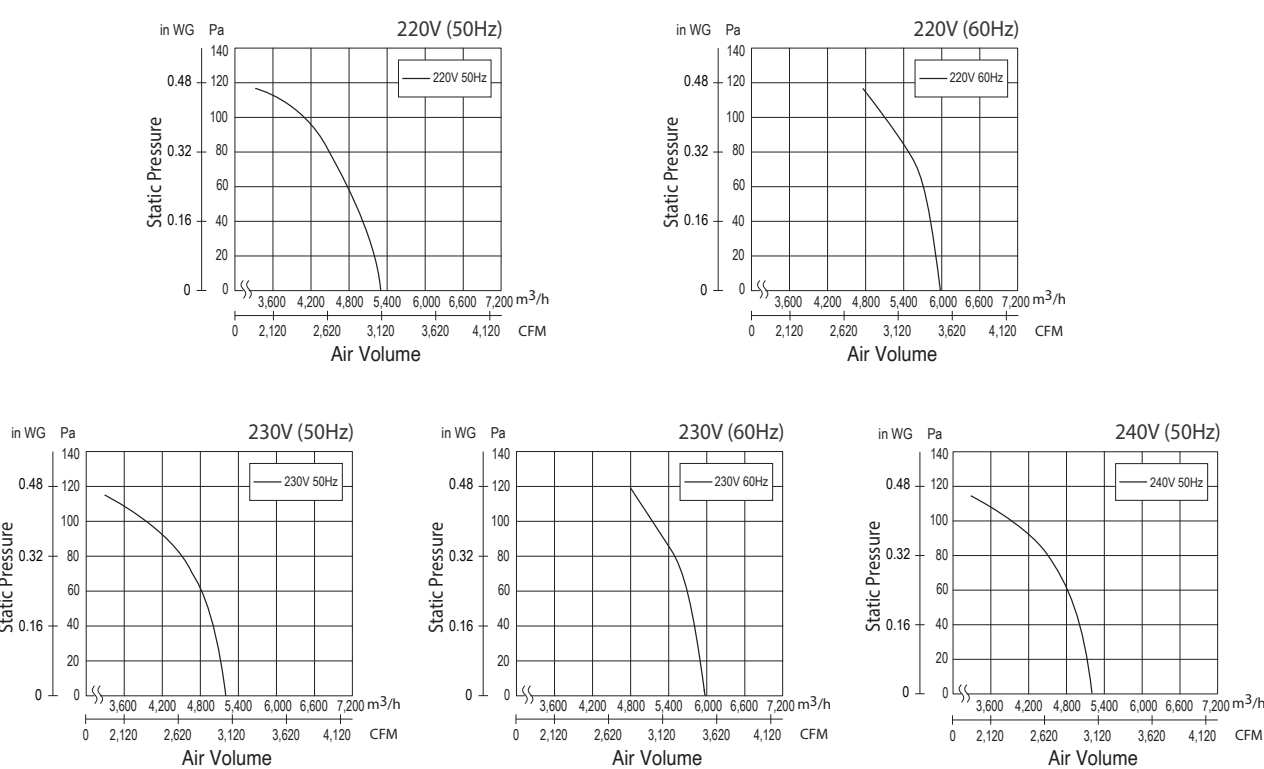


## Industrial Type Ventilation Fan

### High Pressure Series: 40GSE



### High Pressure Series: 45GSC

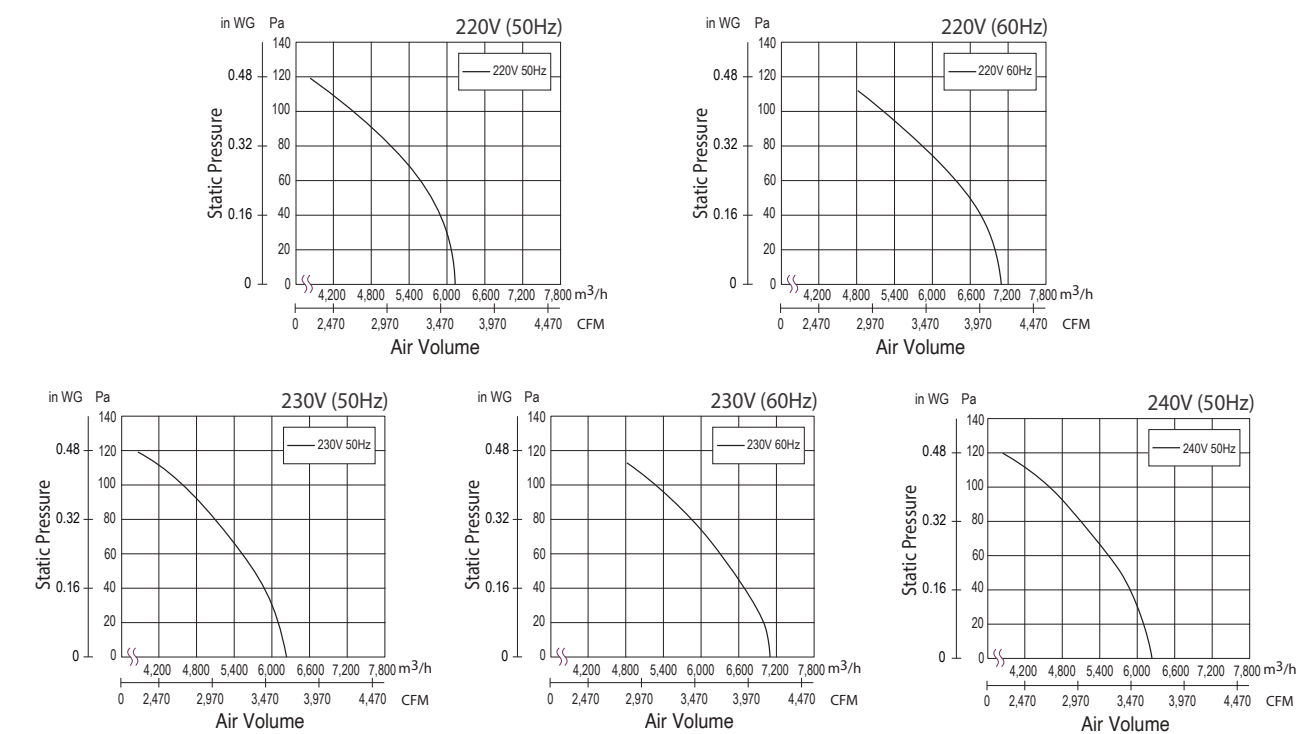




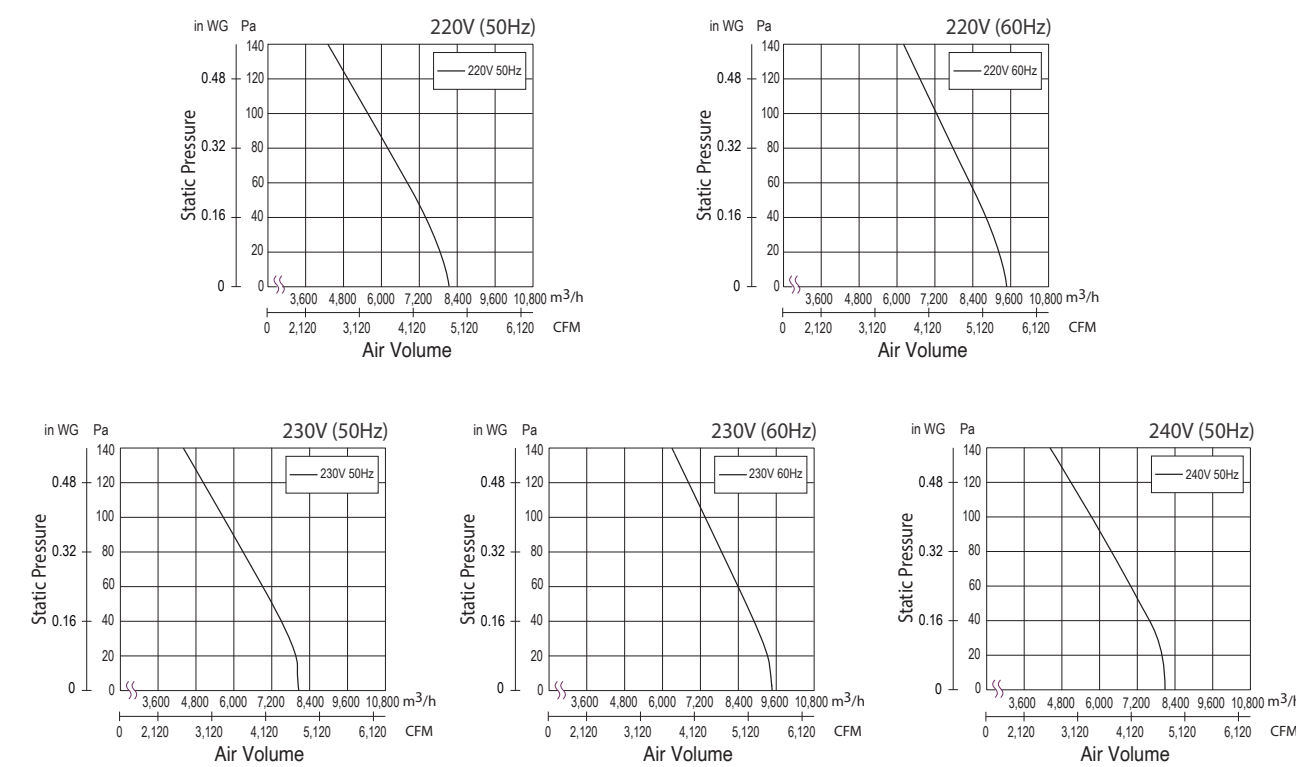
# Performance Data Summary

## Industrial Type Ventilation Fan

### High Pressure Series: 50GSC

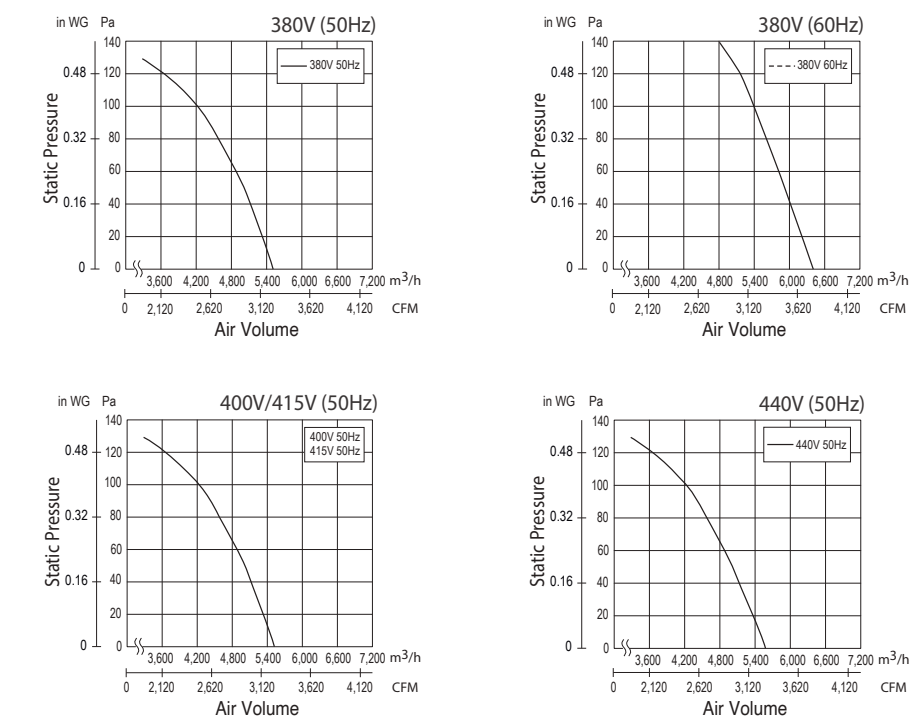


### High Pressure Series: 60GSC

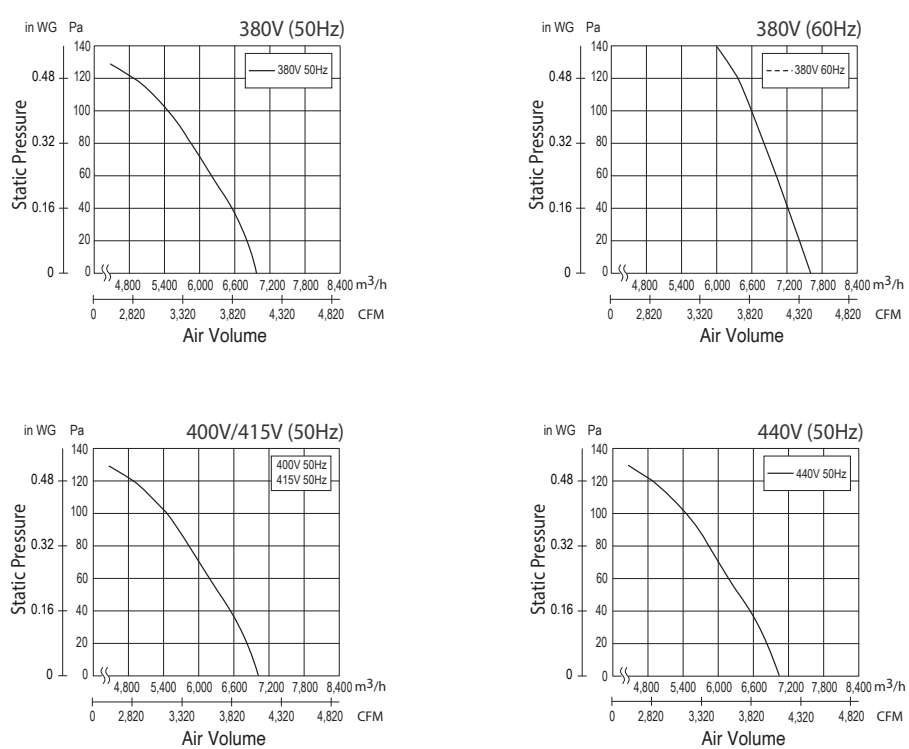


## Industrial Type Ventilation Fan

### High Pressure Series: 45GTC



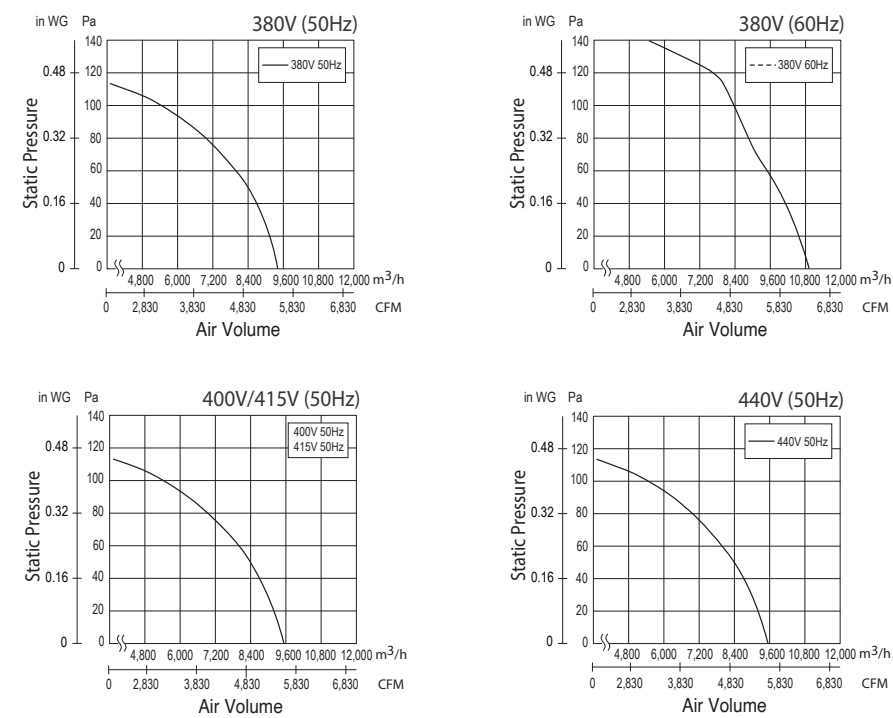
### High Pressure Series: 50GTC



# Performance Data Summary

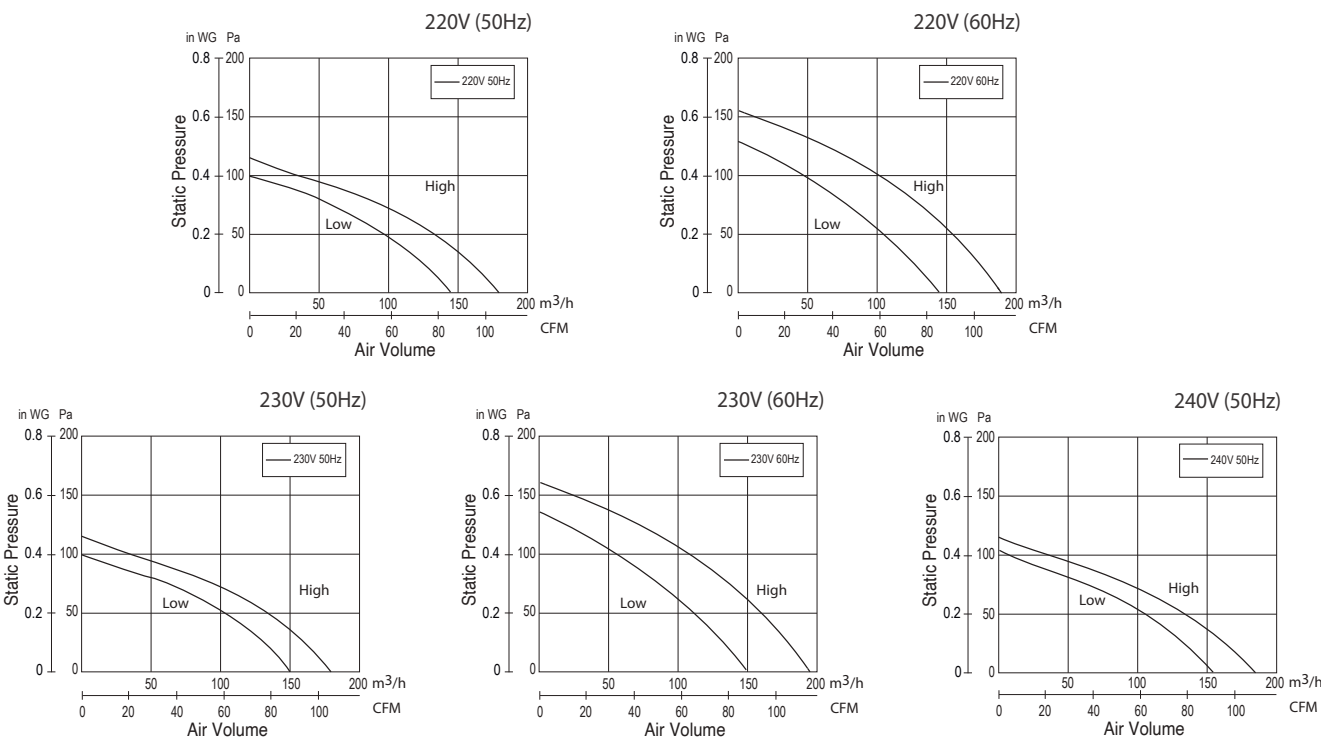
## Industrial Type Ventilation Fan

### High Pressure Series: 60GTC

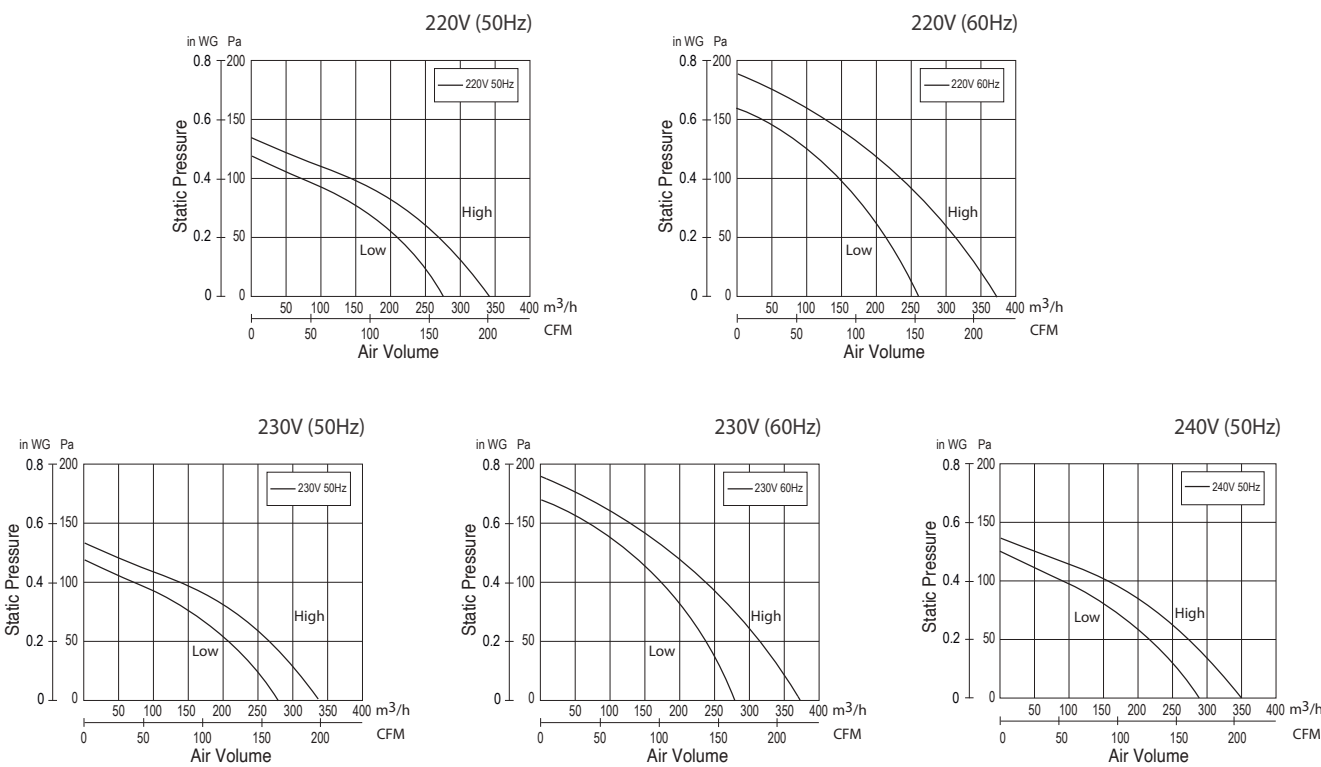


## Cabinet Fan (In-line Fan)

### Standard Series: 12NSB



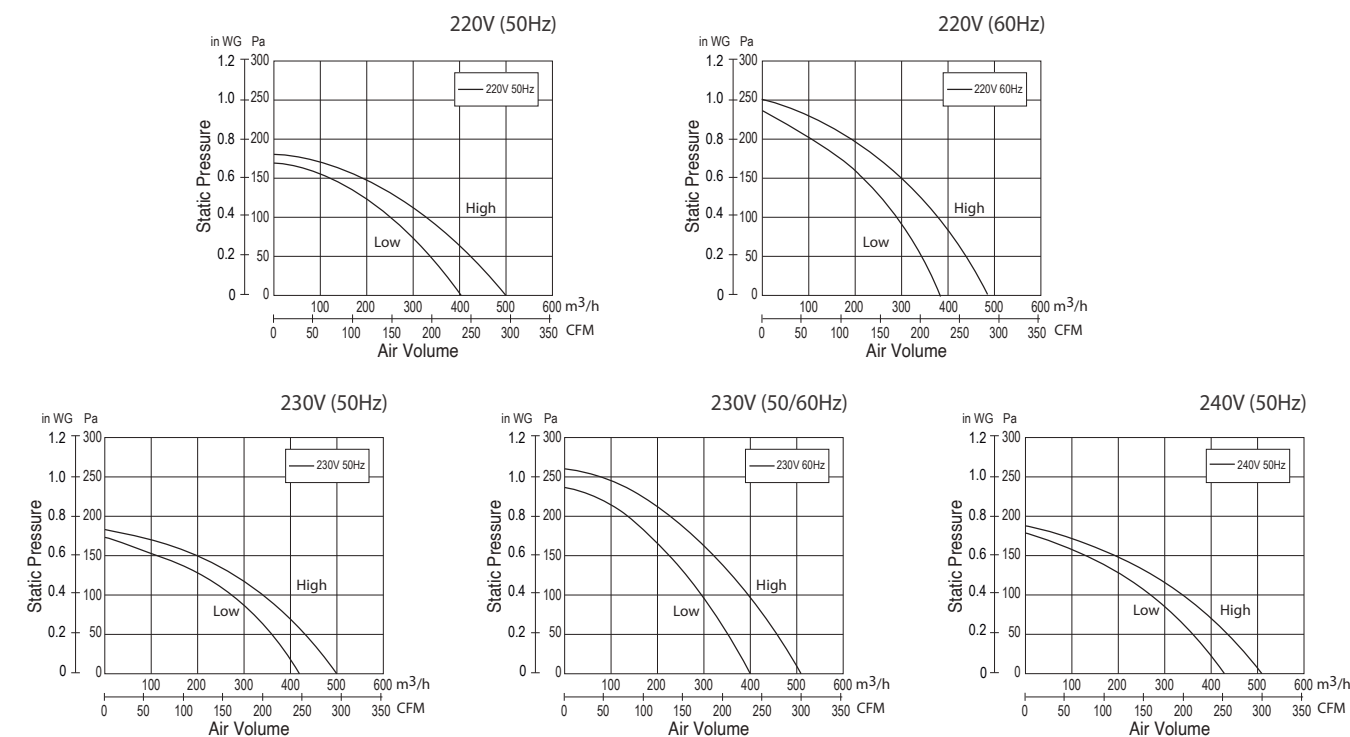
### Standard Series: 15NSB



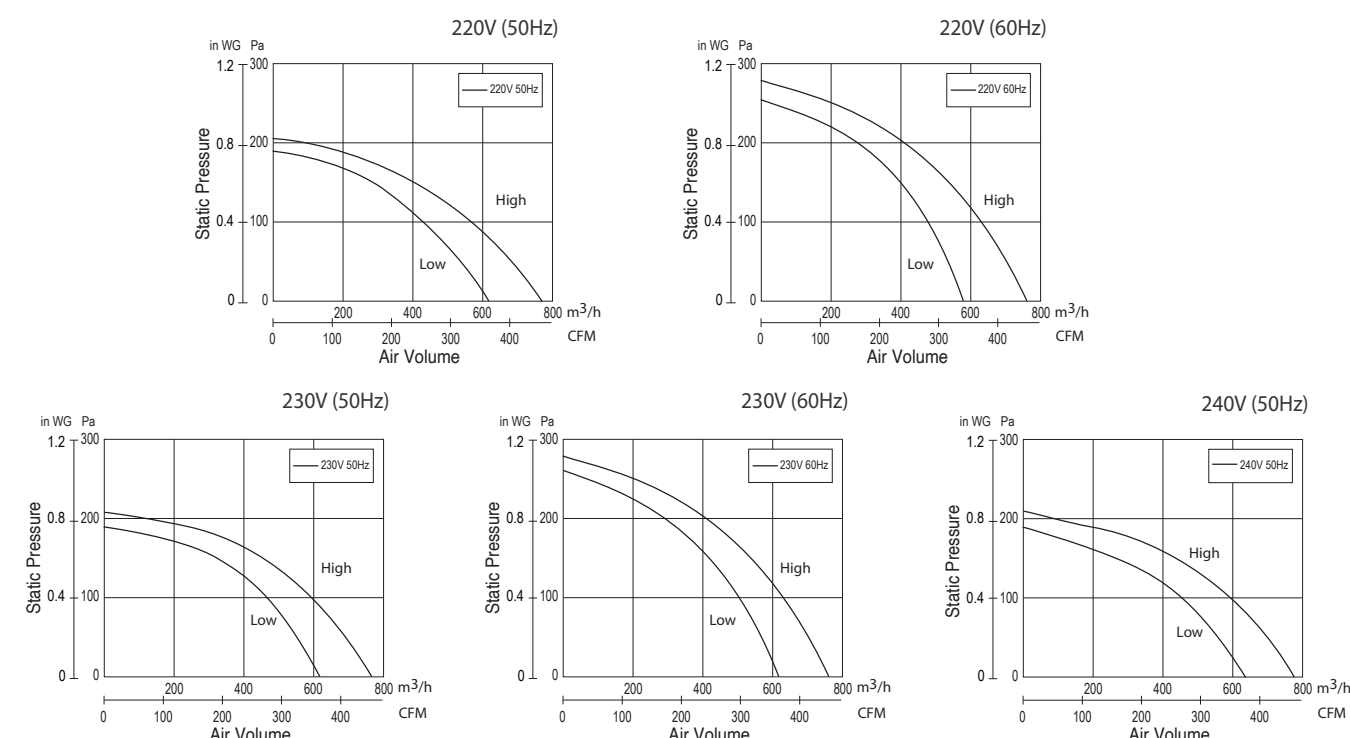
# Performance Data Summary

## Cabinet Fan (In-line Fan)

### Standard Series: 18NSB

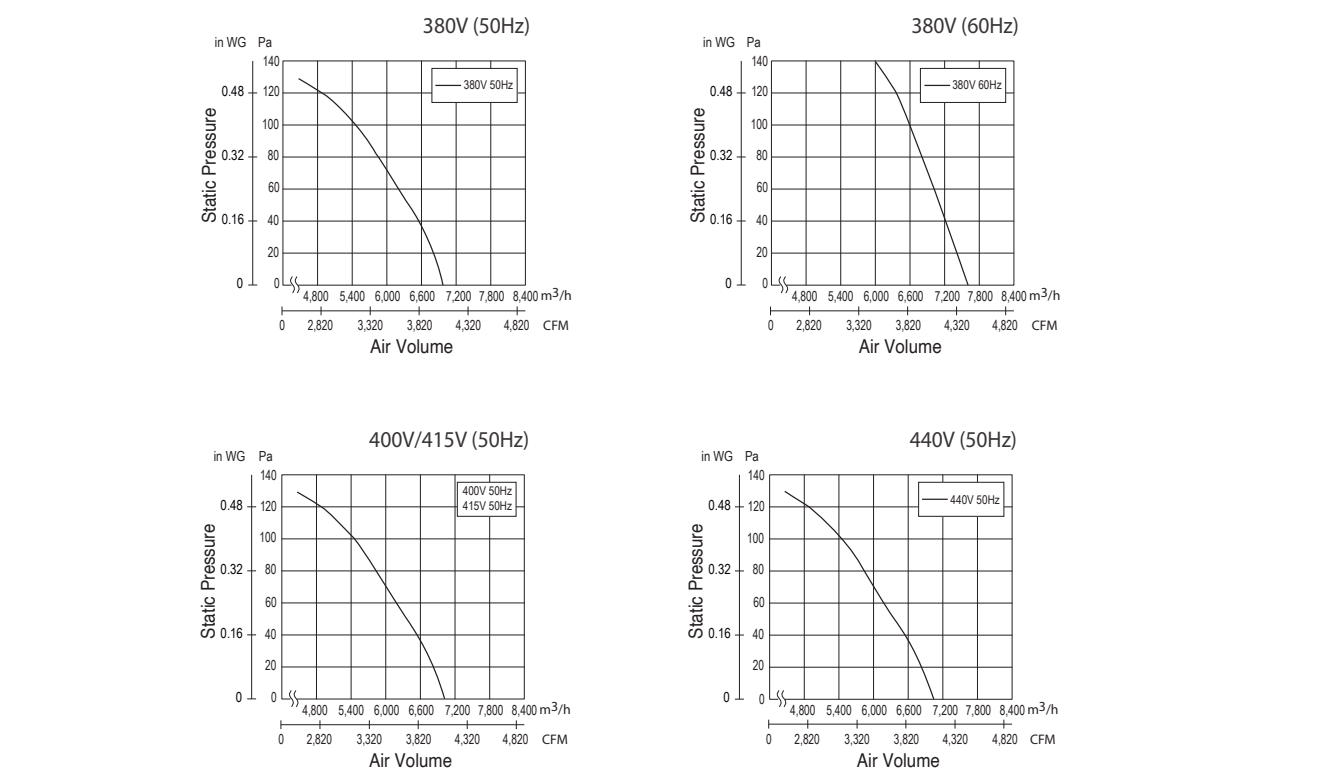


### Standard Series: 18NFB

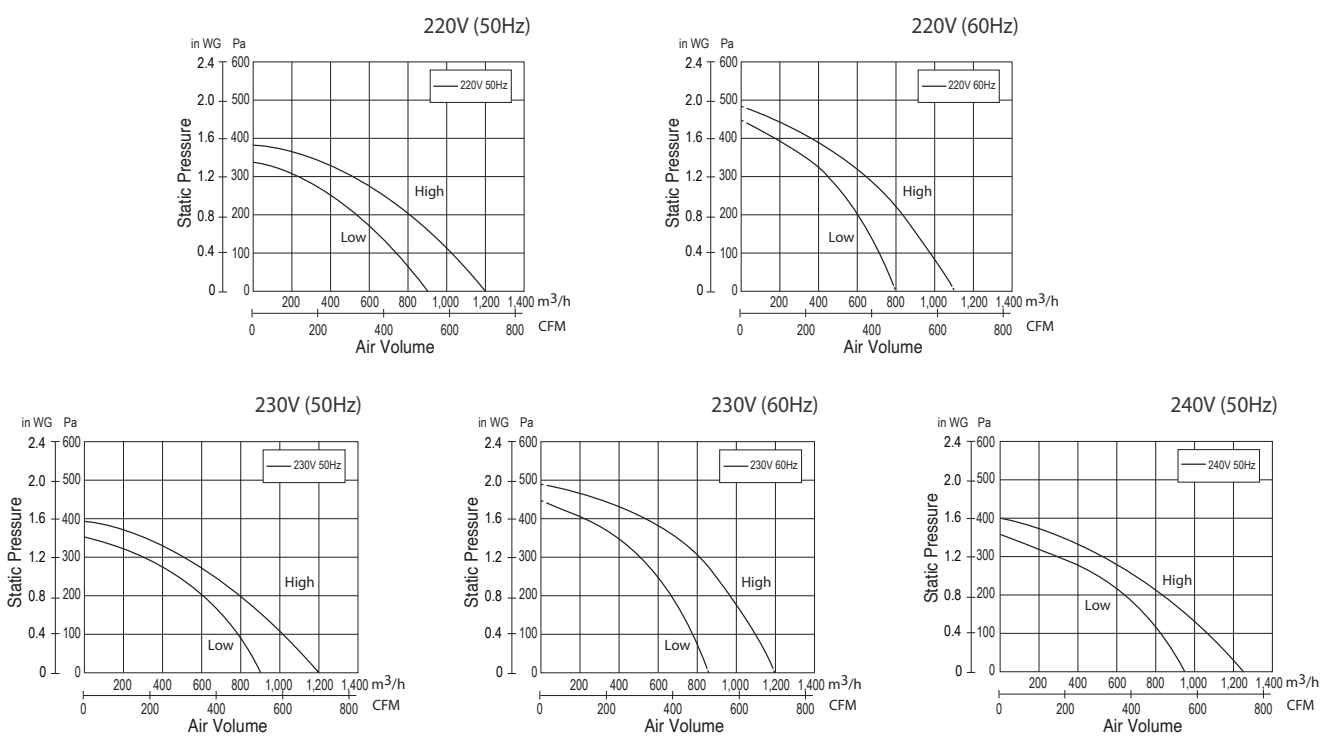


## Cabinet Fan (In-line Fan)

### Standard Series: 20NSB



### Standard Series: 23NLB

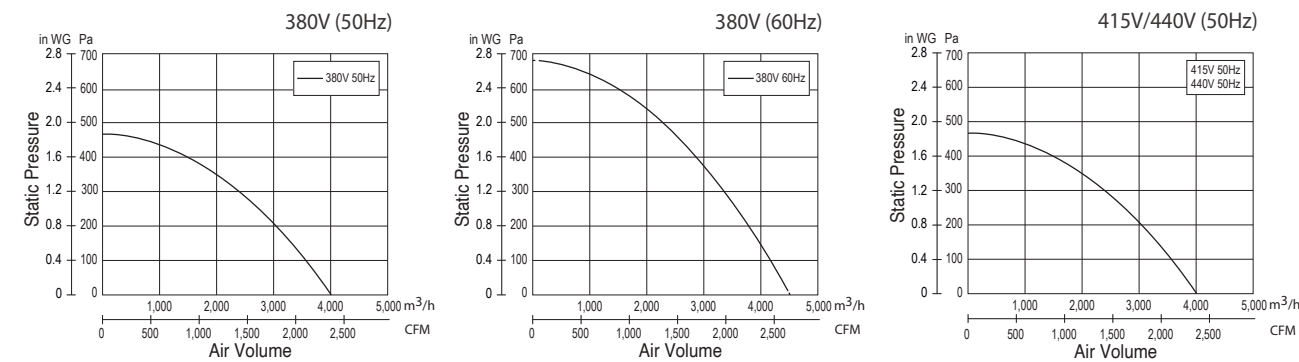




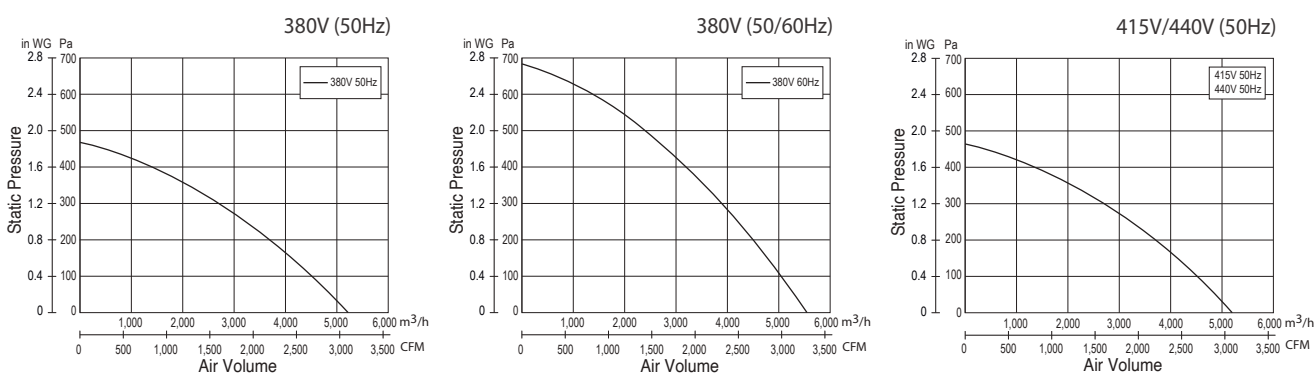
# Performance Data Summary

## Cabinet Fan (In-line Fan)

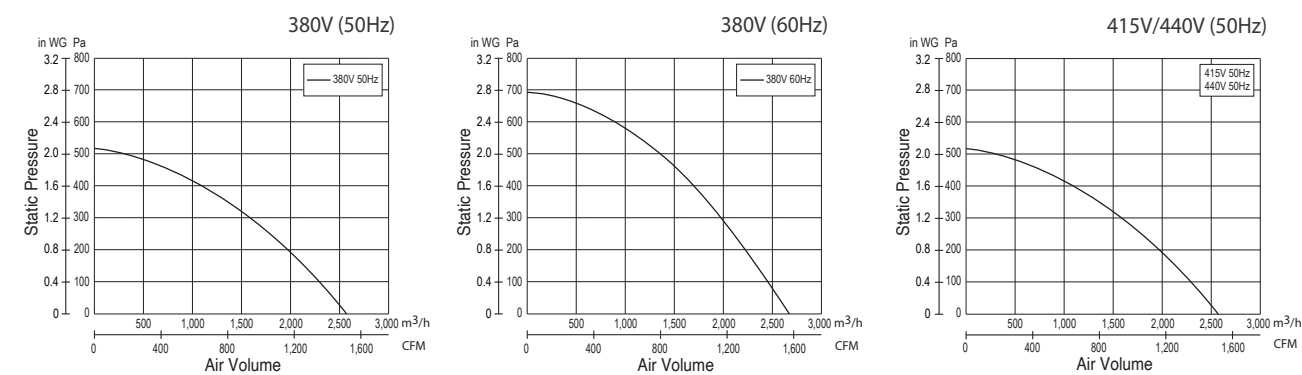
### Three Phase Series: 25SWC



### Three Phase Series: 25SMC

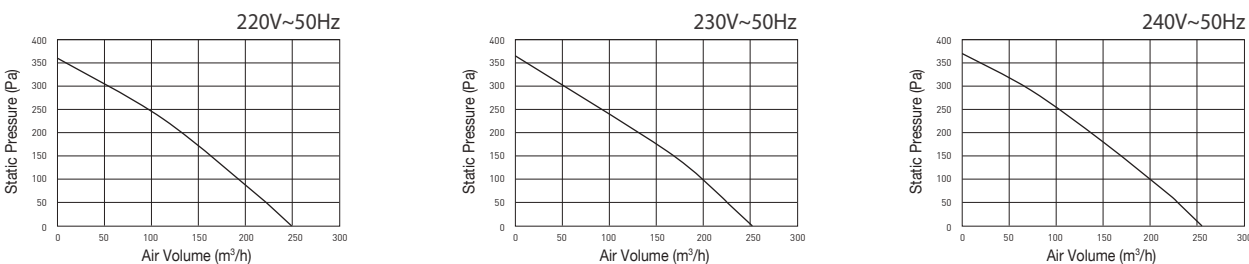


### Three Phase Series: 28NXC

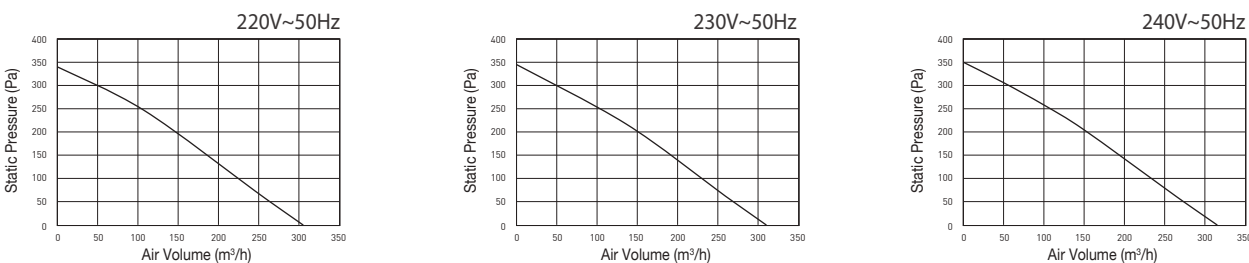


## In-line Centrifugal Fan

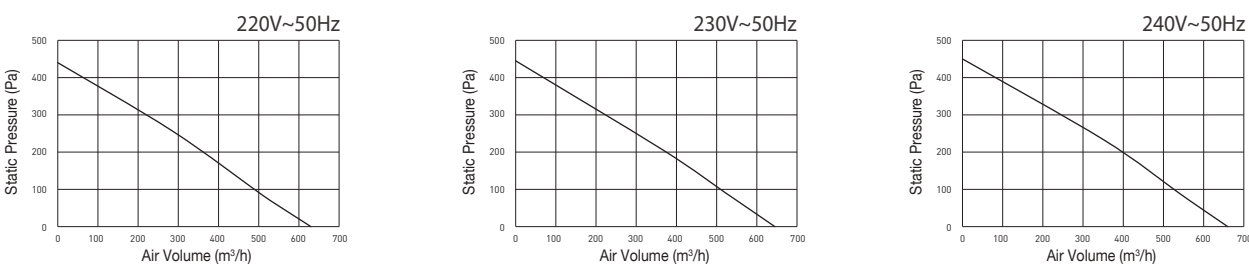
### 10MMA



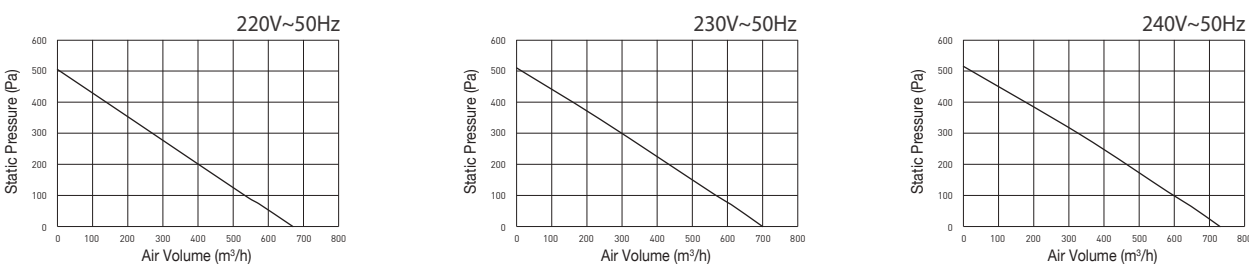
### 12MMA



### 15MMA



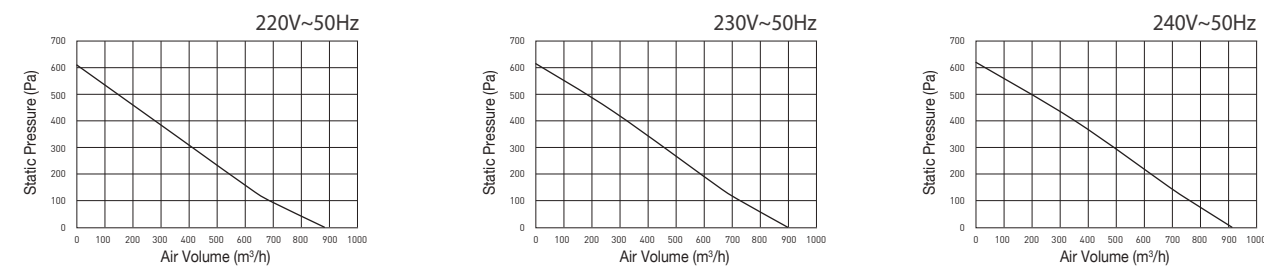
### 16MMA



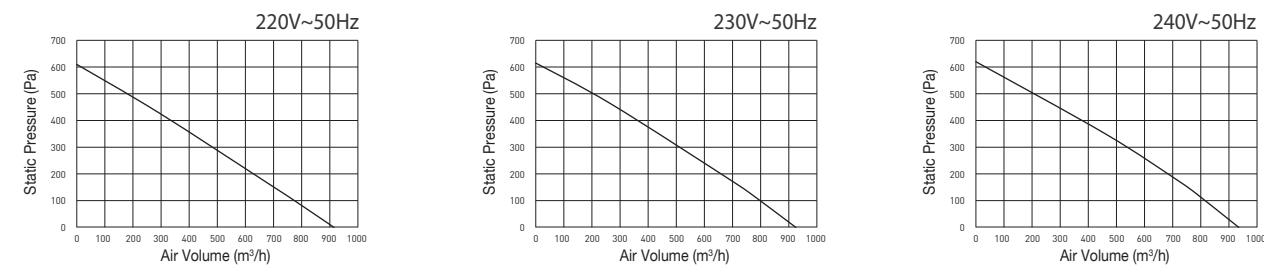
# Performance Data Summary

## In-line Centrifugal Fan

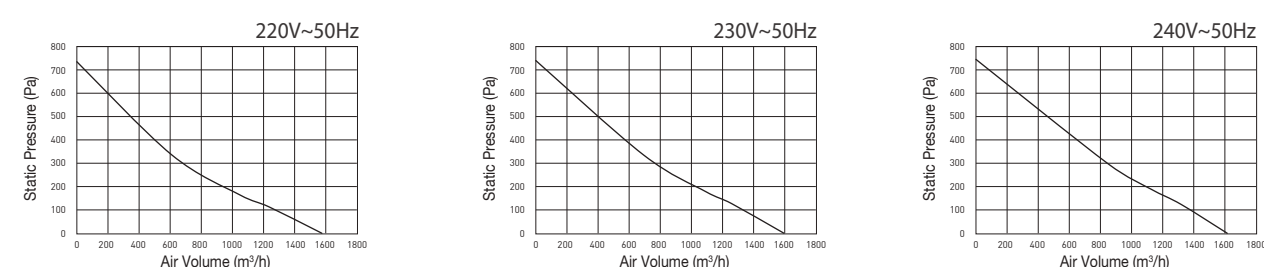
### 20MMA



### 25MMA

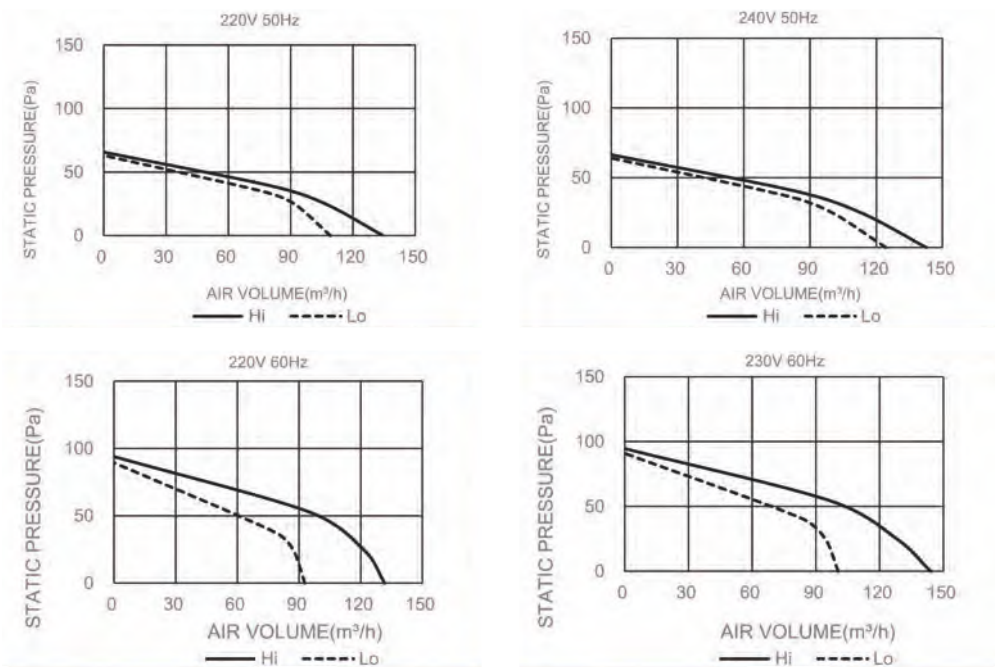


### 31MMA

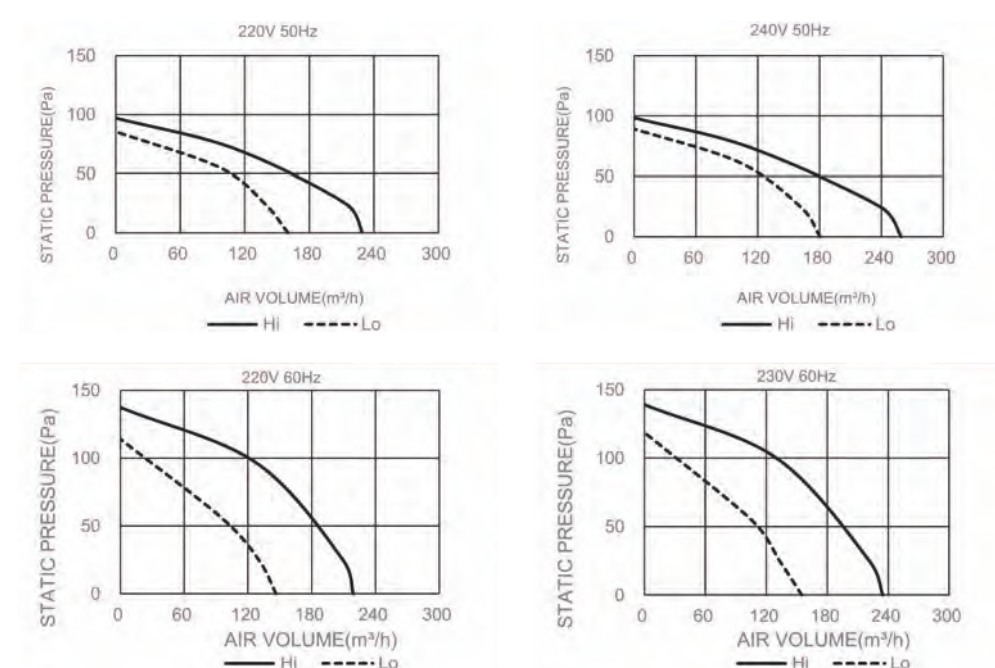


## Mini Sirocco Fan

### 10CGB



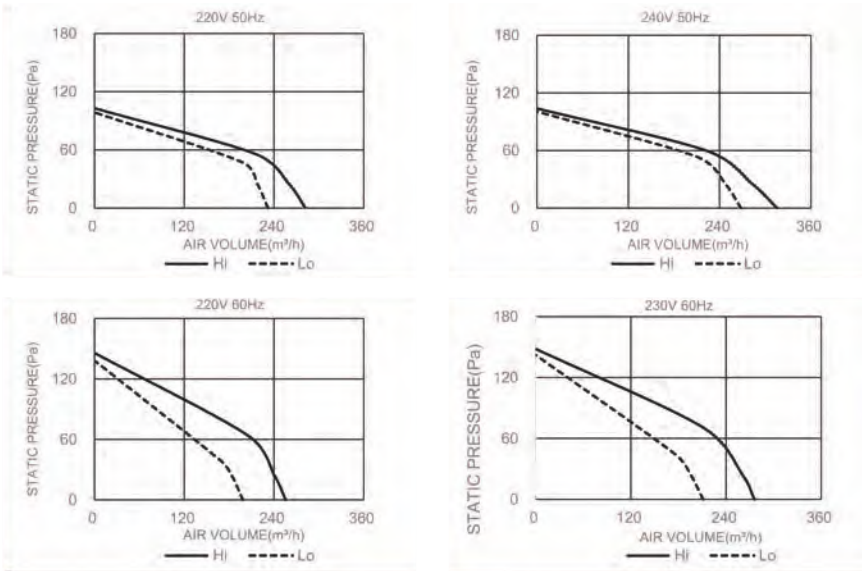
### 12CGB



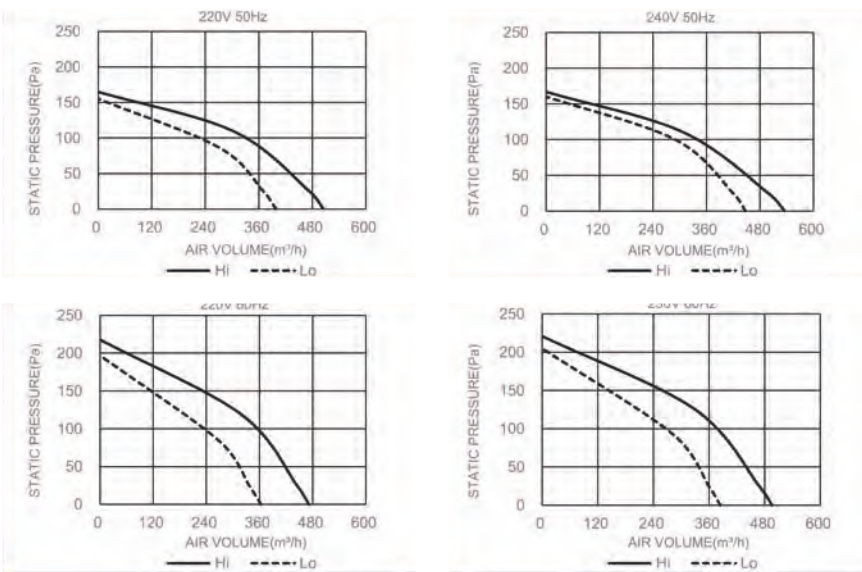
# Performance Data Summary

## Mini Sirocco Fan

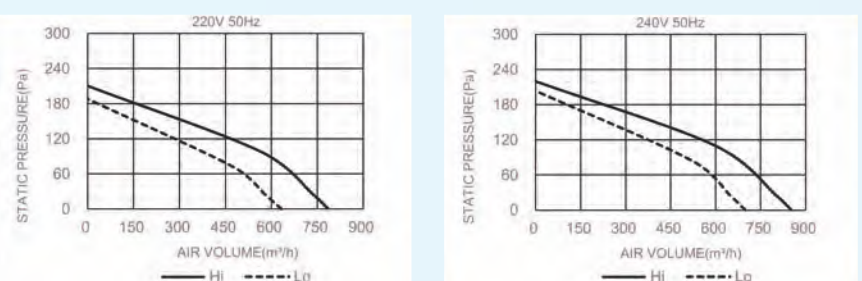
14CGB



16CGB

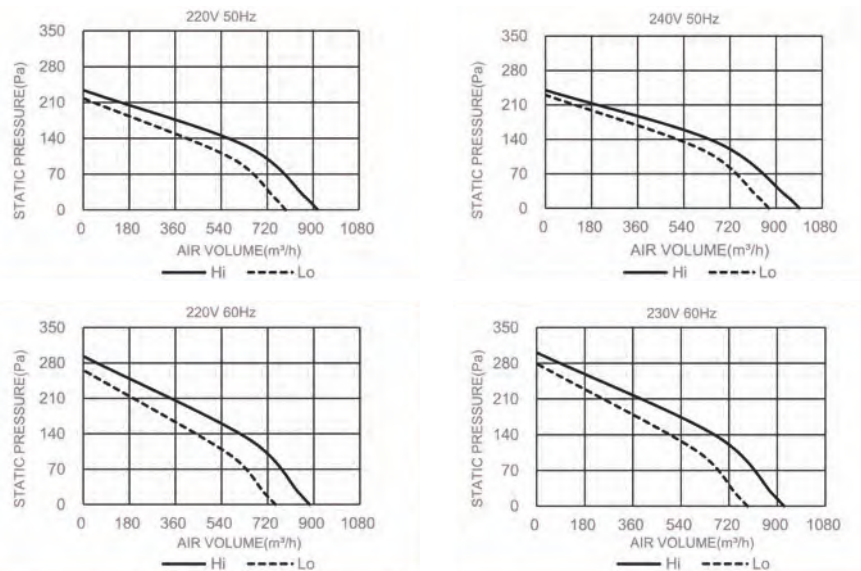


17CGB

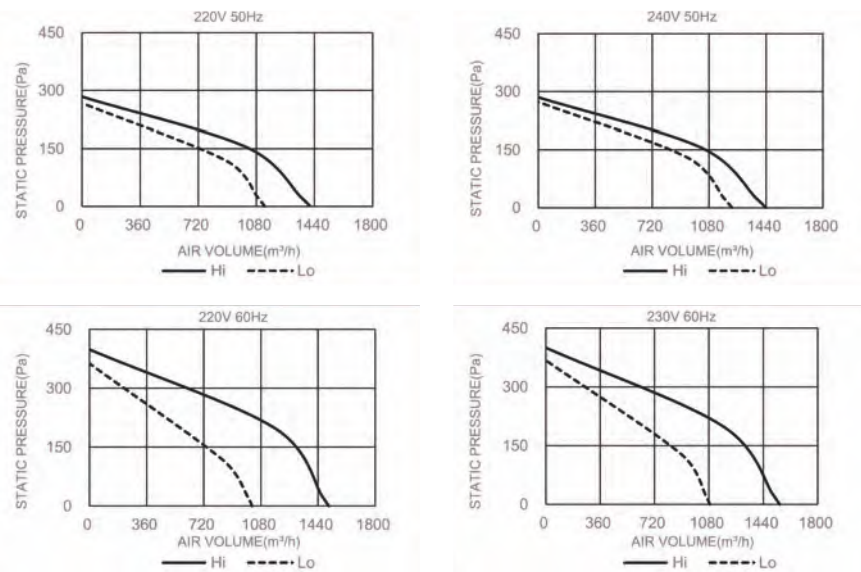


## Mini Sirocco Fan

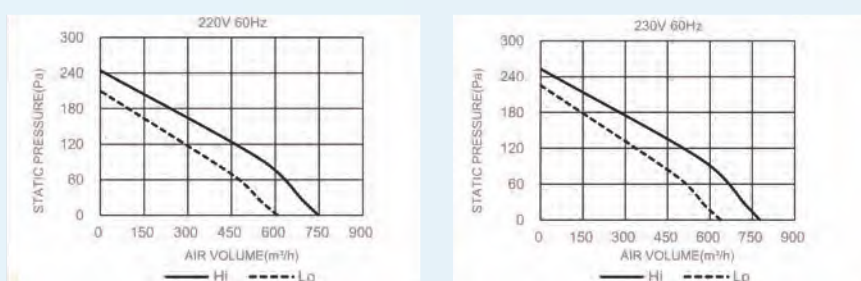
19CGB



21CGB



17CGB

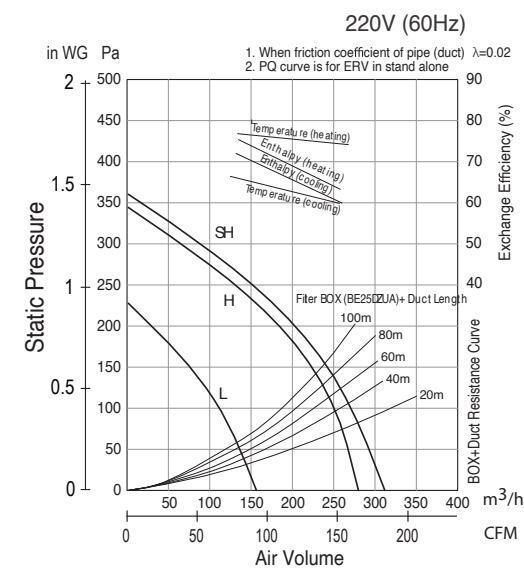




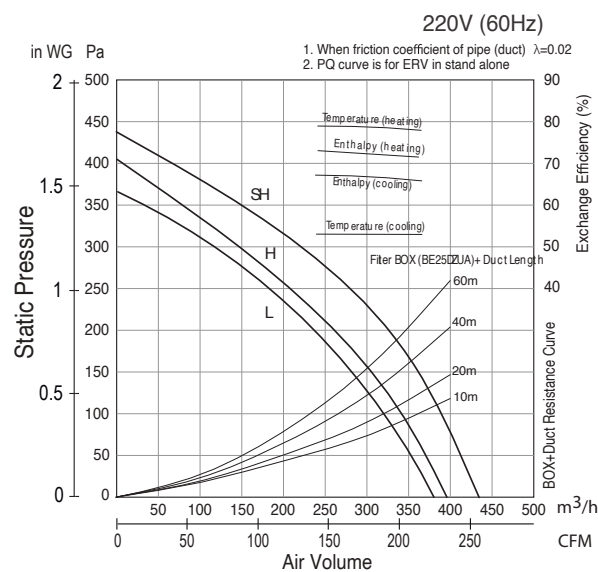
# Performance Data Summary

## Energy Recovery Ventilator

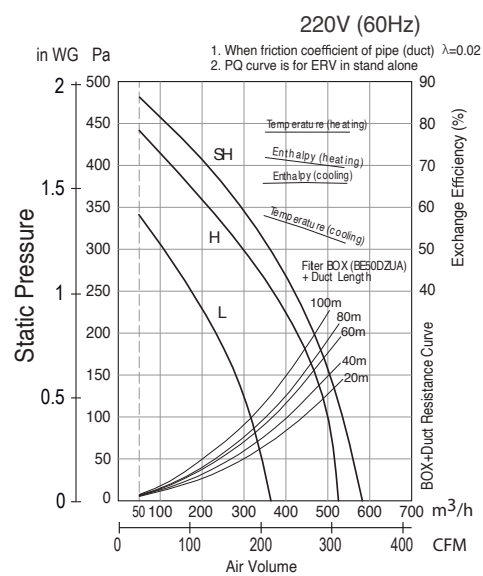
Standard Series:  
E25DZUA



Standard Series:  
E35DZUA

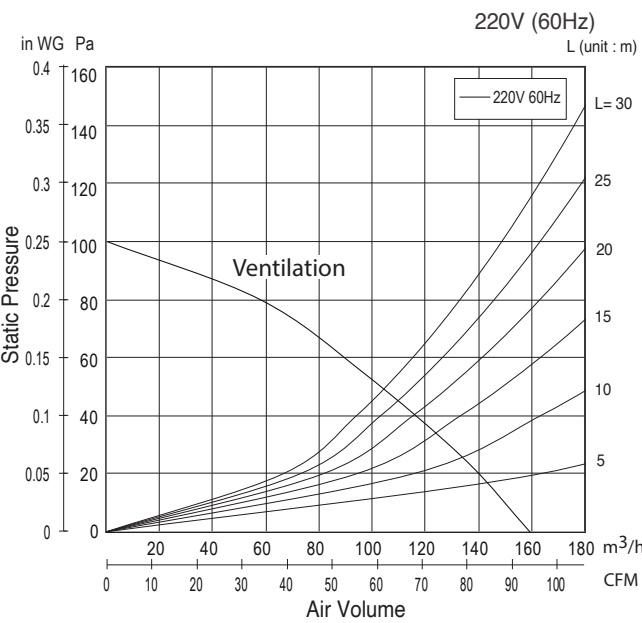


Standard Series:  
E50DZUA



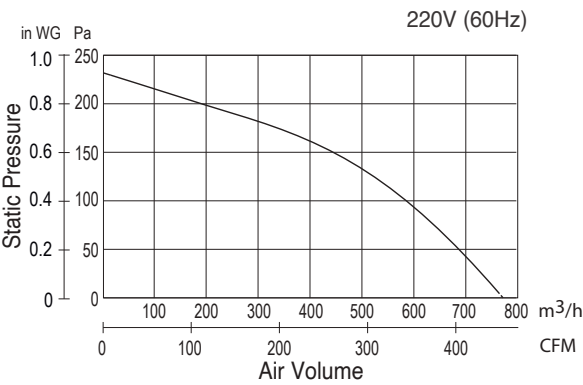
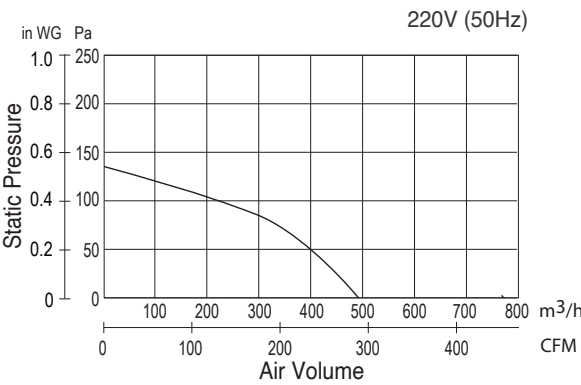
## Thermo Ventilator

Ceiling Mount Series: 30BUC



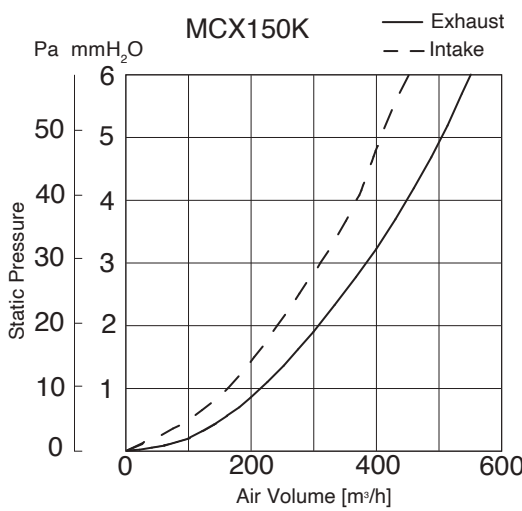
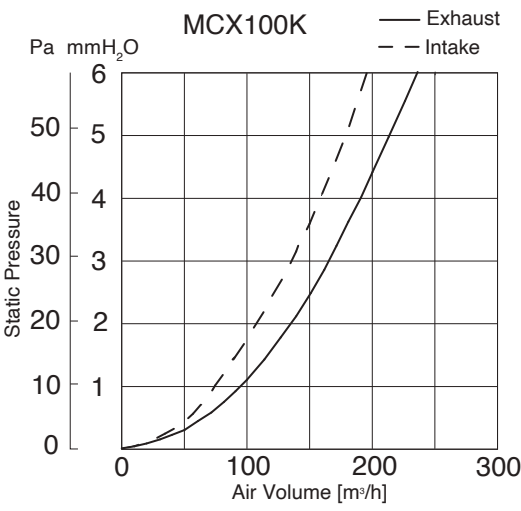
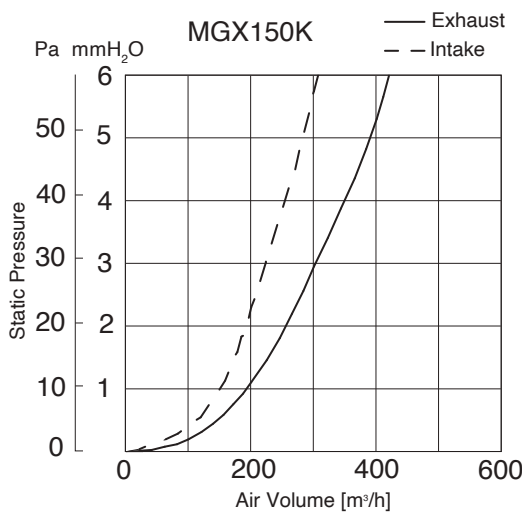
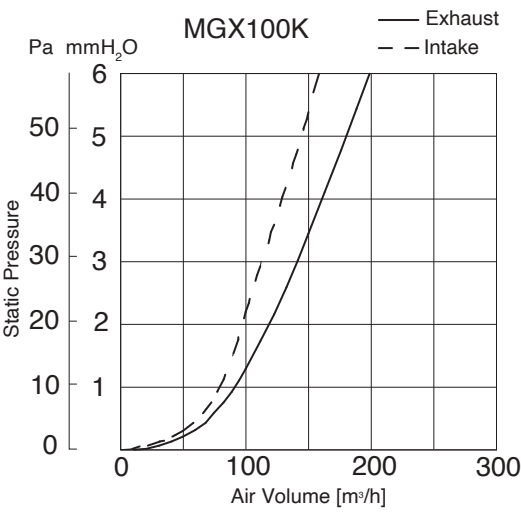
## Range Hood

Twin Motor Series: 90HQUA

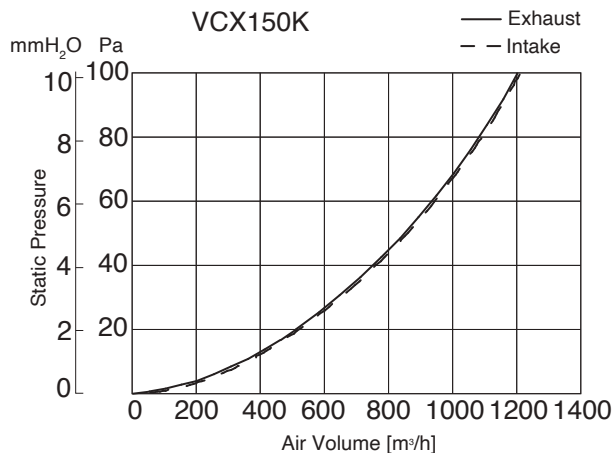
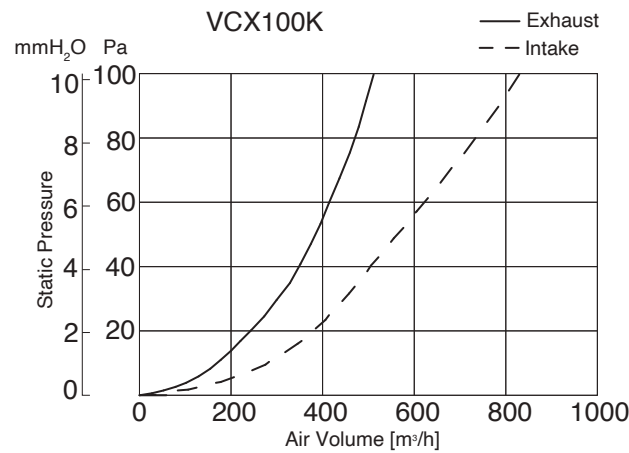
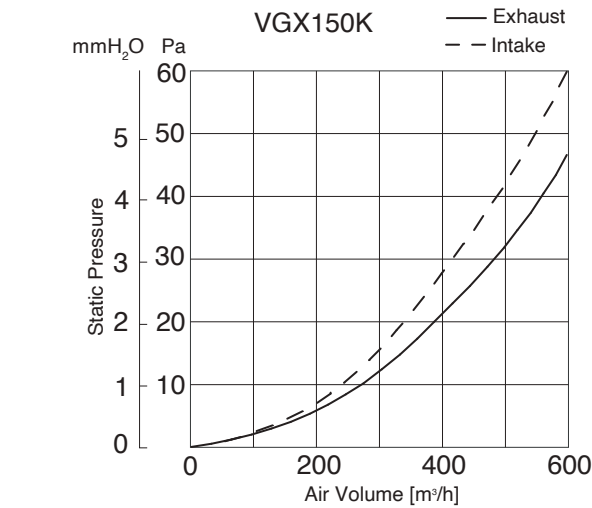
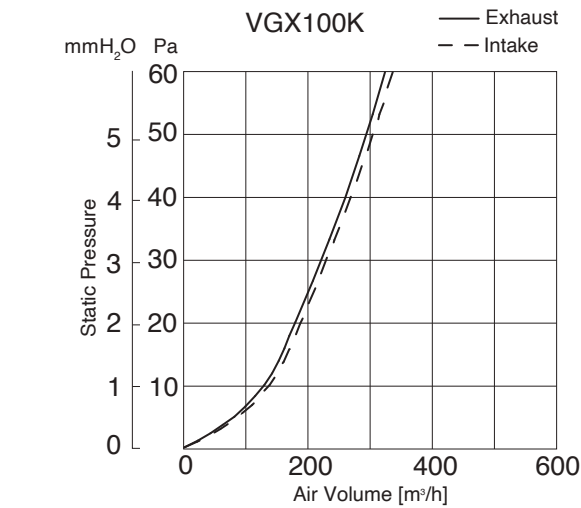


# Performance Data Summary

## Accessories - Pipe Hood



## Accessories - Vent Cap



# Reference Project

SAUDI ARABIA

Luxury Villas  
1600 Villa - Sheik Zayed housing program- Phase 1-3  
Window & Wall Mount Ventilation Fan, Sirocco Fan

SUDAN

Commercial Residential Building  
Energy Recovery Ventilator

UAE

Residential Villas  
519 villas  
Window Mount Type Ventilation Fan

UAE

Luxury Villas  
200 villas  
Ducted Ventilation Products

UAE

Commercial Building  
Window Mount Type Ventilation Fan

SAUDI ARABIA

Residential Villas  
Local Housing Development  
for Locals  
Ducted Ventilation Products

QATAR

Residential Villas  
42 Villas  
Window Mount Type Ventilation Fan

UAE

Residential Building  
Labor Camps Complexes  
Ceiling Fan, Window Mount &  
Industrial Type Ventilation Fan



# Reference Project

# Installation Method



**QATAR** Commercial Residential Building  
Ceiling Fan, Wall Mount Louver  
Type Ventilation Fan

**QATAR** Residential Building  
234 Apartments  
Ceiling Mount Type Ventilation Fan

**UAE** Residential Villas  
220 Villas  
Window & Wall Mount Type  
Ventilation Fan

**SAUDI ARABIA** Net Zero Energy Green House Model  
Cabinet Fan, Wall Mount Louver Type  
Ventilation Fan,  
Energy Recovery Ventilator

173



P.175 Ceiling Mount Type Ventilation Fan  
P.177 Wall Mount Type Ventialtion Fan  
P.179 Window Mount Type Ventilation Fan  
P.181 Industrial Type Ventilation Fan  
P.182 Cabinet Fan  
P.184 In-line Centrifugal Fan  
P.185 Mini Sirocco Fan  
P.186 Energy Recovery Ventilator  
P.187 Thermo Ventilator  
P.188 Range Hood  
P.189 Hand Dryer  
P.190 Air Curtain  
P.191 Ceiling Fan  
P.193 Orbital Fan  
P.194 Wall Fan

174

# Ceiling Mount Type Ventilation Fan

Applicable Model:  
24JRB / 24JAB / 17CUH / 24CUH / 24CDH / 24CHH / 24CXH / 27CHH / 32CDH  
24CMUA/ 24CMHA/ 27CMHA/ 38CDG/ 38CDG 05/ 38CHG

## 1A Installation with anchor bolts

1. Secure 1 set of suspension bracket (optional accessory) with screws.

The screw length should not exceed 8mm.

\*2 sets of accessories are required for 32CDH

Adjustable range

23mm

Adjustable range

25mm

Adjustable range

Model No.

|                               |     |     |       |
|-------------------------------|-----|-----|-------|
| 17CUH                         | 206 | 89  | 103   |
| 24CUH / 24CDH / 24CHH / 24CXH | 266 | 131 | 112   |
| 24JRB / 24JAB                 | 286 | 130 | 97    |
| 27CHH                         | 296 | 160 | 158.5 |
| 32CDH                         | 346 | 200 | 158.5 |
| 24CMUA/24CMHA                 | 286 | 131 | 139   |
| 27CMHA                        | 290 | 160 | 173   |
| 38CDG/38CDG05/ 38CHG          | 440 | 260 | 130   |

Unit : mm

2. Mount the fan body enclosure on the anchor bolts (M8-M10, not supplied).

## 1B Installation with wooden joist

1. First remove the hexagon screw attaching the adapter assembly to the fan body.

2. Build a wooden frame horizontally from the keel. Note that the distance between the top of the fan body and the ceiling should be at least 20mm.

\*Ceiling joist must be subjected to static load more than 5 times of the product weight.

|                                                       |     |       |
|-------------------------------------------------------|-----|-------|
| Model No.                                             | F   | B     |
| 17CUH                                                 | 177 | 25-30 |
| 24CUH / 24CDH / 24CHH / 24CXH / 24CMUA/24CMHA/ 27CMHA | 240 | 25-30 |
| 24JRB / 24JAB                                         | 240 | 30-40 |
| 27CHH                                                 | 270 | 25-30 |
| 32CDH                                                 | 320 | 25-30 |
| 38CDG/38CDG05/ 38CHG                                  | 380 | 30    |

Unit : mm

3. Attach the adapter assembly to the wooden frame as shown in the figure.

4. Insert the fan body in the wooden frame and connect it to the adapter assembly.

5. Firmly secure the fan body with four tapping screws and a hexagon screw.

# Ceiling Mount Type Ventilation Fan

## 2 Power Cord Connection

1. Connect the power cord to the power supply line according to the wiring diagram and the local electrical wiring rules of fixed wiring.

Make sure all connections are fastened firmly after wiring is finished.

For 24JAB

For 27CHH/32CDH

For 17CUH/24CUH/24CDH/24CHH/24CXH/24JRB/24CMUA/24CMHA/27CMHA

For 38CDG/38CDG 05/38CHG

## 3 Duct Connection and Ceiling Plate Installation

1. Insert the duct into the adapter assembly, and tighten it with adhesive tape (not supplied). (Suspend the duct from the ceiling to prevent any external force onto the fan body.)

Slope the duct downward and guide it through the wall to the outside. Be sure to prevent rainwater from falling in the duct from its outlet. (The minimum size of the hole opening on the wall is: Ø116mm for 17/24 model, Ø168mm for 27/32/38 model)

2. Install the ceiling plate. Note that the gap between the flange and the ceiling plate should be 2 to 5 mm.

3. Install the pipe hood or vent cap (optional accessories) on the outer wall.

|                                                       |           |          |
|-------------------------------------------------------|-----------|----------|
| Model No.                                             | Pipe Hood | Vent Cap |
| 24JRB / 24JAB / 17CUH / 24CUH / 24CDH / 24CHH / 24CXH | MCX100K   | VCX100K  |
| 27CHH / 32CDH / 38CDG / 38CDG 05 / 38CHG              | MCX150K   | VCX150K  |

## 4 Louver Installation

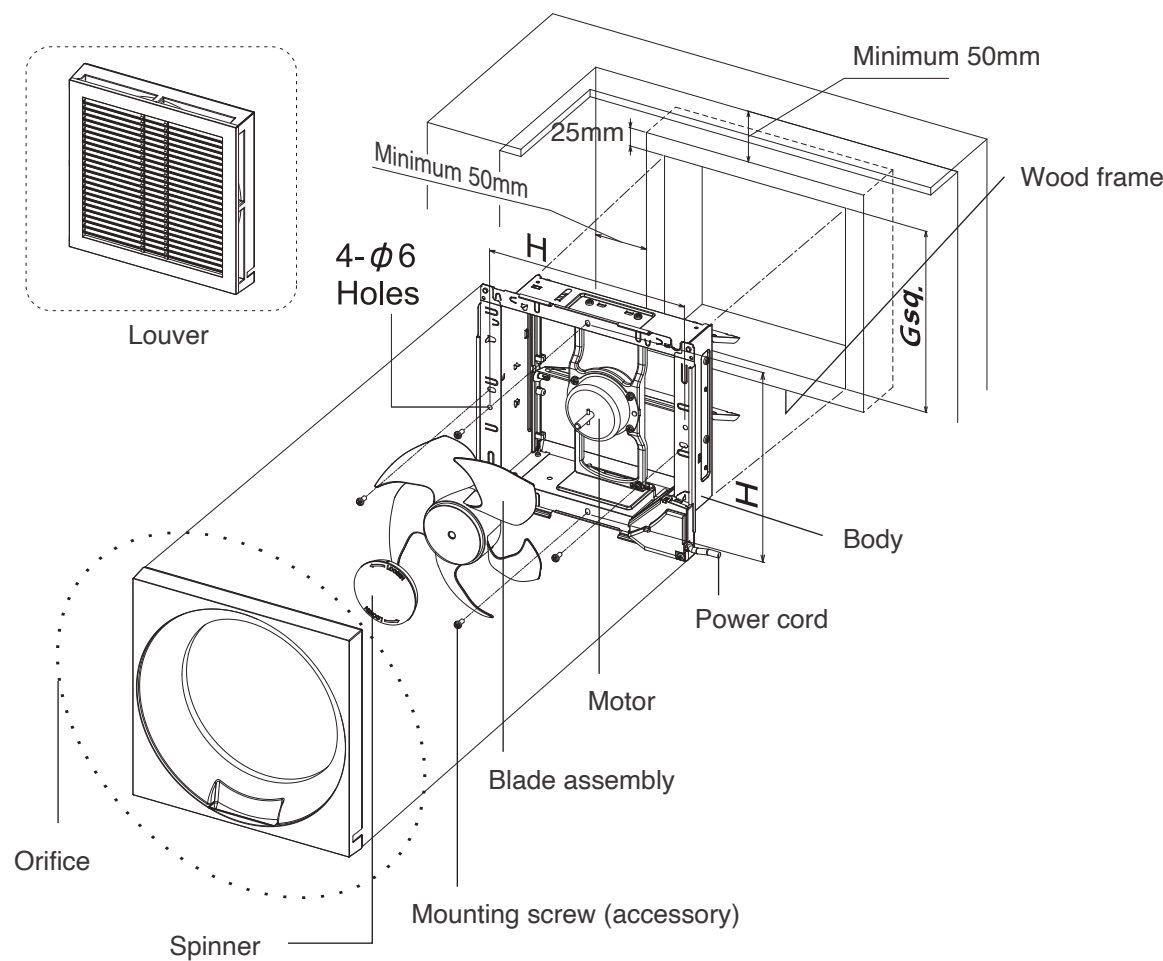
1. For 24JRB only  
Check the sensor lead wire is fixed in the wire hook. Keep the wire away from the air intake and fan blade.

2. Insert the mounting spring into the slots and mount the louver to the fan body. (Please wear gloves during installation.)

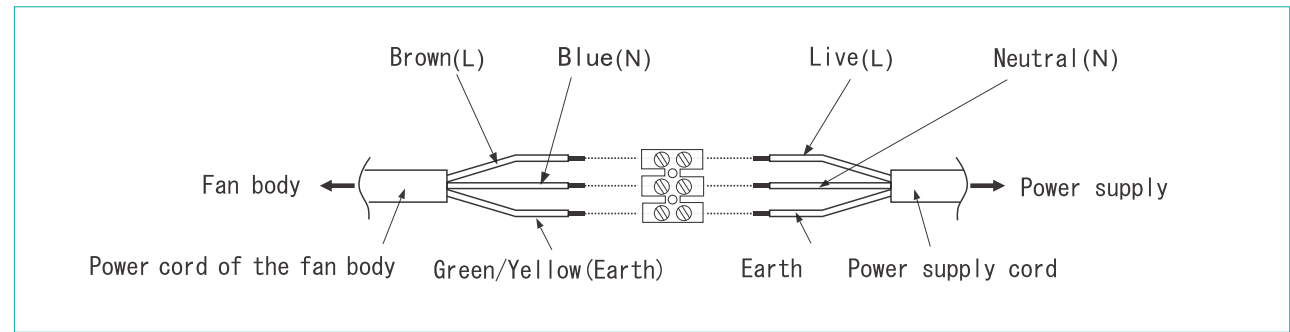


# Wall Mount Type Ventilation Fan

Applicable Model:  
AU model / AL model



- Connet the power cord to the power supply line according to the wiring diagram and the local electrical wiring rules of fixed wiring.
- Make sure all connections are fastened firmly after wiring is finished.
- It is required to use terminal (not supplied) that complies IEC 60998.
- The all connections should be accommodated in a suitable compartment.

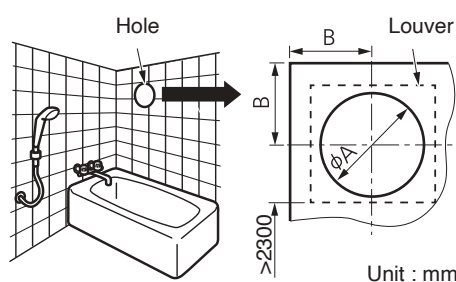


# Wall Mount Type Ventilation Fan

Applicable Model:  
10EGKB/15EGKB

1. Make appropriate hole in the wall for ducting.

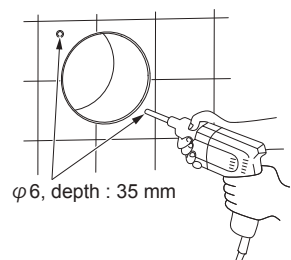
Position of hole. Bathroom side



| Model  | $\phi A$ | B    | Wall thickness |
|--------|----------|------|----------------|
| 10EGKB | 130~140  | >125 | 100~150        |
| 15EGKB | 175~185  | >150 | 100~150        |

Note : It is noted that the wall does not collapse when making hole.  
Do not install on the bumpy or rotten wall.

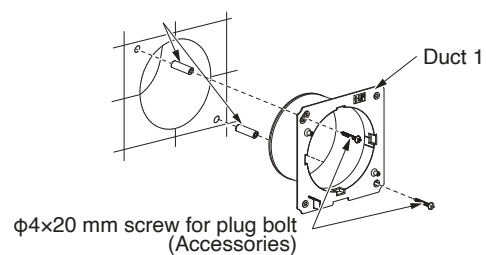
2. Drill holes for plug bolt.



3. Insert the duct 1 to the wall using two screws and plug bolt.

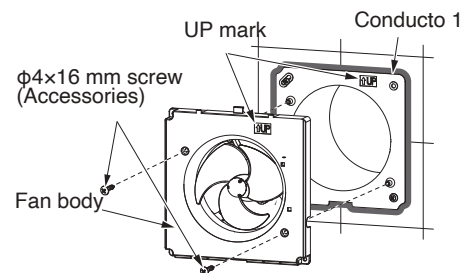
Plug bolt (Accessories)

Note : Use accessory plug bolt and screw.

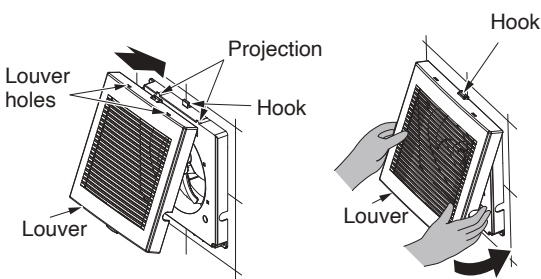


4. Insert the fan body to the duct 1.

Note : Make sure that use screw to fix the fan body. It may cause drop the fan body.



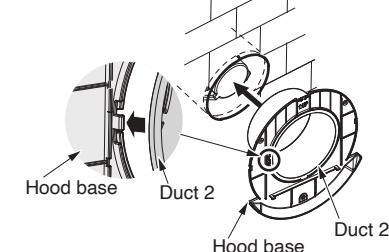
5. Install the louver



6. Hood installation (From outside wall)

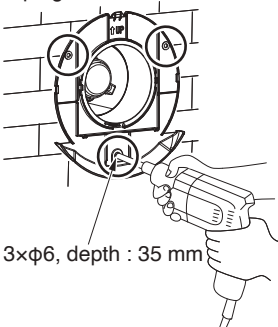
① Put these notches together.

② Insert the duct 2 from outside wall.



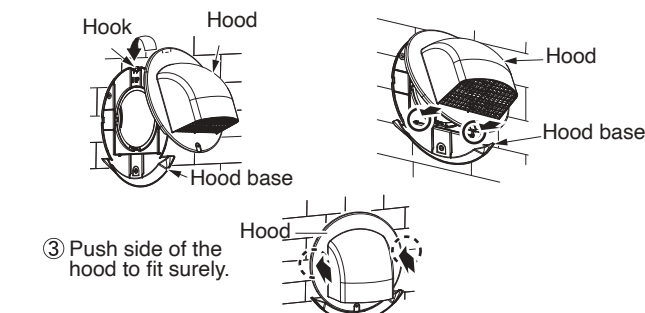
Note : Fit the duct 2 into the hood base when it come off.

7. Drill three holes for plug bolts.



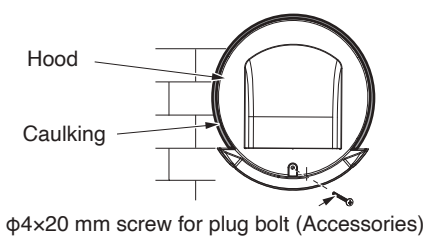
8. Hang and fix hood.

① Hang the hood into the hook. ② Fit the hood into the hood base.



9. Insert the hood to the wall seal with caulking around the hood.

Note : Make sure that use accessory screw to fix the hood. It may cause drop the hood.





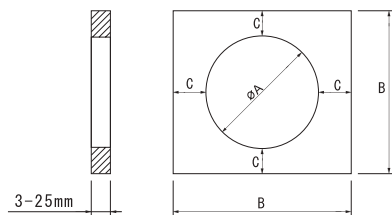
Window Mount Type Ventilation Fan

Applicable Model:  
15WHCT/20WHCT

1. Make an installation hole on the window glass according to the dimensions shown in the table.  
(Applicable to single-glass or double-glass, and the single block thickness of double-glass must be not less than 3mm.)

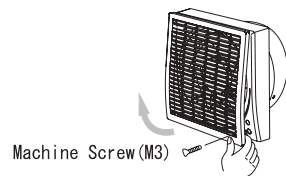
| Model No. | A       | B        | C        |
|-----------|---------|----------|----------|
| 15WHCT    | 186-188 | 390 Min. | 100 Min. |
| 20WHCT    | 247-250 | 450 Min. | 100 Min. |

Unit : mm

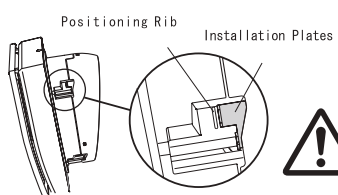


2. Remove the screw of louver and retain it, then pull the louver out of the lower-right corner.

Louver can be pulled out only from the lower-right corner or it may be damaged.

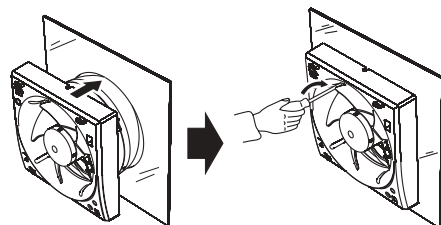


3. Before installation, please ensure every installation plate is at the position as shown below.

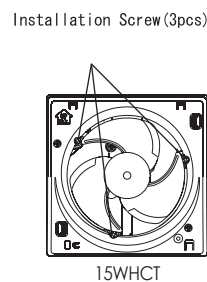
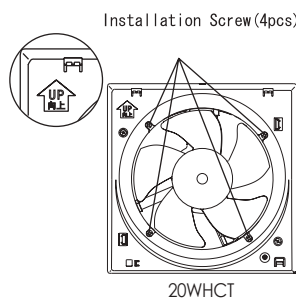


As shown in the diagram, the installation plates must be positioned in the slot between the frame and the hood. Its front edge should not exceed the positioning rib, or installation may fail.

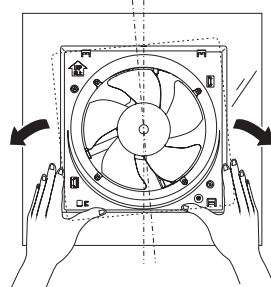
4. Keep the "UP" mark on the orifice on the top position. Insert the ventilation fan body into the installation hole completely. Be sure to keep the back of the body closed to the glass evenly, then twist each installation screw clockwise until the installation plates slightly compress the glass.



Please do not use the electric screwdriver which may damage the glass.

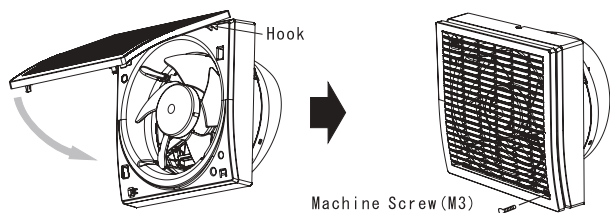


5. Rotate the body to adjust its horizontal and vertical direction. Then tighten each installation screw completely.



To ensure the installation strength, please make sure the tighten torque must be in the range of 90cN-m to 180cN-m. If the tighten torque is not large enough, it may result in rain water ingress through the gap; If the tighten torque is too large, it may damage the glass.

6. Hang the louver on the hook of orifice, rotate downward and insert it into the orifice. Fix the louver with the screw which was removed at installation step 2.



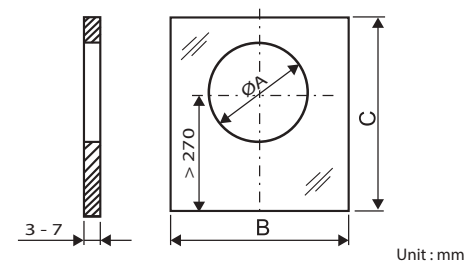
Must use the above specified screw to fix. Otherwise it may damage the product or lead to installation failure.



Window Mount Type Ventilation Fan

Applicable Model:  
15WUD/20WUD/15WAA/20WAA

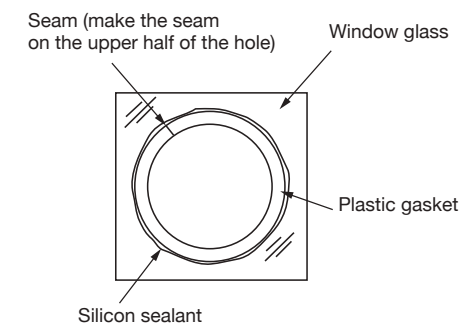
1. Make an installation hole on the window glass.



Unit : mm

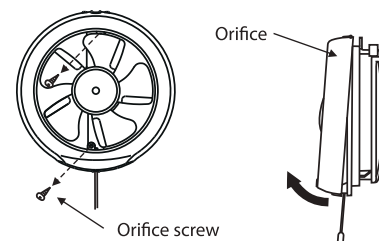
| Model No. | A       | B    | C    |
|-----------|---------|------|------|
| 15WUD     | 186-188 | ≥250 | ≥400 |
| 20WUD     | 247-250 | ≥300 | ≥420 |
| 15WAA     | 186-188 | ≥250 | ≥250 |
| 20WAA     | 247-250 | ≥300 | ≥300 |

2. Set the plastic gasket on the hole that the seam is at upper half (either left or right side). Seal the gap between the glass and gasket with silicon sealant to ensure airtightness.



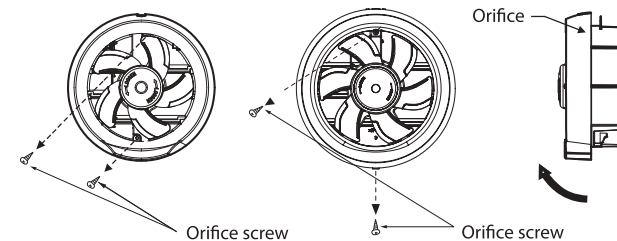
3. Loose the orifice screws (2 pcs) and remove the orifice.

15WUD / 20WUD



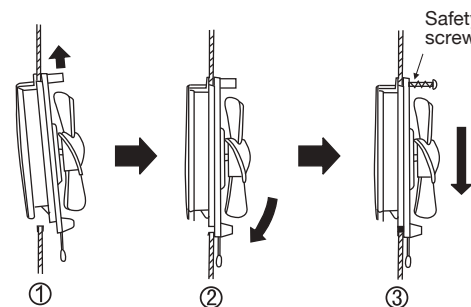
15WAA

20WAA

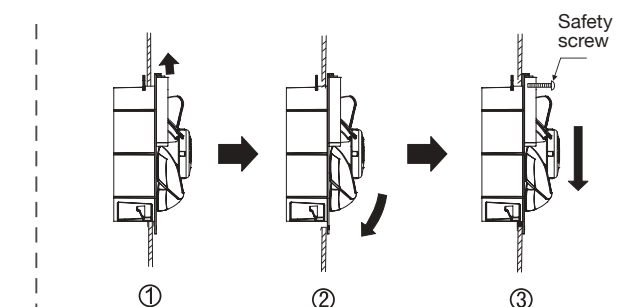


4. While installing the fan, align the fan to top of the hole of window glass and push the bottom of the fan into the hole. Then push the fan downward and tighten the safety screw afterward.

15WUD / 20WUD

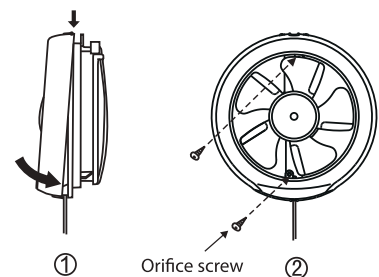


15WAA / 20WAA

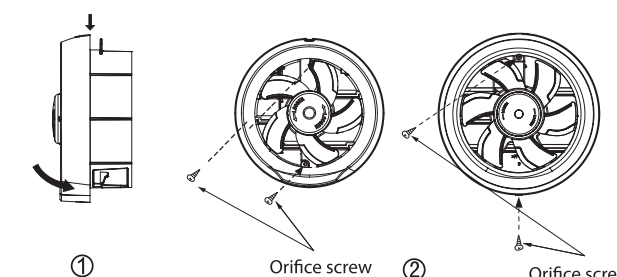


5. Set the orifice and fix with the orifice screws (2 pcs)

15WUD / 20WUD

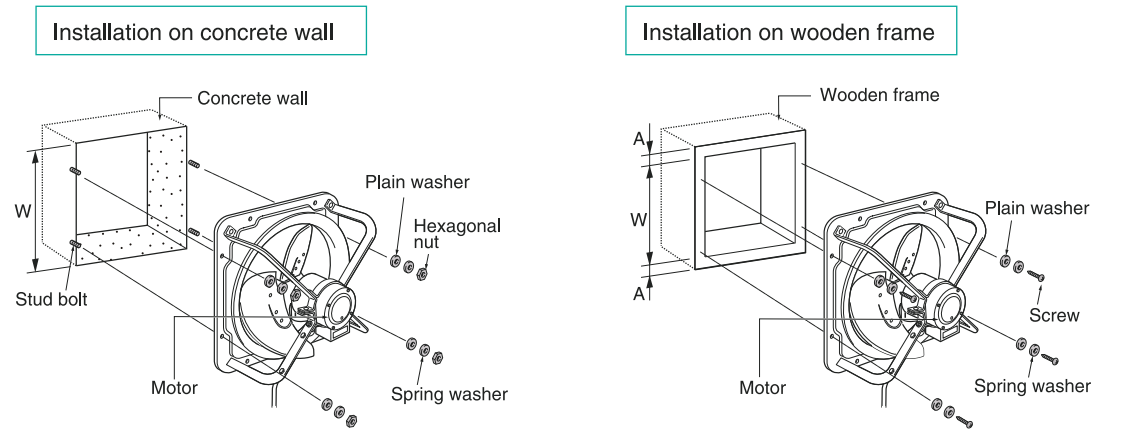


15WAA / 20WAA



# Industrial Type Ventilation Fan

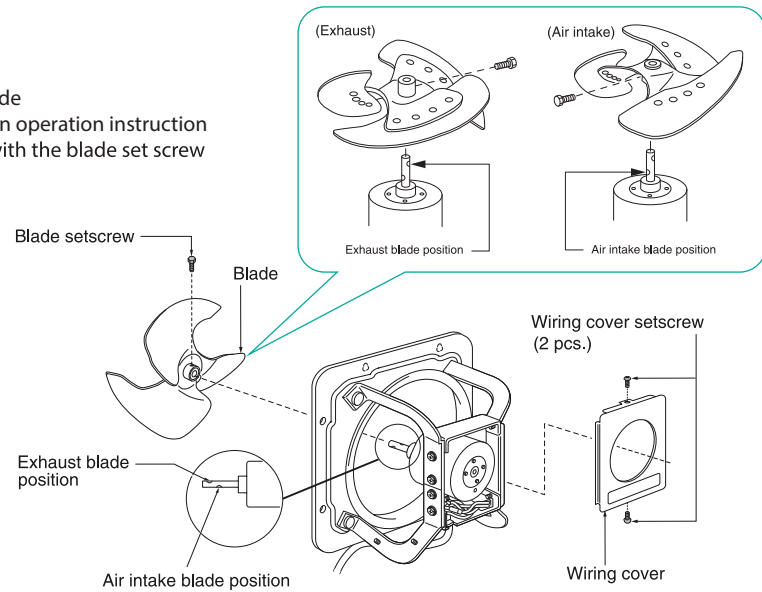
Applicable Model:  
High Pressure Series



## Setting of Reverse Airflow

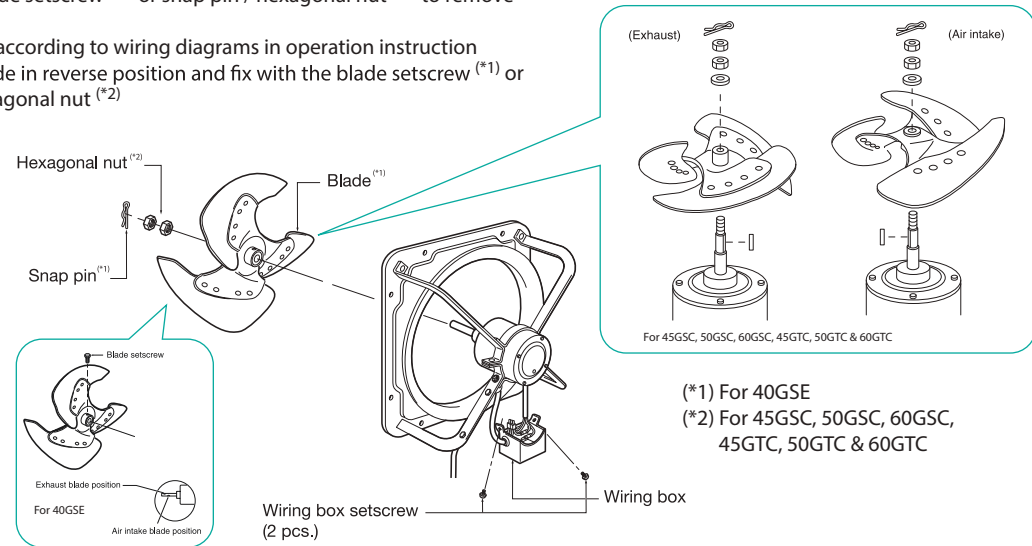
For 25GSE, 30GSE and 35GSE

- 1) Loosen the blade setscrew to remove the blade
- 2) Set the wiring according to wiring diagrams in operation instruction
- 3) Mount the blade in reverse position and fix with the blade set screw



For 40GSE, 45GSC, 50GSC, 60GSC, 45GTC, 50GTC & 60GTC

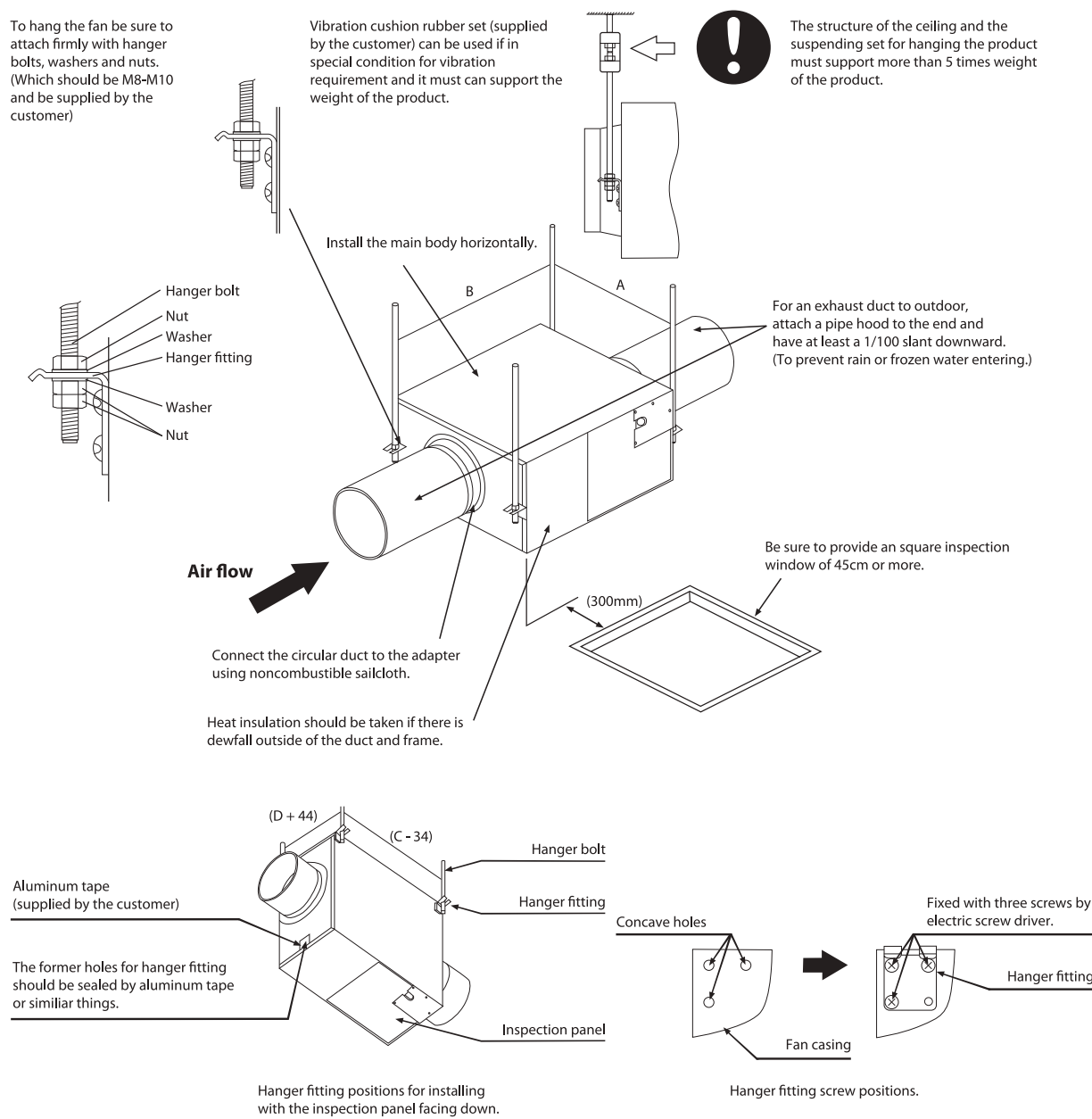
- 1) Loosen the blade setscrew <sup>(\*)1</sup> or snap pin / hexagonal nut <sup>(\*)2</sup> to remove the blade
- 2) Set the wiring according to wiring diagrams in operation instruction
- 3) Mount the blade in reverse position and fix with the blade setscrew <sup>(\*)1</sup> or snap pin / hexagonal nut <sup>(\*)2</sup>



\* Air volume of reverse airflow (intake) would vary subject to different models

# Low Noise Type Cabinet Fan (In-line Fan)

Applicable Model:  
12NSB/15NSB/18NSB/18NFB/20NSB/23NLB/25NSB/25NFB



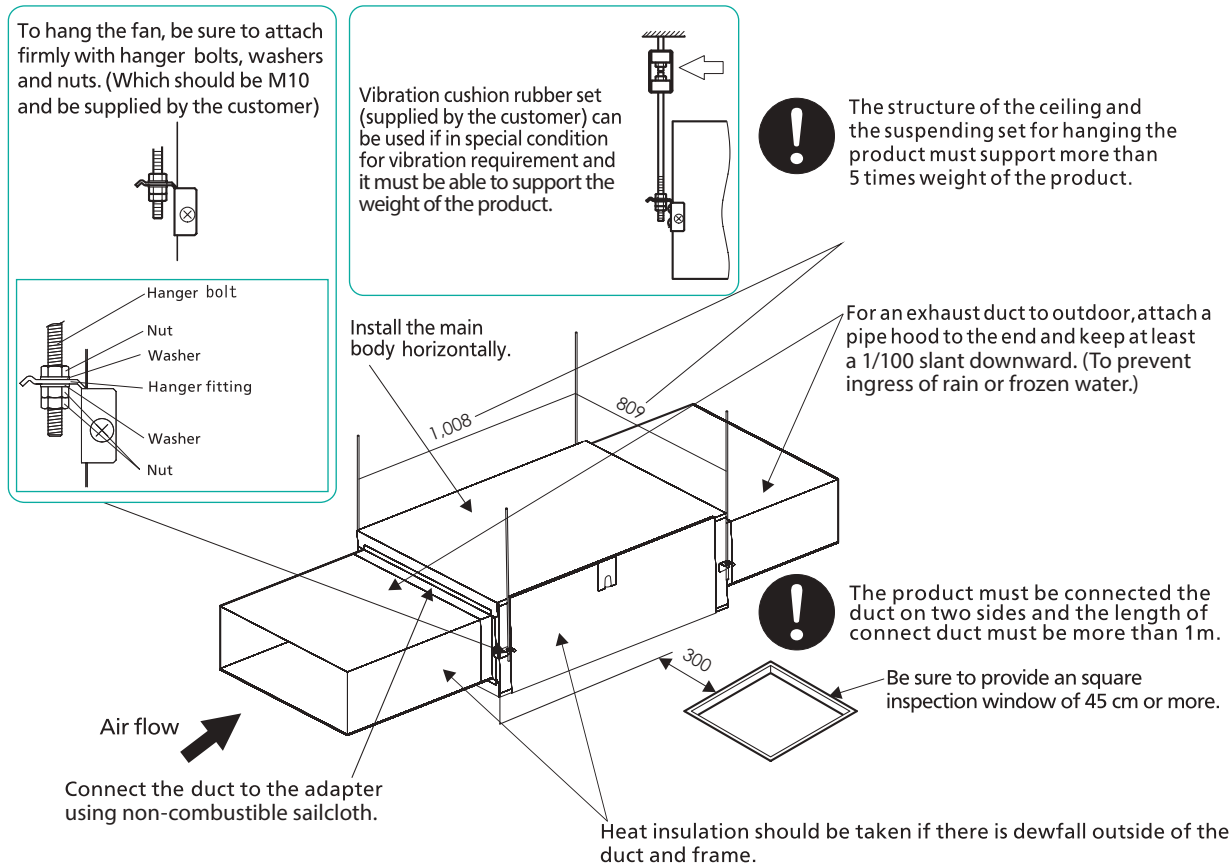
Note: To install the fan with the inspection panel facing down, remove the attached four hangar fittings and re-attach them in the holes on the top and bottom surfaces (Use the screws you just removed). The former holes for installing the hangar fitting need be sealed.

| Model No. | A   | B   | C   | D   |
|-----------|-----|-----|-----|-----|
| 12NSB     | 250 | 335 | 291 | 184 |
| 15NSB     | 250 | 346 | 302 | 206 |
| 18NSB     | 276 | 382 | 338 | 232 |
| 18NFB     | 336 | 441 | 397 | 254 |
| 20NSB     | 376 | 485 | 441 | 272 |
| 23NLB     | 424 | 513 | 469 | 298 |
| 25NSB     | 450 | 549 | 505 | 334 |
| 25NFB     | 450 | 549 | 505 | 334 |

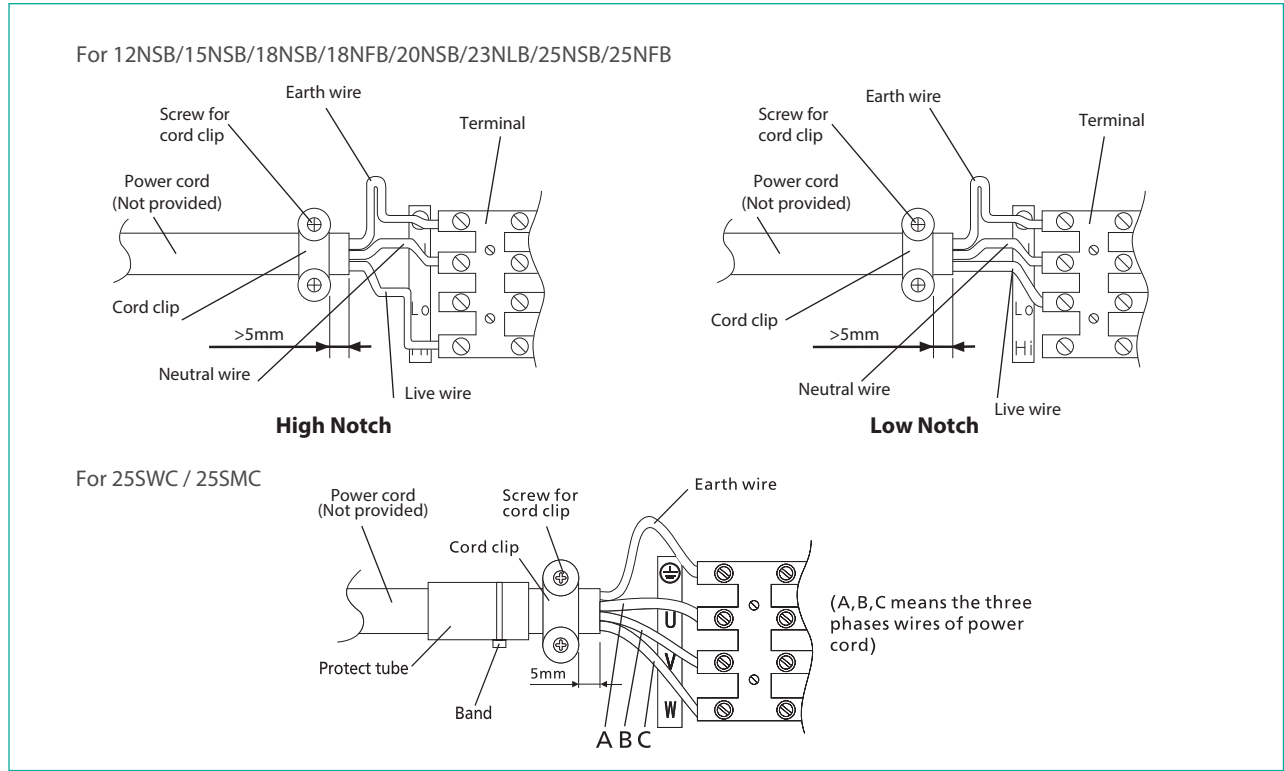
Unit : mm

# Low Noise Type Cabinet Fan (In-line Fan)

Applicable Model:  
25SWC/25SMC



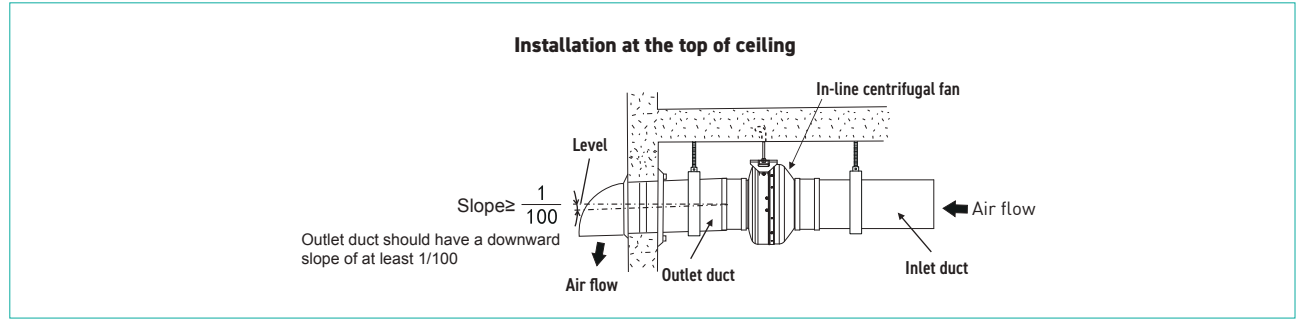
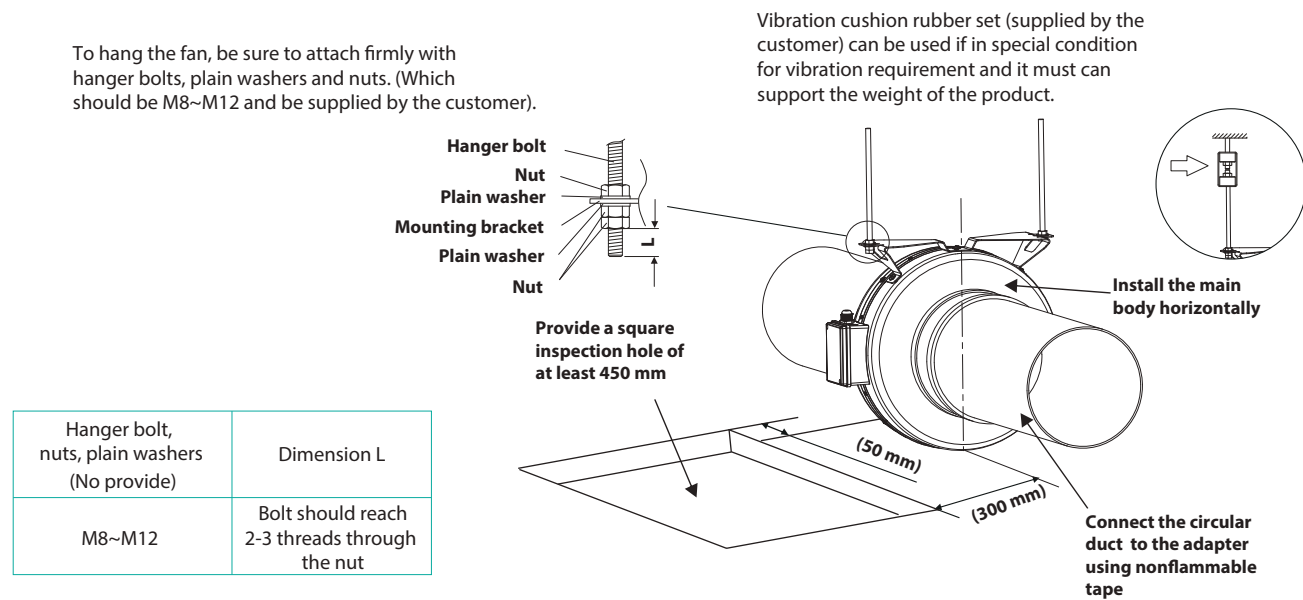
## Wiring Connection



# In-line Centrifugal Fan

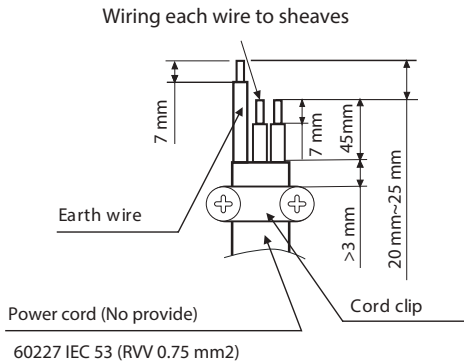
## 1. Installation method

- Follow the illustration below to install. Do not install facing directions other than what is shown in the illustration.



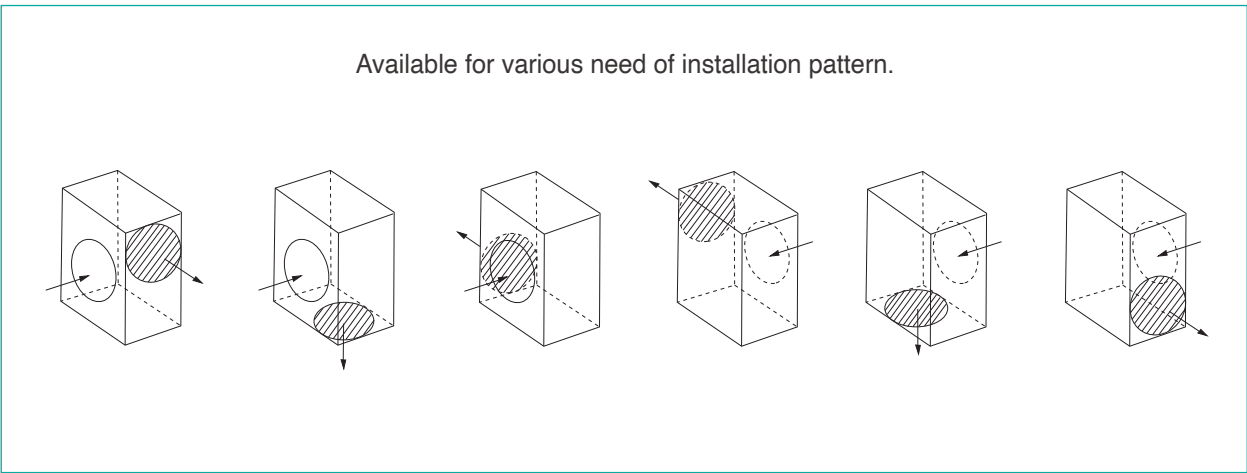
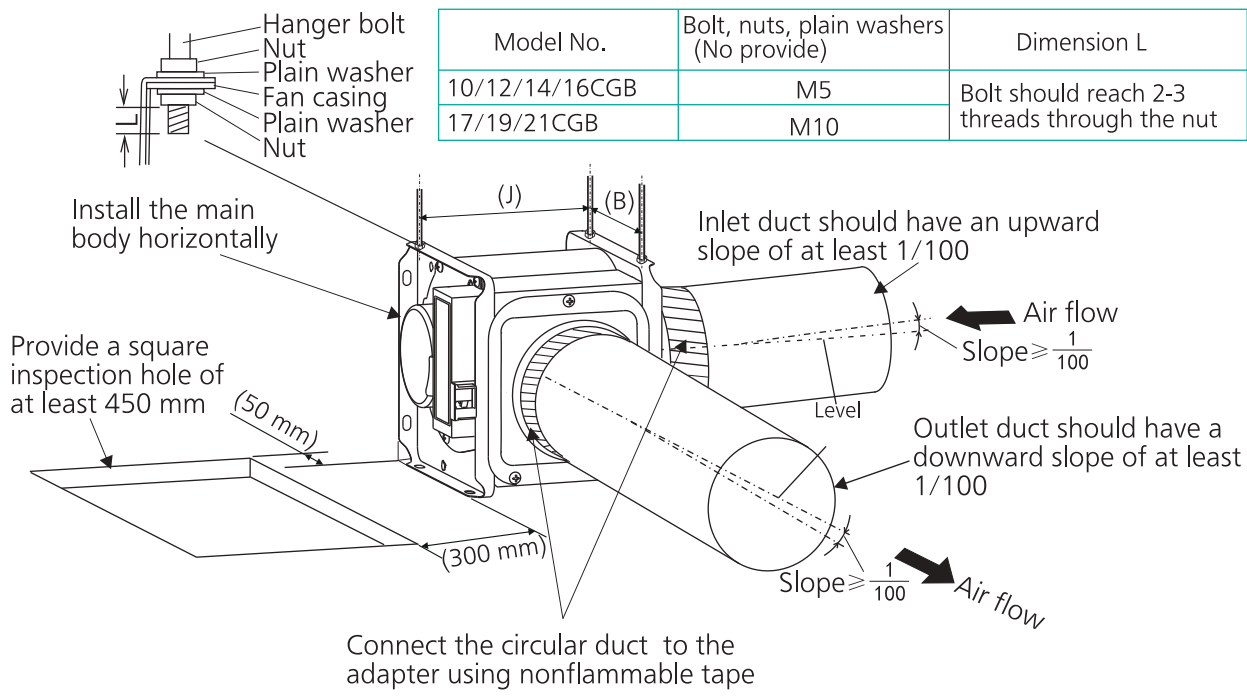
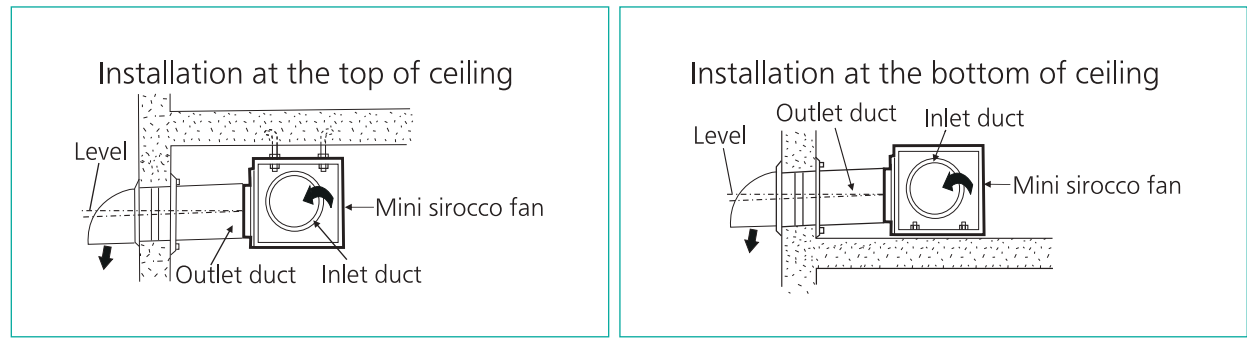
## 2. Wiring method

- Open the condenser box cover.
- Strip the wires according to the right illustration. The earth wire of the power cord must be 20~25 mm longer than other wire. Then bind the separated copper wires into a bundle and insert bundle into the terminal deeply.
- Make sure the screw column of terminal securely presses on the copper wire and that the copper wire near insulation layer is not exposed. (To avoid danger, it should be installed by professionals and be sure to connect the earth wire.)
- Connect wires according to the following diagrams. Finally, mount the power cord with cord clip and install the condenser box cover.
- When two or more products are connected to one single switch in parallel, damage may occur to the motors. Therefore parallel connection are prohibited.

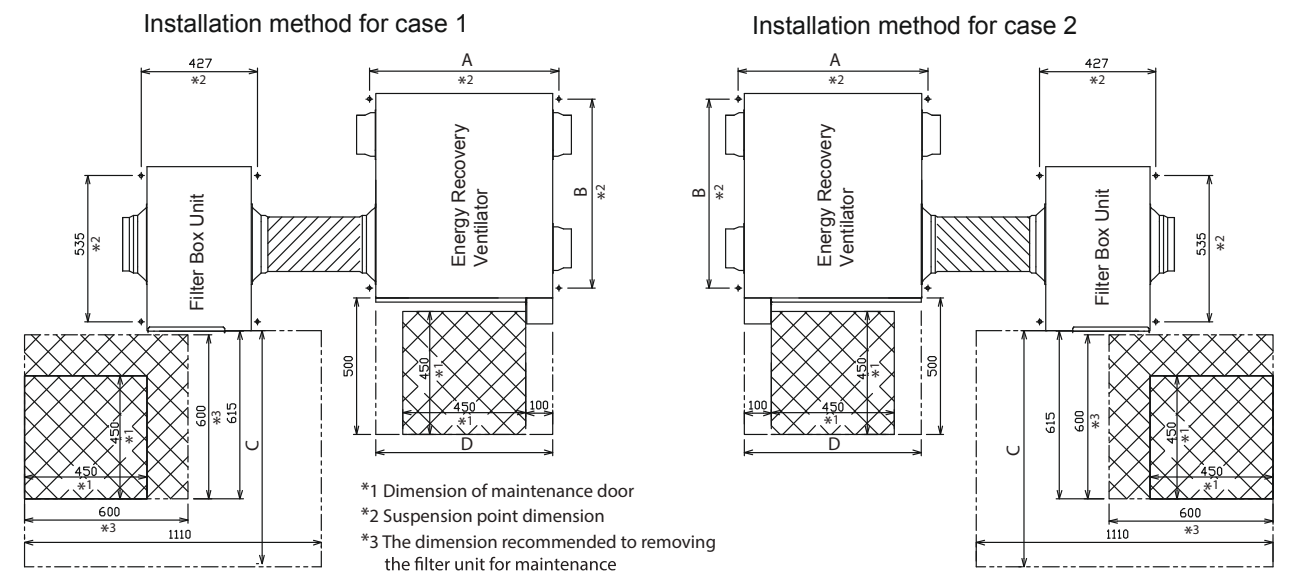
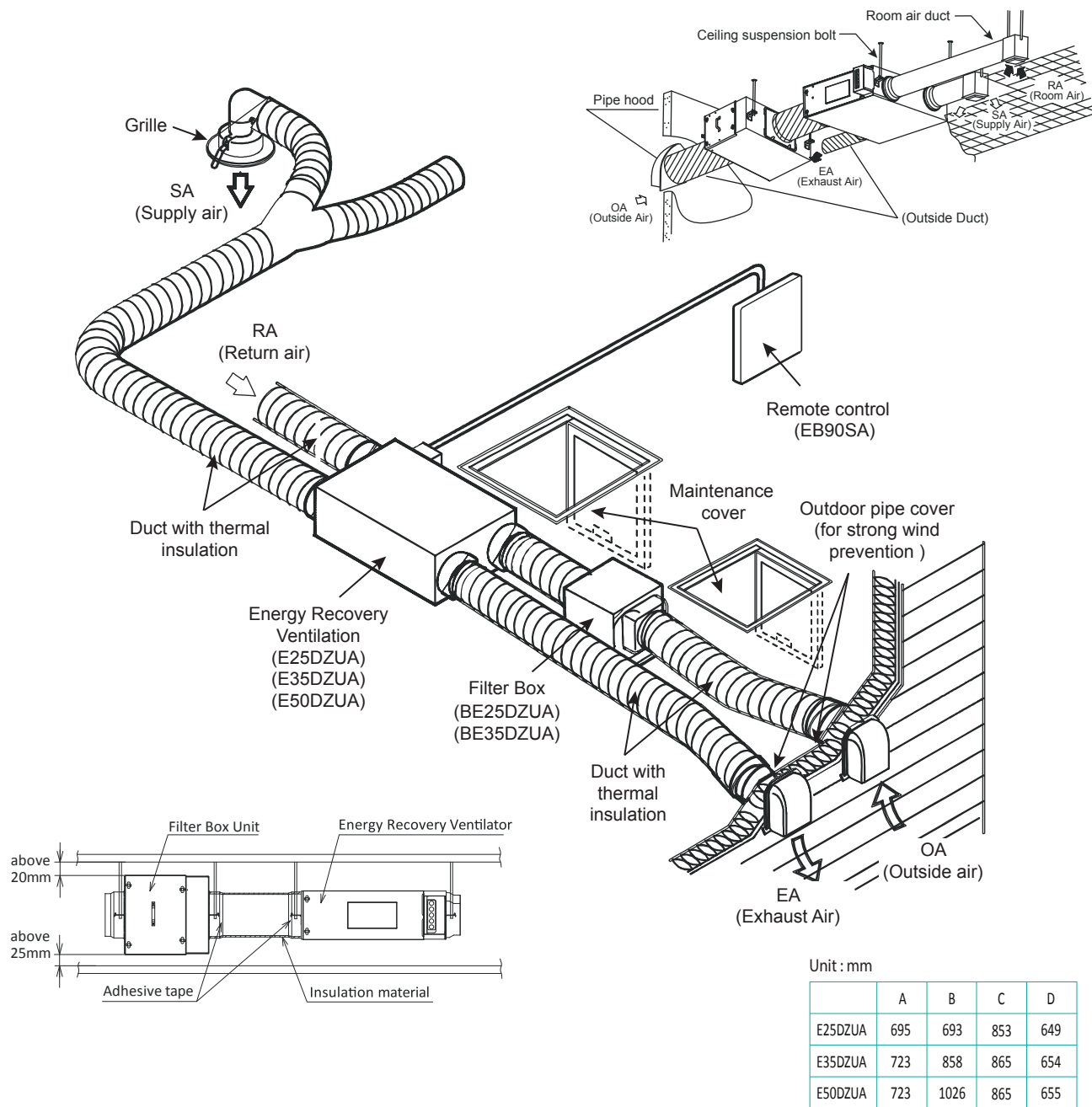




Mini Sirocco Fan



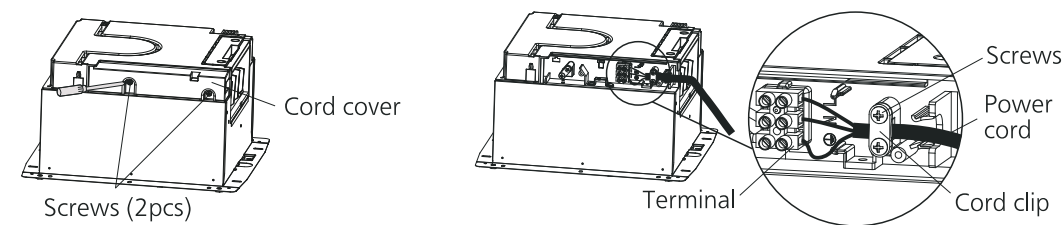
Energy Recovery Ventilator



# Thermo Ventilator

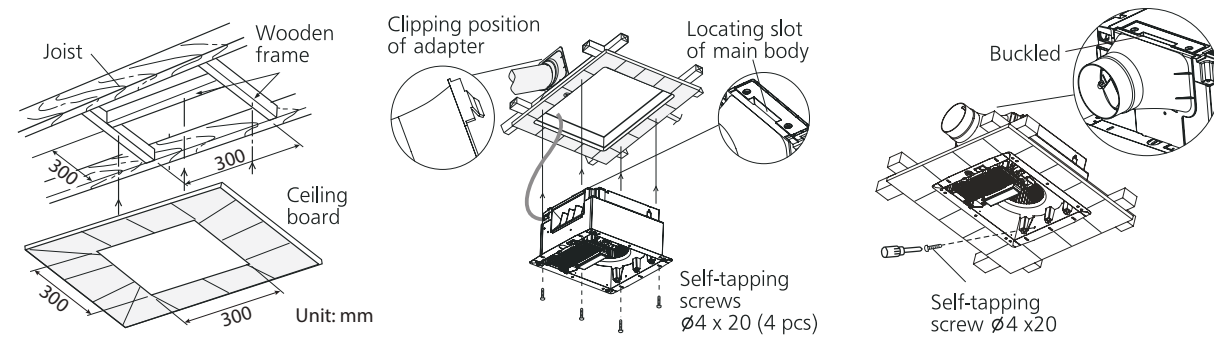
Applicable Model:  
30BUC

1. Open the cord cover and set the wiring

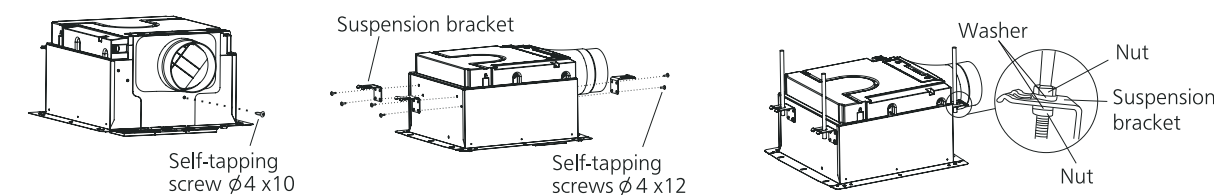


2. Install fan body in the ceiling

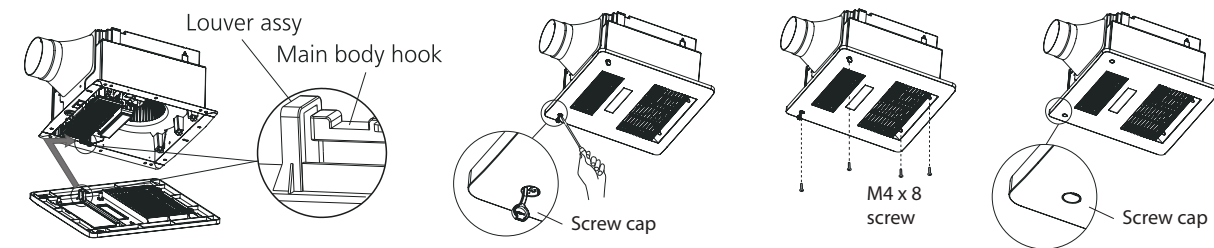
2.1 Installation with wooden joist



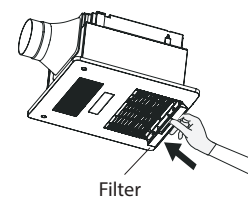
2.2 Installation with anchor bolts



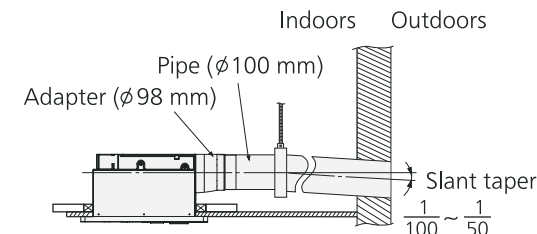
3. Set and tighten louver assembly with screws



4. Set filter into the louver assembly

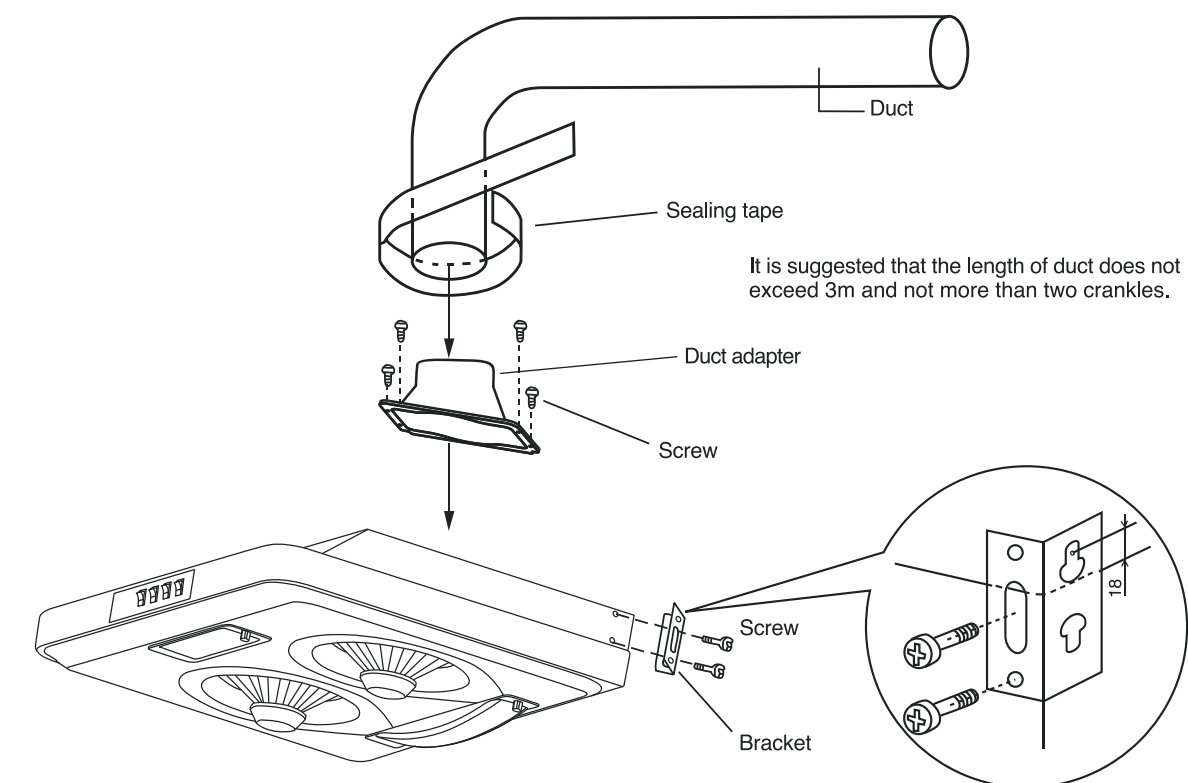
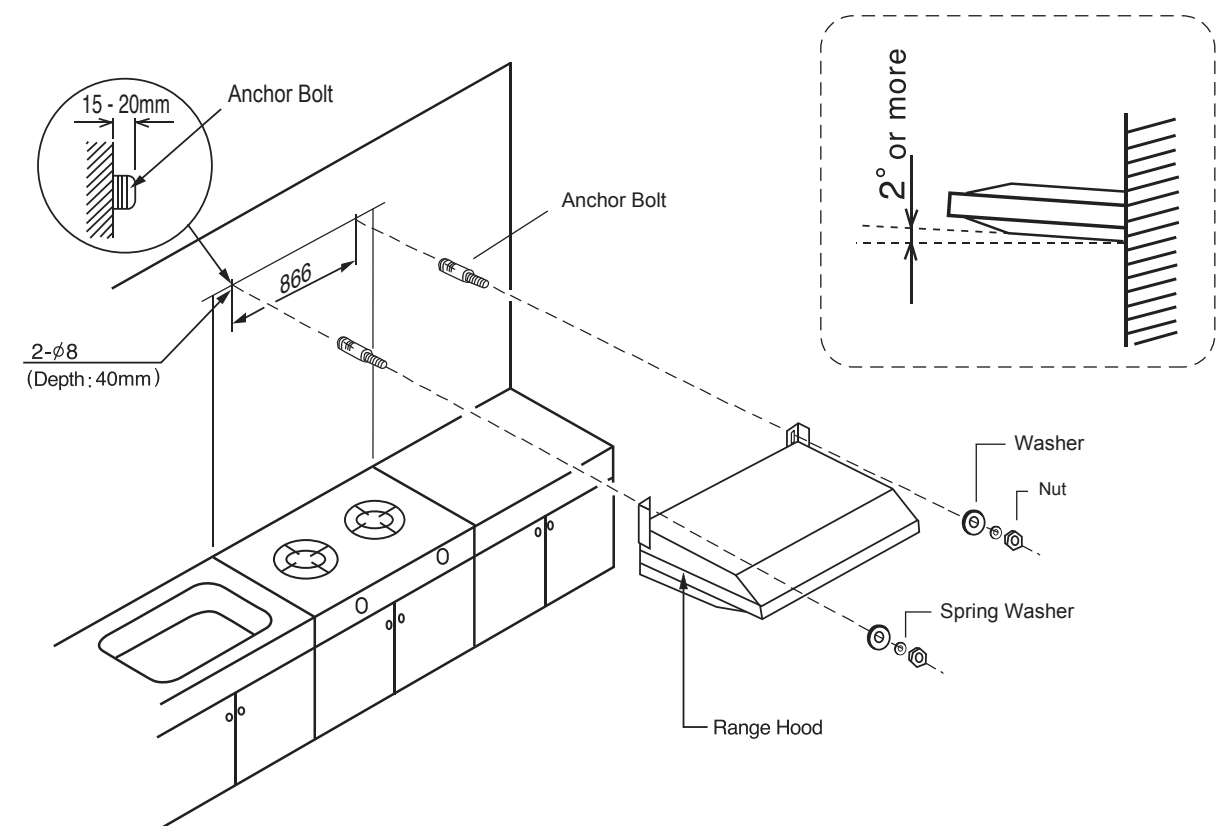


5. Connect duct pipe



# Range Hood

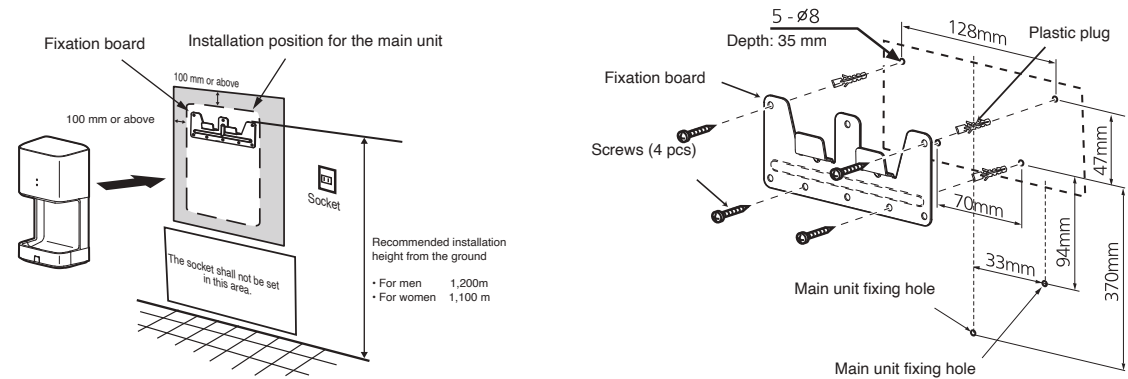
Applicable Model:  
90HQUA



# Hand Dryer

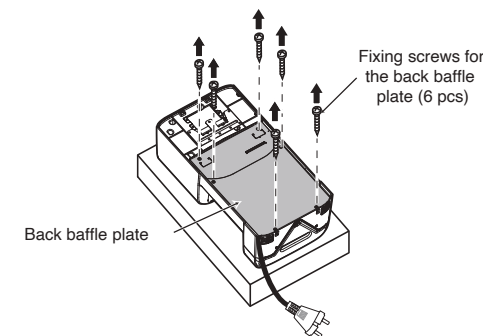
Applicable Model:  
T09AC and T09BC

1. Install fixation board on the wall

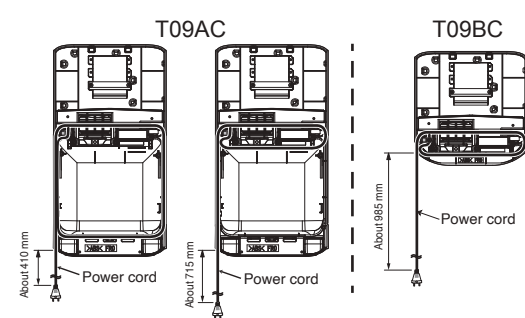


2. Adjust length and lead out direction of power cord

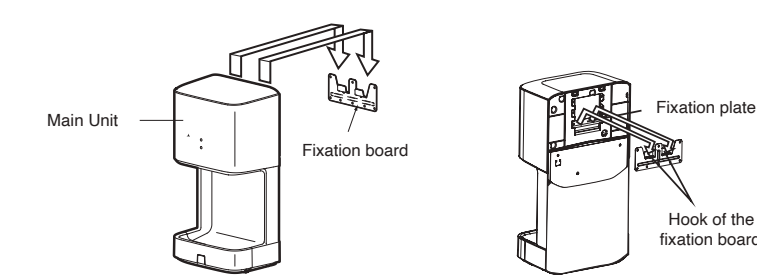
I. Remove the fixing screws on the back baffle plate of the main unit



II. Adjust the length of power cord by winding according to below figure, and select the lead-out direction

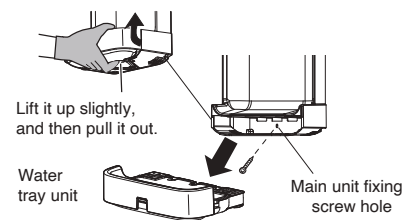


3. Set the main unit into the fixation board

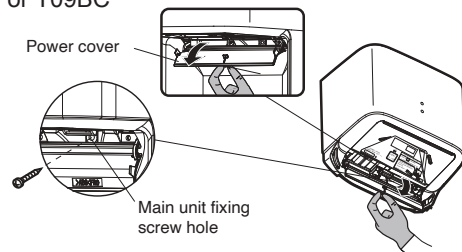


4. Fix the main unit with fixing screw

For T09AC



For T09BC

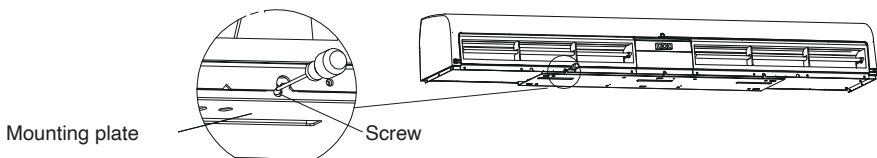


# Air Curtain

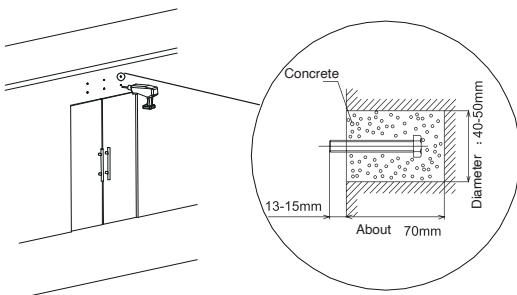
Applicable Model:  
Cross Flow Type

1. Install mounting plate on the wall

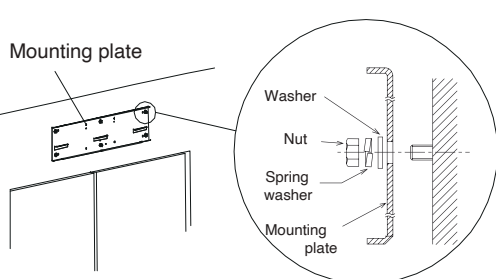
I. Remove the mounting plate from rear of the product



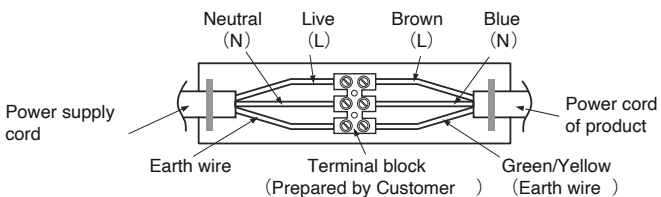
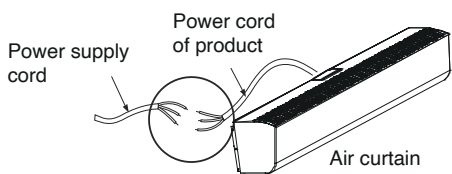
II. Set the bolts on the wall



III. Fix the mounting plate with washers and nuts

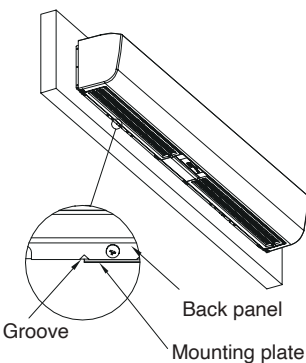
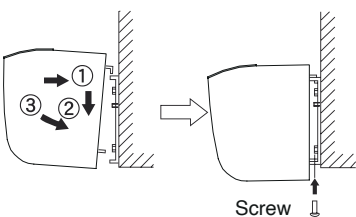


2. Wiring

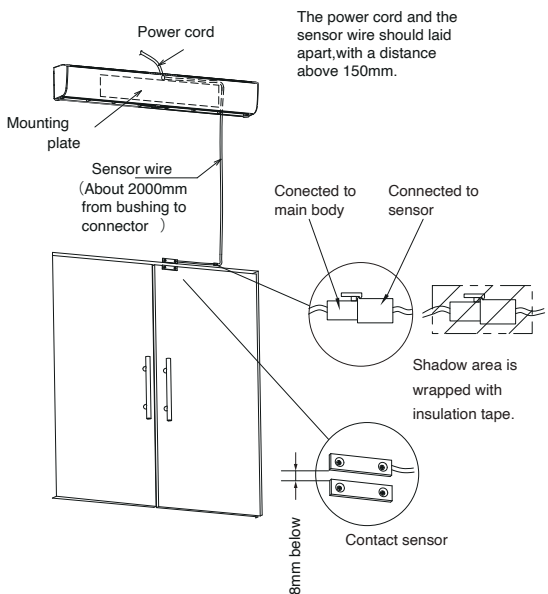


3. Install air curtain

I. Hook the air curtain on the mounting plate and tighten the screws (x3)



II. Fix the contact sensor (for Sensor Series only)



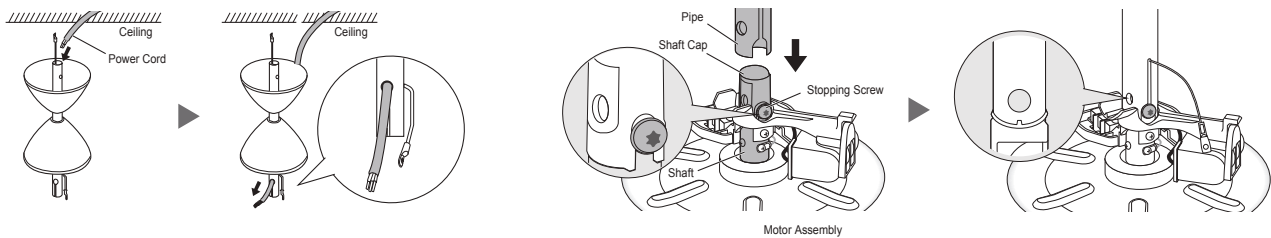


# Ceiling Fan

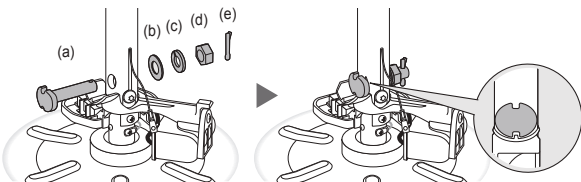
## Applicable Model: Regulator Control Series

### (1) Assemble Pipe to Motor Assembly

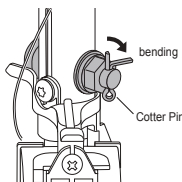
1. Pull power cord (from power supply) and insert into the Pipe hole.
2. Ensure the Shaft Cap is set on the Motor Shaft and tighten with the Stopping Screw. Fit the Pipe to the Shaft Cap that the Pipe hole and the Motor Shaft hole are aligned.



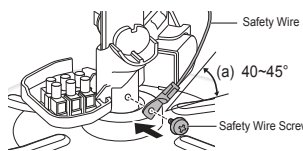
3. Fix the Pipe and Motor Assembly with a) Ellipse Bolt, b) P-R Washer, c) Spring Washer, d) Hexa Nut and e) Cotter Pin.



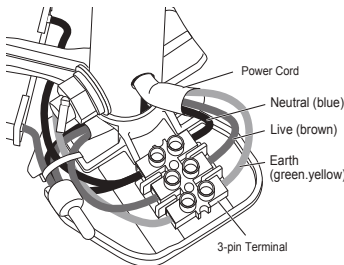
4. Bend the Cotter Pin.



5. Fix Safety Wire to the Motor Shaft with Safety Wire Screw.

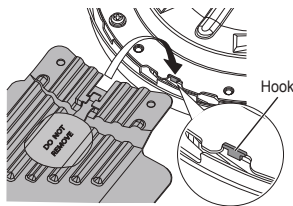


6. Connect the power cord to 3-pin Terminal.

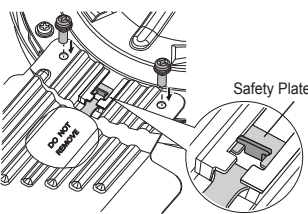


### (2) Install Blade Assembly

1. Remove Blade Screws from Motor Assembly. Set the Blade towards the Cover Hook and ensure the Blade Safety Plate is in proper position.



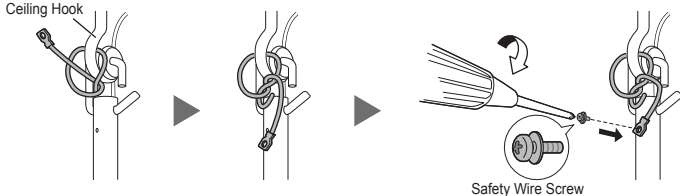
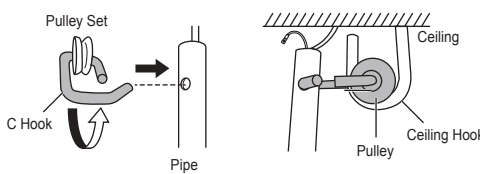
2. Tighten the Blade Screw firmly (2 screws per blade)



# Ceiling Fan

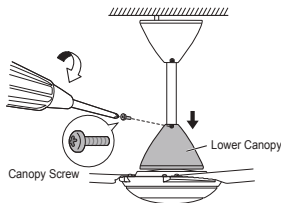
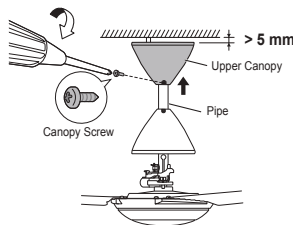
### (3) Install to the ceiling

1. Cross the C Hook of the Pulley Set to the Pipe and Place the Pulley on Ceiling Hook
2. Loop the Safety Wire to the ceiling hook and fix to the Pipe with the Safety Wire Screw



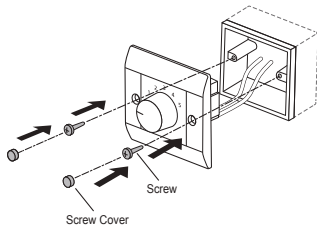
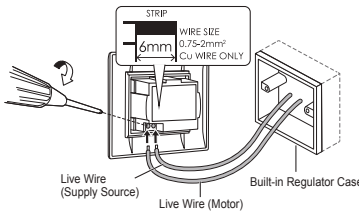
### (4) Fix the Canopy

1. Adjust Upper Canopy position and fix to the Pipe with screw.
2. Pull down the Lower Canopy until it stop and fix to the Pipe with screw.



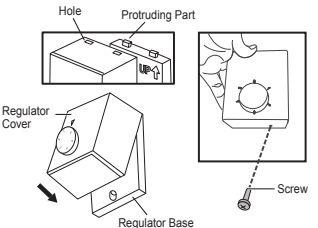
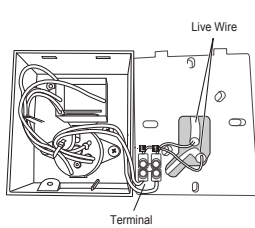
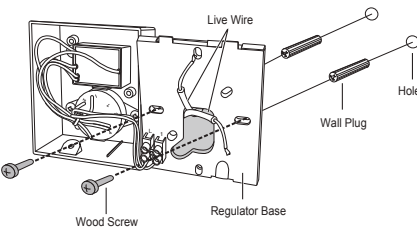
### (5a) Install Speed Regulator (Slim Panel Regulator)

1. Insert the Live Wires (from supply source and Motor) into the 2 pin terminal of the regulator and tighten the terminal screw.
2. Set the Regulator to the wall regulator casing and fix with screws.



### (5b) Install Speed Regulator (Box Regulator)

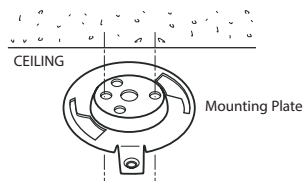
1. Insert the Live Wires through the hole of Regulator Base and fix the base with the screws.
2. Insert the Live Wire (from supply source and Motor) into the 2 pin terminal of the regulator and tighten the terminal screw
3. Set the Regulator cover by inserting the protruding parts of the Regulator Base into the holes of Regulator Cover and fix with the screw



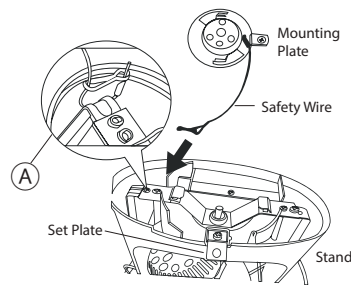
# Orbital Fan

## 1. Install fan stand on the ceiling

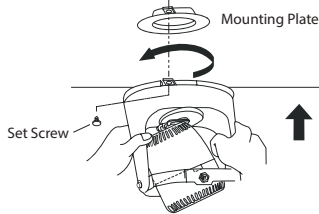
### I. Install mounting plate on the ceiling with the bolts (x2)



### II. Loop the safety wire around left arm of the stand and clip as (A)

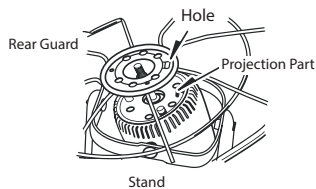


### III. Set the stand to the mounting plate. Align the screw hole and tighten the set screw

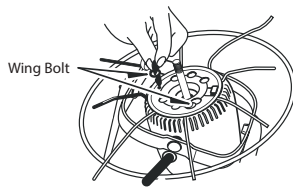


## 2. Assemble the fan

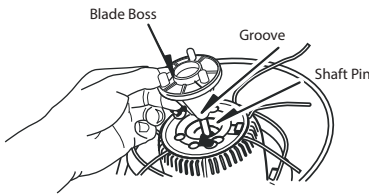
### I. Set rear guard on the stand by aligning the projection part to the hole



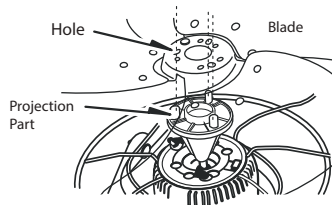
### II. Fit rear guard on the stand with wing bolt (2 pcs)



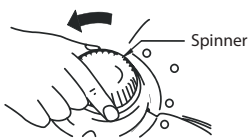
### III. Insert blade boss to the shaft. Ensure the groove is correctly fit to the shaft pin



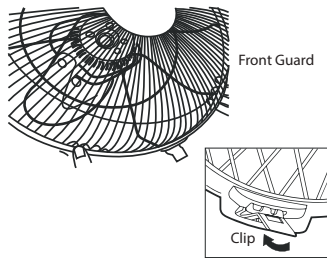
### IV. Set the blade to the blade boss and align the projection part to the hole of blade



### V. Tighten the spinner to fix the blade

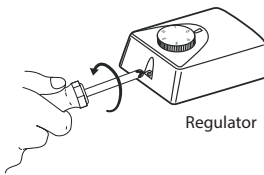


### VI. Set front guard to the rear guard and clip.

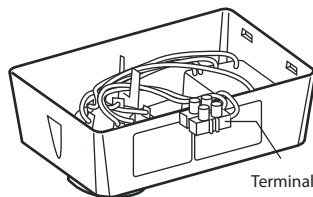


## 3. Install Regulator and Wiring

### I. Open the regulator cover and mount the regulator base on the wall

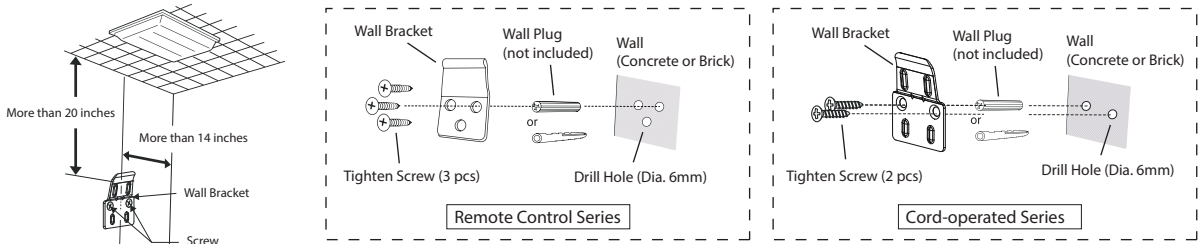


### II. Set the wiring according to the wiring diagram and re-assemble the regulator cover



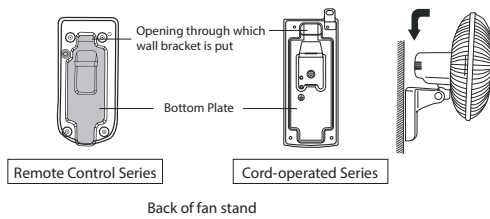
# Wall Fan

## 1. Install wall bracket on the wall



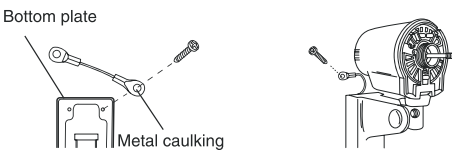
## 2. Install fan stand

Firmly install fan stand vertically onto the wall bracket, and ensure the stand is fully hooked



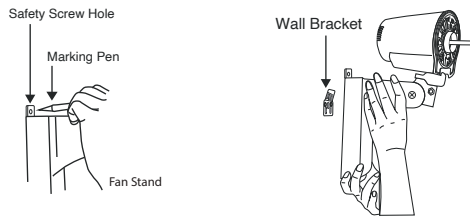
## 3-a. Install safety wire For Remote Control Series

- i. Fix safety wire on the bottom plate of the stand
- ii. Drill hole and insert wall plug. Fix the safety wire on the wall

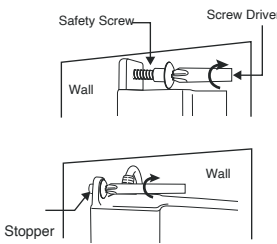


## 3-b. Install safety screw For Cord-operated Series

- I. Mark the position of safety screw from the stand
- II. Take out the stand from wall bracket. Drill hole and insert wall plug



## III. Tighten safety screw to fix the stand



## 4. Assemble the fan

