

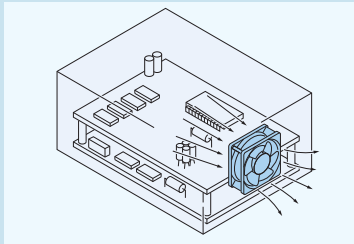


# Fan Types, Characteristics and Main Applications

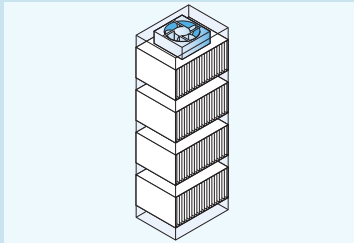
## Axial Fans

A large air flow is a feature of axial fans. Various types are available, including large size and small size.

- Ventilation and Cooling of Devices



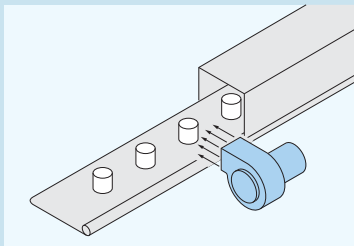
- Cooling of High-Density Devices



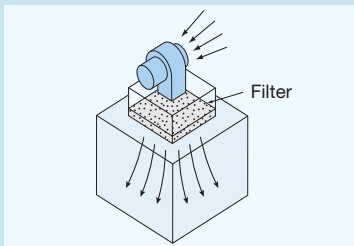
## Centrifugal Blowers

High static pressure and directional air flow are features of centrifugal blowers.

- Concentrated Drying or Cooling



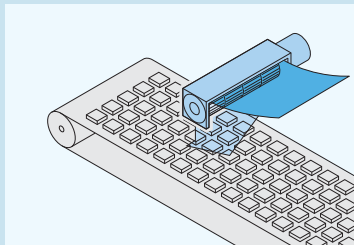
- High Static Pressure Cooling



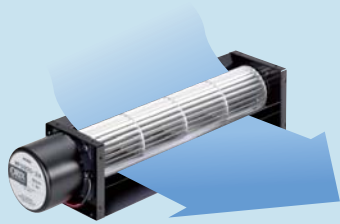
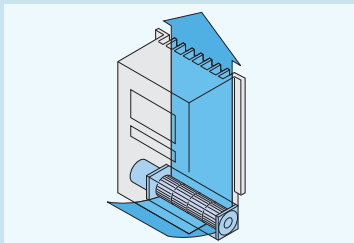
## Cross Flow Fans

A wide, uniform air flow is a feature of cross flow fans.

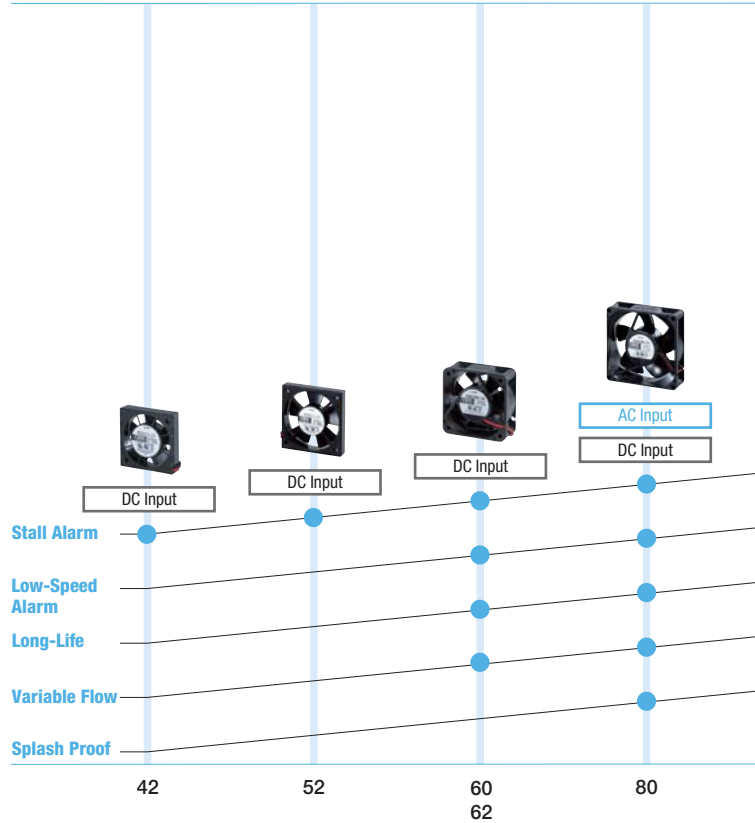
- Uniform Cooling or Drying



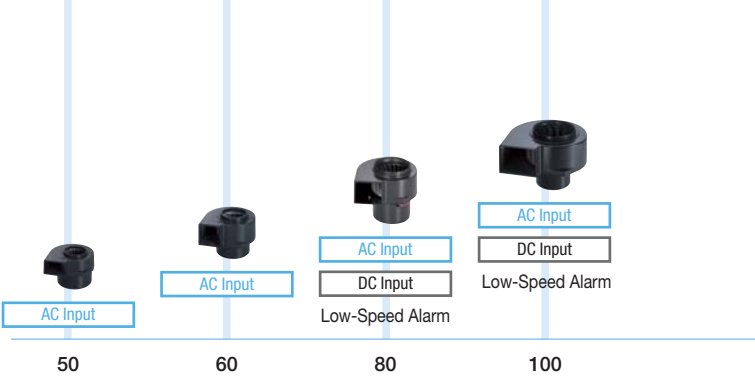
- Cooling of Long and Thin Space



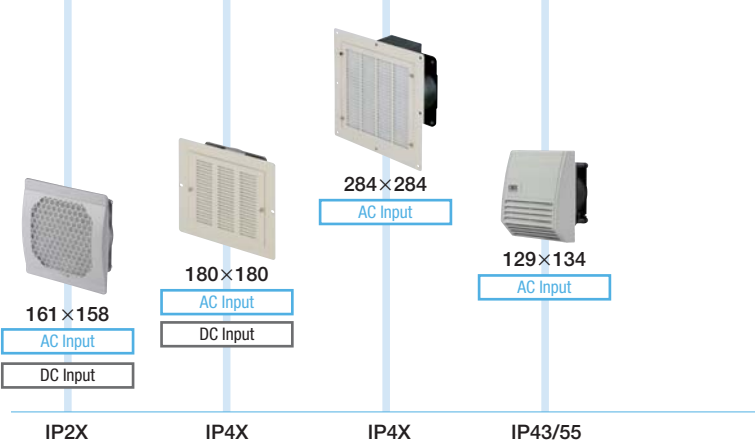
# Product Line of Cooling Fans



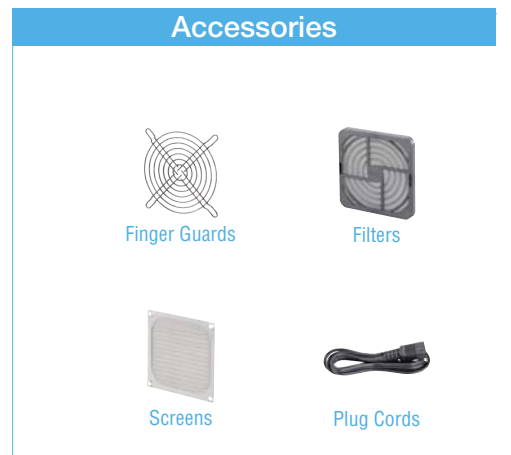
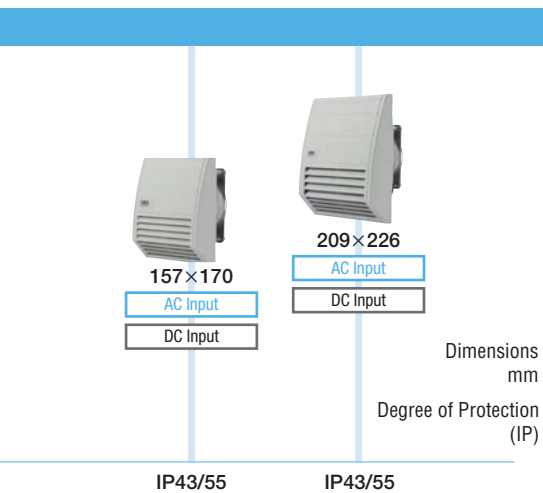
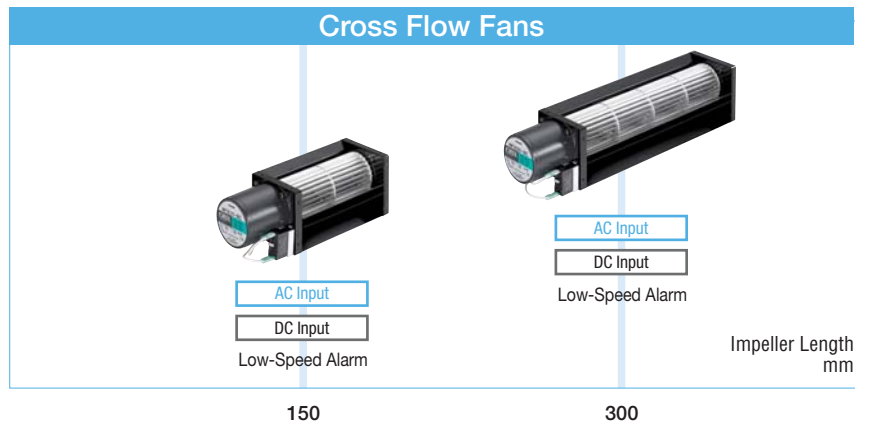
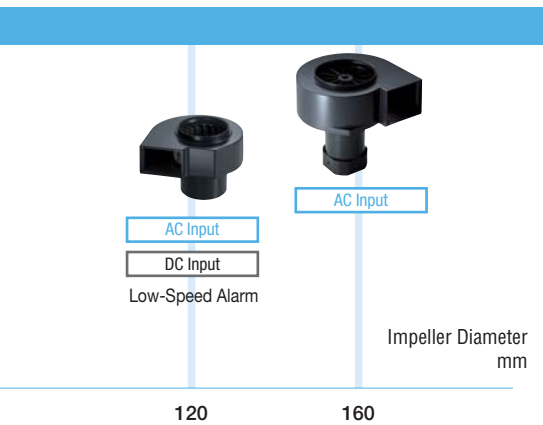
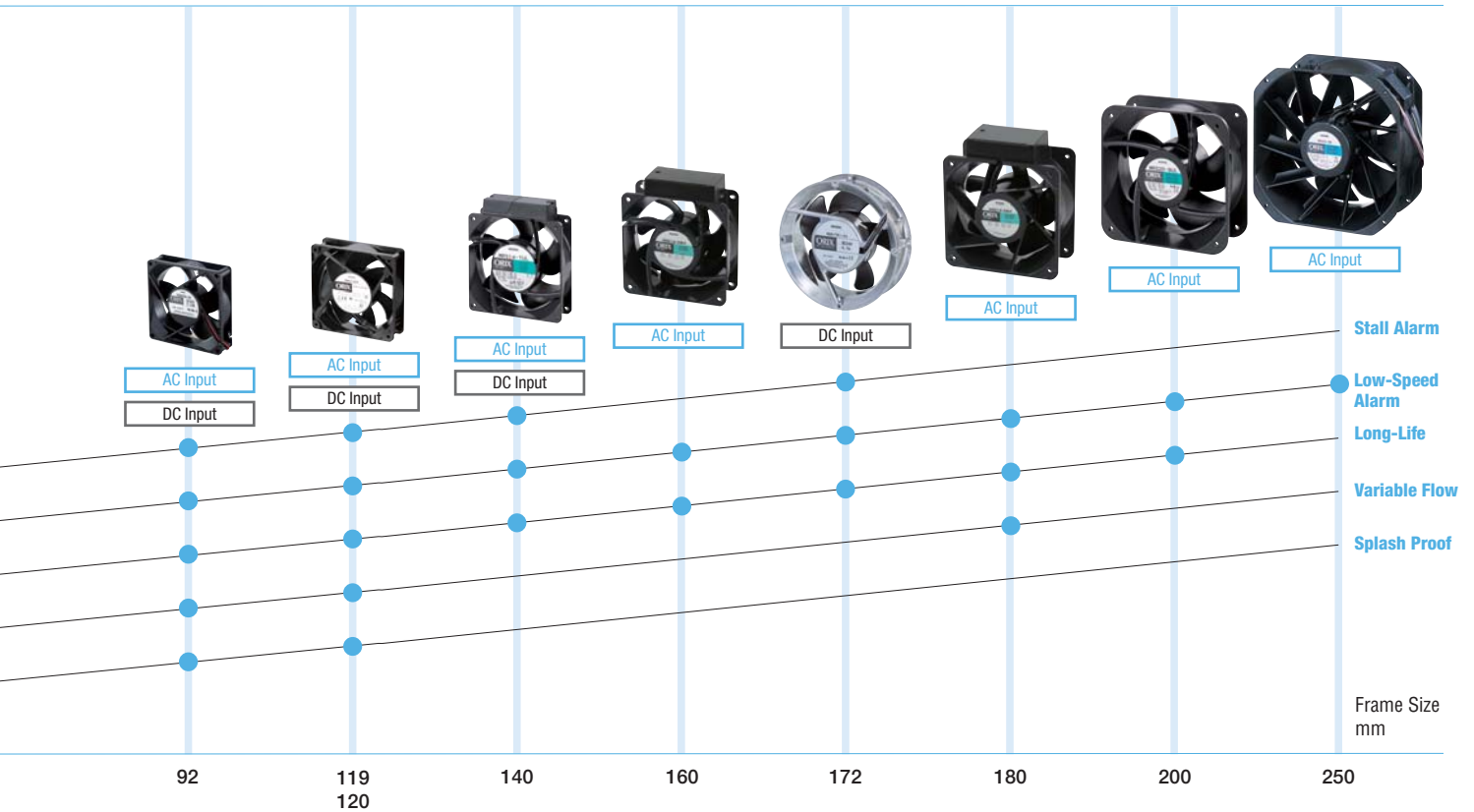
## Centrifugal Blowers



## Enclosure Fans



## Axial Fans



\*See specific part number for the agency approvals on our Oriental Motor website.

## AC Input

### Standard

#### MU Series

Conform to the UL, CSA and EN Standards and also have the CE Marking affixed (The conformity differs according to the product.)



80 mm up to 119 mm

**Max Air Flow = 106 CFM**

### Long-Life

#### MRE Series

Low-Speed Alarm

Achieved an expected life of 100,000 hours.



160 mm up to 200 mm

**Max Air Flow = 564 CFM**

### Large Air Flow

#### MRS Series

Low-Speed Alarm

Large airflow, high static pressure and high-efficient AC input axial fans.



140 mm up to 250 mm

**Max Air Flow = 883 CFM**

## DC Input

### Standard

#### MD/MDS Series

Stall Alarm

- Compact axial fans offering good overall performance and value.
- Available in 8 frame sizes.



42 mm up to 172 mm

**Max Air Flow = 349 CFM**

### Low Speed Alarm

#### MDA Series

Low-Speed Alarm

- Employ a brushless DC motor.
- Features a built-in alarm circuit that the host controller can recognize if the fan speed drops.



62 mm up to 172 mm

**Max Air Flow = 212 CFM**

### Long-Life

#### MDE Series

Stall Alarm

- Utilize a brushless motor and have an expected life of 100,000 hours.
- A stall alarm comes standard.



60 mm up to 172 mm

**Max Air Flow = 226 CFM**

For Prevention of Dust and Water Droplet Ingression. **Enclosure Fans**

**Degree of Protection IP43/ IP55** AC Input DC Input Low-Speed Alarm Stall Alarm Application Example

Enclosure Fans include guards and filters to prevent foreign objects, dust, and water droplets from reaching the cooling fan.



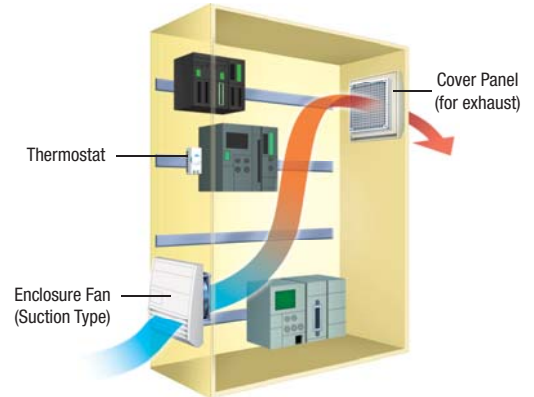
Finger Guard IP2X Type



Slit Metal Plate IP4X Type



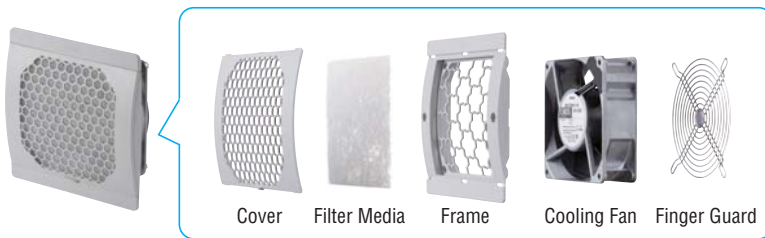
Dust and Water Resistant IP43/ IP55 Type



**What is an Enclosure Fan?**

An Enclosure Fan is a combination package consisting of a cooling fan and peripheral equipment (cover, filter media, frame and finger guard). It is suitable for cooling a control box.

Watch online video, Easy Installation Enclosure Fans.



For Directional Cooling and Duct Air Flow. **Centrifugal Blowers**

AC Input

**MB Series**

Impeller Diameter mm



50 60 80  
100 120 160

DC Input

**MBD Series** Low-Speed Alarm

Impeller Diameter mm



80 100 120

For Wide and Uniform Air Flow. **Cross Flow Fans**

AC Input

**MF Series**

Impeller Length mm



150 300

DC Input

**MFD Series** Low-Speed Alarm

Impeller Length mm



150 300



## Use with a Fan for Energy Saving and Temperature Control.

### Thermostat

#### Achieve energy reduction and noise reduction with the ON/OFF control.

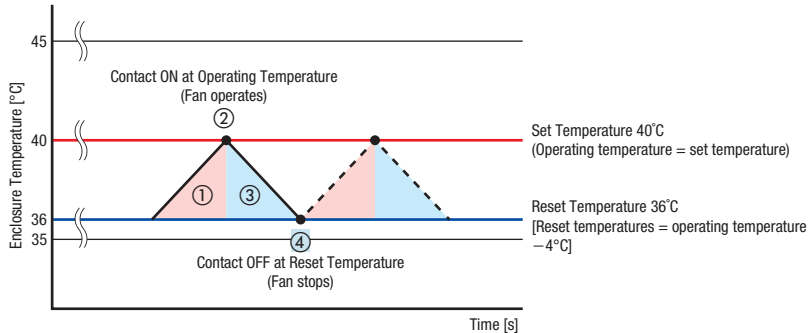
Automatically starts and stops the fan motor in accordance with the temperature fluctuations inside the equipment. Because the fan motor operates only when cooling is needed, this is effective in reducing both energy consumption and noise levels.



#### AM2-XA1 (°C)

- Unlimited settings within the 0~60°C temperature range.
- Separate power supply not required
- Supports DIN rail
- Compact design: Width 33 mm×Height 70 mm×Thickness 42.5 mm
- A single thermostat can control multiple fans. For details, see our Oriental Motor website.

When the fan activation temperature is set to 40°C, and the fan turns ON due to temperature rise inside the enclosure



## Notification of Decreased Fan Motor Cooling Performance Contributes to Increased Device Reliability.

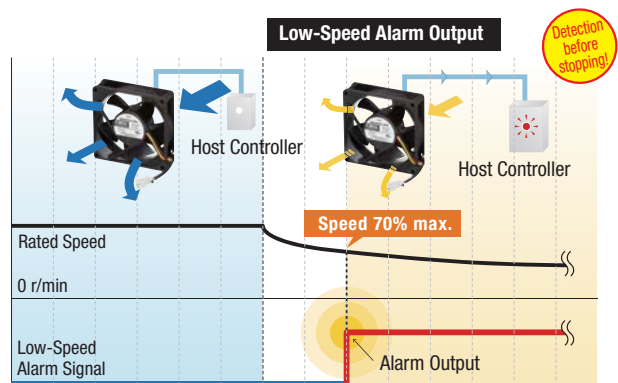
### Alarm

#### Low-Speed Alarm

When the fan motor's speed drops to 70% or less of the rated speed due to fan motor deterioration or ingress of a foreign object, an alarm is output to the host controller.



#### Fans with Low-Speed Alarms

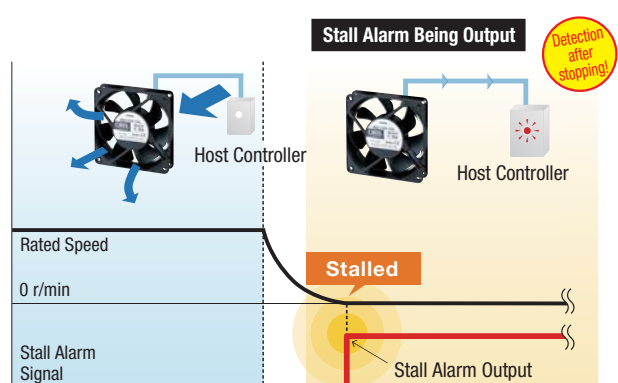


#### Stall Alarm

If the fan motor stops due to fan motor deterioration or ingress of a foreign object, a sensor signal is output to the host controller.



#### Fans with Stall Alarm



## Fan Kits

- Axial Fans



- Centrifugal Blowers



Accessories such as finger guards (or filters), power supply cables, mounting brackets and screws, are packaged together as a single set. This allows use of the fan straight out of the box.

\*Contents of sets differs by fan motor.

## Accessories



- Finger Guard



- Filters/ Metallic Filters



- Screen



- Plug Cords for Connection to Power Supply



- Duct Joints for Blowers



- Mounting Brackets

## Additional Covers for Enclosure Fans



- Finger Guard Cover Panels (IP2X)



- Finger Guard Cover Panels (IP2X)



- Slit Metal Cover Panels with Filter (IP4X)



- Dust and Water Resistant Cover Panels with Filter



### Safety Precautions

- To ensure correct operation, carefully read the Operating Manual before using it.
- The products listed in this catalogue are for industrial use and for built-in component. Do not use for any other applications.

- The factories which manufacture the products listed in this catalogue have obtained Quality Management Systems ISO9001 and Environment Management Systems ISO14001.
- The content listed in this catalogue such as performance and specifications of the products are subject to change without notice for improvements.
- The price of all products listed in this catalogue does not include the consumption tax etc.
- For details of the products, please contact the nearest dealer, sales office or the following "Order Support Center" or "Customer Support Center".
- **Orientalmotor** is registered trademark or trademark of Oriental Motor in Japan and other countries.

# Orientalmotor

## **ORIENTAL MOTOR ASIA PACIFIC PTE. LTD.**

31 Kaki Bukit Road 3, #04-02/04  
Techlink, Singapore 417818  
TEL: +65-6745-7344 FAX: +65-6745-9405  
<http://www.orientalmotor.com.sg/>

## **ORIENTAL MOTOR (THAILAND) CO., LTD.**

### **Headquarters & Bangkok Office**

900, 8th Floor Zone C, Tonson Tower, Ploenchit Road,  
Lumpini, Pathumwan, Bangkok 10330 Thailand  
TEL: +66-2-251-1871 FAX: +66-2-251-1872

### **Lamphun Office**

238/4 Moo 4, Tambol Ban-Klang,  
Amphur Muang, Lamphun 51000 Thailand  
TEL: +66-(0)53-582-074 FAX: +66-(0)53-582-076  
<http://www.orientalmotor.co.th/>

## **ORIENTAL MOTOR (INDIA) PVT. LTD.**

No.810, 8th Floor, Prestige Meridian-1 No.29,  
M.G.Road, Bangalore, 560001, India  
TEL: +91-80-41125586 FAX: +91-80-41125588  
<http://www.orientalmotor.co.in/>

## **ORIENTAL MOTOR (MALAYSIA) SDN. BHD.**

### **Headquarters & Kuala Lumpur Office**

A-13-1, North Point Offices, Mid Valley City,  
No.1 Medan Syed Putra Utara 59200  
Kuala Lumpur, Malaysia  
TEL: +60-3-22875778 FAX: +60-3-22875528

### **Penang Office**

1-4-14 Krystal Point II, Lebu Bukit Kecil 6, Bayan Lepas,  
11900 Penang, Malaysia  
TEL: +60-4-6423788 FAX: +60-4-6425788

## **Customer Support Centre**

TEL: For Singapore: 1800-8420280 (Toll Free)  
For Malaysia: 1800-806161 (Toll Free)  
For Thailand: 1800-888881 (Toll Free)  
For Other Countries: +65-6842-0280

Mail to: [support@orientalmotor.com.sg](mailto:support@orientalmotor.com.sg)

## **Japanese Customer Support Centre**

TEL: +65-6745-3008

Mail to: [j-support@orientalmotor.com.sg](mailto:j-support@orientalmotor.com.sg)

For more information please contact: