

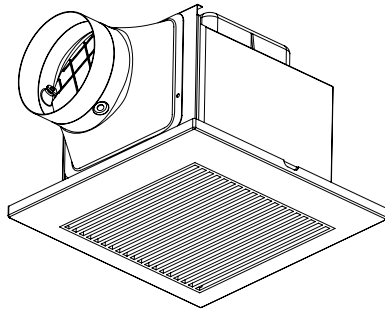


# INSTALLATION AND OPERATING INSTRUCTIONS

## 安裝使用說明書

### Ventilating Fan 換氣扇

Model No.  
型號: 17CUG



#### CONTENTS

SAFETY INSTRUCTIONS .....	2
INSTALLATION CAUTIONS .....	2~4
INSTALLATION REQUIREMENTS .....	5
SUPPLIED ACCESSORIES .....	6
PARTS NAME AND DIMENSIONS .....	7
HOW TO INSTALL .....	7~11
TEST RUN .....	12
MAINTENANCE .....	12~14
TROUBLESHOOTING .....	15
WIRING DIAGRAM .....	15
SPECIFICATIONS .....	BACK COVER

#### 目錄

安全指引 .....	2
安裝注意事項 .....	2~4
安裝要求 .....	5
包裝附件清單 .....	6
部件名稱及尺寸 .....	7
安裝方法 .....	7~11
試運轉 .....	12
日常使用及維護 .....	12~14
常見故障的識別與處理 .....	15
電器原理圖 .....	15
規格 .....	末頁

Thank you for purchasing this KDK product.

Please read these instructions carefully before attempting to install, operate or service the KDK product. Please carefully read the "INSTALLATION CAUTIONS" (P.2~4) of this instructions before installation. Failure to comply with instructions could result in personal injury or property damage. Please explain to users how to operation and maintain the product after installation, and this booklet should be presented to users.

Please retain this booklet for future reference.

感謝您選用KDK產品。

安裝、使用和維護KDK產品前，請仔細閱讀本安裝使用說明書。

安裝前，請務必先閱讀“安裝注意事項”（第2~4頁）。

不遵照此說明書進行操作有可能導致人員受傷或財產損失。

安裝完成後，請向顧客說明如何使用和維護KDK產品，並將此說明書交給顧客保管。

請妥善保管好此說明書以備日後參考。

# SAFETY INSTRUCTIONS Please observe strictly 安全指引 請務必遵守

The following explanations must always be observed in order to prevent harm to users or other people and prevent damage to property.

為了避免給您及其他人造成傷害，這裡我們列出了以下安全注意事項，請務必遵守，各種標誌的含義請參見以下內容。

- The following displays are classified and explained to what extent harm or damage occurs when the display details are ignored and the unit in question is wrongly used. 無視或錯誤理解這些標誌，會產生下列兩種情況。



This indication means: Must be treated seriously that this may result in death or serious injury.  
本標誌所表示內容為“不遵守的話可能造成人員死亡或重傷”。



This indication means: Must be treated seriously that this may result in injury or physical damage.  
本標誌所表示內容為“不遵守的話可能造成人身輕傷或其他財產損害”。

- The types of details to be observed are classified and explained in the following illustrated displays. (below are the series of illustrated displays)  
務必遵守的內容分類，用標誌區分說明如下：



This symbol indicates the item “PROHIBITED” to do.  
此標誌表示為禁止事項



This symbol indicates the “COMPULSORY” item that must be followed without failure.  
此標誌表示為強制事項



This symbol indicates the item is “CAUTION”.  
此標誌表示為提示注意事項

## INSTALLATION CAUTIONS

## 安裝注意事項



- The product must be grounded.  
必須接地。



Otherwise, it may cause electric shock when there is any trouble or electric leakage.

當出現故障或漏電時，可能會觸電。

- Do not operate the product other than the rated voltage (220 V, 50 Hz).

禁止使用額定電壓(220 V~, 50 Hz)以外的電源。



Otherwise, it may damage the product or cause fire.

否則可能會導致損壞本產品，導致火災。

**WARNING**  
**警告**

- Do not install the power switch in bathroom.

禁止將電源開關安裝在浴室內。



Otherwise, it may cause a short circuit, thus resulting a fire.  
否則可能會導致短路，導致火災。

- Do not install the fan out of the window and wall.

禁止將換氣扇安裝於窗戶外或牆壁外。



Otherwise, the product may get wet in the rain and cause short circuit.  
否則產品可能會淋雨，導致短路。

- Do not install the product as the method which is not approved in the instruction.

禁止使用本說明書指定以外的方法進行安裝。



Otherwise, the product may fall down and it may cause injury.  
否則產品可能會掉落，導致受傷。

- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

如果電源軟線損壞，為了避免危險，必須由製造商、其維修部或類似部門的專業人員更換。



Otherwise, it may cause fire or electric shock.  
否則可能會導致火災或觸電。

- Please install an all-pole switch which the contact separation is more than 3 mm (all-pole switch).  
安裝時，須在供電線路中安裝其觸電開距不少於3 mm的全極斷開裝置(全極開關)。



Otherwise, it may cause a short circuit, thus resulting a fire.  
否則可能會導致短路，導致火災。

- Please select 60227 IEC 53 ordinary polyvinyl chloride sheathed cord. Nominal cross-sectional area of conductors is  $3 \times 0.75 \text{ mm}^2$ .

電源線請選用60227 IEC 53型絞合軟線，導線的截面積為 $3 \times 0.75 \text{ mm}^2$ 。



Otherwise, it may cause fire.  
否則可能會導致起火。

- Wiring is required to follow the local wiring regulations.  
器具應按照國家佈線規則進行安裝。



Otherwise, it may cause fire.  
否則可能會導致火災。

- Installation should be done by authorized person. The product should be installed firmly.  
必須由專業人員進行安裝，必須牢固地安裝產品。



Otherwise, the product may fall down and it may cause injury.  
否則產品可能會掉落，導致受傷。



## CAUTION 注意

- The product must be mounted on a building which is strong enough. To ensure it can bear over 5 times of product weight. The building must be reinforced if its strength can not be ensure.

安裝產品的建築結構必須牢固，確保有能承載大於產品重量5倍的強度。如不能確保安裝強度，請務必採取加固措施。



Otherwise, the product may fall down and it may cause injury.

否則產品可能會掉落，導致受傷。

- Components must be installed tightly.

部品安裝必須牢固。



Otherwise, it may injury person caused by product's falling off.

否則部品可能會掉落，導致受傷。

- The product must be installed tightly.

機體安裝必須牢固。



Otherwise, it may injury person caused by product's falling off.

否則機體可能會掉落，導致受傷。

- Please wear the gloves when installing the product.

安裝時請帶手套。



Otherwise, it may cause damage.

否則可能會導致受傷。

- The special-purpose or dedicated parts, such as mounting fixtures, must be used if such parts are provided.

有安裝五金件等專用零部件時，應使用專用零部件。

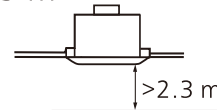


Otherwise, the product may fall down and it may cause injury.

否則產品可能會掉落，導致受傷。

- The lowest surface of this product should be installed above 2.3 m from the floor after installation.

安裝完成後產品最底面至地面的距離必須大於2.3 m。



Avoiding any accident  
防止意外

- Do avoid the back-flow of gas into the room from the open flue of flammable gas or other open-fire appliances.

必須避免氣體從敞開的氣道或其他明火設備回流進室內。



Otherwise, it may cause fire.

否則可能會導致火災。

- Do not reconstruct this product.

禁止對本產品進行改造。



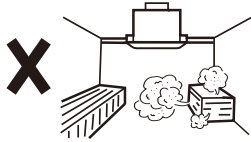
Otherwise, it may cause damage to the product or injury.

否則可能會導致產品損壞或受傷。

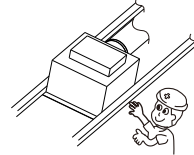
Please observe the following requirement. Otherwise, it may cause the product aging and breakdown.

請遵守以下安裝要求事項，否則有可能會導致機體老化或發生故障。

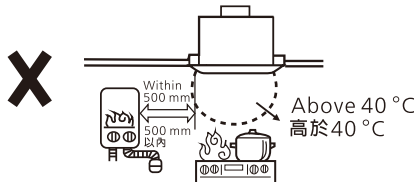
- Do not install the product where there is steam.  
請勿安裝在有蒸氣的場所。



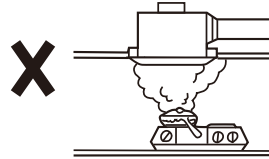
- Please set a square inspection hole of at least 45 cm.  
請設置一個45 cm以上的方形點檢口。



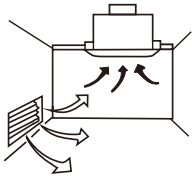
- Do not install the product in places with high temperature.  
請勿安裝在高溫場所。



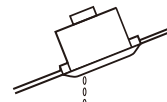
- Do not install the product where it is exposed to oil fumes.  
請勿安裝在油煙過多的場所。



- Please set ventilation holes.  
請設置通風口。



- Do not install onto slanting ceiling.  
請勿安裝在傾斜的天花板上。



Prevent the water condensed in the duct pipe flow back into the body.  
防止水倒流。

- To install the duct, avoid the following cases.  
安裝管道應該避免以下情況：



- Do not install the product in the place with many dust.  
請勿安裝在灰塵較多的場所。

- The product is not provided with all-pole switch and leakage protection switch.  
Please purchase them in market.










本產品沒有附帶電源全極開關和漏電保護開關，需用戶另購。

- When you install plastic part, do not exert too much strength to fixing the screw, otherwise, the product would be damaged.

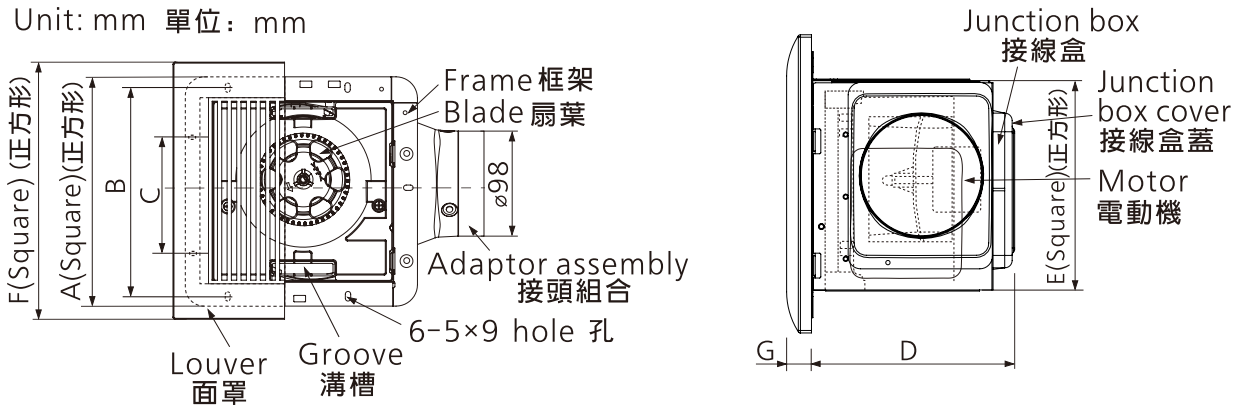
安裝塑料部件時，為了不損壞部件，鎖螺絲時請注意不要用力過大。

The following attachments are enclosed in the packing box of ventilating fan. Be sure to check if they are complete after unpacking, and if anything is missed, contact our After-Sales Service Center or the dealer.

隨換氣扇產品包裝箱有以下附件，開箱後請清點是否齊全，若不齊全，請與Panasonic客戶諮詢服務中心或經銷商聯繫。

No. 序號	Drawing 圖樣	Name and purpose 名稱及用途	Quantity 數量
①		Self-tapping screw (use to fix the frame and adaptor assembly) 自攻螺絲(φ4.2×20用於固定框架和接頭組合)	6
②		Louver 面罩	1
③		Installation and operating instruction 安裝使用說明書	1
④		Vibration-resistance rubber piece 防震橡皮件	2
⑤		Suspension bracket 懸吊支架	2
⑥		Tapping screw, used to install the suspension bracket to the frame 自攻螺絲(ST4.2×8用於固定懸吊支架到框架)	4
⑦		Rubber washer No.1 防震墊圈No.1	2
⑧		Rubber washer No.2 防震墊圈No.2	2
⑨		Washer 墊圈	4

Unit: mm 單位: mm



Model 型號	A	B	C	D	E	F	G	Duct size 管道尺寸
17CUG	214	194	84	164	170	240	20	ø100

## HOW TO INSTALL

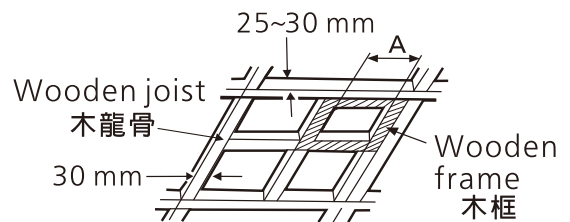
## 安裝方法

### 1. Fan body installation Method 1 install with wooden joist 機體的安裝 方法一 使用木龍骨安裝

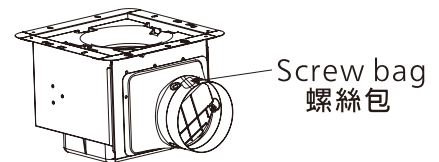
- ① Construct the wooden frame and attach it horizontally to the wooden joist. The distance between the top of fan body and ceiling should not be less than 20 mm.  
在木龍骨上水平地搭建木框。注意應保持機體頂部和天花板的距離不小於20 mm。

Unit: mm 單位: mm

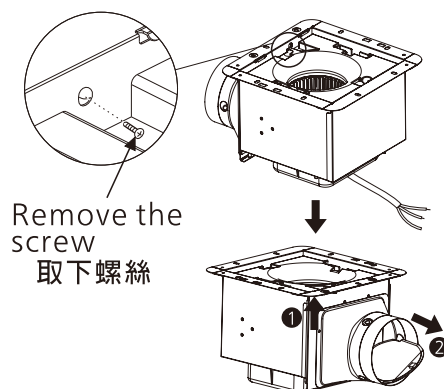
Model 型號	17CUG
A Size A尺寸	177±2 (Square)(正方形)



- ② Remove the screw bag from adaptor assembly.  
撕下接頭組合上的螺絲包。



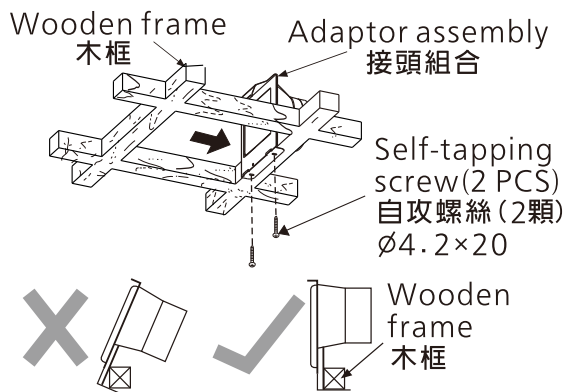
- ③ Remove one ø4.2 machine screw that is fixed adaptor assembly and fan body, then remove the adaptor assembly as below.  
取下固定接頭組合和機體的1顆ø4.2機械螺絲，按圖示方法拆下接頭組合。





- ④ Closing to wooden frame, the adaptor assembly is fixed on wooden frame with 2 self-tapping screws of  $\phi 4.2 \times 20$  as shown in figure.

按圖示將接頭組合緊靠木框固定，並用自攻螺絲  $\phi 4.2 \times 20$  (2顆) 固定。



- ⑤ Connect the power cord (included earth) of fan body to lead wire in accordance with the wiring diagram.

根據接線示意圖，將機體電源線(包括地線)連接到供電電源線上。

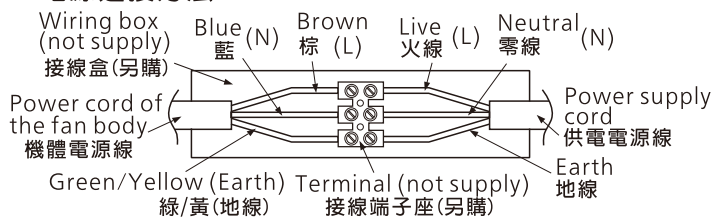
**Notice**  
提示事項

Wiring should be firmly connected without any loose.

電源線連接處必須牢固，不能有鬆動。

Connection example as follows:

電源連接方法：

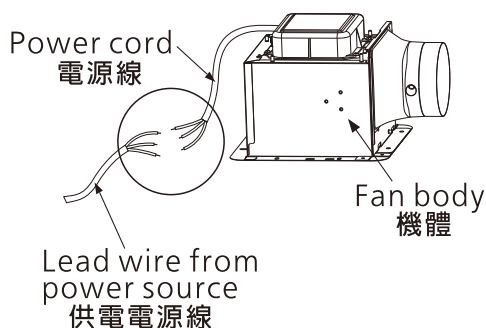


- It is required to use terminal (not supply) that complies IEC 60998 and wiring box (not supply) that complies BS 4662.

要求使用符合IEC 60998的接線端子座(另購)，符合BS 4662的接線盒(另購)。

- Make sure all connections are fastened firmly after finishing wiring.

接線完成後，必須檢查所有連接是否牢固。





- ⑥ Make the power cord pass through the wooden frame, push the fan body into wooden frame, to fix the fan body and adaptor assembly.

將電源線穿過木框，將機體推入木框，使機體與接頭組合固定。

**Notice**  
提示事項

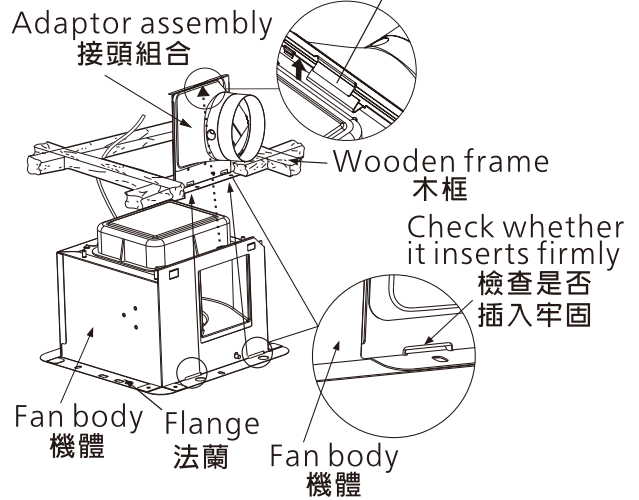
■ Power cord should reserve more than 400 mm, otherwise fan body is hard to disassembly when maintenance.

電源線要有400 mm以上的預留，否則維修時機體難以拆卸。

■ When the fan body is pushed into the wooden frame, be careful not to pinch the power cord.

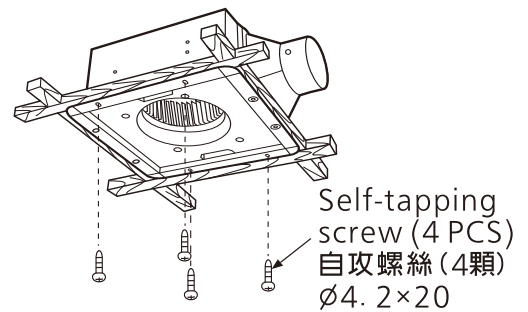
機體推入木框時，請注意不要夾傷電源線。

Check whether the hook is secure  
檢查鉤環是否保護到位



- ⑦ Fix fan body firmly with 4 self-tapping screws  $\phi 4.2 \times 20$ .

用自攻螺絲 $\phi 4.2 \times 20$  (4顆) 將機體牢固地固定。

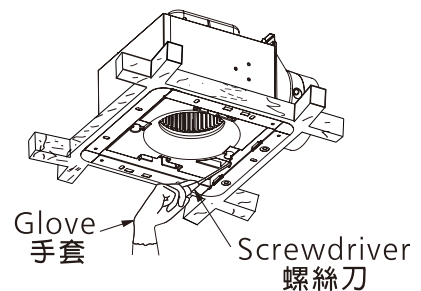


- ⑧ Fix adaptor assembly and fan body firmly with screws removed in step ③.

用步驟③中拆下的螺絲將機體與接頭組合牢固地固定起來。

■ After finishing installation, please confirm whether fan body and adaptor assembly are installed firmly.

安裝完成後，請確認機體與接頭是否完全安裝牢固。



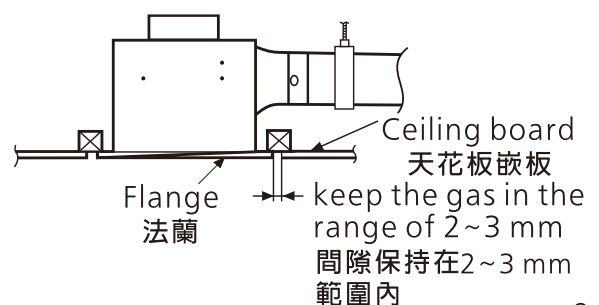
- ⑨ Connect duct. → refer to page 11

2. Connect duct

連接管道。 → 參考第11頁 2. 管道連接

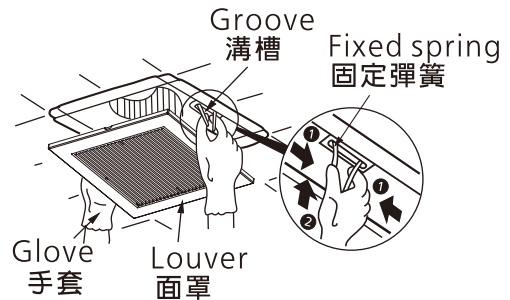
- ⑩ Install ceiling board, keep the gas of flange and ceiling board in the range of 2~3 mm.

安裝天花板嵌板，使法蘭與天花板嵌板的間隙保持在2~3 mm範圍內。



- ⑪ Insert the fixed spring of louver assembly into the groove, install the louver to the fan body.

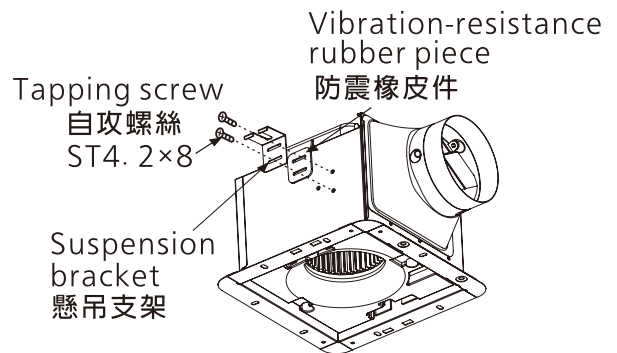
將面罩組合上的固定彈簧裝入溝槽內，將面罩裝在機體上。



## 1. Fan body installation Method 2 install with anchor bolt 機體的安裝 方法二 使用地腳螺栓安裝

- ① Secure the suspension brackets with screws.

用螺絲固定懸吊支架。



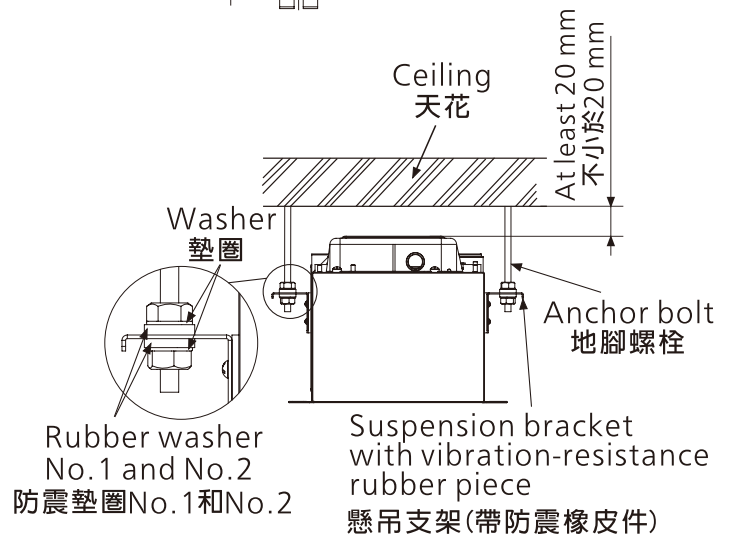
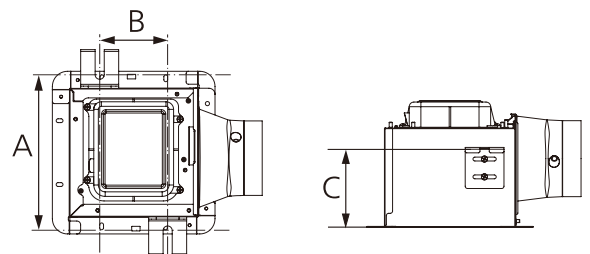
- ② Install the fan body on the anchor bolt refer to the following form.

(M8-M10, not supply)

參考下表尺寸安裝地腳螺栓，並將機體安裝在地腳螺栓上(M8-M10另購)。

Unit: mm 單位: mm

Model 型號	A size A尺寸	B size B尺寸	C size C尺寸
17CUG	206	89	103



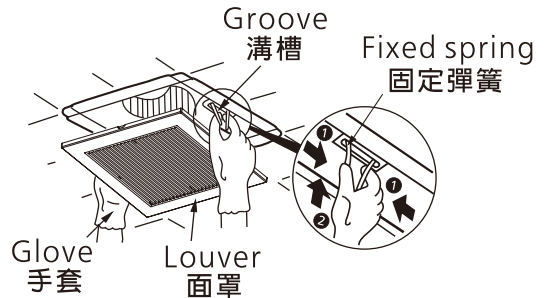
- ③ Connect power cord. → refer to page 8  
 1. Fan body installation Method 1  
 install with wooden joist ⑤

連接電源線。→ 參考第8頁

## 1. 機體的安裝 方法一 使用木龍骨安裝 ⑤

- ④ Insert the fixed spring of louver assembly into the groove, install the louver to the fan body.

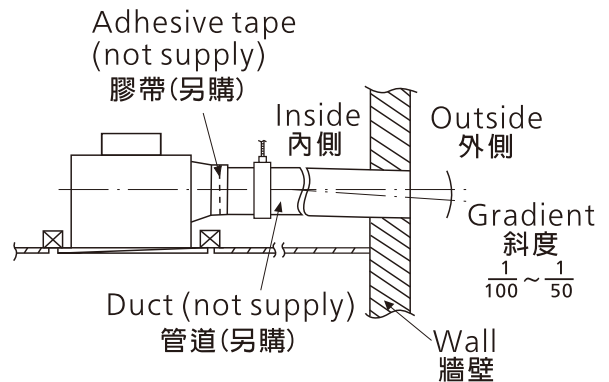
將面罩組合上的固定彈簧裝入溝槽內，將面罩裝在機體上。



## 2. Connect duct 管道連接

- ① Insert the duct (not supply) into the adaptor and secure it with adhesive tape (not supply) tightly. Suspend the duct from the ceiling so that no force is applied to the fan body. Install the duct horizontally with a gradient downwards to the outside. And the outlet of duct shall be located to avoid the rain ingress.

將管道(另購)裝入接頭組合上，然後用膠帶(另購)紮緊密閉，防止漏風。將管道懸掛在天花板上，以防止外力施加于機體。管道水平向下傾斜地安裝到外側，其出口應設置在避免雨水進入的地方。



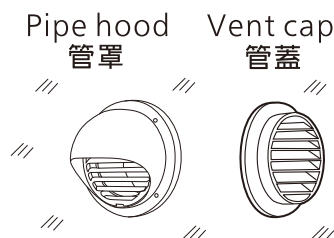
### Notice 提示事項

The minimum diameter of the hole:  $\phi 116$  mm  
 牆壁的最小開口尺寸為： $\phi 116$  mm

- ② Install the pipe hood or vent cap (not supply) on the external wall. Please install it refer to instruction of outdoor duct installation.

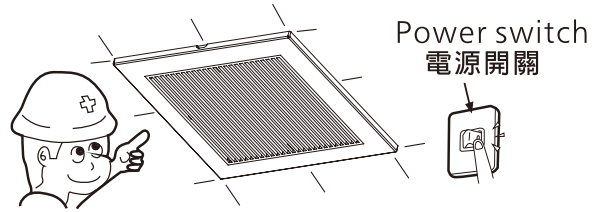
將管罩或管蓋(另購)安裝到牆外。請根據室外管罩的安裝說明書進行安裝。

Pipe hood 管罩	Vent cap 管蓋
FV-MCX100P	FV-VCX100P



■ Please check whether all kinds of anomalies below happen after connecting power.  
在接通電源後，檢查一下是否發生以下各種異常現象：

- Blades doesn't run properly.  
扇葉不正常地運轉。
- Blades is clockwise rotation.  
扇葉順時針旋轉。
- Blades have abnormal vibration or noise.  
發生不正常的聲音或震動。



■ If anomalies happen, please check whether the installation is right.  
若出現異常現象，請檢查是否安裝正確。

## MAINTENANCE

## 日常使用及維護

WARNING  
警告

■ Do not directly spray this product with water and other liquids.  
禁止用水及其他液體直接噴射、清潔本產品。



Otherwise, it may cause short circuit or electric shock.  
否則可能會導致短路或觸電。

■ Once flammable gas leaks, do not start any function of this product.  
當發生煤氣洩漏時，禁止開啟本產品的任何功能。



Otherwise, it may generate sparkle and this leads to explosion.  
否則可能會產生電火花而引起爆炸。

■ Do not let water flow into the motor.  
禁止讓水進入電動機。



Otherwise, it may damage the product or cause fire.  
否則可能會損壞本產品或導致火災。

■ Make sure to disconnect power supply before cleaning product.  
維護保養產品前，請務必斷開電源。



Otherwise, the product might operate with the possibility of electric shock or injury.  
否則產品可能會突然運轉，導致觸電或受傷。

■ This product is applicable to living rooms, washrooms and other places where the humidity is not too high.  
本產品需安裝在起居室、衛生間等濕度不太高的場所。



Otherwise, it may lead to short circuit or electric shock.  
否則可能會引起短路或觸電。

■ If you will not use this product any more, remove the product.  
如果以後不打算再使用本產品，不得放置不管，而應予以拆除。



Otherwise, the product may fall down and it may cause injury.  
萬一掉落，可能會導致受傷。

**CAUTION**  
**注意**

- Please wear the gloves when cleaning the product.

清潔時請帶上手套。



Otherwise, it may cause damage.

否則可能會導致受傷。

**Notice**  
**提示事項**

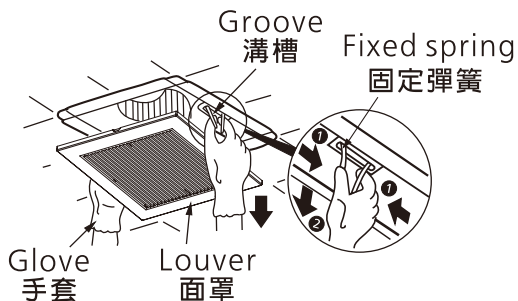
1. The applicable ambient temperature of this product is in the range of  $-10^{\circ}\text{C}$ ~ $40^{\circ}\text{C}$ . The applicable ambient humidity is in the range of 25%~95%. Otherwise, it may cause failure.  
本產品適用環境溫度 $-10^{\circ}\text{C}$ ~ $40^{\circ}\text{C}$ ，適用環境濕度25%~95%，否則可能會引起故障。
2. This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety.  
Children should be supervised to ensure that they do not play with the product.  
本產品不適合有殘疾、智障或精神障礙的人士，或缺乏經驗常識者(包括兒童)維護使用，除非在監護人的看護或指導下使用。  
在維護保養期間，兒童應該有人進行看護，以防將產品當做玩具。

**Cleaning Precautions**  
**清潔提示事項**

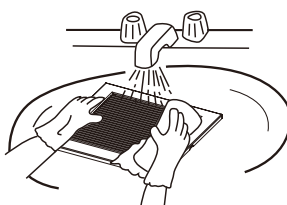
- Never immerse blade or other resin parts in hot water over  $60^{\circ}\text{C}$ .  
請勿把塑料部品浸入高於 $60^{\circ}\text{C}$ 的水中。
- Never use petrol, benzene thinner or any other such chemicals for cleaning the product.  
請勿使用汽油、苯、稀釋劑或其他諸如此類的化學品擦拭換氣扇。

## Clean product 清潔產品

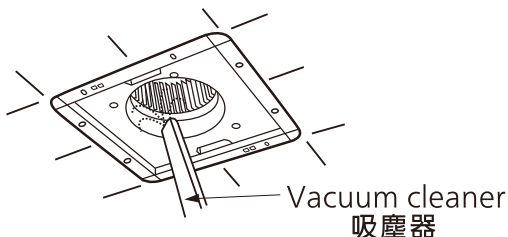
- ① Remove the louver.  
拆下面罩。



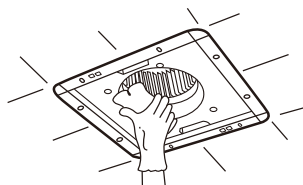
- ② Rinse the louver with water, and then dry it with a soft dry cloth or leave it air dry.  
用水沖洗面罩，洗淨的面罩請用柔軟的乾布抹乾或風乾。



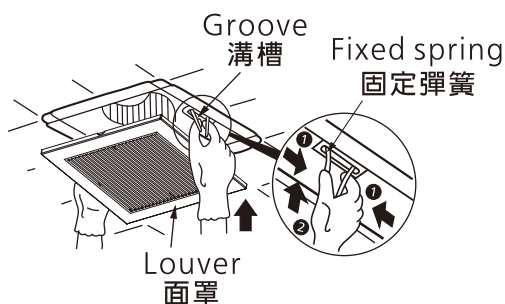
- ③ Clean the dirt of blades with vacuum cleaner.  
使用吸塵器清除扇葉上的污物。



- ④ Wipe the dust off the fan body with a soft cloth moistened with kitchen detergent, and then clear it with a clean soft cloth.  
使用軟布沾上廚房用洗滌劑後擦掉扇葉上的污物，再用乾淨軟布擦淨。



- ⑤ Finally, install the louver.  
重新裝上面罩。



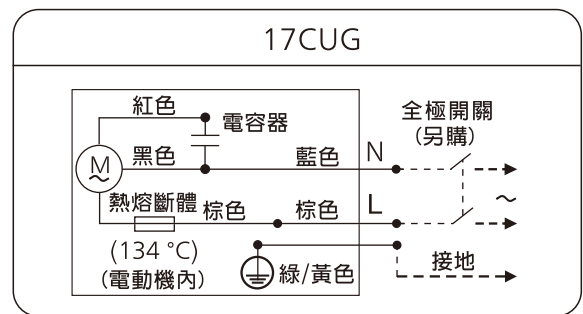
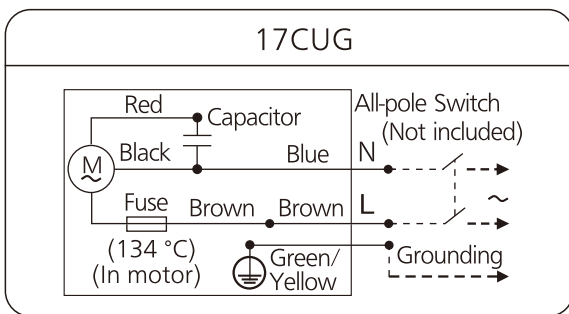
Check according to the following table and correct the symptom. If the product still does not work correctly, disconnect the power source and contact After-Sales Service Center or the dealer.

請根據下表檢查和應對問題。如果換氣扇依然不能正常工作，請斷開電源並聯繫客戶諮詢服務中心或經銷商。

Cause 原因	Anomaly 問題	Insufficient air flow 風量不足	Excessive noise 噪音過大	Excessive vibration 振動過大	Overheated motor 電動機過熱	Run abnormally 運轉異常	Handle 處理
Poor foundation 安裝基礎弱			○	○			Reinforce foundation 修補基礎
Faulty installation 安裝不良			○	○			Re-adjust installation 調整安裝
Low voltage 電壓下降		○					Check power source 確認電源
Sucked in objects/ Adhered dust 混入異物，帶有灰塵			○	○	○		Inspect and clean 檢查、清潔
Faulty ducting 管道不良		○	○	○			Inspect and adjust 檢查、調整
Incorrect wiring 接線錯誤						○	Change wiring 變更接線

## WIRING DIAGRAM

## 電器原理圖





Model No. 型號	Voltage 電壓 [V]	Frequency 頻率 [Hz]	Power consumption 功率 [W]	Air delivery 風量 [m <sup>3</sup> /h]	Noise 噪音 [dB]	Static pressure 靜壓 [Pa]	Net weight 淨重 [kg]
17CUG	220	50	8.5	85	23.5	110	1.9

- The 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 value are measured by our company, within +3 dB and -7 dB to tolerance.
- The values of noise level are measured at the 1 m apart from the side 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, within  $\pm 10\%$  tolerance.
- Insulation class E
- 排氣量、電器特性、噪音值等數據是在靜壓為0 Pa狀態下的數值。
- 噪音值為A計權平均聲壓級,是本公司測試結果的中心值,有+3 dB, -7 dB的公差範圍。測試方法為在噪音測試室內,距樣品左側、右側、下方各1米處測定其噪音值,然後取其平均值。
- 風量是本公司測試結果的中心值,有 $\pm 10\%$ 的公差範圍。
- 靜壓是風量為0時本公司測試結果的中心值,下偏差為-10%。
- E級絕緣

The above specification may be changed without further notice.

上述參數如有變動,恕不另行通知。