



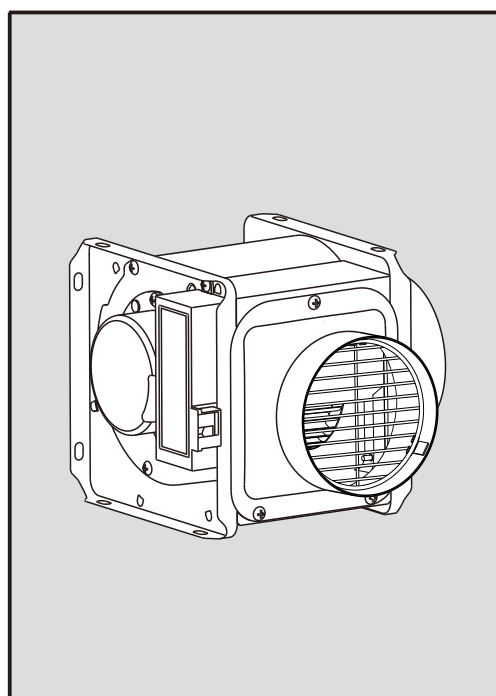
INSTALLATION AND OPERATING INSTRUCTION

安裝使用說明書

MINI SIROCCO FAN

迷你送風機

Model: FV-10CG2H FV-14CG2H FV-16CG2H
型號： FV-17CG2H FV-19CG2H FV-21CG2H



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READ AND SAVE THESE INSTRUCTIONS

Thank you for purchasing this Panasonic product.

Please read the instructions carefully before attempting to install, operate or service the Panasonic product. Failure to comply with instructions could result in personal injury or property damage.

Please explain to users how to operate and maintain the Panasonic product after the installation, and this booklet should be presented to users.

Please retain this booklet for future reference.

閱讀並保管此說明書

感謝您選用Panasonic產品。

安裝、使用和維護Panasonic產品前，請仔細閱讀本安裝使用說明書。

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Panasonic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

安全指引

Please observe strictly
請務必遵守

The following instructions should be strictly observed in order to prevent injury to the users and other persons, or damage to property.

為了避免對您或他人造成傷害或財物損失，請務必遵守以下注意事項。

- The degrees of injury or damage that can occur when the instructions are ignored and if the product is not used properly have been classified and described by the following indications.

無視說明書內容或者不正確地使用時，所引起的危害或者損傷程度，用以下標記進行分類、說明：



WARNING
警告

Those things shown in this column indicate that there is possibility of causing death or severe injury.

有此標記的欄目，是有可能導致死亡或重傷的內容。



CAUTION
注意

Those things shown in this column indicate that there is possibility of causing minor injury to the users or damage.

有此標記的欄目，是有可能導致受輕傷或產生物品損壞的內容。

- Types of instructions that should be observed have been classified and described by the following pictorial symbols.

務必遵守的內容，用標誌區分說明如下：



These symbols indicate the item "PROHIBITED" to do.
此標記表示禁止事項。



These symbols indicate the "COMPULSORY" item that must be followed without failure.

此標記表示強制事項。



These symbols indicate the item "CAUTION".

此標記表示提示注意事項。

INSTALLATION CAUTIONS

安裝注意事項



WARNING
警告

- In regards to electrical, piping, and set-up consideration, you should consign qualified professionals to perform installation according to these instructions.

在電氣、配管、設置工程方面，必須委託有資格的专业人員按照本說明書進行安裝。



Unqualified construction may cause unexpected accidents.

安裝工程有不完善之處，可能出現不能預測的事故。

- If the fan is hung from the ceiling, you should install and tighten the specified number of bolts with proper specification.

在天花板口懸掛機體時，要使用規定數量和直徑的螺栓，且必須擰緊。



If the bolt specification is unqualified or any bolt is loose, the fan may drop and cause injury.

螺栓不合格或未擰緊，可能會導致產品墜下而引起受傷。

- Do not modify the internal wiring or disassemble the fan.

禁止改動內部接線或改造、拆本產品。



May cause fire, electric shock, or personal injury.

易引起火災、觸電或人員受傷等事故。

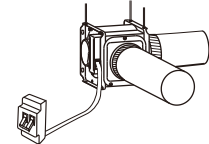
- There should be an all poles switch with minimum 3mm contact gap in the fixed wiring.

安裝時，需在供電線路中安裝其觸點開距不少於3mm的全極斷開裝置。



May cause electric shocks.

可能引起觸電。



INSTALLATION CAUTIONS

安裝注意事項



WARNING 警告

- The fan should be grounded.
本產品必須接地。



If any abnormality or current leakage occurs, it may cause electric shock.
當出現異常或漏電時，可能會觸電。

- Secured upon the strengthened foundations for installation. Be sure to take reinforcement measures if required for sufficient installation strength.

安裝本產品的建築結構必須牢固。當不能確保安裝強度時，務必採取加固措施，以確保安裝強度。



Improper installation may cause accident because of the falling of the product.
建築結構不牢固可能會導致產品墜落而發生事故。

- The weight of the air duct cannot be supported by the fan after installation. 安裝後導風管的負荷不可落在機體上。



May drop and cause injury due to carrying an extra load.
可能會因產品負荷過重導致機體墜落而引起受傷。

- Do not install the fan or allow the indoor air inlet to be placed near areas of high moisture or where large amounts of steam are produced, such as a bathroom.

請勿將本體及室內進風口安裝在浴室等濕氣較多的地方及產生高濕度蒸汽的地方。



Internal condensation of moisture may cause dew dropping or electrical accidents, such as a short circuit or electric shock.
本體內部發生結露現象，造成觸電、短路等電氣事故或結露水滴落。

- An overload protection device must be installed in the wiring when installing.
安裝時須在線路中安裝超載保護裝置。



May cause fire or electric shocks.
可能引起火災或觸電。

- The power cord recommend to use the 60227 IEC 53 (RVV 0.75mm²) according to IEC 60227-5.

電源線推薦使用IEC 60227-5中規定的60227 IEC 53 (RVV 0.75 mm²)的電線。



May cause fire or electric shocks.
可能引起火災或觸電。

- Do not use any other power supply other than the rated voltage.
禁止使用本產品額定電壓以外的電源。



May cause fire or damage the unit.
可能會引起火災或損壞本產品。

- Do not install the fan or allow the indoor air inlet installed in locations close to machinery plants, chemical factories and any other facilities where harmful gases and gases with corrosive components, such as acid, alkali, organic solvent, and coating, may be generated.

請勿將本體及室內進風口安裝在機械廠、化工廠及研究設施等產生酸、堿、有機溶劑、塗料等有害氣體和含有腐蝕性成分的地方。



May cause poisoning due to gas. Internal corrosion or deterioration may cause fire.
易引起氣體中毒。本體內部腐蝕、劣化，而引發火災。



CAUTION 注意

- Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.

請採取適當的措施防止氣體從敞開的氣道或其他明火設備回流進室內。



May cause back-flow of gases.
可能引起煙氣逆流。

- Connect the duct avoiding the following cases.
安裝導風管時禁止以下情況發生。



Prevent abnormal performance from happening.
防止發生產品性能異常。

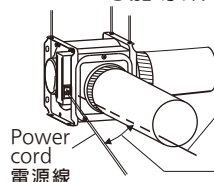


- Power cord should be located below the outlet of condenser box during installation and maintenance.

安裝及維護時，電源線的位置應低於電容盒的出線口。



May cause water flow along the power cord into condenser box.
可能導致水沿電源線流入電容盒。

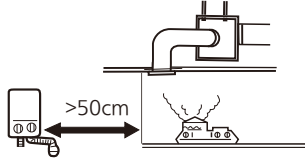


Horizontal line
水準線

The power cord should have an angle of 5°~30° in the horizontal direction
電源線與水準方向成5°~30°角

INSTALLATION REQUIREMENTS 安裝要求事項

- Do not install the fan in a place with high temperature or excessive smoke.
不可安裝在高溫或油煙過多的場所。

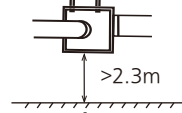


- Outlet duct should have a downward slope of at least 1/100. Inlet duct should have an upward slope of at least 1/100.

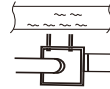
出風口的導風管必須保持至少1/100的向下傾斜，入風口的導風管必須保持至少1/100的向上傾斜。

- Do not connect two or more fans in the same power outlet.
不要一個開關上並聯兩台及以上產品同時運行。

- The bottom surface of the fan should keep a distance of over 2.3m from the ground after installation.
安裝之後本產品的最低面至地面距離必須大於2.3m。



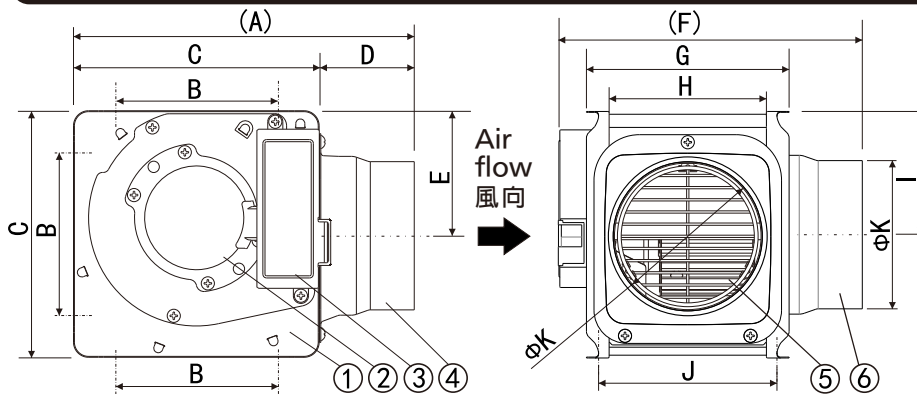
- The fan should not make contact with any other items, such as a wall.
機體不可接觸到任何物體。如：牆壁等。



- Do not place any obstacles near air outlet and inlet.
不可在出風口和進風口附近放置障礙物。

- Add netting or an equivalent deterrent on air outlet to keep off birds.
在出風口處安裝防鳥網或類似物品。

PART NAME AND DIMENSIONS 部件名稱和尺寸



No.	Part name 部品名	Q'ty 數量
①	Fan casing 送風機殼體	1
②	Motor 馬達	1
③	Condenser box cover 電容盒蓋	1
④	Outlet adapter 出風口接頭	1
⑤	Blade 扇葉	1
⑥	Inlet adapter 入風口接頭	1

Remark: This is the third perspective view.
注：此圖示為第三視角視圖。

Unit: mm
單位: mm

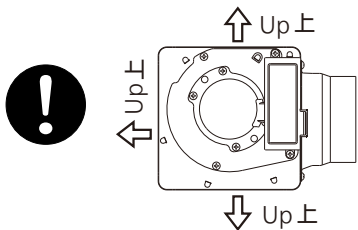
Model 型號	A	B	C	D	E	F	G	H	I	J	K	Duct dimension 管道尺寸
FV-10CG2H	226	109	163	63	83	207	138	104	79	126	98	Φ100
FV-14CG2H	269	145	209	60	112	236	170	136	101	158	146	Φ150
FV-16CG2H	330	196	270	60	170	264	189	155	117	177	146	Φ150
FV-17CG2H	400	222	330	71	200	332	263	203	142	239	195	Φ200
FV-19CG2H	400	222	330	71	200	332	263	203	142	239	195	Φ200
FV-21CG2H	400	222	330	71	200	403	263	203	142	239	195	Φ200

HOW TO INSTALL

安裝方法

1. Installation method 安裝方法

- Follow the illustration below to install. Do not install facing directions other than what is shown in the illustration.
請使用以下圖示方向進行安裝，不可使用其他方向安裝。

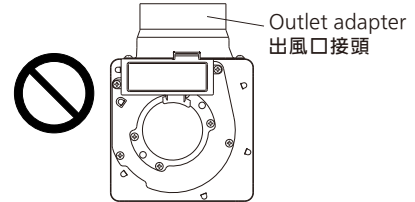


The figure indicates the surfaces in the left view which can be installed upwards.

此圖示表示在左邊視圖中可朝上安裝的產品側面。

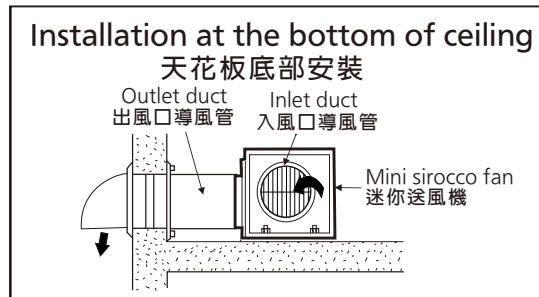
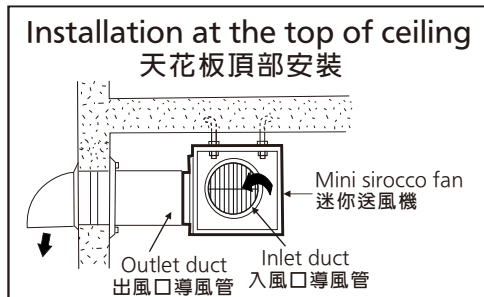
- Do not install while the outlet adapter faces up.

禁止出風口接頭向上安裝。

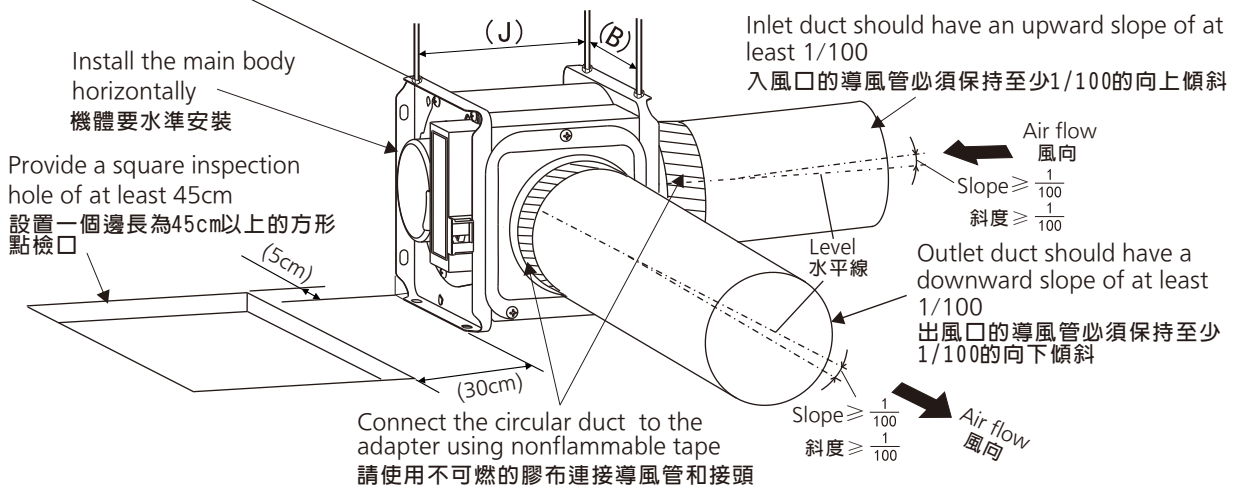


- Ceiling and suspension components for suspend this product must be subjected to static load more than five times the weight of the product.

天花板結構和用於懸掛本產品的懸掛元件必須能夠承載大於本產品重量5倍的強度。



Model 型號	Bolt, nuts, plain washers (No provide) 螺柱、螺母、平墊圈 (另購)	Dimension L 尺寸 L
FV-10/14/16CG2H	M5	Bolt should reach 2-3 threads through the nut.
FV-17/19/21CG2H	M10	螺栓比螺母突出2~3個螺紋



2. Wiring connection 引線連接

- Consign a professional electrical shop to securely install the fan based on Electrical Equipment Engineering Standard and the domestic wiring rule specified by the electrical shop.

委託專門的電氣工程店根據電氣設備技術基準和內部接線規程，進行安全牢固地安裝。

- Carry out grounding work.

必須實施接地工程。

HOW TO INSTALL

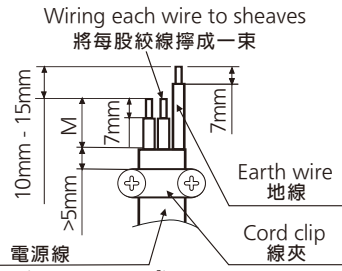
安裝方法

Strip the wires according to the right illustration. The earth wire of the power cord must be 10-15mm 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.)

請按照右圖圖示進行剝線，其中電源線的地線必須比其它引線長10-15mm。剝好線後請將每股分散的銅芯各自擰成一束，然後插入接線端子深處，確保接線端子的接線螺絲柱壓在銅線上且接近絕緣層一側的銅線不外露。（為避免危險必須由專業人員進行安裝並務必接上地線。）

Open the condenser box cover and connect wires according to the following diagrams. Finally, mount the power cord with cord clip and install the condenser box cover.

打開電容盒蓋後，請根據下面的接線示意圖進行接線。最後將電源線用線夾固定，並把電容盒蓋固定好。



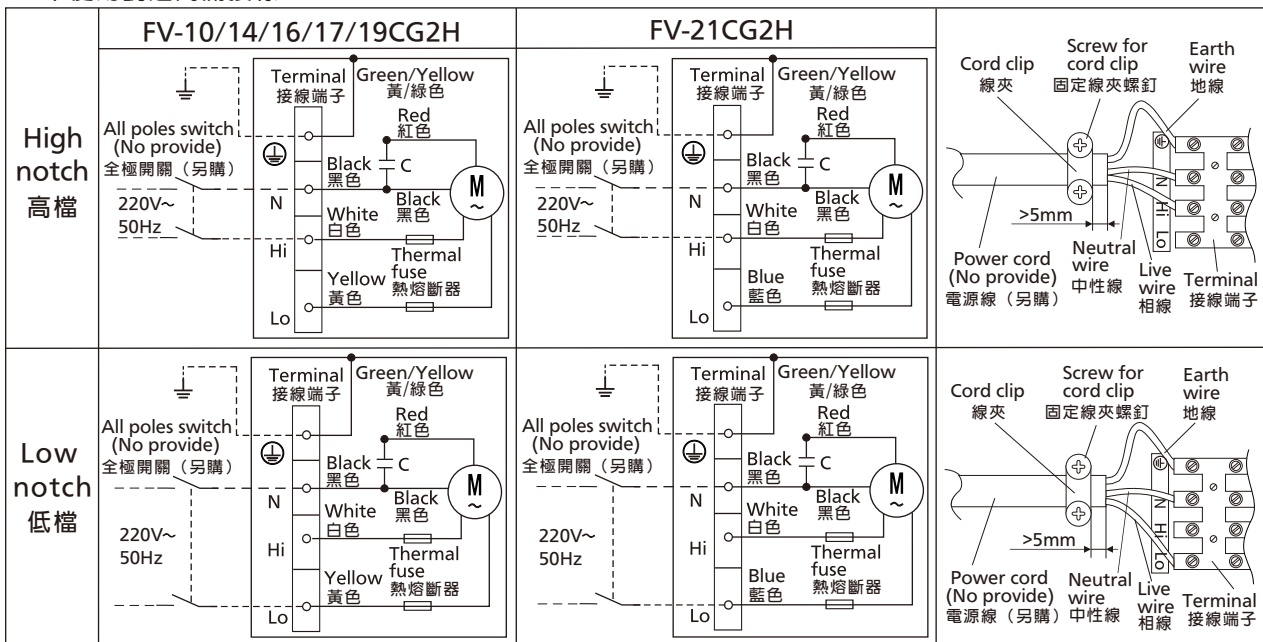
Power cord 電源線
60227 IEC 53 (RVV 0.75mm²)

Model 型號	Dimension M 尺寸 M
FV-10/14/16/17/19CG2H	45mm
FV-21CG2H	40mm

Wiring diagram 接線示意圖

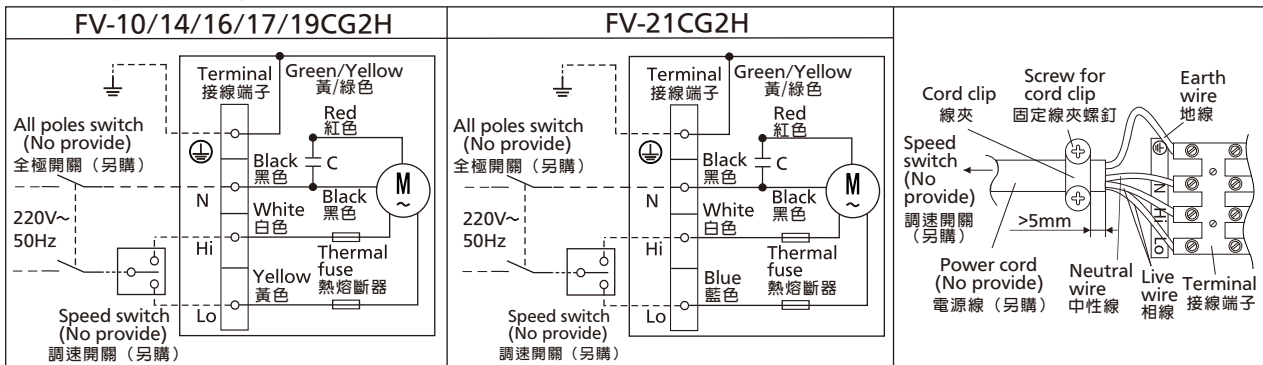
● Wiring connection when not use speed switch:

不使用調速開關接線：



● Wiring connection when use speed switch:

使用調速開關接線：





WARNING
警告

- Unqualified persons should not inspect and maintain the product.
禁止非專業人員進行檢查和維修。



May cause injury or electric shocks.
可能會引起受傷或觸電。

- A statement to the effect that when the product is no longer to be used, it must not be left in the place but removed to prevent it from possible falling.

如以後不打算再使用本產品，為了防止在萬一的情況下掉落，不得放置不管，而應予以拆除。



May cause unexpected accident.
可能會產生不能預測的事故。

- In case of gas leakage, open all doors and windows for ventilation. Do not turn on or off the product.
當發生煤氣洩漏時，請打開門窗使室內空氣流通，禁止開啟或關閉本產品。



May cause explosion.
可能會產生電火花引起爆炸。

- Do not touch the fan and motor when the product is running.

產品運行時禁止接觸扇葉及馬達等部件。



May cause injury.
可能會引起受傷。

- Disconnect power supply before inspection.
檢查前必須切斷電源。



May cause electric shocks.
可能會引起觸電。

- Do not pull the wires during service, maintenance and cleaning.

在產品的服務，維修及清潔過程中不要拉動電氣引線。



May cause electric shocks.
可能會引起觸電。

- Immediately stop the product in case of any abnormality (noise, vibration, smell).
發生異常（聲音、振動、臭味）時應立即停止使用。



May cause unexpected accident.
可能會產生不能預測的事故。



CAUTION
注意

- Be careful to not drop any part or tool during inspection.

檢查時要防止零件、工具等從高處掉落。



May cause injury.
可能會引起受傷。

- The protective tools, such as gloves, helmet should be worn while installation, maintenance, inspection or cleaning.

在安裝、維護、檢查或清潔時請佩戴手套、頭盔等保護工具。



May cause injury.
可能會引起受傷。

- The cabinet fan may keep running for a short period after power-off. Do not perform any inspection before cabinet fan stops completely.

檢查時即使關掉電源，送風機還會有短時間的運轉，請確認在送風機已完全停止運轉的情況下才進行檢查。



May cause injury if being caught into the rotating section.
人或物等被捲進運轉部分，可能會引起受傷。

- For long-term and safe use of the fan, inspection and cleaning of the fan approximately once a year is required. Maintenance and inspection by a specialized subcontractor is required for prevention of accidents due to damaged parts deriving from aging and for normal performance.

部件的自然損耗可能會引起災害或性能變化，為了保證送風機的長期安全使用，必須由有資格的專業人士進行至少一年一次的檢查和維護。

- This appliance 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 appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

本產品不適合有殘障、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。應確保兒童不要把本產品當作玩具玩。

TROUBLE SHOOTING

常見故障識別與處理

Check according to the following table and correct the problem. If the fan still does not work, disconnect the power supply and contact the dealer.

根據下表中的指示，若有異常現象出現必須切斷電源與代理商聯繫。

Problem 問題	Cause 異常	Insufficient air flow 風量不足	Excessive noise 噪音過大	Excessive vibration 振動過大	Overheated motor 馬達過熱	Run abnormally 運轉異常	Action 對策
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 supply 確認電源
Contact between rotary and stationary parts 動體與靜體相接觸			○	○	○		Inspect and adjust 檢查、調整
Sucked in objects/ Adhered dust 混入異物，帶有灰塵			○	○	○		Inspect and clean 檢查、清潔
Faulty ducting 導風管不良		○	○	○			Inspect and adjust 檢查、調整
Incorrect wiring 接線錯誤						○	Change wiring 變更接線

SPECIFICATIONS

規格

Model 型號	Rated Voltage 額定電壓 [V]	Rated Frequency 額定頻率 [Hz]	Rated Power Consumption 額定功率 [W]		Air Volume 風量 [m ³ /h]		Noise 噪音 [dB]		Max Static Pressure 最大靜壓 [Pa]		Net Weight 淨重 [kg]
			Hi 高檔	Lo 低檔	Hi 高檔	Lo 低檔	Hi 高檔	Lo 低檔	Hi 高檔	Lo 低檔	
FV-10CG2H	220	50	15	12	150	110	30	26	70	60	1.9
FV-14CG2H	220	50	33	28	330	235	36	28	108	100	2.9
FV-16CG2H	220	50	47	41	500	390	39	34	180	170	5.7
FV-17CG2H	220	50	85	72	770	620	39	35	240	210	10.3
FV-19CG2H	220	50	120	105	950	830	42	39	260	250	10.4
FV-21CG2H	220	50	224	185	1400	1100	55	50	319	300	14.8

- 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, within +3 and -7 tolerance.
 - 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 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, with ± 10% tolerance.
- 風量、電氣特性、噪音值等資料是在靜壓為0Pa狀態下的數值。
 - 噪音值是A計權平均聲壓級，是本公司測試結果的中心值，有+3、-7的公差範圍。
 - 噪音值是在距機體側面1.5m處測得的值（在機體入風口、出風口兩側分別連接導風管）。此測試方法是在假設機體的噪音傳到室內的情況下設定的。
 - 風量是本公司測試結果的中心值，有±10%的公差範圍。

* Insulation class B (FV-21CG2H), Insulation class E (other models)

* B級絕緣 (FV-21CG2H), E級絕緣 (其餘型號)

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