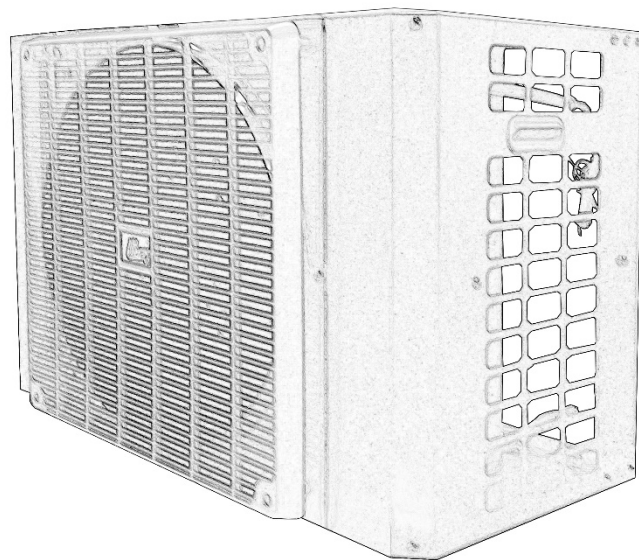


# DVC 系列冷凝器安裝與操作說明

## DVC Series User's Manual



**ICHERNG**<sup>®</sup>



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### 1. Check on delivery

When receive the product, please check if there is any damage on packing or product due to shipping. And the content is the same as packing list. If there is any damage, please describe the defect on the delivery note. If possible, take photos on damaged part and send the photos and damage description to your local agent. In order to protect your right and interests, please inform your local agent within 3 days.

### 2. Storage

**Warning! Incorrect storage way could lead to casing damage!**  
**Never place any heavy goods on this product!**  
**Never sit or stand on the container!**

Store product in cool and dry place. If corrugated cardboard gets wet, please remove the wet corrugated cardboard box as soon as possible! The wet corrugated cardboard might produce corrosive compounds which are aggressive to heat exchanger materials!

If this condenser has been run for a while, for some reason has to unload the unit or shut down the whole system for a long time, please dry and clean the fin surface before storage. If this condenser is disconnected from system, please seal the condenser with dry nitrogen.



Do place product horizontally!  
請將產品水平放置！

### 1. 收貨檢查

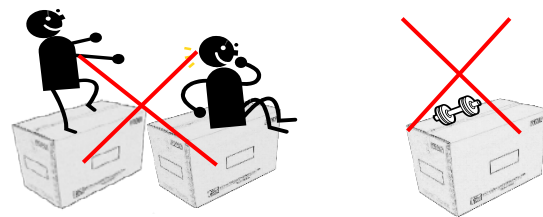
當收到產品時，請檢查產品包裝與產品本身是否有運輸損傷。並請核對產品與送貨單內容是否符合。如果任何損傷，請於送貨單上註明損害情形。可能的話請將受損的部分拍照，並將照片與損害說明傳送到當地經銷商。為了確保您的權益，務請於到貨 3 天內通知您的經銷商。

### 2. 儲存

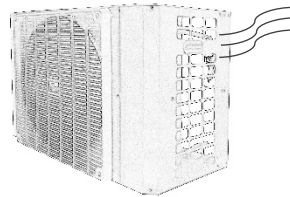
**警告！錯誤的存放方式將造成板金受損！**  
**請勿放置任何重物於本產品上！**  
**請勿坐或站立於本產品上！**

請將產品放置於涼爽乾燥的位置。如果瓦楞紙包裝潮濕，請迅速將受潮的瓦楞紙箱移除。潮濕的瓦楞紙可能會產生有腐蝕性的物質，對熱交換器的材質造成損壞。

如果冷凝器已經運轉過，在某些情形下必須要將冷凝器取下或是將系統關閉一段長時間，請在儲存前將鰭片清潔乾燥。如果冷凝器由系統拆下，請將冷凝器以乾燥氮氣封存。



Do NOT sit or stand or place any heavy goods on condensers!  
請勿坐或站立或放置任何重物於本產品上！



Clean and dry up condenser before storage or shut down for a long time if it has been run.  
如系統已經運轉過，在儲存或要長時間停機前，請先清潔乾燥！

# DVC 系列冷凝器安裝與操作說明

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Select correct forklift or working ladder to hoist this product!



慎選合適的堆高機或工作梯進行本產品吊裝作業！



Installation work must be executed by professional technician !



本產品的安裝作業僅能由專業作業人員執行！

### 3. Installation

#### 3.1 Hoisting at site

**Caution!** Please **CHECK** the capacity of forklift/cane before unloading/hoisting, the unit weight of this product could be found on Appendix 1. Operator of forklift/cane must be qualified. Be careful for lifting this product, do not damage the fin surface.

DVC series is installed via anchoring. Base on requirement, you can use thread rod, slotted angles bar and plate for installation. All the fixing position lay out and product weight can be found on Appendix 1.

Before shipping, all condensers have been pressurized inside to block moisture. While releasing gas via cutting connection tube before connection, do watch out the gas blowout. After releasing pressure, do piping as soon as possible to avoid moisture and dusts invading.

All the packing materials disposal must meet local regulation.

### 3. 安裝

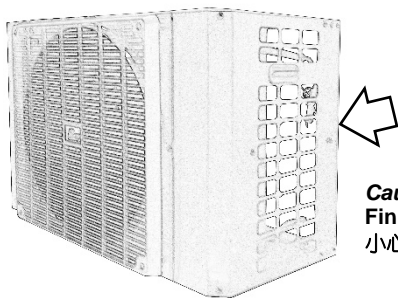
#### 3.1 現場安裝

小心！在安裝前請仔細檢查堆高機能力是否足夠或工作梯是否固定牢靠，本產品的重量可以由附錄 1 查到。堆高機作業人員與安裝人員必須要為合格的技術人員。要昇舉本產品時，請小心不要傷到鱗片面。

DVC 系列是利用下方腳座固定，依照使用狀況使用萬能角鐵、牙條或板金固定。孔位距離與產品重量請參照附錄 1

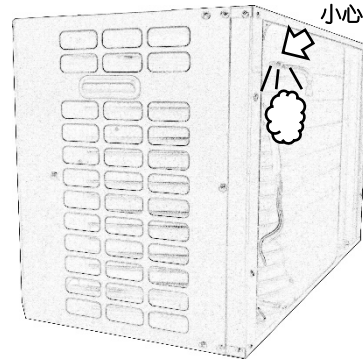
所有的冷凝器在裝運前內部皆有充填氣體維持正壓，以避免水氣進入管路內部。在連接管路前切開入管端將氣體釋放，請注意管內部氣體噴出。切開管路後應儘速配管，以免水氣或灰塵進入。

所有包裝素材的拋棄必須依照當地廢棄物處理法規辦理。



**Caution!**  
Fin surface!  
小心！鱗片面！

**Caution!**  
Pressurized Gas Inside!  
小心！內封加壓氣體！



If using supporting bars (optional), please check distance between supporting bars on Appendix 1 before hoisting. For DVC100~DVC800, use 6mm or 1/4" anchor bolts to fix condenser. 12mm or 1/2" anchor bolts for DVC900/DVC1000

如果使用選購吊桿，請於吊裝前檢查附錄 1 中所列的固定孔距離。DVC100~DVC800 使用 6mm 或 1/4" 膨脹螺絲固定散熱器。DVC900~DVC1000 使用 12mm 或 1/2" 膨脹螺絲固定散熱器。

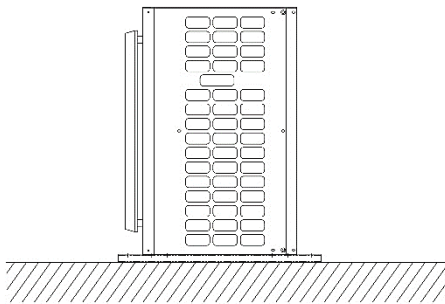
# DVC 系列冷凝器安裝與操作說明

## DVC Series User's Manual

### DVC Series Installation DVC 系列安裝

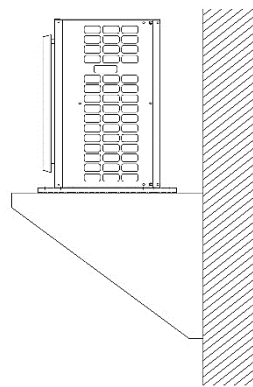
Find the holes position of your condenser on Appendix 1. If needed to be hanged on a wall or under ceiling, please use strong supporting bars for installation.  
由附錄 1 找到所購買散熱器的孔位。如果需要壁掛或天吊安裝，請使用堅固的支撐架安裝。

Fixing on ground 立式

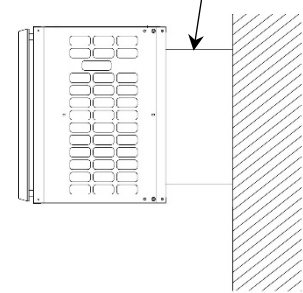


If install on ground, please use 12mm or 1/2" expand anchors for fixing.  
如果採用立式安裝，使用 12mm 或 1/2" 膨脹螺栓固定。

Fixing on a wall 壁掛式

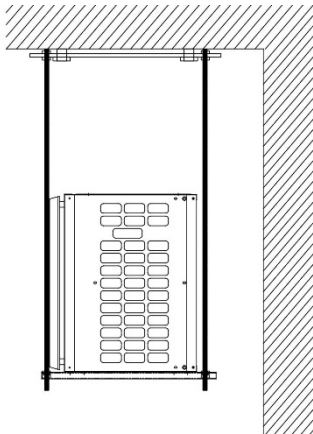


Optional Supporting bars 624112  
選購吊桿 624112



For fixing on a wall, please find strong supporting bars. Install the supporting bars on wall first, then place the condenser on supporting bars (provided by user). Fix the condenser with four 12mm or 1/2" bolts and nuts.  
如果採用壁掛式，請選擇足以負荷此散熱器的堅固支撐架（使用者自備）。先將固定架鎖在牆上，再將冷凝器置於架上。利用 12mm 或 1/2" 螺栓與螺帽將散熱器固定。

Fixing under a ceiling 天吊式



If fixing under a ceiling, use 12mm or 1/2" thread rods for supporting.  
如果採用天吊式安裝，使用 12mm 或 1/2" 牙條吊掛。

**Safety First!!**  
**安全第一！**



# DVC 系列冷凝器安裝與操作說明

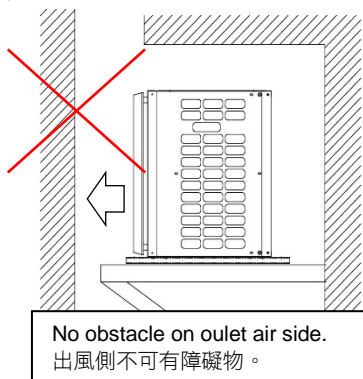
## DVC Series User's Manual

### 3.2 Positioning condenser

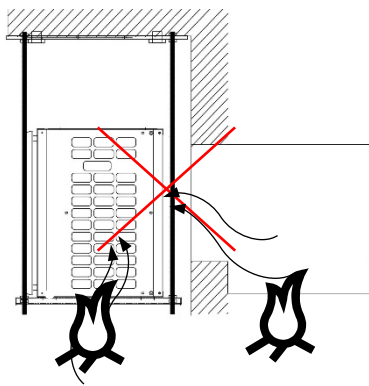
In order to get the best performance of your condenser, you must install the condenser in a correct place. The following general rules must be followed while selecting the position for condenser:

1. This series condenser must be installed outdoors and there must be no obstacle on exhaust air side. This condenser is **NOT** designed for installing air duct. If you want to change the direction of outlet air, please ask your local dealer for optional air guide mask.
2. In order to get better air flow, please do not place any object on the suction side. And there must be no heat source around the condenser.
3. With trapezoid shape of coil, you can install condensers side by side at minimum distance, only have to reserve space for unscrew screws (at least 100mm). Distance between wall and air inlet side of condenser must be kept at least 160mm.
4. Please avoid the corrosive environment, if it has to be, order anti-corrosion type and clean the condenser more often.

Before installation, check the position with designer or customer to find the most suitable place for the condenser.



No obstacle on outlet air side.  
出風側不可有障礙物。



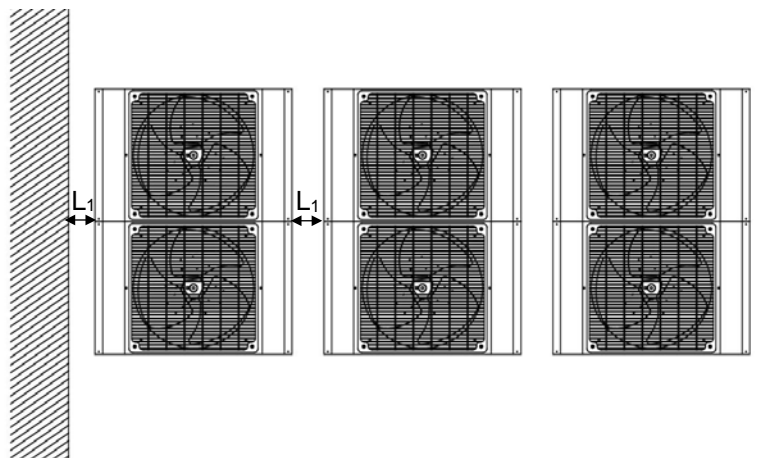
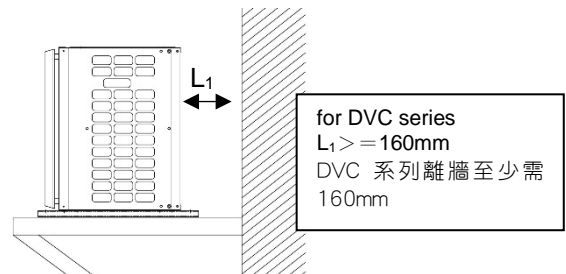
Suction side must be away from heat source to avoid capacity being reduced.  
冷凝器吸氣端應遠離熱源，避免降低性能。

### 3.2 冷凝器的安裝位置

為了確保冷凝器能發揮最大的效能，必須要將冷凝器裝置在正確的位置。在選擇安裝位置時，必須要遵守以下的通則：

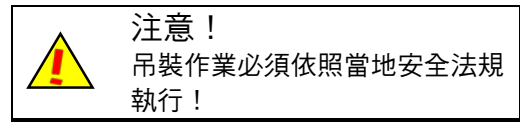
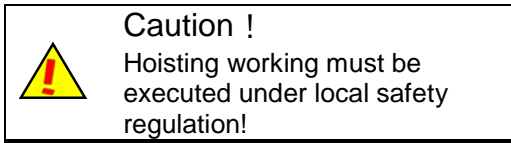
1. 本系列冷凝器必須要安裝於室外，且排風側必須要無障碍物。本系列冷凝器**並非**為安裝風管所設計，如果您必須要改變排風方向，請洽詢當地經銷商選購專用導風罩。
2. 為獲得較佳的氣流，請勿在吸氣面放置任何物件阻擋氣流。且冷凝器四周不可有任何熱源。
3. 特殊的梯形管排設計，在使用多組冷凝器系統時可以最小空間並排，僅需預留拆卸螺絲的距離(至少 100mm)。安裝時冷凝器的吸風面與牆至少須保持 160mm 的距離。
4. 請儘可能避開安裝於腐蝕性的環境，如果必須如此，請選購防蝕型機種並經常清洗冷凝器。

在安裝前務必與系統設計者和使用者確認位置，以獲得冷凝器的最佳安裝位置。



Every condenser should be at least 100mm away from each other and 160mm away from wall.  
每一個冷凝器間至少要有 100mm 距離。與牆至少要有 160mm 的距離。





### 3.3 Locate

Before working, **MUST CHECK every safety facility** and if hoisting work has to be executed, should follow local regulation about hoisting.

- For safety reason, please do fix the condenser tightly.
- Diameter of anchor for DVC100~800 is 6mm or 1/4". Diameter of anchor for DVC900~1000 is 12mm or 1/2".
- Lift the condenser to the position, fasten it with nuts.

### 3.4 Refrigerant Piping

\* **Refrigerant piping must be done by professional technician and follow the national codes.**

\* **Please follow ASHRAE guide line for refrigerant piping.**

\* **The liquid line should not be suddenly expanded in refrigerant direction to avoid flash happening.**

\* **Refrigerant line should be as short as possible to reduce pressure drop.**

- In order to prevent moisture entering condenser, the condenser is sealed with pressurized dry gas. Before brazing the tube, cut the inlet or outlet tube for exhausting sealed gas. **Be careful for the ejected gas. Take personal safety protecting equipment while working.**
- When the condenser reaches to the zero pressure status, deburr the tube ends and expand the tube for brazing. For the good cleanness inside the system, use dry nitrogen to purge the oxygen out. This will prevent forming oxide inside during brazing.
- When finish connecting all the components, perform leak test and vacuuming. Make sure there is no leak and reach the vacuum level required. It's important for steady system operating.

### 3.3 定位

在作業前**必須要檢查每一項安全措施**，如需吊裝作業時必須依照當地吊裝作業法規執行。

- 為安全起見，務必將冷凝器穩固固定。
- DVC100~800 固定膨脹螺絲規格為 1/4"或 6mm。DVC900~1000 固定膨脹螺絲規格為 1/2"或 12mm。
- 將冷凝器放至所要安裝的位置，以螺帽固定。

### 3.4 冷媒配管

※配管必須符合國家相關法規與系統實際操作需求。

並由專業技術人員執行。

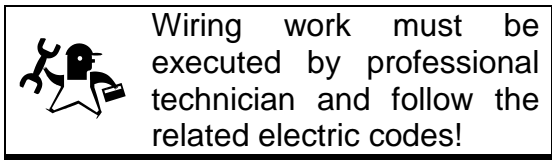
※請依照 ASHRAE 手冊的冷媒配管指導原則進行配管。

※配液管時在冷媒的行進方向不可以有突然管徑變大的情形，以免發生閃變。

※冷媒管路盡可能保持短，以降低管路壓損。

- 為確保冷凝器管路內部保持乾燥，出廠前內部會充填乾燥氣體。焊接前，請小心切開出入管，讓冷凝器內部氣體排出。**注意！**釋氣時應注意噴出氣體，工作時請穿戴個人安全防護裝備。
- 當冷凝器達到零壓力後，開始進行銅管切口去毛邊與擴口準備焊接。為維持管內的潔淨，焊接前請先以氮氣掃除原管內的氧氣，焊接時請以微量氮氣充入管內進行焊接，以避免管內氧化！
- 當連接完成所有的管路後，進行測漏與抽真空。確認系統無洩漏且達到所需要的真空度。此對於日後系統穩定運轉是十分重要。

### 3.5 Wiring



- Use the correct tool for wiring.
- Please select the correct electrical wire based on the rating current specified on the connection diagram. (Connection diagram is on the back of terminal box cover.)
- Connect the fan motor to power source, check if the rotation direction is correct.
- For safety reason, be sure to ground condenser.



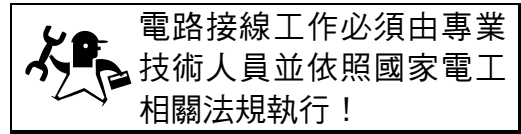
## 4. Test running and adjustment

### 4.1 Before start up

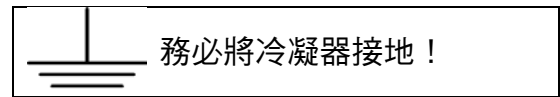
Before setting system into working, the following check list must be examined very carefully:

- Check fan support(s) is/are fastened firmly. All the screws are fixed. There is no loose part before running.
- Check the level of condenser is correct.
- Check all the electric wirings are correctly connected and fastened tightly.
- Check the power source is correct. And the fan is in right rotation direction.
- Check the refrigerant piping is connected and all valves are in their positions. System is filled up suitable refrigerant quantity.

### 3.5 電路接線



- 請使用正確的工具進行接線。
- 請依照接線圖上所標示的額定運轉電流選擇適當的電線規格。(接線圖位於端子盒蓋背面。)
- 將馬達與電源接妥，並測試馬達轉向是否正確。
- 為了安全起見，務必將冷凝器接地。



## 4. 試車與調整

### 4.1 啟動前檢查

在啟動系統之前，請仔細確認以下相關事項：

- 確認風車支架是否被牢固鎖定，所有的螺絲已被旋緊。運轉前確認無其他鬆動零件。
- 檢查冷凝器的水平是否正確。
- 檢查所有電線是否正確連接且已鎖緊。
- 檢查供電電源是否正常，確認風扇轉向正確。
- 確認冷媒管路已連接妥當，所有的閥都在正確的位置。系統已充填適當的冷媒量。

## 4.2 Check and adjust while running

In order to keep system in steady running, must adjust well in test running, the following check list must be examined and adjusted with patience.

- \* Check for fans rotating direction, make sure all the fans run in correction direction. Check the current if it is correct.
- \* Check if there is any short circuit in air side.
- \* Check oil level, if too low add adequate oil to standard oil level. If system is equipped with high pressure side oil separator, there is no oil return at high temperature but oil returns at low temperature. Do check the capacity of oil separator if it is too small.
- \* Check if condensing temperature is at the design point. Be sure to consider the outdoor air temperature while checking condensing temperature.
- \* Check sight glass of liquid line. The liquid must be full at the rating operation.

## 5.1 Maintenance

In order to keep condenser in a good condition, you have to check the condenser periodically. The following items must be done for check.

- a. Clean the fins periodically for retaining performance. Use clean water to wash fins. Water pressure must be lower than 4 bars. Be careful not to damage the fins, otherwise it will block air flow. Use fin comb to straighten the damaged fin. If needed, use neutral detergent to clean the coil. Must rinse the coil till no residue left.
- \*\*If condenser is coated with EnergyGuard, please follow instruction of EnergyGuard!\*\***
- b. Clean fan blades and air streamer fan guard. If fan blades are damaged or bent, replace with new ones.
  - c. Check every electrical connection is fastened. Also check if there is any current leakage, find out the problem and fix it.
  - d. Check fan motor if there is any noise. If so, fix it or replace it.
  - e. Check every screw and bolt, if there is any loose part, fasten it.
  - f. Check tubes and brazed parts of condenser if there is any stain or spot. If there is any corrosion happened, do remove the aggressive material(s), and check if there is any leak.

\*EnergyGuard is a trade mark of Monopoly BV, Holland

\*衛能為荷蘭 Monopoly BV 的註冊商標!

## 4.2 運轉時的檢查與調整

為確保系統能穩定運轉，試車時必須要仔細調校，以下的檢查項目在試車過程中必須要耐心觀察與調整。

- \*檢查風扇運轉方向，確保所有的風扇向正確。檢查運轉電流。
- \*檢查空氣是否有短循環。
- \*檢查油位，如果油位過低加入適量的冷凍油至標準油位。如果系統裝有高壓側油分離器，在高溫段不回油低溫段才回油的情形，請檢查油分離器的能力是否過小。
- \*檢查冷凝溫度是否在設計點。檢查冷凝溫度時請同時考慮當時的外氣溫度。
- \*檢查液管的視窗，在額定運轉時視窗必須呈現滿溢情形。

## 5.1 保養

為確保冷凝器維持良好的運轉狀態，請定期檢查並保養冷凝器。

- a. 定期清潔鰭片確保熱傳效能的維持。使用清水清潔鰭片，水的壓力必須要低於 4 bar。清潔時要注意不可以損壞鰭片，以免阻擋氣流通道。使用鰭片梳將傾倒的鰭片梳直。必要時使用中性清潔劑清洗盤管，清洗後務必潤洗乾淨至無殘留物留在熱交換器上。  
**\*\* 如果冷凝器已進行衛能防蝕處理，請依照衛能保養說明進行清潔！ \*\***
- b. 清潔扇葉與導風罩。如果扇葉受損或彎曲請更換新的扇葉。
- c. 檢查電氣接點是否鬆脫，鎖緊鬆脫的部分。同時檢查是否有漏電的情形，如有請找出原因並予以修復。
- d. 檢查風扇馬達是否有異音，如有請修復或是更換馬達。
- e. 檢查所有的螺絲與螺栓，如果有鬆脫的部分請鎖緊。
- f. 檢查冷凝器的管路與焊接點是否有銹點與污斑。如果發生鏽蝕情形，請將腐蝕性物質移離，並檢查系統是否洩漏。

# DVC 系列冷凝器安裝與操作說明

## DVC Series User's Manual

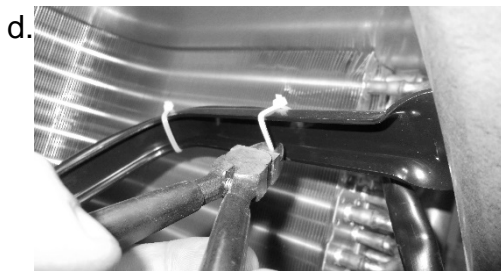
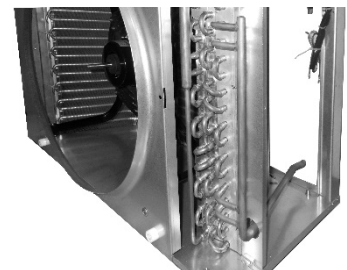
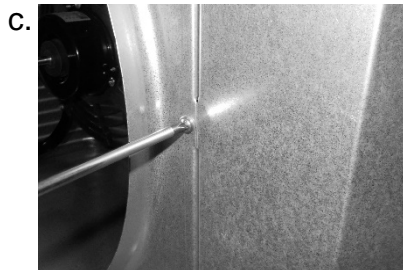
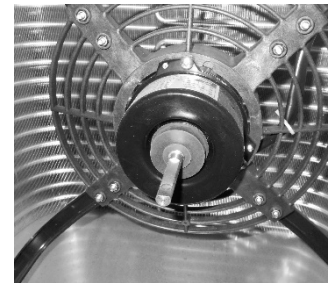
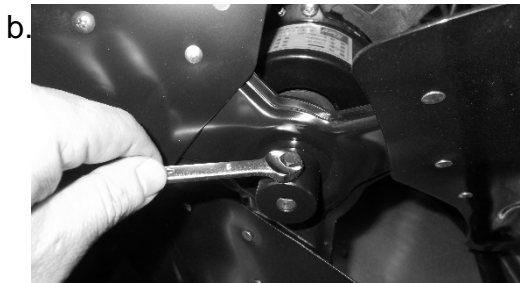
### 5.2 Change fan motor



#### Caution !

Disconnect the power source from condenser before change fan motor!

- Take off the fan guard by unscrewing 3/16" screws (total 4 screws).
- Using M8 wrench to move fan blade from motor shaft.
- Take off the right side panel by unscrewing 7 screws.
- Cut the cables ties.
- Unscrew 3 screws, take out the faulted motor.



### 5.2 馬達更換



#### 注意！

更換馬達前務請先將冷凝器斷電！

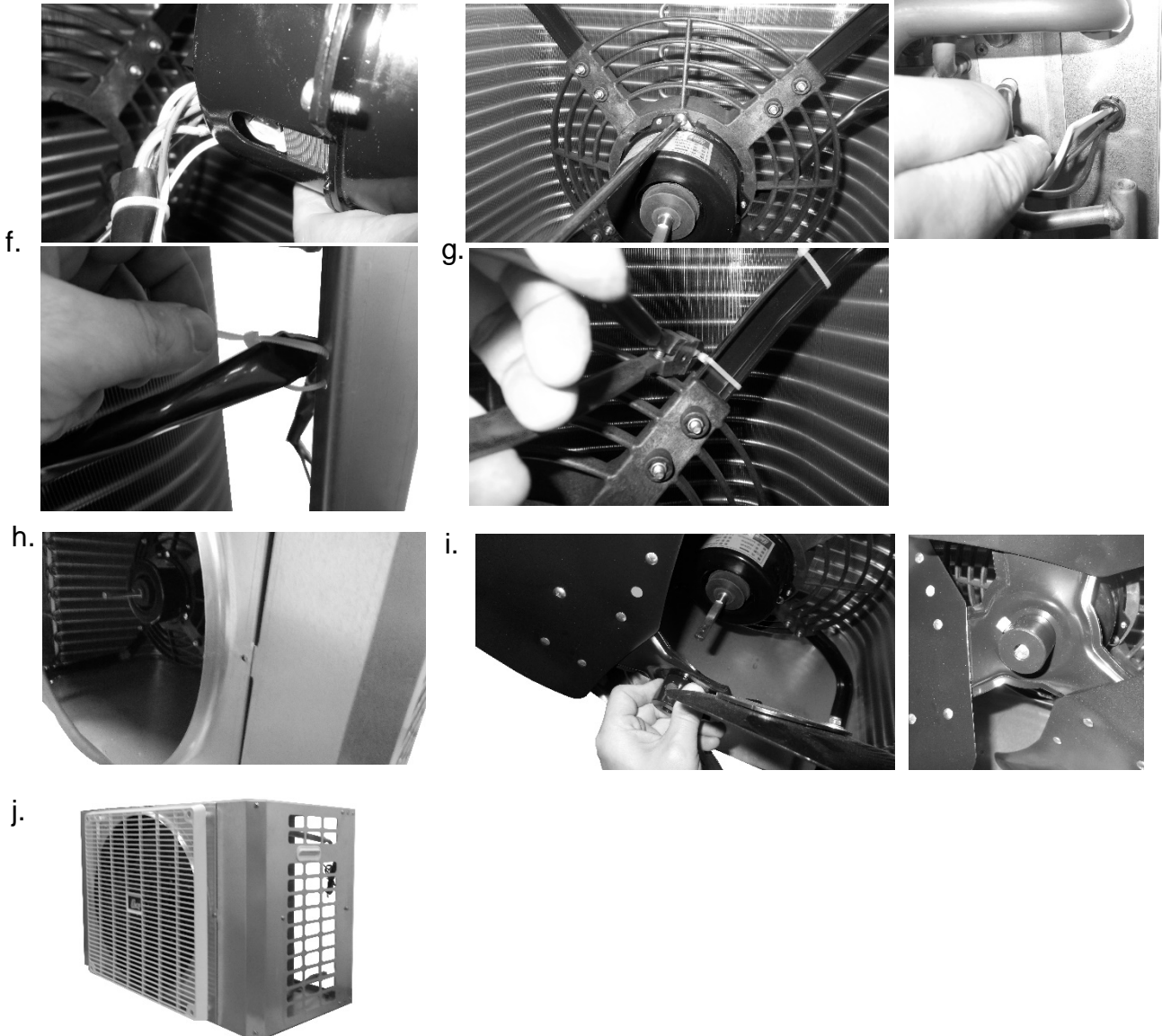
- 旋下風扇護網四個 3/16" 固定螺絲，取下風扇護網。
- 利用 M8 扳手將葉片由馬達軸取下。
- 旋下右側面板 7 個固定自攻螺絲，取下右側面板。
- 剪斷馬達電線束線帶。
- 旋下 3 個馬達固定螺絲將故障馬達取下。

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- f. Fix the new motor to motor supporter.  
Reconnect to power line.  
Note: The drain hole of motor must face down!
- g. Fix the cable with cable ties. Prevent possible interference with fan blade. Cut off excessive part of cable ties.
- h. Reinstall the right side panel.
- i. Install back the fan blade on to motor shaft.  
The screw must be fixed on the flat surface of motor shaft tightly.  
Note: The end surface of shaft must be in the same plan with shaft sleeve of fan blade.
- j. Screw the fan guard back.
- k. Supply power source to condenser.

- f. 將新馬達鎖回馬達固定網架上。連接電源線。  
注意：馬達洩水孔必須朝下。
- g. 將馬達電源線以束線帶固定，避免與扇葉干涉。
- h. 將右側面板重新鎖回。
- i. 將扇葉鎖回馬達軸上。螺絲必須要牢靠地鎖在馬達軸的平面上。  
注意：馬達軸末端的平面必須與扇葉軸套的平面貼齊。
- j. 將風扇護網鎖回。
- k. 將電源送到冷凝器。



### 6. Trouble shooting

Symptoms	Possible causes	Correction
Condensing temperature is too high	<ol style="list-style-type: none"> <li>1. Condenser is dirty</li> <li>2. Supply voltage to fan(s) is too low</li> <li>3. Heat source nearby or short circuit in air flow</li> <li>4. Fan is out of order.</li> <li>5. Condensing temperature control is out of order.</li> <li>6. Outdoor temperature is too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean condenser.</li> <li>2. Check the power source.</li> <li>3. Remove heat source or any obstacle causes short circuit.</li> <li>4. Replace a new one.</li> <li>5. Check condensing temperature control and repair it.</li> <li>6. Check design point.</li> </ol>
Condensing temperature is too low	<ol style="list-style-type: none"> <li>1. Insufficient refrigerant charge/leak</li> <li>2. No heat load.</li> <li>3. Condensing temperature control is out of order.</li> <li>4. Outdoor temperature is too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge refrigerant/repair the leaking.</li> <li>2. Check the loading and control.</li> <li>3. Check condensing temperature control and repair it.</li> <li>4. Check design point and condensing temperature control.</li> </ol>
Fan speed is too low	<ol style="list-style-type: none"> <li>1. Motor is out of order.</li> <li>2. Incorrect power source.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace a new one.</li> <li>2. Check the power source and fix it.</li> </ol>
Fan does not run	<ol style="list-style-type: none"> <li>1. Control component(s) broken.</li> <li>2. Motor is out of order.</li> <li>3. Stuck.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the control circuit, replace the broken component(s).</li> <li>2. Replace a new one.</li> <li>3. Remove obstacle(s).</li> </ol>
Fan is running but no air out	<ol style="list-style-type: none"> <li>1. Condenser is dirty</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean condenser.</li> </ol>

### 6. 故障排除

現象	可能原因	處理方法
冷凝溫度過高	<ol style="list-style-type: none"> <li>1. 冷凝器髒污</li> <li>2. 風車供應電壓過低</li> <li>3. 附近有熱源或是風路短循環</li> <li>4. 風車故障</li> <li>5. 冷凝溫度控制故障</li> <li>6. 外氣溫度過高</li> </ol>	<ol style="list-style-type: none"> <li>1. 清潔冷凝器。</li> <li>2. 檢查供應電壓並予以修正。</li> <li>3. 移除熱源或是造成風路短循環的障礙物。</li> <li>4. 更換新的風車。</li> <li>5. 檢查冷凝控制並予以修復。</li> <li>6. 檢查設計點。</li> </ol>
冷凝溫度過低	<ol style="list-style-type: none"> <li>1. 冷媒充填量不足／洩漏</li> <li>2. 無熱負載</li> <li>3. 冷凝溫度控制故障</li> <li>4. 外氣溫度過低</li> </ol>	<ol style="list-style-type: none"> <li>1. 補充冷媒量／檢查有無洩漏並予以修復</li> <li>2. 檢查負載與控制系統</li> <li>3. 檢查冷凝控制並予以修復。</li> <li>4. 檢查設計點與冷凝控制。</li> </ol>
風扇轉速太慢	<ol style="list-style-type: none"> <li>1. 馬達故障</li> <li>2. 供應電源不正確</li> </ol>	<ol style="list-style-type: none"> <li>1. 更換新馬達。</li> <li>2. 檢查電源並予以修正。</li> </ol>
風扇不運轉	<ol style="list-style-type: none"> <li>1. 控制元件故障</li> <li>2. 馬達故障</li> <li>3. 扇葉卡住</li> </ol>	<ol style="list-style-type: none"> <li>1. 檢查控制迴路並更換損壞零件。</li> <li>2. 更換新馬達。</li> <li>3. 移除障礙物。</li> </ol>
風扇運轉但無風量	<ol style="list-style-type: none"> <li>1. 冷凝器過髒</li> </ol>	<ol style="list-style-type: none"> <li>1. 清潔冷凝器。</li> </ol>

7. Installation of Optional parts 選購品安裝

*Note! Be careful, turn off the power before any installation!!*  
注意！任何安裝之前務必先關閉電源！！

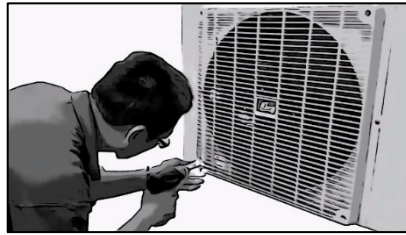
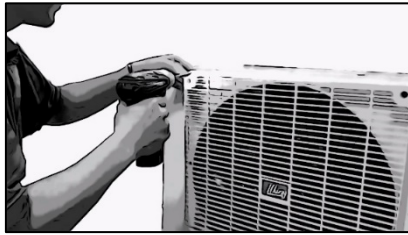


7.1 Installation for Air Guider 導風罩安裝導

A. Installation for old model fan guard (No fixing holes on fan guard) Before 2017 June.  
舊款風扇護網安裝(護網上無安裝孔)2017年六月前產品

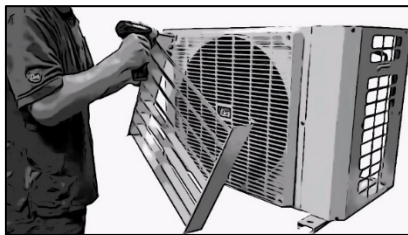
Step1 Unscrew two left side fan Guard fixing screws by plus screw driver.

步驟 1 將風扇護網左側兩個固定螺絲拆下。



Step2 Fixing the air guider and fan Guard together onto condenser with 5/32"x2" screw on the upper left corner first.

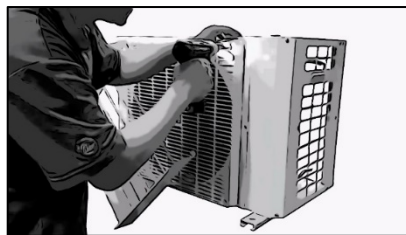
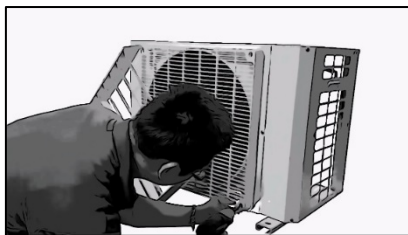
步驟 2 利用所附的 5/32"x2"長螺絲先將導風罩與護網固定於左上角的冷凝器上。



Note: Make sure the air direction you want to guide to before installation!!  
注意：安裝前先確定所要導往的氣流方向！

Step3 Unscrew two right side fan Guard fixing screws by plus screw driver. Be careful the fan guard will rotate.

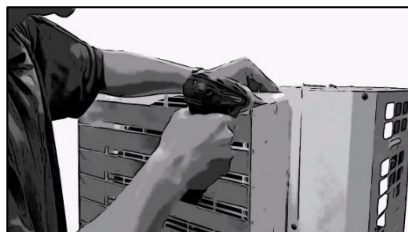
步驟 3 將風扇護網右側兩個固定螺絲拆下。請小心風扇護網擺動。



Step4 Fixing the air guider and fan Guard together onto condenser with 5/32"x2" screws on the rest corners.

Tighten all the fixing screws.

步驟 4 將利用所附的 5/32"x2"長螺絲將導風罩與護網固定於冷凝器的其他角落上。並將所有的螺絲旋緊。



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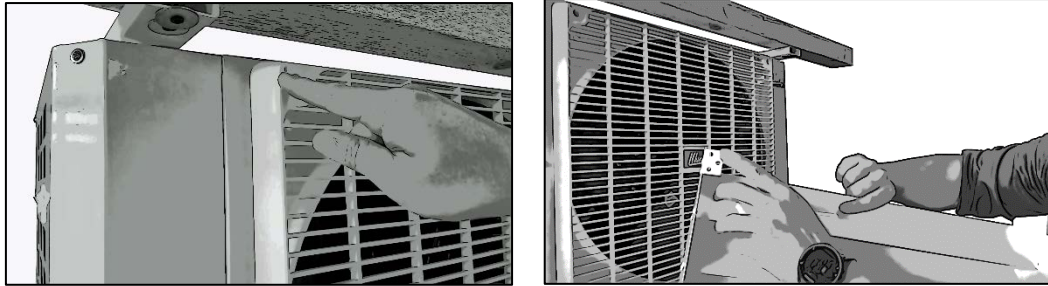
### B. Installation air guider for new model fan guard

Product after 2018 June (With fixing holes on fan guard).

新款風扇護網安裝導風罩(護網上有安裝孔)2018 年六月後產品

Step1 Make sure your fan guard and air guider are the new model ones. There is fixing hole on each corner of fan guard and there are 3 fixing holes on each corner of air guider. Make sure the air direction you want to guide to before installation!

步驟 1 確認導風罩與風扇護網為新款式樣。新款特色將風扇護網四個角落皆有固定孔，導風罩上每個角落都有三個固定孔位。安裝前先確定所要導往的氣流方向！

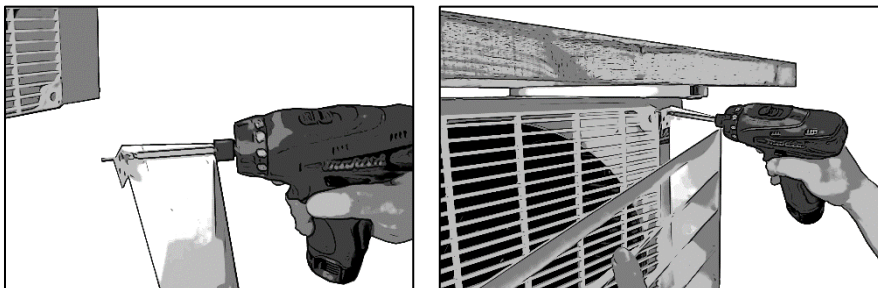


Step2 Fixing the air guider into fixing hole on fan Guard with special 4.2x20 screw(comes with the air guider) on the upper right corner first.

步驟 2 利用所附的特殊 4.2x20 長螺絲先將導風罩固定於護網右上角的固定孔上。

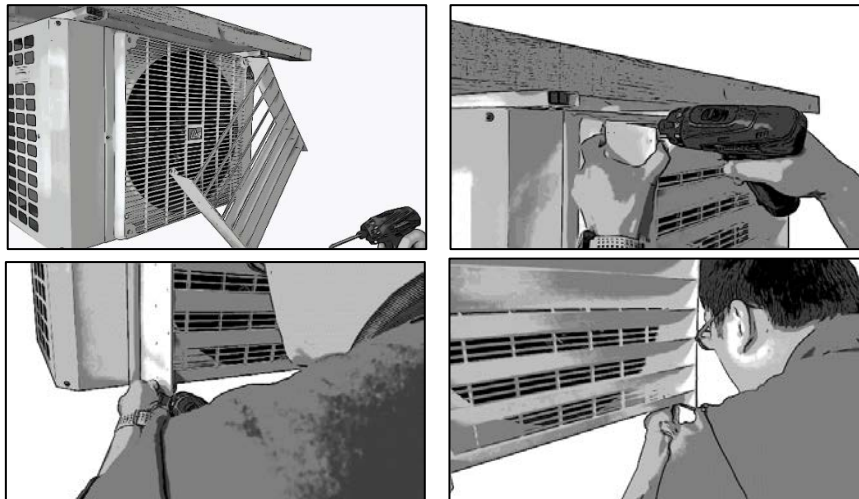
**Note: Must use the stainless steel screws come with air guider!!**

**注意：必須使用導風罩隨附的不鏽鋼螺絲。**



Step3 Fixing the air guider into fixing hole on fan Guard with special 4.2x20 for the rest corner.

步驟 3 利用所附的特殊 4.2x20 長螺絲將導風罩固定於護網其他角落的固定孔上。





## 7.2 Installation for Water Spray System 灑水系統安裝(專利中)

This optional System is only available for those DVC condensers with pipe clamps on ceiling panel. Be sure to check your DVC condenser before purchasing this option.

This optional system provides a spray tube, drain pan and fixing parts. You may use this system with your control system to clean the condenser periodically or use this to lower the condensing temperature.

In the following instruction, we simulate the installing process for the hung condenser. We highly recommend to **disassemble the fixing bars under the condenser, and fixing the fixing bars on the top of condenser, change the seating mode into hanging mode. Then install the water spray tube before you install condenser**, then install drain pan when condenser is already in its position.

The drain pan could not be installed for the seating installation of condenser. You still could buy the water spray tube, if your condenser is already seated on a frame and need a drain pan, you may order a customer made drain pan.

**Note: For standard drain pan, condenser must be hanging mode installation, could not be seating mode!!**

此選購系統僅適用於上板具有水管固定環的 DVC 冷凝器。在購買此選購配備前先確認您的 DVC 冷凝器是否可安裝。

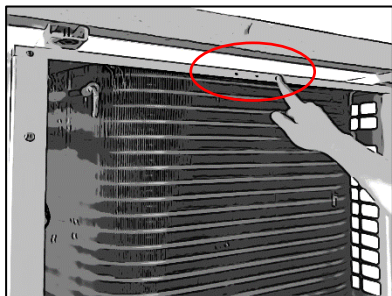
此選購系統包含了一隻灑水管，排水盤與固定零件。您可以使用此系統與您的控制系統結合進行定期清潔鰭片或是用來降低冷凝溫度。

接下來的安裝說明我們是模擬既有以吊掛方式的冷凝器進行安裝，我們強烈建議在安裝冷凝器前將底座的固定桿拆下，並將固定桿鎖於上板上成為吊式安裝，並將灑水管裝妥，待冷凝器安裝好後再安裝水盤。

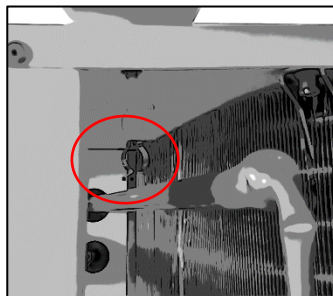
**注意：使用標準水盤冷凝器必須以吊掛方式安裝，不可以坐式安裝！**

Please check your DVC if it could be installed the water spray system!

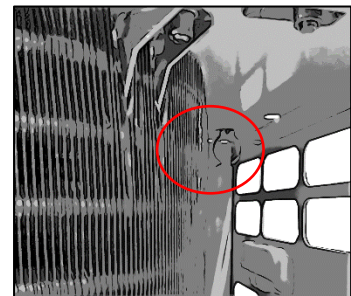
請先檢查您的 DVC 冷凝器是否可安裝灑水系統！



3 fixing holes on top and bottom plates  
上下板中央有三個固定孔



Two pip clamps on the left and right of ceiling  
上板內側左右共有兩個灑水管固定管夾



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#### A. Change the support bars 變更底座為吊桿

In order to install the standard drain pan, please follow the instruction to change the condenser fixing mode.

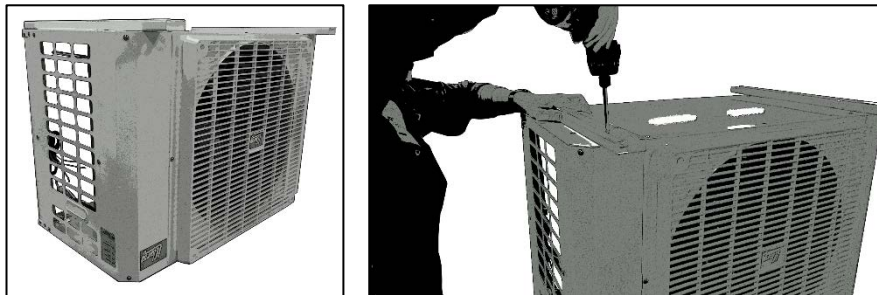
為安裝標準排水盤，請依照以下程序變更熱交換器的固定模式。

Step1 Upside the condenser. Make the bottom side face to sky. Using the plus screw driver to unassembled two support bars.

Note: Please put the condenser on a clean cardboard or soft clothing to avoid scratching during the changing process.

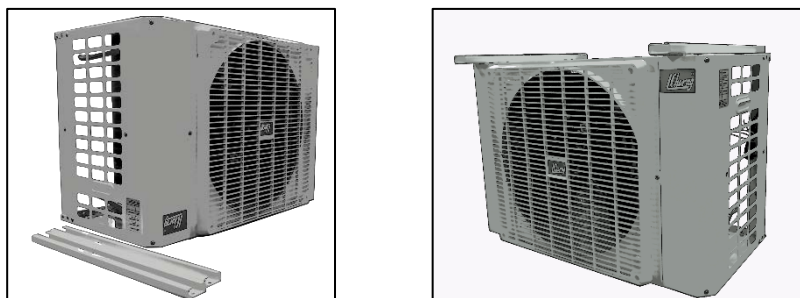
步驟 1 將冷凝器倒置，使底部朝上。利用十字螺絲起子將兩個支撐桿拆下。

注意：請將冷凝器放置在乾淨的瓦楞紙或布上，以避免在更換程序時發生刮傷情形。



Step2 Turn the condenser back to normal position. Using the plus screw driver to assembled two support bars on the top of condenser. This is hanging mode.

步驟 2 將冷凝器放回正常位置。利用十字螺絲起子將兩個支撐桿固定於冷凝器的上方。此為吊掛模式。



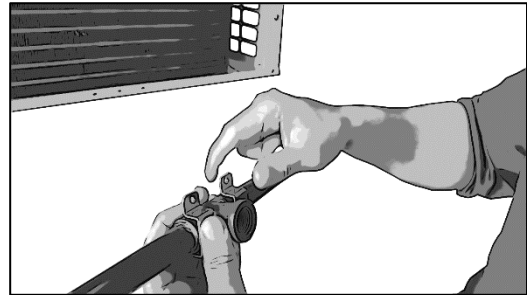


B. Install the water spray tube  
安裝灑水管

You may install the water spray tube before fixing condenser to its service position.  
在固定冷凝器置運轉位置前，可以先安裝灑水管。

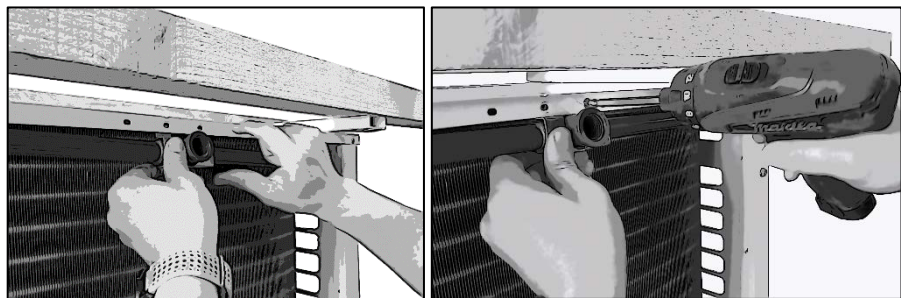
Step1 Combine the water spray tube with fixing parts.

步驟 1 將灑水管與固定片組合。



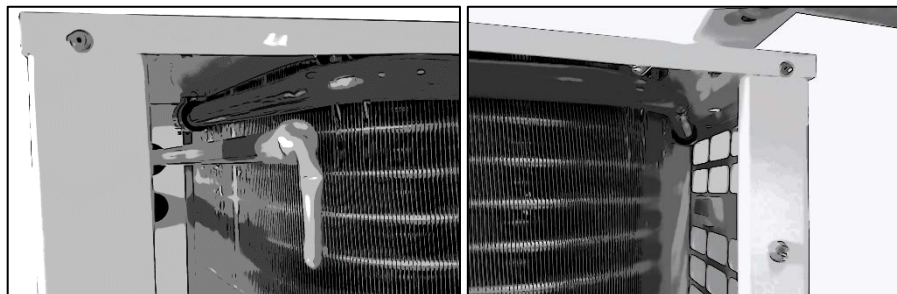
Step2 Place the water spray tube around the top of condenser coil. Insert the fixing parts between up plate and fins. Using plus screw driver to tighten the fixing parts with two 4x8 screws.

步驟 2 將灑水管放在盤管的上緣。將固定片插入於鱗片與上板間。使用時自螺絲起子與隨附的 2 只 4x8 screws 將固定片與冷凝器上板鎖緊。



Step3 Push the left side and right side of spray tube into pipe clamp till hear the click sound. Finish the water spray tube installation process.

步驟 3 將灑水管左右兩側推入固定環，直到聽到喀答的聲音。完成灑水管安裝程序。



**Note:** The water sprat tube is ABS tube, be sure to select suitable glum to connect your water pipe and this water spray tube.

**注意：**灑水管為 ABS 管，請選擇合適的膠以結合您的水管與本灑水管。

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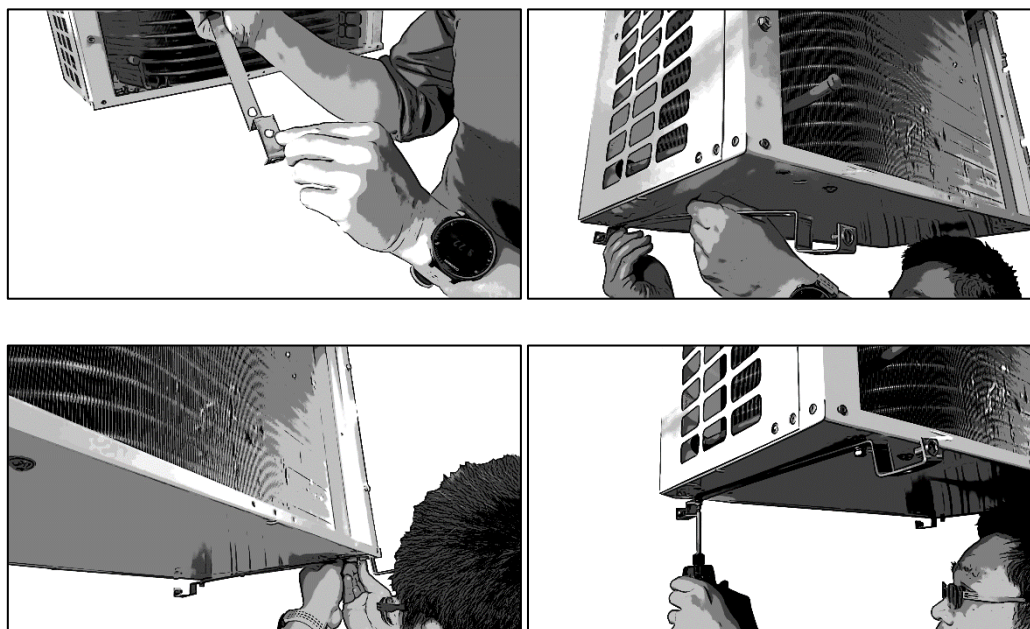
### C. Install the drain pan 安裝排水盤

Please install the drain pan when the condenser is in its service position to avoid damage during fixing condenser. This drain pan is only for hanging mode installation!

建議冷凝器完成安裝後再安裝排水盤，以避免安裝冷凝器時造成水盤損壞。此排水盤僅適用於吊掛式安裝。

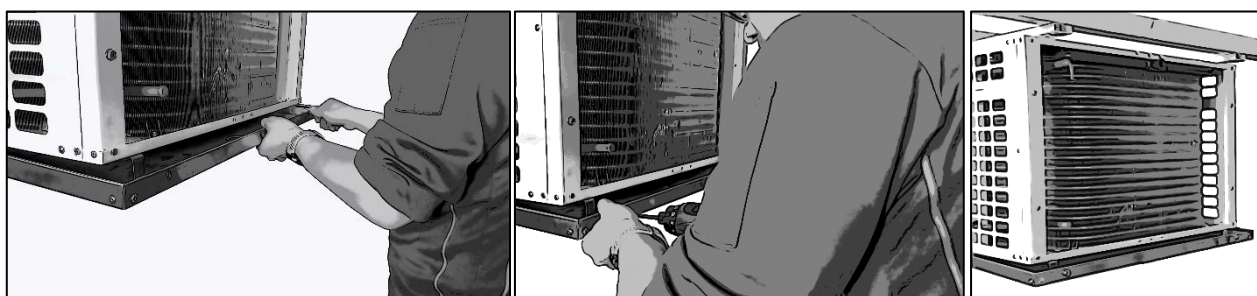
Step1 There are one drain pan, two drain pan fixtures and 8 M6X20 screws. Make sure the drain pipe position. There is a mark hole on the fixture. The mark hole must be on the drain pipe side to insure necessary slope for draining. Use plus driver to screw 4 M6X20 screws to fix the fixtures at the bottom of condenser.

步驟 1 套件中有一個排水盤，兩隻水盤固定桿與 8 個 M6X20 螺絲。先確定排水管的位置，固定桿上有一個記號孔，此記號孔必須在排水管側以確保足夠的坡度洩水。使用十字螺絲起子將 4 個 M6X20 螺絲把固定桿鎖在冷凝器底部。



Step2 Fix the drain pan onto the fixtures with 4 M6X20 screws. Be sure the drain hole must be in correct position. The drain pipe connection is for 1" water pipe.

步驟 2 使用 4 個 M6X20 將個排水盤鎖在固定桿上。確定排水孔式在正確的位置。排水接管為 1"水管用。



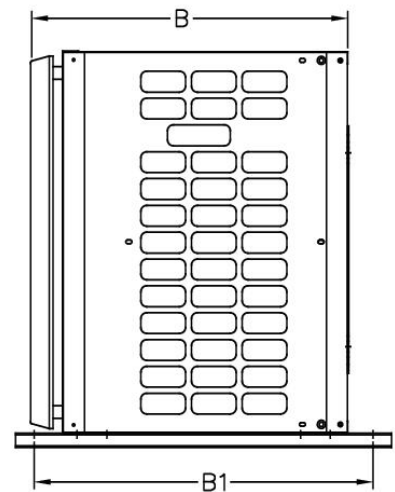
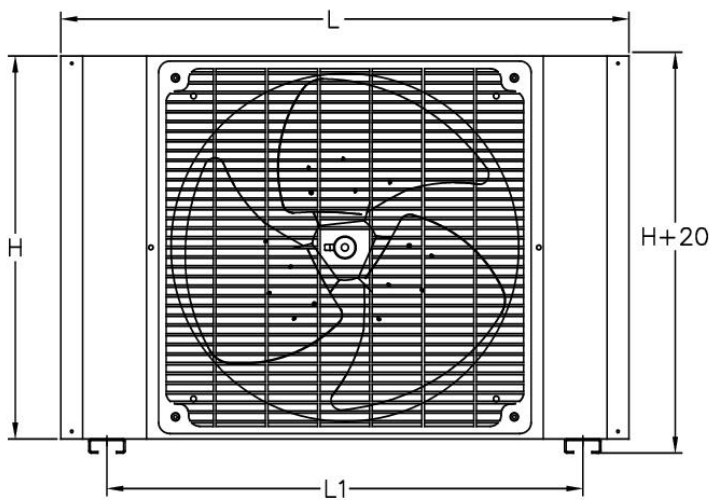
Memo 備忘

# DVC 系列冷凝器安裝與操作說明

## DVC Series User's Manual

### Appendix 1 Position and weight 孔位與重量

Model No. 型號	Net Weight 淨重 kg	Anchor position 錨定位置	
		L1 mm	B1 mm
DVC100□□	10.4	426	370
DVC 150□□	11.8	426	370
DVC 200□□	12.6	426	370
DVC 250□□	15.6	639	455
DVC 300□□	18.5	639	455
DVC 350□□	20.0	639	455
DVC 400□□	21.5	639	455
DVC 500□□	22.5	790	455
DVC 600□□	23.5	790	455
DVC 700□□	33.0	1244	455
DVC 800□□	35.0	1244	455
DVC 900□□	38.0	1244	455
DVC1000□□	40.5	1244	455



Appendix 2 Replacement Parts 替換零件表

Model No. 型號	Fan Set 風車組
DVC100A2	AAHVZ
DVC150A2	AAHVZ
DVC200A2	AAHVZ
DVC250A2	AAHVZ
DVC300A2	AAHXN
DVC350A2	AAHXN
DVC400A2	AAHXN
DVC500A2	AAHXN
DVC600A2	AAHXN
DVC700A2	AAHXN
DVC800A2	AAHXN
DVC900A2	AAHXN
DVC1000A2	AAHXN

Fan Set Assembly 風車組

Fan Set 風車組	Motor 馬達	Fan Blade 扇葉	Motor Support 馬達網架
AAHVZ	AASVM	AADUK	AAHLJ
AAHXN	AACMI	AAHAW	AANTA

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