

R32分體式冷氣機

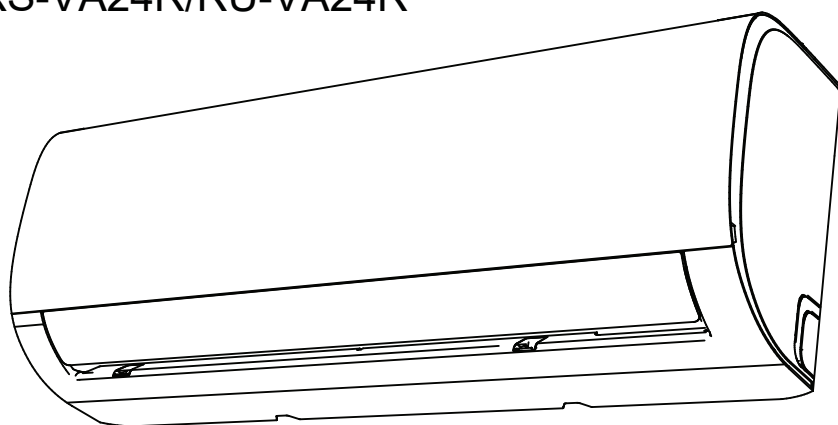
型號：

RS-VA9R/RU-VA9R

RS-VA12R/RU-VA12R

RS-VA18R/RU-VA18R

RS-VA24R/RU-VA24R



重要提示：

本設備使用 R32 輕度易燃製冷劑。
在安裝或操作新冷氣機之前，請仔細閱讀本說明書。請妥善保管本說明書以備將來參考。
適用的型號、技術資料見機身銘牌。

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安全預防措施

操作和安裝前請閱讀安全預防措施

因忽略指示而導致的不正確安裝可能會造成嚴重的損壞或傷害。

潛在損壞或傷害的嚴重性分為 警告 或 注意。



警告

此符號表示可能造成人員受傷或喪失生命。



注意

此符號表示可能造成財產損失或嚴重後果。



警告

此設備可供8歲及以上兒童和殘障人士使用

身體、感官或精神能力受限制，或缺乏經驗和知識的人士，只有在得到監督或指導，並瞭解使用本設備的安全方法和相關風險後，方可使用本設備。兒童不得玩弄本設備。清潔和用戶維護不得由無監督的兒童進行。

本設備不適用於身體、感官或精神能力受限制，或缺乏經驗和知識的人士（包括兒童）使用，除非他們已得到負責其安全的人士的監督或指導。兒童應在監督下使用，以確保他們不會玩弄本設備。



產品使用警告

- 如出現異常情況（如燒焦味），立即關閉機器並斷開電源。請聯繫您的經銷商以獲取指示，避免電擊、火災或受傷。
- **請勿**將手指、棍棒或其他物品插入進風口或出風口。這可能會造成傷害，因為風扇可能以高速旋轉。
- **請勿**在機器附近使用易燃噴霧，如髮膠、清漆或油漆。這可能會引起火災或燃燒。
- **請勿**在易燃氣體附近或周圍操作空調。排放的氣體可能在機器周圍聚集並引起爆炸。
- **請勿**在潮濕的房間（如浴室或洗衣房）操作您的冷氣機。過多的水暴露可能會導致電氣部件短路。
- **請勿**讓身體長時間直接暴露在冷空氣中。
- **請勿**讓兒童玩冷氣機。兒童在機器周圍時必須始終受到監督。
- 如果冷氣機與燃燒器或其他加熱設備一起使用，請徹底通風房間以避免氧氣不足。
- 在某些功能環境中，如廚房、伺服器房等，建議使用專門設計的冷氣機。

清潔和維護警告

- 清潔前請關閉設備並斷開電源。否則可能會引起觸電。
- **請勿**用過多的水清潔冷氣機。
- **請勿**用易燃清潔劑清潔冷氣機。易燃清潔劑可能會引起火災或變形。

 **注意**

- 如果您長時間不使用冷氣機，請關閉並斷開電源。
- 在暴風雨期間請關閉並拔掉電源。
- 確保冷凝水可以從設備中無阻礙地排出。
- **切勿**用濕手操作冷氣機。可能會引起觸電。
- **切勿**將設備用於其預定用途之外的任何目的。
- **切勿**攀爬或在室外機上放置物品。
- **切勿**在門窗開啟或濕度非常高的情況下，讓冷氣機長時間運作。

 **電氣警告**

- 僅使用指定的電源線。如果電源線損壞，必須由製造商、其服務代理商或同等資格的人員更換，以避免危險。
- 保持電源插頭清潔。清除積聚在插頭上或周圍的任何灰塵或污垢。骯髒的插頭可能會引起火災或觸電。
- **切勿**拉扯電源線以拔出裝置。牢固握住插頭並從插座中拔出。直接拉扯電源線可能會損壞電源線，這可能會導致火災或觸電。
- **切勿**修改電源線的長度或使用延長線為裝置供電。
- **切勿**與其他電器共用電源插座。不正確或不足的電源供應可能會引起火災或電擊。
- 產品在安裝時必須妥善接地，否則可能會發生觸電。
- 所有電氣工作均需遵循當地和國家的配電標準、法規及安裝手冊。緊固連接電纜，並牢固夾緊，以防止外力損壞端子。不正確的電氣連接可能會過熱並引發火災，也可能導致觸電。所有電氣連接必須按照位於室內機和室外機面板上的電氣連接圖進行。
- 所有配線必須妥善排列，以確保控制板蓋能夠正常關閉。如果控制板蓋未能正常關閉，可能會導致腐蝕，並使端子上的連接點發熱、著火或引發觸電。
- 如果連接到固定線路，則必須在固定線路中按照配線規則整合一個具有至少3mm間隙的所有極斷開裝置，且漏電電流可能超過10mA，剩餘電流裝置(RCD)的額定剩餘動作電流不超過30mA。



產品安裝警告

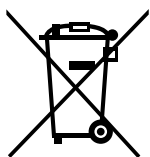
1. 安裝必須由授權經銷商或專業人員進行。安裝不良可能會導致漏水、觸電或火災。
2. 安裝必須按照安裝說明進行。安裝不當可能會導致漏水、觸電或火災。
3. 請聯繫授權的服務技術人員進行此裝置的維修或保養。此電器裝置應按照國家電氣安裝規範進行安裝。
4. 僅使用隨附的配件、零件和指定零件進行安裝。使用非標準零件可能會導致漏水、觸電、火災，並可能使裝置失效。
5. 將裝置安裝在能夠支撐其重量的堅固位置。如果所選位置無法支撐裝置的重量，或安裝不當，裝置可能會掉落並造成嚴重傷害和損壞。
6. 請按照本說明書中的說明安裝排水管。不正確的排水可能會對您的房屋和財產造成水損。
7. 對於具有輔助電加熱器的裝置，**切勿**在距離任何可燃材料1米（3英尺）以內的地方安裝裝置。
8. **切勿**將機器安裝在可能暴露於可燃氣體洩漏的地點。如果可燃氣體在機器周圍積聚，可能會引發火災。
9. 在所有工作完成之前，不要開啟電源。
10. 在移動或重新安裝冷氣機時，請諮詢有經驗的服務技術人員進行拆卸和重新安裝。
11. 如何將裝置安裝到其支撐上，請詳細閱讀「室內機安裝」和「室外機安裝」部分的說明。

⚠ 使用 R32製冷劑的警告

- 當使用易燃製冷劑時，設備應存放在通風良好的區域，且房間大小應符合操作規定的房間面積。
對於R32製冷劑型號：
設備應安裝在地板面積大於4m²的房間中。
- 室內不允許使用可重複使用的機械接頭和擴口接頭。
- 室內使用的機械接頭在25% 的最大允許壓力下的泄漏率不得超過3g/年。
- 當室內重複使用機械接頭時，密封部件應更換。當室內重複使用擴口接頭時，擴口部分應重新製作。
(IEC 標準要求)
- 室內使用的機械接頭應符合ISO 14903。

處置指南

此標記顯示在產品或其文獻上，表示棄置電器及電子設備不應與一般家庭廢物混合。



本產品的正確處置
(棄置電器及電子設備)

此設備含有製冷劑和其他潛在的有害物質。處置此設備時，法律要求進行特別收集和處理。切勿將此產品作為家庭廢物或未分類的都市廢物處理。

處置此設備時，您有以下選項：

- 在指定的市政電子廢物收集設施處置設備。
- 購買新設備時，零售商會免費回收舊設備。
- 製造商會免費回收舊設備。

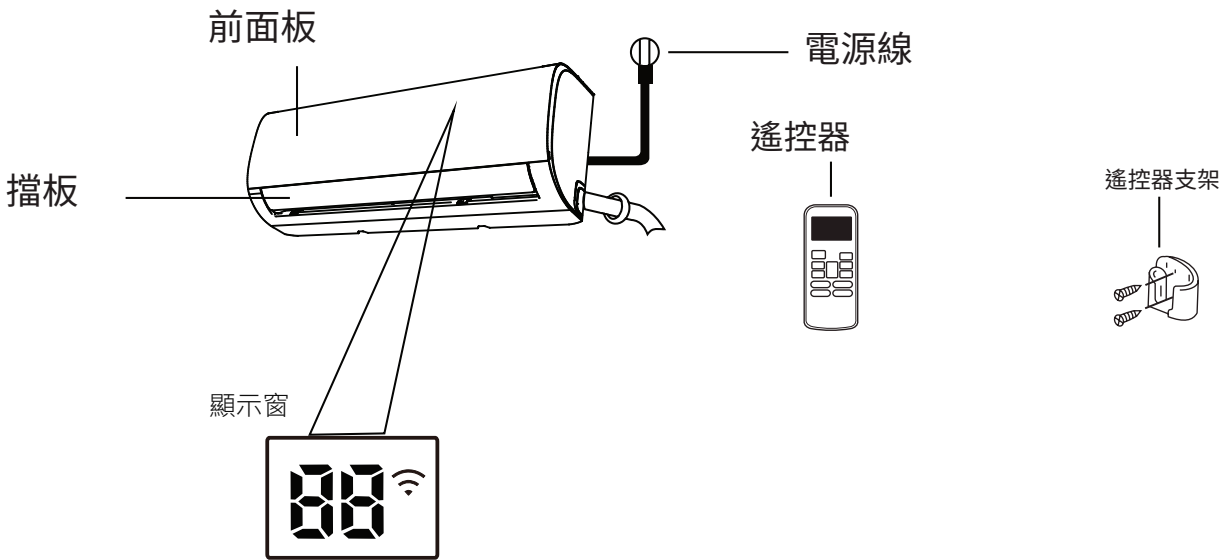
特別通知

在森林或其他自然環境中處置此設備會危害您的健康，並且對環境不利。有害物質可能會滲入地下水並進入食物鏈。

機體規格和特點

室內機顯示

本說明書中的插圖僅供說明之用。室內機的實際形狀可能略有不同，應以實際形狀為準。



- "88" 顯示溫度、操作特性和錯誤代碼：
當 ECO 功能（部分機型）啟動時，'88' 會逐漸一個接一個地亮起，顯示為 E--E
--0-- 設定溫度 --E 每隔一秒。
- "00" 在以下情況下顯示3秒：
• 定時器開啟已設定（如果機組關閉，"00" 在定時器開啟已設定時保持亮起）
• 啟用新鮮、UV-C 燈、擺風、渦輪或靜音功能
- "0F" 在以下情況下顯示3秒：
• 設定定時關機
• 關閉新鮮、UV-C 燈、擺風、渦輪或靜音功能
- "cF" 當啟用防冷風功能時
- "dF" 除霜時（僅限冷暖機型）
- "5C" 當機組自清潔時（部分機型）
- "FF" 當 8°C 加熱功能開啟時（部分機型）

顯示代碼
意義

操作溫度

當您在以下溫度範圍之外使用冷氣機時，某些安全保護功能可能會啟動，導致機組失效。

定速型

	製冷模式	除濕模式
室內溫度	17°C-32°C (62°F-90°F)	10°C-32°C (50°F-90°F)
室外溫度	18°C-43°C (64°F-109°F)	11°C-43°C (52°F-109°F)

注意：房間相對濕度低於80%。如果冷氣機運行超出此數值，冷氣機表面可能會吸引冷凝水。請將垂直空氣流擋板設置到最大角度（垂直於地面），並設置為高風速模式。

為了進一步優化您的機器性能，請按照以下步驟：

- 保持門窗關閉。
- 使用定時開機和定時關機功能限制能源使用。
- 不要阻擋進風口或出風口。
- 定期檢查並清潔空氣過濾網。

本說明書未包含紅外線遙控器的使用指南。並非所有功能都適用於冷氣機，請檢查您購買的機型的室內顯示屏和遙控器。

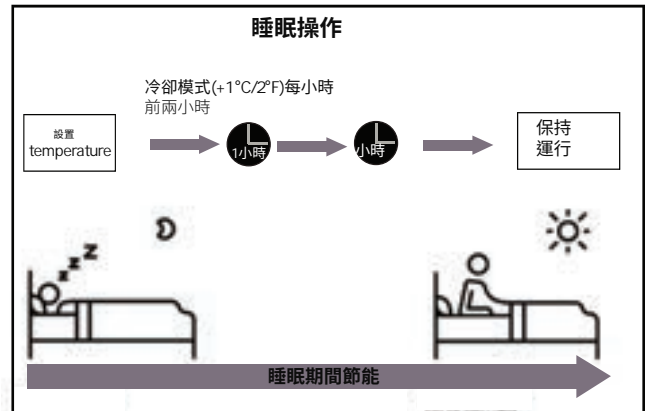
其他功能

- 自動重啟**
 如果裝置斷電，它將在恢復供電後自動以先前的設定重新啟動。
- 防黴**
 當從冷卻、自動（冷卻）或除濕模式關閉裝置時，冷氣機將繼續以非常低的功率運行，以蒸發凝結的水並防止黴菌生長。
- 擋板角度記憶**
 當您開啟裝置時，擋板將自動恢復到先前的角度。
- 製冷劑洩漏檢測**
 當室內機檢測到製冷劑洩漏時，將自動顯示“EC”。

睡眠操作

睡眠功能用於在您睡覺時降低能源使用（無需相同的溫度設定來保持舒適）。此功能只能通過遙控器啟動。睡眠功能在風扇或除濕模式下不可用。

當您準備好睡覺時，請按 SLEEP 按鈕。
 在冷卻模式下，溫度將在1小時後升溫1°C (2°F)，並在再過1小時後再升溫1°C (2°F)。
 睡眠功能在8小時後停止，系統將以最終狀態繼續運行。



• 設置空氣流量角度

設置空氣流動的垂直角度

在機器開啟時，使用遙控器上的擺風/直吹按鈕設置空氣流動的方向（垂直角度）。詳細信息請參閱遙控器手冊。

擋板角度注意事項

當使用製冷或除濕模式時，不要將擋板設置在過於垂直的角度長時間使用。這可能會導致水在擋板葉片上凝結，進而滴到您的地板或傢俱上。

當使用製冷模式時，將擋板設置在過小的角度可能會因空氣流量受限制而降低機器的性能。

設置水平空氣流量角度

空氣流動的水平角度必須手動設置。握住擋板桿（見圖B），並手動調整到您喜好的方向。對於某些機型，空氣流動的水平角度可以通過遙控器設置。請參閱遙控器手冊。

手動操作（無遙控器）

⚠ 注意

手動按鈕僅供測試和緊急操作使用。除非遙控器遺失且絕對必要時，否則請勿使用此功能。要恢復正常操作，請使用遙控器啟動裝置。在手動操作之前必須關閉裝置。

要手動操作您的機器：

1. 打開室內機的前面板。
2. 找到機器右側的手動控制按鈕。
3. 按一次手動控制按鈕以啟動強制自動模式。
4. 再次按下手動控制按鈕以啟動強製冷卻模式。
5. 按**手動控制按鈕第三次**以關閉裝置。
6. 關閉前面板。

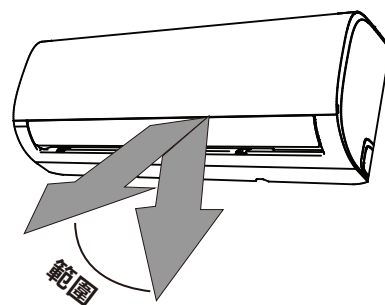


圖 A

注意：請勿手動移動擋板。這將導致擋板不同步。如果發生此情況，請關閉裝置並拔掉插頭幾秒鐘，然後重新啟動裝置。這將重置擋板。

⚠ 注意

請勿將手指伸入或靠近裝置的風扇和吸氣側。裝置內部的高速風扇可能會造成傷害。

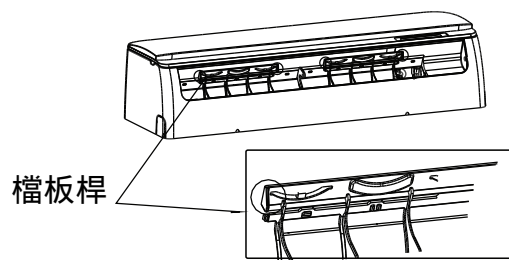
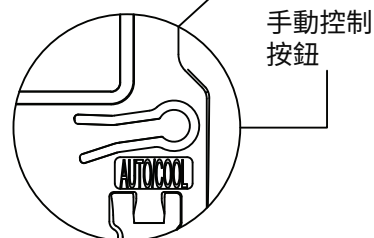
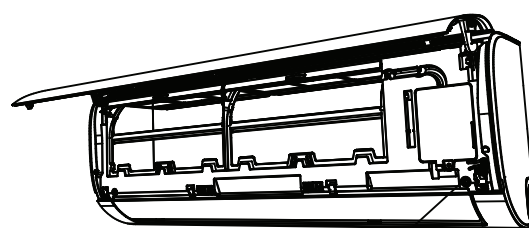


圖 B



保養和維護

清潔您的室內機

⚠️ 清潔或維護前

清潔或維護前，請關閉您的冷氣機系統並斷開其電源。

⚠️ 注意

僅使用柔軟、乾燥的布擦拭機器。如果機器特別骯髒，可以使用浸有溫水的布擦拭。

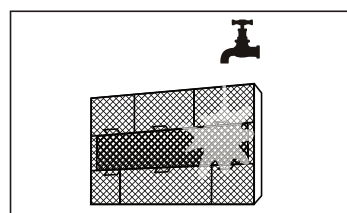
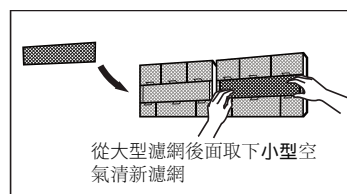
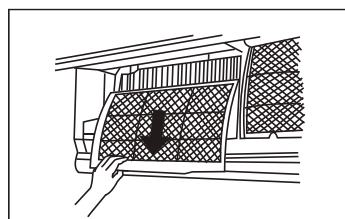
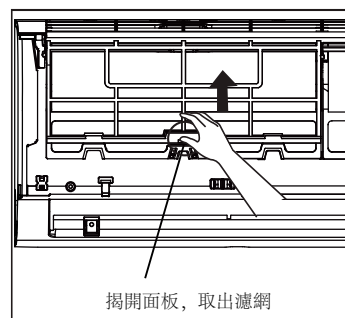
- 切勿使用化學品或化學處理的布清潔機器
- 切勿使用苯、油漆稀釋劑、拋光粉或其他溶劑清潔機器。它們可能會導致塑料表面開裂或變形。
- 切勿使用超過40°C (104°F) 的熱水清潔前面板。這可能會導致面板變形或變色。

清潔您的空氣過濾網

堵塞的冷氣機可能會降低您的機器效率，並且對您的健康不利。請確保每兩週清潔一次過濾網。

1. 打開室內機的前面板。
2. 首先按下過濾網末端的卡扣以鬆開扣環，提起它，然後向自己拉出。
3. 現在將過濾網拉出。
4. 如果您的過濾網有一個小型空氣清新過濾網，先從大型過濾網上解下它。並使用手提吸塵機清潔此空氣清新過濾網
5. 使用溫暖的肥皂水清潔大型空氣過濾網。務必使用溫和的洗滌劑。

6. 用新鮮水沖洗過濾器，然後甩掉多餘的水。
7. 在涼爽、乾燥的地方晾乾，避免直接日曬。
8. 晾乾後，將空氣新鮮過濾器重新夾到大過濾網上，然後滑回室內機。
9. 關閉室內機的前面板。



⚠️ 注意

關機後至少10分鐘內不要觸碰空氣清新（銀離子）過濾網。

⚠ 注意

- 在更換過濾網或清潔之前，關閉裝置並斷開其電源供應。
- 在取出過濾網時，切勿觸碰裝置內的金屬部件。銳利的金屬邊緣可能會割傷您。
- 不要用水清潔室內機的內部。這可能會破壞絕緣並造成電擊。
- 在晾乾時，不要讓過濾網直接暴露在陽光下。這可能會使過濾網收縮。

空氣過濾網提醒事項

空氣過濾網清潔提醒

使用 240 小時後，室內機的顯示窗將閃爍“CL”。這是清潔過濾網的提醒。15 秒後，機器將恢復到之前的顯示。

要重設提醒，請按遙控器上的 LED 按鈕 4 次，或按手動控制按鈕 3 次。如果您不重設提醒，重新啟動機器時“CL”指示燈將再次閃爍。

空氣過濾網更換提醒

使用 2,880 小時後，室內機的顯示窗將閃爍“nF”。這是更換過濾網的提醒。15 秒後，機器將恢復到之前的顯示。

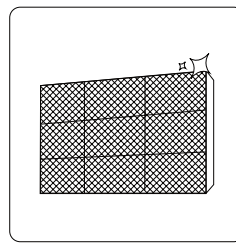
要重設提醒，請按遙控器上的 LED 按鈕 4 次，或按手動控制按鈕 3 次。如果您不重設提醒，當您重新啟動裝置時，「nF」指示燈將會再次閃爍。

⚠ 注意

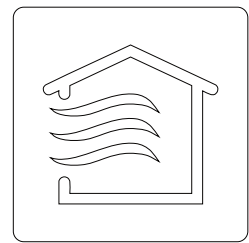
- 室外機的任何維護和清潔都應由授權經銷商或有執照的服務提供商進行。
- 任何機組維修都應由授權經銷商或有執照的服務提供商進行。

維護 – 長期不使用

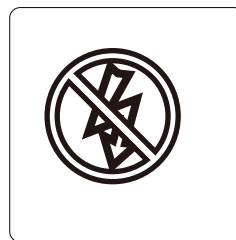
如果您計劃長時間不使用冷氣機，應按照以下步驟操作：



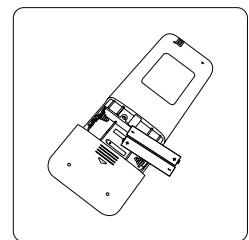
清潔所有過濾網



打開風扇功能，直到裝置完全乾燥



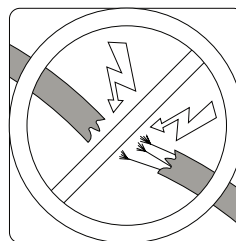
關閉裝置並斷開電源



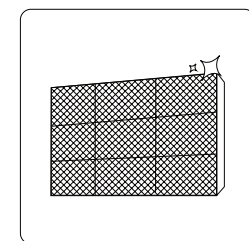
從遙控器中取出電池

維護 – 季前檢查

在長時間不使用後，或在頻繁使用前，請按照以下步驟操作：



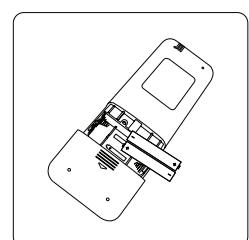
檢查是否有損壞的電線



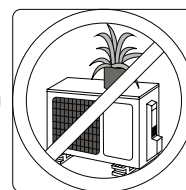
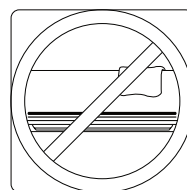
清潔所有過濾網



檢查是否有洩漏



更換電池



確保沒有任何東西阻塞所有進氣口和出氣口

故障排除

安全注意事項

如果發生以下任何情況，立即關閉您的機器！

- 電源線損壞或異常發熱
- 聞到燒焦的氣味
- 機器發出大聲或異常聲音
- 保險絲熔斷或斷路器頻繁跳閘
- 水或其他物體落入或從機器中掉出

切勿自行修理！請立即聯繫信興電器服務中心有限公司！

常見問題

以下問題並非故障，在大多數情況下無需維修。

問題	可能的原因
按開/關按鈕時，機組無法啟動	機組具有3分鐘保護功能，可防止機組過載。機組在關機後的三分鐘內無法重新啟動。
機器從製冷模式切換到風扇模式	機組可能會更改設置以防止機組上結霜。一旦溫度升高，機組將再次以先前選擇的模式運行。
	已達到設定溫度，此時機組關閉壓縮機。當溫度再次波動時，機器將繼續運行。
室內機散發白色霧氣	在潮濕地區，房間空氣與調節後的空氣之間的溫差較大時，可能會產生白色霧氣。
室內機發出噪音	當擋板重置其位置時，可能會發出氣流聲。
室內機和室外機都發出噪音	運行時發出低嘶嘶聲：這是正常的，是由於製冷劑氣體在室內和室外機中流動所致。
	系統啟動、剛剛停止運行或除霜時發出低嘶嘶聲：此噪音屬正常現象，是由製冷劑氣體停止或改變方向引起的。
	吱吱聲：運行期間由於溫度變化引起的塑料和金屬部件的正常膨脹和收縮可能會產生吱吱聲。

問題	可能的原因
室外機發出噪音	機器會根據其當前的運行模式發出不同的聲音。
灰塵從室內機或室外機散出	機器在長時間不使用期間可能會積累灰塵，當機器開啟時會散出灰塵。這可以通過在長時間不活動期間覆蓋機器來減輕。
機器散發出異味	機器可能會吸收環境中的氣味（如傢俱、烹飪、香煙等），這些氣味在運行時會散發出來。
	機器的濾網已發黴，需要清潔。
室外機的風扇不運轉	運行期間，風扇速度會被控制以優化產品運行。
運行不穩定，不可預測，或機器無反應	<p>手機基站和遙控增強器的干擾可能會導致機器故障。</p> <p>在此情況下，請嘗試以下操作：</p> <ul style="list-style-type: none"> 斷開電源，然後重新連接。 按下遙控器上的開關按鈕以重新啟動運行。
<p>注意：如果問題仍然存在，請聯繫信興電器服務中心有限公司。請向他們提供機器故障的詳細描述以及您的型號編號。</p>	

故障排除

當故障發生時，請在聯繫信興電器服務中心有限公司之前檢查以下事項。







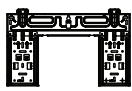




問題	可能的原因	解決方案
冷卻效果不佳	溫度設定可能高於室內溫度	降低溫度設定
	室內或室外機的熱交換器骯髒	清潔受影響的熱交換器
	空氣過濾網骯髒	取出過濾網並根據指示清潔
	任一單元的進氣口或出氣口被阻塞	關閉冷氣機，移除阻塞物並重新開啟
	門窗開啟	在操作冷氣機時確保所有門窗關閉
	過多的熱量是由陽光產生的	在高溫或強烈陽光期間關閉窗戶和窗簾
	房間內有太多熱源（人、電腦、電子設備等）	減少熱源數量
	由於洩漏或長期使用導致製冷劑不足	檢查是否有洩漏，必要時重新密封並補充製冷劑

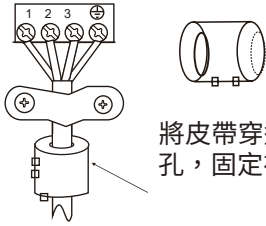
問題	可能的原因	解決方案
機器無法運作	電源故障	等待電源恢復
	電源已關閉	打開電源
	保險絲燒斷	更換保險絲
	遙控器電池耗盡	更換電池
	機器的3分鐘保護已啟動	重新啟動裝置後等待三分鐘
	定時器已啟用	關閉定時器
機器頻繁啟動和停止	系統中的製冷劑過多或過少	檢查是否有洩漏並重新充填製冷劑。
	不可壓縮的氣體或水分已進入系統。	抽真空並重新充填製冷劑
	壓縮機故障	更換壓縮機
	電壓過高或過低	安裝壓力開關以調節電壓
指示燈持續閃爍	<p>機器可能停止運行或繼續安全運行。如果指示燈持續閃爍或顯示錯誤代碼，請等待約10分鐘。問題可能自行解決。</p> <p>如果未解決，請斷開電源，然後重新連接。打開機器。如果問題仍然存在，請斷開電源並聯繫信興電器服務中心有限公司。</p>	

注意：如果您在進行上述檢查和診斷後問題仍然存在，請立即關閉您的設備並聯繫信興電器服務中心有限公司。

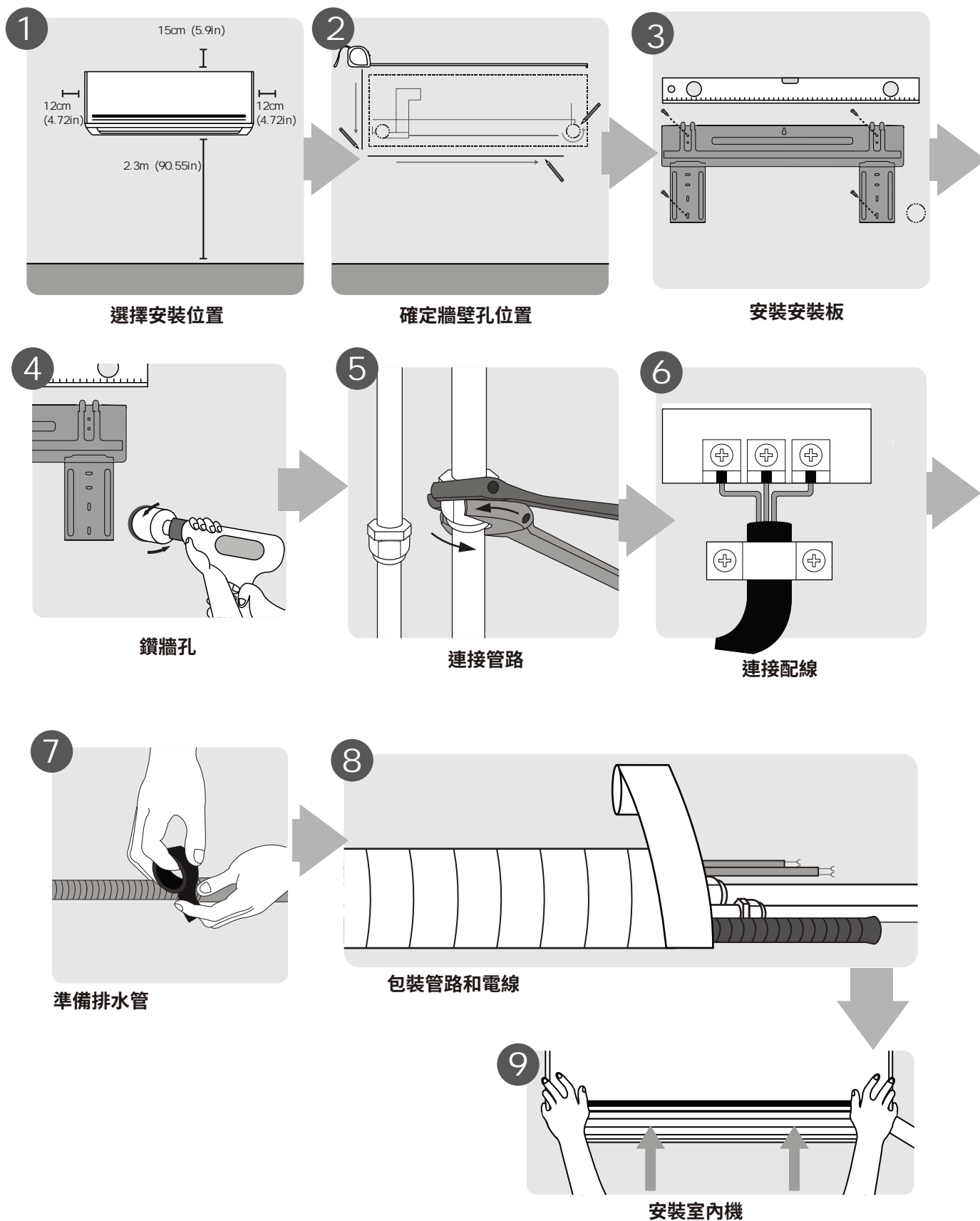
配件

冷氣機系統附帶以下配件。使用所有安裝零件和配件來安裝冷氣機。不正確的安裝可能會導致漏水、電擊和火災，或使設備失效。未隨冷氣機提供的項目必須單獨購買。

配件名稱	數量(個)	形狀	配件名稱	數量(個)	形狀
手冊	3		遙控器	1	
排水接頭 (淨冷型號不包括)	1		電池	2	
密封件 (淨冷型號不包括)	1		遙控器支架	1	
安裝板	1		固定螺絲用於遙控器支架	2	
錨柱	5~8 (視型號而定)		小過濾網	1~2 (視型號而定)	
安裝板固定螺絲	5~8 (視型號而定)				

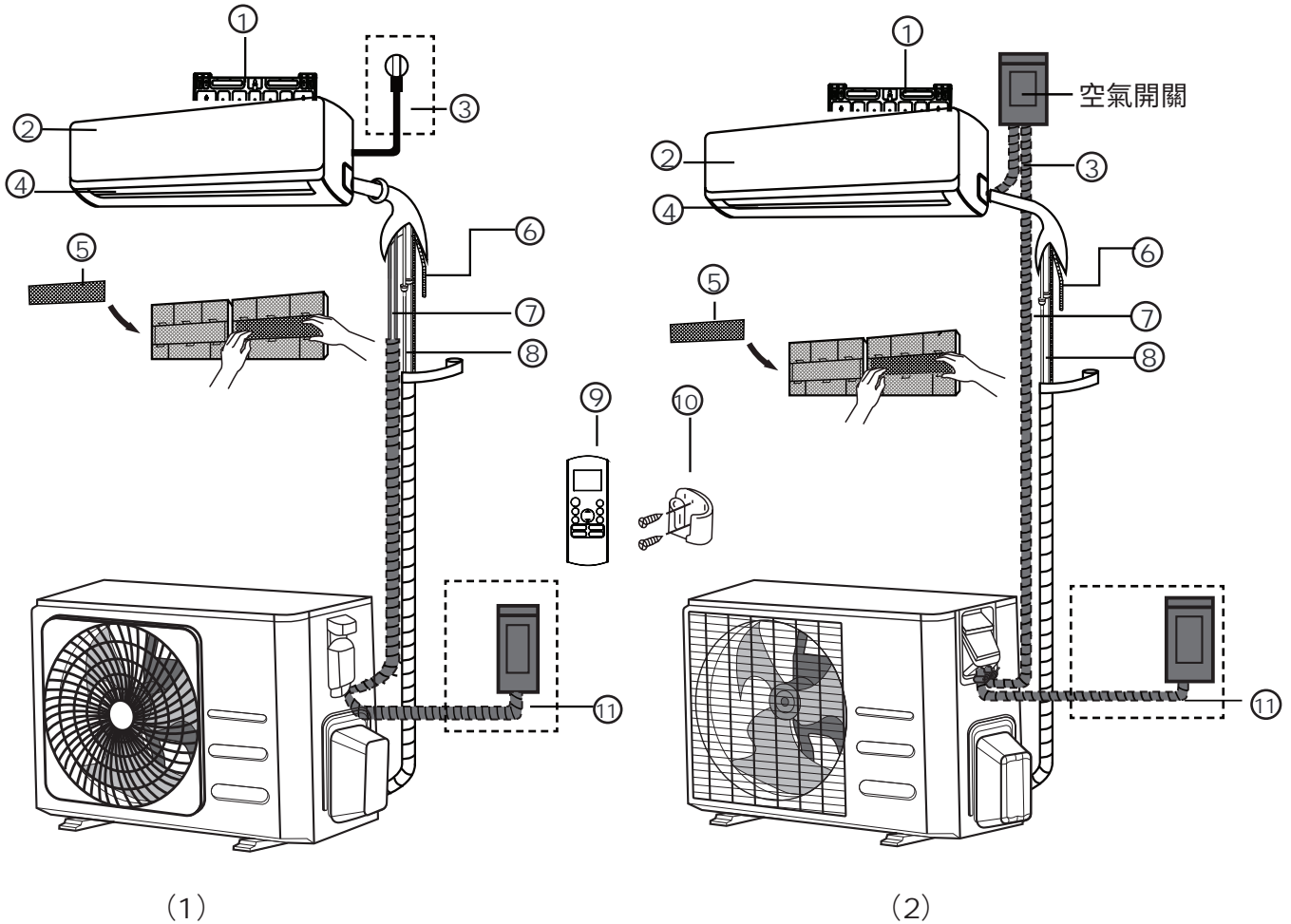
名稱	形狀	數量(個)
連接管組裝	液側	Φ 6.35(1/4 in)
		Φ 9.52(3/8in)
	氣側	Φ 9.52(3/8in)
		Φ 12.7(1/2in)
		Φ 16(5/8in)
		Φ 19(3/4in)
您必須另行購買的零件。請向經銷商諮詢您所購買機型的適當管徑。		
磁環和皮帶 (如果提供，請參閱接線圖將其安裝在連接電纜上。)	 <p>將皮帶穿過磁環的孔，固定在電纜上。</p>	因型號而異

安裝摘要 - 室內機



冷氣機部件

注意:安裝必須符合當地和國家標準的要求。不同地區的安裝可能略有不同。



- | | | |
|---------|-------------|----------|
| ① 牆壁安裝板 | ⑤ 小型空氣清新過濾網 | ⑨ 遙控器 |
| ② 前面板 | ⑥ 排水管 | ⑩ 遙控器支架 |
| ③ 電源線 | ⑦ 信號線 | ⑪ 室外機電源線 |
| ④ 擋板 | ⑧ 製冷劑管路 | |

圖示說明

本手冊中的插圖僅供說明之用。您的室內機實際形狀可能略有不同。應以實際形狀為準。

室內機安裝

安裝指示 – 室內機

安裝前

在安裝室內機之前，請參閱產品包裝上的標籤，確保室內機的型號與室外機的型號相匹配。

步驟 1：選擇安裝位置

在安裝室內機之前，您必須選擇一個合適的位置。以下標準將幫助您選擇合適的安裝位置。

合適的安裝位置應符合以下標準：

- 良好的空氣流通
- 方便排水
- 機器的噪音不會干擾其他人
- 堅固且穩固—位置不會振動，足夠堅固以支撐機器的重量
- 距離所有其他電器設備（例如電視、收音機、電腦）至少一米的位置

切勿在以下位置安裝機器：

- ⊗ 靠近任何熱源、蒸汽或可燃氣體
- ⊗ 靠近易燃物品，如窗簾或衣物
- ⊗ 靠近可能阻擋空氣流通的障礙物
- ⊗ 靠近門口
- ⊗ 直接受到陽光照射的位置

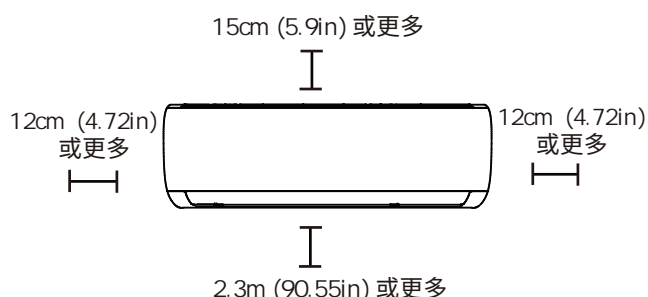
關於牆壁孔的注意事項：

如果沒有固定的製冷劑管路：

在選擇位置時，請注意應留出足夠的空間以鑽牆孔（見鑽牆孔以連接連接管步驟），以便安裝連接室內機和室外機的信號線和製冷劑管路。

所有管路的預設位置是室內機的右側（面對機器時）。然而，此機器可以容納左側和右側的管路。

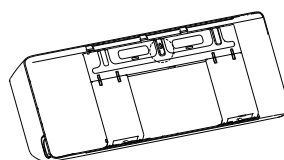
請參閱以下圖表，以確保與牆壁和天花板的適當距離：



步驟 2：將安裝板固定在牆上

安裝板是您將室內機固定在牆上的裝置。

- 取出室內機背面的安裝板。



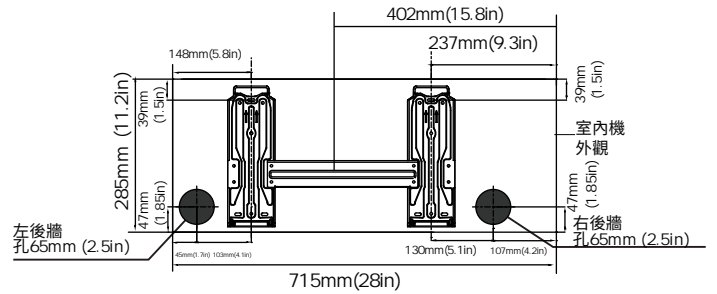
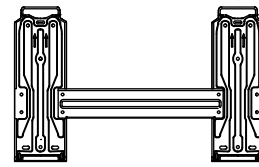
- 使用提供的螺絲將安裝板固定在牆上。
 - 確保安裝板緊貼牆面。

混凝土或磚牆的注意事項：

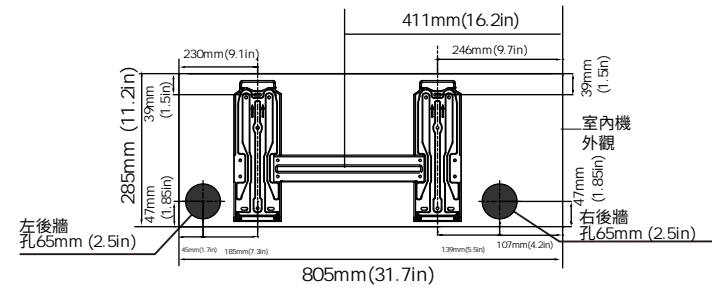
如果牆壁是由磚、混凝土或類似材料製成，請在牆上鑽5mm直徑（0.2in直徑）的孔，並插入提供的錨栓。然後通過將螺絲直接擰入錨栓中，將安裝板固定在牆上。

步驟 3：鑽牆孔以連接管路

1. 根據安裝板的位置確定牆孔的位置。參閱**安裝板尺寸**。
2. 使用 65mm (2.5in) 或 90mm (3.54in) (取決於型號) 的芯鑽，在牆上鑽一個孔。確保孔以略微向下傾斜的角度鑽孔，使孔的室外端比室內端低約 5mm 至 7mm (0.2-0.275in)。這將確保適當的排水。
3. 將保護牆套放入孔中。這可以保護孔的邊緣，並在安裝完成後幫助密封孔。



型A



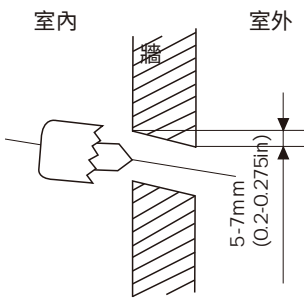
型B

注意: 當氣體側連接管為 $\Phi 16\text{mm}$ (5/8in) 或更大時，牆孔應為 90mm (3.54in)。



注意

鑽牆孔時，請確保避開電線、水管和其他敏感部件。

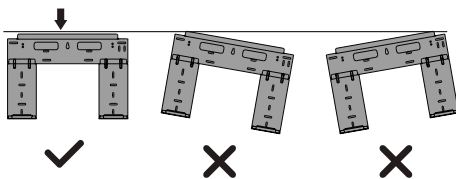


安裝板尺寸

不同型號有不同的安裝板。對於不同的定製要求，安裝板的形狀可能會略有不同。但相同尺寸的室內機的安裝尺寸是相同的。

請參見 A 型和 B 型：

安裝板的正確方向



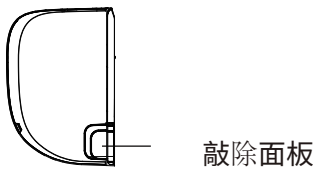
步驟 4：準備製冷劑管

製冷劑管路位於機器背面的絕緣套內。您必須在將管路穿過牆壁孔之前做好準備。

1. 根據牆壁孔相對於安裝板的位置，選擇管路從機器哪一側伸出。
2. 如果牆壁孔在機器後方，請保持敲除面板原位。如果牆孔位於室內機的一側，請從該側卸下塑料敲出面板。

這將形成一個槽，您的管路可以從此槽中穿出機器。如果塑料面板難以手動卸下，請使用尖嘴鉗。

3. 在敲除面板上已製作了凹槽，以便於切割。槽的大小由管徑決定。

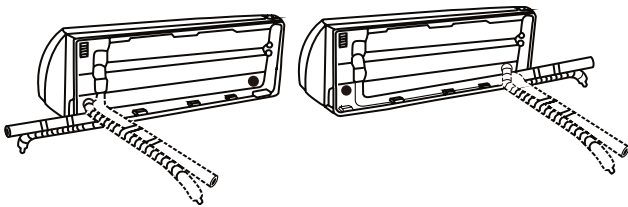


敲除面板

4. 如果牆壁中已嵌入連接管，請直接跳至**連接排水管**步驟。如果沒有嵌入的管路，請將室內機的製冷劑管路連接到將室內機和室外機連接起來的連接管上。請參閱本說明書的管路連接部分以獲取詳細說明。

管路角度注意事項

製冷劑管路可以從四個不同的角度從室內機穿出：左側、右側、左後、右後。



⚠ 注意

在彎曲管路使其遠離機器時，請極其小心，不要使管路變形或損壞。任何管路的凹痕都會影響單元的性能。

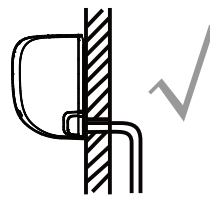
步驟 5：連接排水管

預設情況下，排水管連接在單元的左側（當您面對單元的背面時）。但是，也可以連接到右側。為了確保正確排水，將排水管連接到與您的製冷劑管路出口相同的側面。將排水管延長管（需另行購買）連接到排水管的末端。

- 用特氟龍帶牢固地纏繞連接點，以確保良好的密封並防止泄漏。
- 對於將留在室內的排水管部分，用泡沫管保溫材料包裹，以防止冷凝。
- 取下空氣過濾器，向排水盤倒入少量水，確保水能從單元順暢流出。

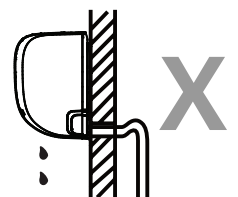
⚠ 排水管 放置注意事項

請按照以下圖示安排排水管。



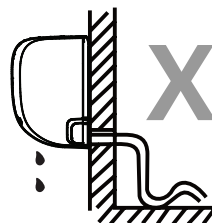
正確

確保排水管沒有彎折或凹陷，以確保正常排水。



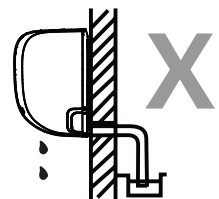
不正確

排水管的彎折會形成水陷阱。



不正確

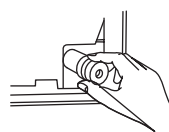
排水管的彎折會形成水陷阱。



不正確

不要將排水管的末端放在水中或放在收集水的容器中。這將防止正常排水。

封堵未使用的排水孔



為了防止不必要的泄漏，您必須用提供的橡膠塞封堵未使用的排水孔。



在進行任何電氣工作之前， 請閱讀這些規定

1. 所有配線必須符合當地和國家的電氣法規，並由持照電工安裝。
2. 所有電氣連接必須按照位於室內和室外機面板上的電氣連接圖進行。
3. 如果電源供應有嚴重的安全問題，請立即停止工作。向客戶解釋您的理由，並拒絕在安全問題得到妥善解決之前安裝機器。
4. 電源電壓應在額定電壓的90-110%之間。電源供應不足可能會導致故障、電擊或火災。
5. 如果將電源連接到固定線路，應安裝突波保護器和主電源開關。
6. 如果將電源連接到固定線路，固定線路中必須包含一個斷開所有極且接觸間隙至少為1/8英寸（3毫米）的開關或斷路器。合格的技術人員必須使用經批准的斷路器或開關。
7. 僅將機器連接到單獨的支路電路插座。不要將其他電器連接到該插座。
8. 確保空調機正確接地。
9. 每根線都必須牢固連接。鬆動的線路可能會導致端子過熱，導致產品故障和可能發生火災。
10. 不要讓配線接觸或靠在製冷劑管、壓縮機或機組內的任何移動部件上。
11. 如果機組配有輔助電熱器，必須安裝在距離任何可燃材料至少1米（40英寸）的地方。
12. 為避免觸電，切勿在斷電後立即觸摸電氣部件。斷電後，始終等待10分鐘或更長時間再觸摸電氣部件。



警告

在進行任何電氣或配線工作之前，請關閉系統的主電源。

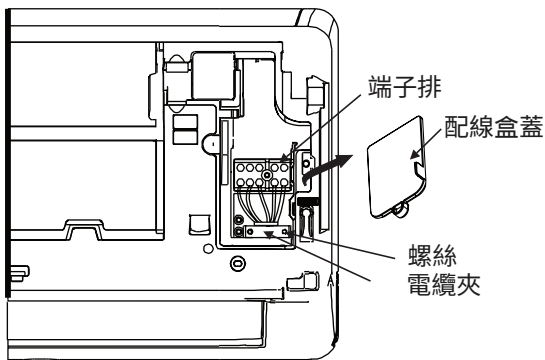
步驟6：連接信號和電源線

信號線實現室內機和室外機之間的通信。您必須先選擇合適的電纜尺寸，然後再準備連接。

選擇合適的電纜尺寸

所需電源電纜、信號線、保險絲和開關的尺寸由單元的最大電流決定。最大電流標記在單元側面板上的銘牌上。請參閱此銘牌以選擇合適的電纜、保險絲或開關。

1. 打開室內機的前面板。
2. 使用螺絲起子，打開單元右側的配線盒蓋。這將顯示端子排。



警告

所有配線必須嚴格按照室內機前面板上的配線圖進行。

3. 鬆開端子排下方的電纜夾，並將其放在一旁。
4. 面對單元的背面，卸下左下角的塑料面板。
5. 將信號線從單元的背面穿過此槽到前面。
6. 面對單元的前面，根據室內機的配線圖連接線路，連接U形端子並牢固地將每根線固定在其相應的端子上。

注意

不要混淆火線和零線

這是很危險的，可能會導致冷氣機故障。

7. 檢查每一個連接是否牢固後，使用電纜夾將信號線固定在機組上。將電纜夾緊緊擰緊。
8. 將機體前面的線蓋和後面的塑料面板重新裝上。



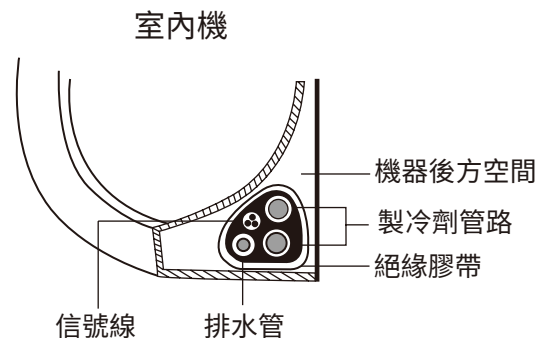
關於配線的注意事項

不同機型和地區的配線連接過程可能略有不同。

步驟7：包裹管路和電纜

在將管路、排水管和信號線穿過牆壁孔洞之前，必須將它們捆綁在一起以節省空間、保護它們並隔熱。

1. 請按照以下方式捆綁排水管、製冷劑管路和信號線：



排水管必須在底部

確保排水管位於捆綁物的底部。將排水管放在捆綁物的頂部可能會導致排水盤溢出，這可能會引發火災或水損。

不要將信號線與其他線纜纏繞在一起

在捆綁這些物品時，不要將信號線與任何其他線纜纏繞或交叉。

2. 使用黏性PVC膠帶，將排水管固定在製冷劑管道的底部。
3. 使用絕緣膠帶，將信號線、製冷劑管道和排水管緊緊纏繞在一起。請再次檢查所有物品是否已捆綁。

不要纏繞管路的末端

在捆綁時，請保持管路末端不被纏繞。您需要在安裝結束後檢查漏氣（請參閱本手冊的電氣和氣體洩露檢查部分）。

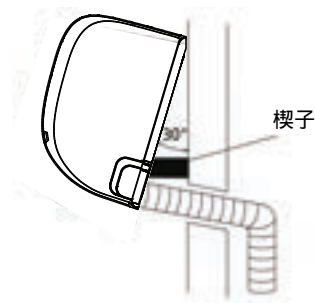
步驟8：安裝室內機

如果您已將新的連接管路安裝到室外機，請執行以下操作：

1. 如果您已將製冷劑管路通過牆上的孔，請進行to 步驟4。
2. 否則，請再次檢查製冷劑管的端部是否已密封，以防止灰塵或異物進入管內。
3. 緩慢地將包好的製冷劑管、排水管和信號線束通過牆上的孔。
4. 將室內機的頂部掛在安裝板的上鉤上。
5. 檢查單元是否牢固地掛在安裝板上，方法是對單元的左側和右側施加輕微的壓力。單元不應晃動或移動。
6. 用均勻的壓力，向下按壓單元的下半部分。繼續向下按壓，直到單元卡入安裝板底部的鉤子上。
7. 再次檢查單元是否牢固地安裝，方法是對單元的左側和右側施加輕微的壓力。

如果製冷劑管路已嵌入牆壁中，請執行以下操作：

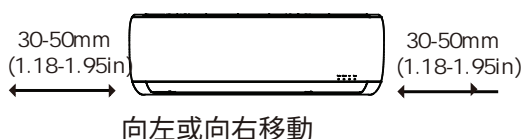
1. 將室內機的頂部掛在安裝板的上鉤上。
2. 使用支架或楔子將單元支起，以便連接製冷劑管路、信號線和排水管。



3. 連接排水管和製冷劑管路（參閱本手冊的製冷劑管路連接部分以獲取指示）。
4. 保持管路連接點暴露以進行泄漏測試（參閱本手冊的**電氣和氣體洩露檢查**部分）。
5. 完成漏氣測試後，用絕緣膠帶包覆連接點。
6. 移除支撐機器的支架或楔形物。
7. 用均勻的壓力，向下按壓單元的下半部分。繼續向下按壓，直到單元卡入安裝板底部的鉤子上。

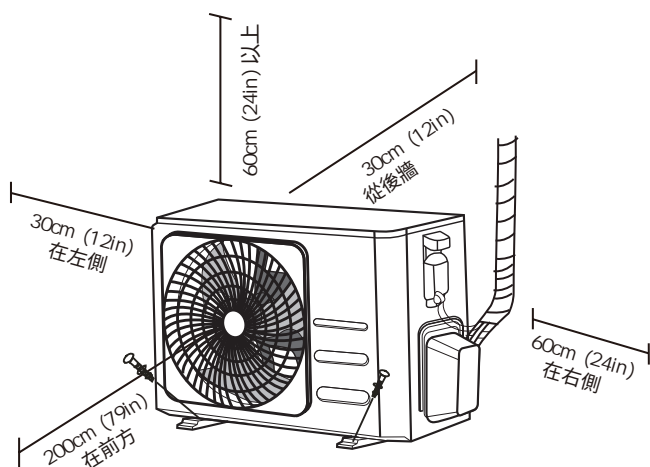
裝置可調節

請注意，安裝板上的鉤子比裝置背面的孔小。如果您發現沒有足夠的空間將嵌入式管路連接到室內機，則可以根據型號將裝置向左或向右調整約30-50mm（1.18-1.95英寸）。



室外機安裝

按照當地法規和規定安裝機器，不同地區之間可能略有不同。



安裝指示 - 室外機

步驟 1：選擇安裝位置

在安裝室外機之前，您必須選擇一個合適的位置。以下是一些標準，可幫助您選擇合適的安裝位置。

合適的安裝位置應符合以下標準：

- 滿足上述安裝空間要求所示的所有空間要求
- 良好的空氣流通和通風
- 堅固且穩固—位置可以支撐機器且不會振動
- 機器的噪音不會打擾他人
- 避免長時間直接日曬或雨淋
- 在預期降雪的地方，請採取適當措施防止冰層積聚和線圈損壞

請勿在以下位置安裝裝置：

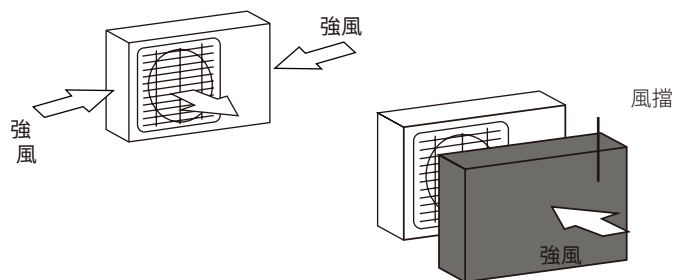
- ⊗ 靠近會阻擋進風口和出風口的障礙物
- ⊗ 靠近公共街道、人羣聚集地或裝置噪音會干擾他人的地方
- ⊗ 靠近會被熱空氣排放傷害的動物或植物
- ⊗ 靠近任何可燃氣體源
- ⊗ 在暴露於大量灰塵的位置
- ⊗ 在暴露於過多鹽霧的環境中

極端天氣的特殊考慮

如果裝置暴露於強風中：

安裝裝置時，使風扇出風口與風向呈90°角。如有需要，在裝置前建立屏障以保護裝置免受極強風的影響。

參見下圖。



如果裝置經常暴露於大雨或雪中：

在裝置上方建造遮蔽物以保護其免受雨雪侵襲。請注意不要阻礙裝置周圍的空氣流通。

如果裝置經常暴露於鹽霧中（海邊）：

使用特別設計以抵抗腐蝕的室外機。

步驟 2：安裝排水接頭（熱泵機組專用）

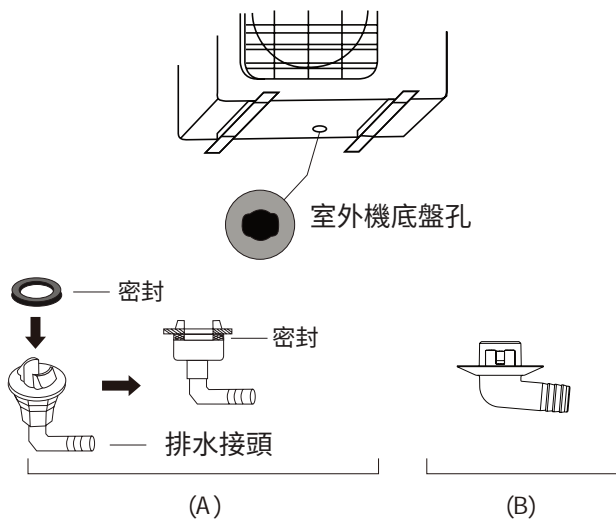
在將室外機固定到位之前，您必須在機組底部安裝排水接頭。請注意，根據室外機的類型，有兩種不同的排水接頭。

如果排水接頭配有橡膠密封圈（見圖 A），請按照以下步驟操作：

1. 將橡膠密封圈套在將與室外機連接的排水接頭一端。
2. 將排水接頭插入機組底盤上的孔中。
3. 將排水接頭旋轉 90°，直到它卡入機組前部的位置。
4. 連接排水管延長管（未提供）到排水接頭，以在加熱模式下將水從機組引出。

如果排水接頭沒有橡膠密封圈（見圖 B），請按照以下步驟操作：

1. 將排水接頭插入機器底盤上的孔中。排水接頭會卡入位置。
2. 連接排水管延長管（不包括）到排水接頭，以在加熱模式下將水從機組引出。



在寒冷氣候中

在寒冷氣候中，請確保排水管盡可能垂直，以確保水迅速排出。如果水排得太慢，可能會在水管中結冰並淹沒機器。

步驟 3：固定室外機

室外機可以使用螺栓 (M10) 固定在地面或牆壁支架上。根據以下尺寸準備機器的安裝基座。

如果您將機器安裝在地面上或混凝土安裝平臺上，請按照以下步驟操作：

1. 根據尺寸圖標記四個膨脹螺栓的位置。
2. 預鑽膨脹螺栓的孔。
3. 在每個膨脹螺栓的末端放置一個螺母。
4. 將膨脹螺栓敲入預鑽的孔中。
5. 從膨脹螺栓上取下螺母，並將室外機放置在螺栓上。
6. 在每個膨脹螺栓上放置一個墊圈，然後重新安裝螺母。
7. 使用扳手，將每個螺母擰緊至適當位置。

警告



在鉆混凝土時，建議全程佩戴護目鏡。

如果將機器安裝在牆壁支架上，請執行以下操作：



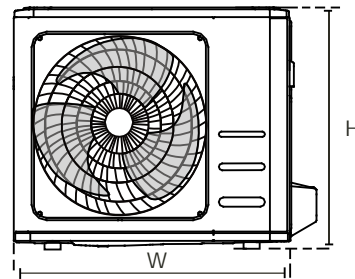
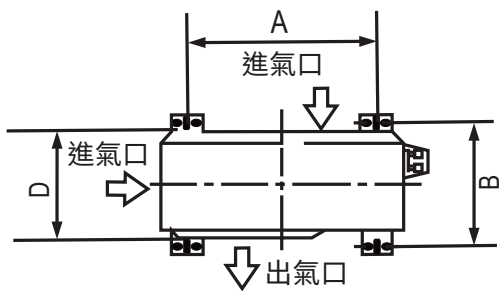
注意

確保牆壁由實心磚、混凝土或類似堅固材料製成。**牆壁必須能夠承受機器重量的至少四倍。**

1. 根據尺寸圖標記支架孔的位置。
2. 預鑽擴張螺栓的孔。
3. 在每個擴張螺栓的末端放置一個墊圈和螺母。
4. 將擴張螺栓穿過支架上的孔，將支架定位，並將擴張螺栓敲入牆壁。
5. 檢查安裝支架是否水平。
6. 小心地抬起機器並將其安裝腳放在支架上。
7. 將機器牢固地固定在支架上。
8. 如果允許，安裝機器時可使用橡膠墊片以減少振動和噪音。

機組安裝尺寸

以下是不同室外機的尺寸及其安裝腳之間的距離。根據以下尺寸準備機組的安裝基座。



室外機尺寸 (mm) W x H x D	安裝尺寸	
	距離 A (mm)	距離 B (mm)
720x495x270 (28.3" x 19.5" x 10.6")	452 (17.8")	255 (10.0")
765x555x303 (30.1" x 21.8" x 11.9")	452 (17.8")	286(11.3")
890x673x342 (35.0" x 26.5" x 13.5")	663 (26.1")	354 (13.9")

步驟4：連接信號和電源線

室外機的端子排由機組側面的電氣配線蓋保護。

配線圖全面印在配線蓋的內側。



警告

在進行任何電氣或配線工作之前，請關閉系統的主電源。

1. 準備連接電纜：

選擇合適的電纜尺寸

電源電纜、信號線、保險絲和開關的尺寸由機器的最大電流決定。最大電流標記在單元側面板上的銘牌上。

- a. 使用剝線鉗，剝去電纜兩端的橡膠外套，露出約40mm（1.57英寸）的內部導線。
- b. 剝去導線末端的絕緣層。
- c. 使用壓線鉗將U型端子壓接在電線的末端。

注意帶電線

在壓接電線時，請確保清楚區分火線（“L”）和其他電線。

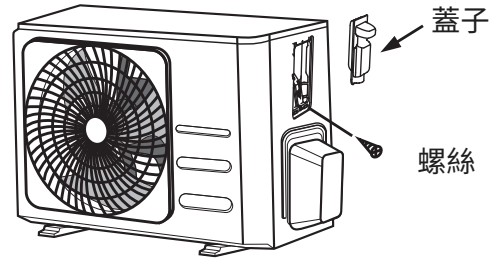
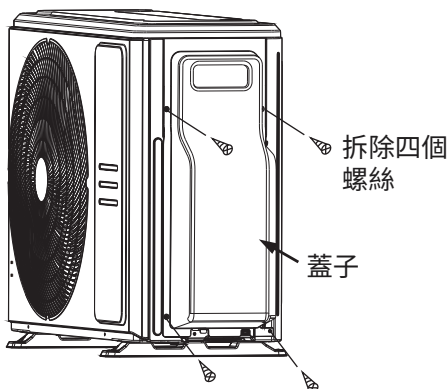


警告

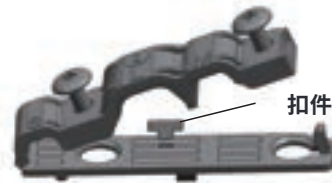
所有電線工作必須嚴格按照室外機電線蓋內的電線圖進行。

2. 旋開電氣配線蓋並取下。
3. 旋開端子排下方的電纜夾，並將其放在一旁。
4. 根據配線圖連接電線，並將每根電線的U型端子牢固地擰緊到相應的端子上。
5. 檢查每一個連接是否牢固後，將電線繞成環狀，以防止雨水流入端子。
6. 使用電纜夾將電纜固定在機器上。將電纜夾緊緊擰緊。
7. 用PVC電工膠帶絕緣未使用的電線。將其排列，使其不接觸任何電氣或金屬部件。
8. 將電線蓋重新裝回機器側面，並擰緊固定。

注意 您購買的機體可能略有不同。以下插圖僅供說明。應以實際形狀為準。



注意：如果電纜夾看起來如下所示，請根據電線的直徑選擇合適的穿孔。



三種尺寸的孔：小、大、中



當電纜固定不夠時，請使用扣件將其支撐，以便夾緊。

製冷劑管路連接

連接製冷劑管路時，不得讓除指定製冷劑以外的物質或氣體進入機組。其他氣體或物質的存在會降低機組的效能，並可能導致製冷循環中的壓力異常升高。這可能會導致爆炸和受傷。

管長注意事項

製冷劑管路的長度將影響單元的性能和能源效率。標稱效率是在管路長度為5米（16.5英尺）的冷氣機上測試的。最小管路長度為3米，以減少振動和過多的噪音。

請參閱下表以獲取管路的最大長度和下降高度的規格。

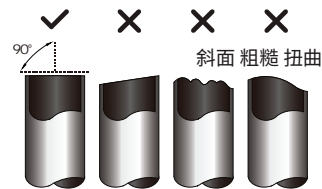
每種機型製冷劑管路的最大長度和下降高度

型號	容量 (BTU/h)	最大長度 (m)	最大落差高度 (m)
R32 定頻分體式冷氣機	< 18,000	20 (66ft)	8(26ft)
	≥ 18,000 和 < 36,000	25 (82ft)	10(33ft)
	≥ 36,000 和 < 60,000	30 (98.5ft)	15 (49ft)

連接指示 – 製冷劑管

步驟 1：切割管路

在準備製冷劑管路時，請格外注意正確切割和擴口。這將確保高效運行並最大限度地減少未來的維護需求。



1. 測量室內機和室外機之間的距離。
2. 使用管切刀，將管子切割成比測量距離稍長一些。
3. 確保管子被切成完美的90°角。

⊘ 切管時請勿使管子變形

切管時要格外小心，不要損壞、壓痕或使管子變形。這將大幅降低機組的加熱效率。

步驟2：去除毛刺

毛刺可能影響製冷劑管路連接的密封性。必須完全去除。

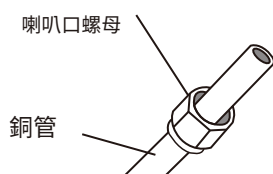
1. 以向下角度握住管路，以防毛刺落入管內。
2. 使用擴孔器或去毛刺工具，去除管路切口處的所有毛刺。



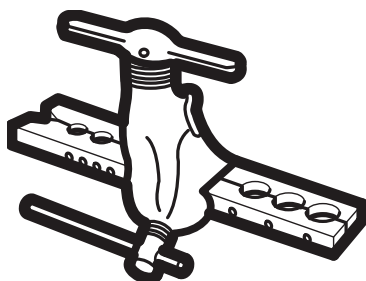
步驟3：輸送管

適當的擴口對於實現密封至關重要。

1. 在去除切管上的毛刺後，用PVC膠帶密封管端，以防止外來物質進入管內。
2. 用絕緣材料包覆管子。
3. 在管子的兩端放置擴管螺母。確保它們朝向正確的方向，因為在擴管後無法安裝或更改其方向。

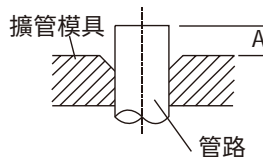


4. 在準備進行擴管工作時，從管端去除PVC膠帶。
5. 將擴管模具夾在管端。管端必須超出擴管模具的邊緣，具體尺寸參見下表。



管子超出擴管模具的長度

管子的外徑 (mm)	A (mm)	
	最小	最大
Ø 6.35 (Ø 0.25")	0.7 (0.0275")	1.3 (0.05")
Ø 9.52 (Ø 0.375")	1.0 (0.04")	1.6 (0.063")
Ø 12.7 (Ø 0.5")	1.0 (0.04")	1.8 (0.07")
Ø 16 (Ø 0.63")	2.0 (0.078")	2.2 (0.086")
Ø 19 (Ø 0.75")	2.0 (0.078")	2.4 (0.094")



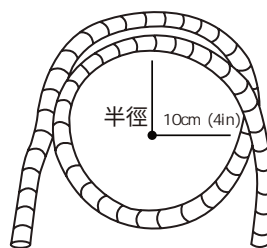
6. 將擴管工具放在模具上。
7. 順時針轉動擴管工具的手柄直到管道完全擴展。
8. 移除擴管工具和擴口，然後檢查管端是否有裂紋和均勻的擴口。

步驟4：連接管路

在連接製冷劑管路時，請小心不要使用過大的扭力或以任何方式使管路變形。您應先連接低壓管，然後再連接高壓管。

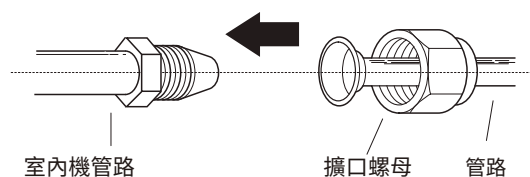
最小彎曲半徑

在彎曲連接製冷劑管路時，最小彎曲半徑為10cm。

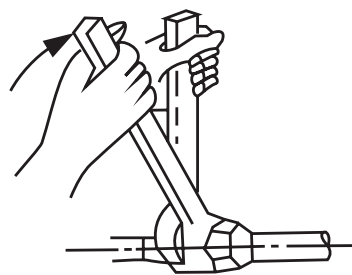


將管路連接到室內機的指示

1. 將要連接的兩根管的中心對齊。



2. 盡可能用手將擴管螺母擰緊。
3. 使用扳手固定單元管路上的螺母。
4. 在牢固固定單元管路上的螺母的同時，使用扭矩扳手根據下表的扭力值擰緊擴口螺母。稍微鬆開擴口螺母，然後再次擰緊。



扭力要求

管道外徑 (mm)	轉緊扭力 (N·m)	擴口尺寸(B) (mm)	擴口形狀
Ø 6.35 (Ø 0.25")	18~20(180~200kgf.cm)	8.4~8.7 (0.33~0.34")	
Ø 9.52 (Ø 0.375")	32~39(320~390kgf.cm)	13.2~13.5 (0.52~0.53")	
Ø 12.7 (Ø 0.5")	49~59(490~590kgf.cm)	16.2~16.5 (0.64~0.65")	
Ø 16 (Ø 0.63")	57~71(570~710kgf.cm)	19.2~19.7 (0.76~0.78")	
Ø 19 (Ø 0.75")	67~101(670~1010kgf.cm)	23.2~23.7 (0.91~0.93")	

⊘ 勿使用過大扭力

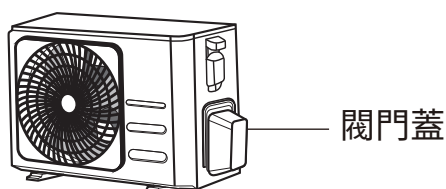
過大的力會使螺母斷裂或損壞製冷劑管路。不得超過上表中所示的扭力要求。

連接管道至室外機的指示

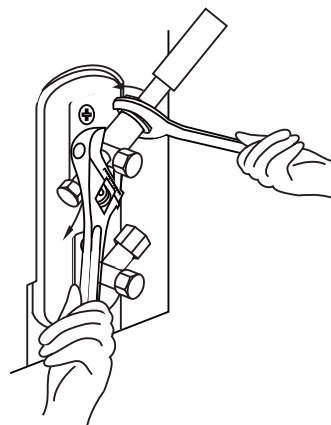
1. 卸下室外機側邊包裝閥上的蓋子。
2. 移除閥門末端的保護蓋。
3. 將擴口管端對準每個閥門，並盡可能用手旋緊擴口螺母。
4. 使用扳手夾住閥門本體。不要夾住密封檢修閥的螺母。
5. 在牢固夾住閥門本體的情況下，使用扭矩扳手根據正確的扭矩值旋緊喇叭口螺母。
6. 稍微鬆開擴口螺母，然後再次旋緊。
7. 對剩餘的管子重複步驟3至6。

⚠ 使用扳手夾住閥門主體

擰緊擴口螺母的扭矩可能會使閥門的其他部分斷裂。



5. 在牢固夾住閥門本體的情況下，使用扭矩扳手根據正確的扭矩值旋緊喇叭口螺母。



抽真空

準備工作和預防措施

製冷劑迴路中的空氣和異物會導致壓力異常升高，可能會損壞空調機，降低其效率，並造成傷害。使用真空泵和歧管壓力錶來抽空製冷劑迴路，移除系統中的不凝性氣體和水分。

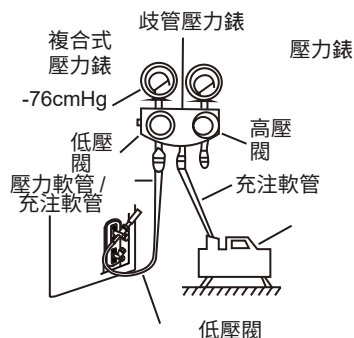
抽空應在初次安裝和設備重新定位時進行。

在進行抽空前

- ☑ 檢查室內機和室外機之間的連接管是否已正確連接。
- ☑ 檢查所有配線是否已正確連接。

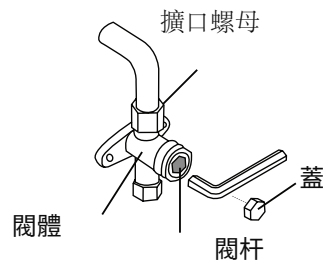
抽真空指示

1. 將歧管壓力錶的充注軟管連接到室外機低壓閥的服務端口。
2. 將另一個充注軟管從歧管壓力錶連接到真空泵。
3. 打開歧管壓力錶的低壓側。保持高壓側關閉。
4. 打開真空泵以抽空系統。
5. 讓真空泵運行至少15分鐘，或直到複合計顯示-76cmHG (-10Pa)。



6. 關閉歧管壓力錶的低壓側，並關閉真空泵。
7. 等待5分鐘，然後檢查系統壓力是否有變化。

8. 如果系統壓力有變化，請參閱氣體泄漏檢查部分，瞭解如何檢查泄漏的信息。如果系統壓力無變化，請旋開組件活門（高壓閥）的蓋子。
9. 將六角扳手插入組件活門（高壓閥）並逆時針轉動1/4圈以打開閥門。聽是否有氣體從系統中排出，5秒後關閉閥門。
10. 觀看壓力錶一分鐘，確保壓力無變化。壓力錶的讀數應略高於大氣壓力。
11. 從服務端口拆下充注軟管。



12. 使用六角扳手，完全打開高壓和低壓閥。
13. 用手旋緊所有三個閥的閥蓋（服務端口、高壓、低壓）。如有需要，可使用扭力扳手進一步旋緊。

⚠ 輕輕打開閥杆

打開閥杆時，轉動六角扳手直到碰到止動器。不要試圖強行打開閥門。

添加製冷劑注意事項

某些系統根據管長可能需要額外充注。標準管長根據當地法規有所不同。

在其他地區，標準管長為 5m (16')。應從室外機低壓閥的服務端口充注製冷劑。額外充注的製冷劑可使用以下公式計算：

額外製冷劑每管長

連接管 長度 (m)	空氣吹除 方法	額外製冷劑	
≤ 標準管長	真空泵	不適用	
> 標準管 長度	真空泵	液側: Ø 6.35 (Ø 0.25") R32: (管長 - 標準長度) x 12g/m (管長 - 標準長度) x 0.13oz/ft	液側: Ø 9.52 (Ø 0.375") R32: (管長 - 標準長度) x 24g/m (管長 - 標準長度) x 0.26oz/ft



注意：切勿混合不同的類形製冷劑。

電氣和氣體泄漏檢查

試運行前

只有在完成以下步驟後才能進行試運行：

- **電氣安全檢查** - 確認單元的電氣系統安全且運行正常
- **氣體泄漏檢查** - 檢查所有擴口螺母連接並確認系統無泄漏
- 確認氣體和液體（高壓和低壓）閥門完全打開

電氣安全檢查

安裝後，確認所有電氣配線均按照當地和國家法規，以及《安裝說明書》的要求安裝。

試運行前

檢查接地工作

以視覺檢查並使用接地電阻測試儀測量接地電阻。接地電阻必須小於 0.1 Ω。

試運行期間

檢查電氣泄漏

在試運行期間，使用電探針和多用錶進行全面的電氣泄漏測試。

如果檢測到電氣泄漏，立即關閉設備並請有資格的電工查找並解決泄漏原因。



警告 - 存在電擊危險

所有配線必須符合當地和國家電氣規範，並必須由持牌電工安裝。

氣體泄漏檢查

有兩種不同的方法來檢查氣體泄漏。

肥皂和水方法

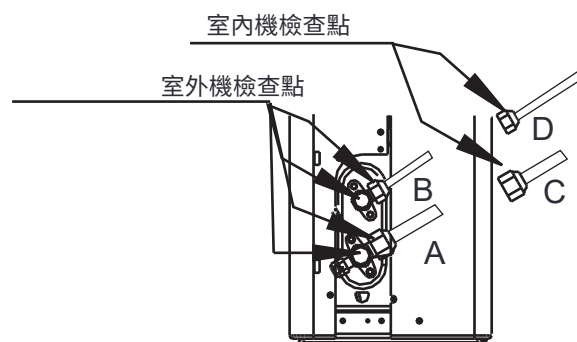
使用軟毛刷將肥皂水或液體洗滌劑塗抹到室內機和室外機的所有管道連接點。出現泡沫表示有泄漏。

漏檢器方法

如果使用漏檢器，請參閱設備的操作說明書以獲取正確的使用說明。

完成氣體泄漏檢查後

確認所有管道連接點均無泄漏後，更換室外機的閥門蓋。



- A: 低壓截止閥
- B: 高壓截止閥
- C & D: 室內機擴口

試運行

試運行指示

您應進行試運行至少 30 分鐘。

1. 將電源連接到機器。
2. 按遙控器上的 ON/OFF 按鈕以打開機器。
3. 按 MODE 按鈕依次選擇以下功能：

- 製冷 - 選擇最低可能溫度

4. 讓每個功能運行 5 分鐘，並進行以下檢查：

要執行的檢查清單	通過/失敗	
無電氣泄漏		
機器已正確接地		
所有電氣端子均已妥善覆蓋		
室內和室外機均已牢固安裝		
所有管路連接點均無泄漏	室外 (2):	室內 (2):
水從排水管正常排出		
所有管路均已妥善絕緣		
機組正常執行製冷功能		
室內機擋板正常旋轉		
室內機響應遙控器		


再次檢查管路連接


運行期間，製冷劑迴路的壓力將增加。這可能會暴露出初始泄漏檢查時未發現的泄漏。在試運行期間，請花時間再次檢查所有製冷劑管路連接點均無泄漏。請參閱氣體泄漏檢查部分以獲取指示。

5. 在試運行成功完成，並確認檢查項目列表中的所有檢查點均已通過後，請執行以下操作：

- a. 使用遙控器，將機組恢復到正常運行溫度。
- b. 使用絕緣帶，將在室內機安裝過程中未覆蓋的室內製冷劑管連接處纏繞起來。

設計和規格如有變更，恕不另行通知，以產品改進為目的。詳細信息請諮詢銷售機構或製造商。
手冊的任何更新將上傳至服務網站，請查閱最新版本。

- 
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如發生以下任何情況,請立即關閉電源並聯絡信興電器服務中心有限公司。

- 斷路器經常跳掣或保險絲常被燒斷。
- 水或異物意外進入冷氣機內。
- 冷氣機操作時發出異常聲音。

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User Manual & Installation Manual

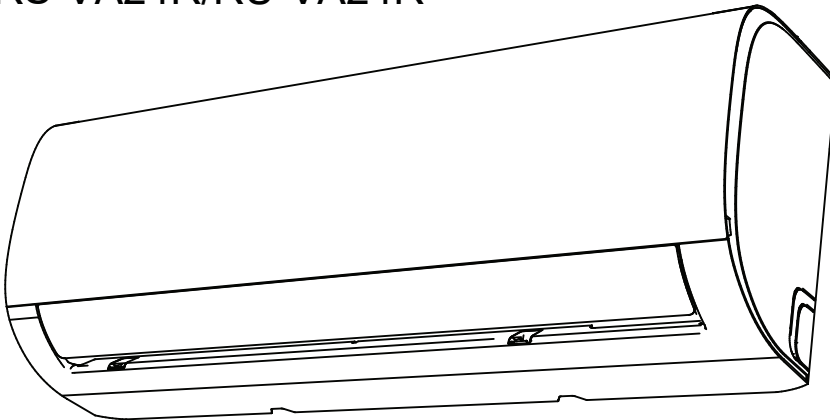
Model:

RS-VA9R/RU-VA9R

RS-VA12R/RU-VA12R

RS-VA18R/RU-VA18R

RS-VA24R/RU-VA24R



IMPORTANT NOTE:

This appliance is using R32 mildly flammable refrigerant.

Read this manual carefully before installing and operating. Make sure to save this manual for future reference. Please check the applicable models, technical data from the nameplate pasted on the unit.

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Safety Precautions

Read Safety Precautions Before Operation and Installation

Incorrect installation due to ignoring instructions can cause serious damage or injury.

The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**.



WARNING

This symbol indicates the possibility of personnel injury or loss of life.



CAUTION

This symbol indicates the possibility of property damage or serious consequences.



WARNING

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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.



WARNINGS FOR PRODUCT USE

- If an abnormal situation arises (like a burning smell), immediately turn off the unit and disconnect the power. Call your dealer for instructions to avoid electric shock, fire or injury.
- **Do not** insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- **Do not** use flammable sprays such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- **Do not** operate the air conditioner in places near or around combustible gases. Emitted gas may collect around the unit and cause explosion.
- **Do not** operate your air conditioner in a wet room such as a bathroom or laundry room. Too much exposure to water can cause electrical components to short circuit.
- **Do not** expose your body directly to cool air for a prolonged period of time.
- **Do not** allow children to play with the air conditioner. Children must be supervised around the unit at all times.
- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.

CLEANING AND MAINTENANCE WARNINGS

- Turn off the device and disconnect the power before cleaning. Failure to do so can cause electrical shock.
- **Do not** clean the air conditioner with excessive amounts of water.
- **Do not** clean the air conditioner with combustible cleaning agents. Combustible cleaning agents can cause fire or deformation.

 **CAUTION**

- Turn off the air conditioner and disconnect the power if you are not going to use it for a long time.
- Turn off and unplug the unit during storms.
- Make sure that water condensation can drain unhindered from the unit.
- **Do not** operate the air conditioner with wet hands. This may cause electric shock.
- **Do not** use device for any other purpose than its intended use.
- **Do not** climb onto or place objects on top of the outdoor unit.
- **Do not** allow the air conditioner to operate for long periods of time with doors or windows open, or if the humidity is very high.

 **ELECTRICAL WARNINGS**

- Only use the specified power cord. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- **Do not** pull power cord to unplug unit. Hold the plug firmly and pull it from the outlet. Pulling directly on the cord can damage it, which can lead to fire or electric shock.
- **Do not** modify the length of the power supply cord or use an extension cord to power the unit.
- **Do not** share the electrical outlet with other appliances. Improper or insufficient power supply can cause fire or electrical shock.
- The product must be properly grounded at the time of installation, or electrical shock may occur.
- For all electrical work, follow all local and national wiring standards, regulations, and the Installation Manual. Connect cables tightly, and clamp them securely to prevent external forces from damaging the terminal. Improper electrical connections can overheat and cause fire, and may also cause shock. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
- All wiring must be properly arranged to ensure that the control board cover can close properly. If the control board cover is not closed properly, it can lead to corrosion and cause the connection points on the terminal to heat up, catch fire, or cause electrical shock.
- If connecting power to fixed wiring, an all-pole disconnection device which has at least 3mm clearances in all poles, and have a leakage current that may exceed 10mA, the residual current device(RCD) having a rated residual operating current not exceeding 30mA, and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.



WARNINGS FOR PRODUCT INSTALLATION

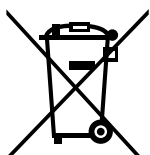
1. Installation must be performed by an authorized dealer or specialist. Defective installation can cause water leakage, electrical shock, or fire.
2. Installation must be performed according to the installation instructions. Improper installation can cause water leakage, electrical shock, or fire.
3. Contact an authorized service technician for repair or maintenance of this unit. This appliance shall be installed in accordance with national wiring regulations.
4. Only use the included accessories, parts, and specified parts for installation. Using non-standard parts can cause water leakage, electrical shock, fire, and can cause the unit to fail.
5. Install the unit in a firm location that can support the unit's weight. If the chosen location cannot support the unit's weight, or the installation is not done properly, the unit may drop and cause serious injury and damage.
6. Install drainage piping according to the instructions in this manual. Improper drainage may cause water damage to your home and property.
7. For units that have an auxiliary electric heater, **do not** install the unit within 1 meter (3 feet) of any combustible materials.
8. **Do not** install the unit in a location that may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it may cause fire.
9. **Do not** turn on the power until all work has been completed.
10. When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
11. How to install the appliance to its support, please read the information for details in "indoor unit installation" and "outdoor unit installation" sections .

WARNING for Using R32 Refrigerant

- When flammable refrigerant are employed, appliance shall be stored in a well -ventilated area where the room size corresponds to the room area as specific for operation.
For R32 frigerant models:
Appliance shall be installed, operated and stored in a room with a floor area larger than 4m^2 .
- Reusable mechanical connectors and flared joints are not allowed indoors.
- Mechanical connectors used indoors shall have a rate of not more than 3g/year at 25% of the maximum allowable pressure. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated.
- When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated.
(IEC Standard Requirements)
- Mechanical connectors used indoors shall comply with ISO 14903.

Disposal Guidelines

This marking shown on the product or its literature, indicates that waste electrical and eletrical equipment should not be mixed with general household waste.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

This appliance contains refrigerant and other potentially hazardous materials. When disposing of this appliance, the law requires special collection and treatment. **Do not** dispose of this product as household waste or unsorted municipal waste.

When disposing of this appliance, you have the following options:

- Dispose of the appliance at designated municipal electronic waste collection facility.
- When buying a new appliance, the retailer will take back the old appliance free of charge.
- The manufacturer will take back the old appliance free of charge.
- Sell the appliance to certified scrap metal dealers.

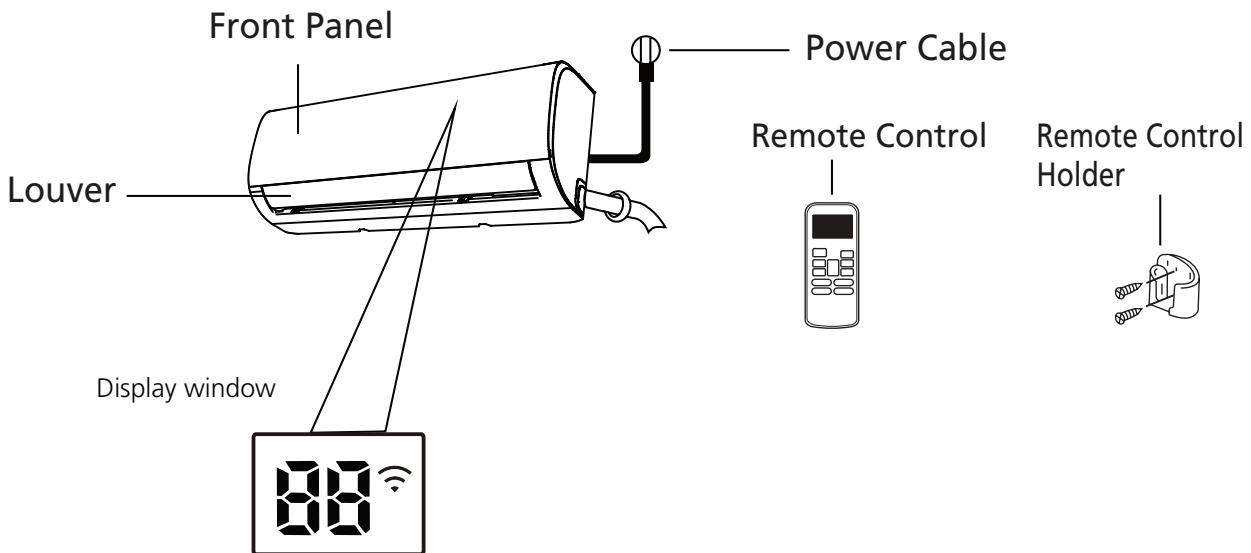
Special notice

Disposing of this appliance in the forest or other natural surroundings endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain.

Unit Specifications and Features

Indoor unit display

Illustrations in this manual are for explanatory purposes. The actual shape of indoor unit may be slightly different. The actual shape shall prevail.



"88" Displays temperature, operation feature and Error codes:
When ECO function(some units) is activated, the '88' illuminates gradually one by one as 8 -- 8
-- 0 --set temperature -- 8 in one second interval.

"01" for 3 seconds when:

- TIMER ON is set (if the unit is OFF, "01" remains on when TIMER ON is set)
- FRESH, UV-C lamp, SWING, TURBO, or SILENCE feature is turned on

"0F" for 3 seconds when:

- TIMER OFF is set
- FRESH, UV-C lamp, SWING, TURBO, or SILENCE feature is turned off

"cF" when anti-cold air feature is turned on

"dF" when defrosting(cooling & heating units only)

"5C" when unit is self-cleaning(some units)

"FP" when 8°C heating feature is turned on(some units)

Display Code Meanings

Operating temperature

When your air conditioner is used outside of the following temperature ranges, certain safety protection features may activate and cause the unit to disable.

Fixed-speed Type

	COOL mode	DRY mode
Room Temperature	17°C-32°C (62°F-90°F)	10°C-32°C (50°F-90°F)
Outdoor Temperature	18°C-43°C (64°F-109°F)	11°C-43°C (52°F-109°F)

NOTE: Room relative humidity less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation. Please sets the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.

To further optimize the performance of your unit, do the following:

- Keep doors and windows closed.
- Limit energy usage by using TIMER ON and TIMER OFF functions.
- Do not block air inlets or outlets.
- Regularly inspect and clean air filters.

A guide on using the infrared remote is not included in this literature package. Not all the functions are available for the air conditioner, please check the indoor display and remote control of the unit you purchased.

Other features

- **Auto-Restart**

If the unit loses power, it will automatically restart with the prior settings once power has been restored.

- **Anti-mildew**

When turning off the unit from COOL, AUTO (COOL), or DRY modes, the air conditioner will continue operate at very low power to dry up condensed water and prevent mildew growth.

- **Louver Angle Memory**

When turning on your unit, the louver will automatically resume its former angle.

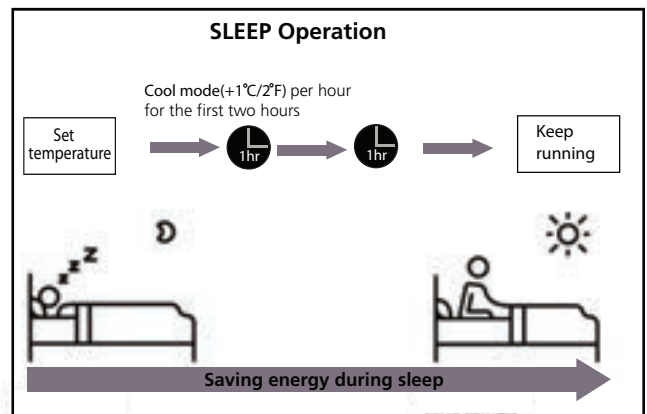
- **Refrigerant Leakage Detection**

The indoor unit will automatically display "EC" when it detects refrigerant leakage.

- **Sleep Operation**

The SLEEP function is used to decrease energy use while you sleep (and don't need the same temperature settings to stay comfortable). This function can only be activated via remote control. And the Sleep function is not available in FAN or DRY mode.

Press the **SLEEP** button when you are ready to go to sleep. When in COOL mode, the unit will increase the temperature by 1°C (2°F) after 1 hour, and will increase an additional 1°C (2°F) after another hour. The sleep feature will stop after 8 hours and the system will keep running with final situation.



• Setting angle of airflow

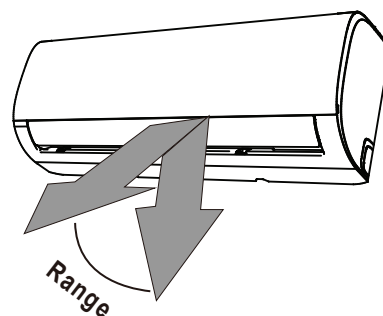
Setting vertical angle of airflow

While the unit is on, use the **SWING/DIRECT** button on remote control to set the direction (vertical angle) of airflow. Please refer to the Remote Control Manual for details.

NOTE ON LOUVER ANGLES

When using COOL or DRY mode, do not set louver at too vertical an angle for long periods of time. This can cause water to condense on the louver blade, which will drop on your floor or furnishings.

When using COOL mode, setting the louver at too small an angle can reduce the performance of the unit due to restricted air flow.



NOTE: Do not move louver by hand. This will cause the louver to become out of sync. If this occurs, turn off the unit and unplug it for a few seconds, then restart the unit. This will reset the louver.

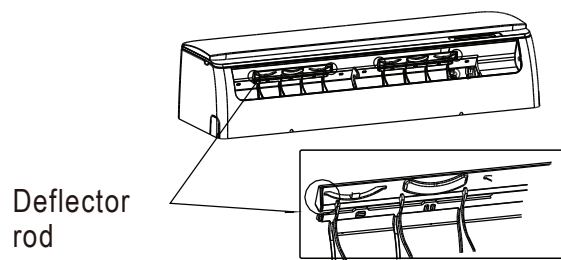
Fig. A

CAUTION

Do not put your fingers in or near the blower and suction side of the unit. The high-speed fan inside the unit may cause injury.

Setting horizontal angle of airflow

The horizontal angle of the airflow must be set manually. Grip the deflector rod (See **Fig.B**) and manually adjust it to your preferred direction. For some units, the horizontal angle of the airflow can be set by remote control. please refer to the Remote Control Manual.



Deflector rod

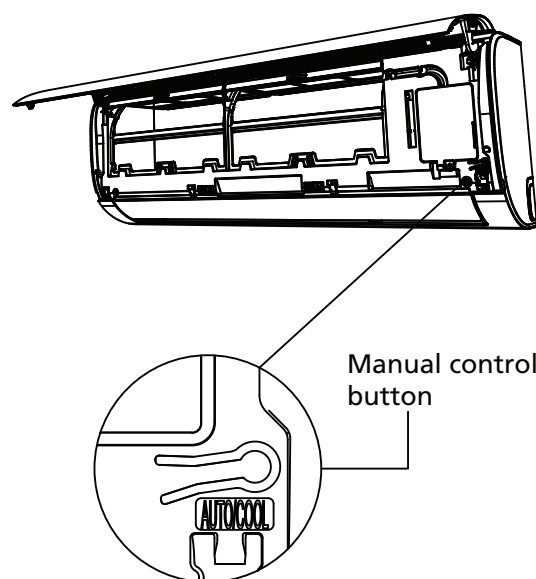
Fig. B

CAUTION

The manual button is intended for testing purposes and emergency operation only. Please do not use this function unless the remote control is lost and it is absolutely necessary. To restore regular operation, use the remote control to activate the unit. Unit must be turned off before manual operation.

To operate your unit manually:

1. Open the front panel of the indoor unit.
2. Locate the **MANUAL CONTROL button** on the right-hand side of the unit.
3. Press the **MANUAL CONTROL button** one time to activate FORCED AUTO mode.
4. Press the **MANUAL CONTROL button** again to activate FORCED COOLING mode.
5. Press the **MANUAL CONTROL button** a third time to turn the unit off.
6. Close the front panel.



Manual control button

Care and Maintenance

Cleaning Your Indoor Unit

BEFORE CLEANING OR MAINTENANCE

ALWAYS TURN OFF YOUR AIR CONDITIONER SYSTEM AND DISCONNECT ITS POWER SUPPLY BEFORE CLEANING OR MAINTENANCE.

CAUTION

Only use a soft, dry cloth to wipe the unit clean. If the unit is especially dirty, you can use a cloth soaked in warm water to wipe it clean.

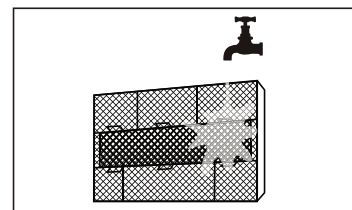
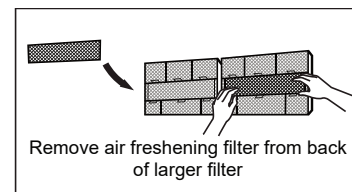
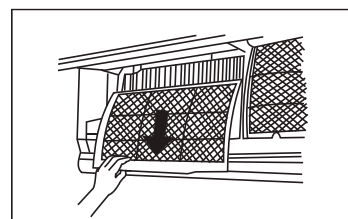
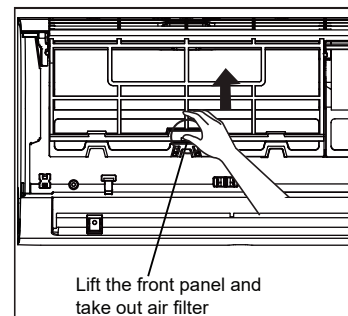
- **Do not** use chemicals or chemically treated cloths to clean the unit
- **Do not** use benzene, paint thinner, polishing powder or other solvents to clean the unit. They can cause the plastic surface to crack or deform.
- **Do not** use water hotter than 40°C (104°F) to clean the front panel. This can cause the panel to deform or become discolored.

Cleaning Your Air Filter

A clogged air conditioner can reduce the cooling efficiency of your unit, and can also be bad for your health. Make sure to clean the filter once every two weeks.

1. Lift the front panel of the indoor unit.
2. First press the tab on the end of filter to loosen the buckle, lift it up, then pull it towards yourself.
3. Now pull the filter out.
4. If your filter has a small air freshening filter, unclip it from the larger filter. Clean this air freshening filter with a hand-held vacuum.
5. Clean the large air filter with warm, soapy water. Be sure to use a mild detergent.

6. Rinse the filter with fresh water, then shake off excess water.
7. Dry it in a cool, dry place, and refrain from exposing it to direct sunlight.
8. When dry, re-clip the air freshening filter to the larger filter, then slide it back into the indoor unit.
9. Close the front panel of the indoor unit.



CAUTION

Do not touch air freshening (Plasma) filter for at least 10 minutes after turning off the unit.



CAUTION

- Before changing the filter or cleaning, turn off the unit and disconnect its power supply.
- When removing filter, do not touch metal parts in the unit. The sharp metal edges can cut you.
- Do not use water to clean the inside of the indoor unit. This can destroy insulation and cause electrical shock.
- Do not expose filter to direct sunlight when drying. This can shrink the filter.

Air Filter Reminders (Optional)

Air Filter Cleaning Reminder

After 240 hours of use, the display window on the indoor unit will flash "CL." This is a reminder to clean your filter. After 15 seconds, the unit will revert to its previous display.

To reset the reminder, press the **LED** button on your remote control 4 times, or press the **MANUAL CONTROL** button 3 times. If you don't reset the reminder, the "CL" indicator will flash again when you restart the unit.

Air Filter Replacement Reminder

After 2,880 hours of use, the display window on the indoor unit will flash "nF." This is a reminder to replace your filter. After 15 seconds, the unit will revert to its previous display.

To reset the reminder, press the **LED** button on your remote control 4 times, or press the **MANUAL CONTROL** button 3 times. If you don't reset the reminder, the "nF" indicator will flash again when you restart the unit.

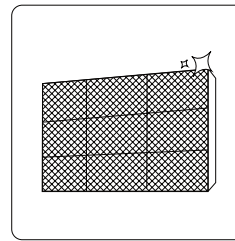


CAUTION

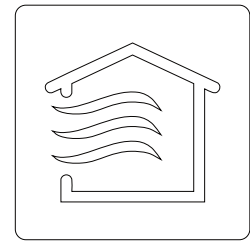
- Any maintenance and cleaning of outdoor unit should be performed by an authorized dealer or a licensed service provider.
- Any unit repairs should be performed by an authorized dealer or a licensed service provider.

Maintenance – Long Periods of Non-Use

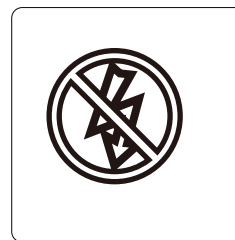
If you plan not to use your air conditioner for an extended period of time, do the following:



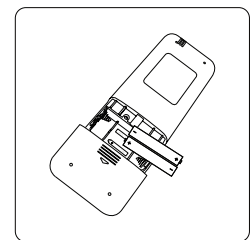
Clean all filters



Turn on FAN function until unit dries out completely



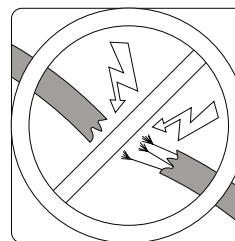
Turn off the unit and disconnect the power



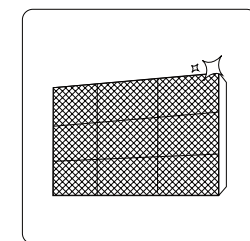
Remove batteries from remote control

Maintenance – Pre-Season Inspection

After long periods of non-use, or before periods of frequent use, do the following:



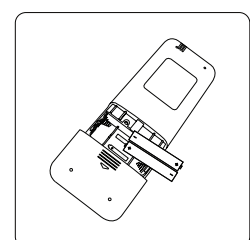
Check for damaged wires



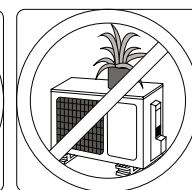
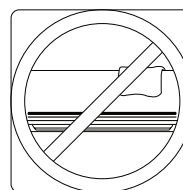
Clean all filters



Check for leaks



Replace batteries



Make sure nothing is blocking all air inlets and outlets

Troubleshooting

SAFETY PRECAUTIONS

If ANY of the following conditions occurs, turn off your unit immediately!

- The power cord is damaged or abnormally warm
- Smell a burning odor
- The unit emits loud or abnormal sounds
- A power fuse blows or the circuit breaker frequently trips
- Water or other objects fall into or out of the unit

DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT SHUN HING ELECTRIC SERVICES CENTRE LTD IMMEDIATELY!

Common Issues

The following problems are not a malfunction and in most situations will not require repairs.

Issue	Possible Causes
Unit does not turn on when pressing ON/OFF button	The unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
The unit changes from COOL mode to FAN mode	The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again.
	The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.
The indoor unit emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
The indoor unit makes noises	A rushing air sound may occur when the louver resets its position.
Both the indoor unit and outdoor unit make noises	Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.
	Low hissing sound when the system starts, has just stopped running, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.
	Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.

Issue	Possible Causes
The outdoor unit makes noises	The unit will make different sounds based on its current operating mode.
Dust is emitted from either the indoor or outdoor unit	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The unit emits a bad odor	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.
	The unit's filters have become moldy and should be cleaned.
The fan of the outdoor unit does not operate	During operation, the fan speed is controlled to optimize product operation.
Operation is erratic, unpredictable, or unit is unresponsive	Interference from cell phone towers and remote boosters may cause the unit to malfunction. In this case, try the following: <ul style="list-style-type: none"> • Disconnect the power, then reconnect. • Press ON/OFF button on remote control to restart operation.

NOTE: If problem persists, contact Shun Hing Electric Service Centre Ltd. Provide them with a detailed description of the unit malfunction as well as your model number.

Troubleshooting

When troubles occur, please check the following points before contacting Shun Hing Electric Service Centre Ltd.







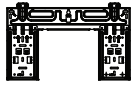




Problem	Possible Causes	Solution
Poor Cooling Performance	Temperature setting may be higher than ambient room temperature	Lower the temperature setting
	The heat exchanger on the indoor or outdoor unit is dirty	Clean the affected heat exchanger
	The air filter is dirty	Remove the filter and clean it according to instructions
	The air inlet or outlet of either unit is blocked	Turn the unit off, remove the obstruction and turn it back on
	Doors and windows are open	Make sure that all doors and windows are closed while operating the unit
	Excessive heat is generated by sunlight	Close windows and curtains during periods of high heat or bright sunshine
	Too many sources of heat in the room (people, computers, electronics, etc.)	Reduce amount of heat sources
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant

Problem	Possible Causes	Solution
The unit is not working	Power failure	Wait for the power to be restored
	The power is turned off	Turn on the power
	The fuse is burned out	Replace the fuse
	Remote control out of battery	Replace batteries
	The Unit's 3-minute protection has been activated	Wait three minutes after restarting the unit
	Timer is activated	Turn timer off
The unit starts and stops frequently	There's too much or too little refrigerant in the system	Check for leaks and recharge the system with refrigerant.
	Incompressible gas or moisture has entered the system.	Evacuate and recharge the system with refrigerant
	The compressor is broken	Replace the compressor
	The voltage is too high or too low	Install a manostat to regulate the voltage
Indicator lamps continue flashing	<p>The unit may stop operation or continue to run safely. If the indicator lamps continue to flash or error codes appear, wait for about 10 minutes. The problem may resolve itself.</p> <p>If not, disconnect the power, then connect it again. Turn the unit on. If the problem persists, disconnect the power and contact Shun Hing Electric Service Centre Ltd.</p>	

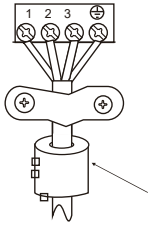

NOTE: If your problem persists after performing the checks and diagnostics above, turn off your unit immediately and contact Shun Hing Electric Service Centre Ltd.

Accessories

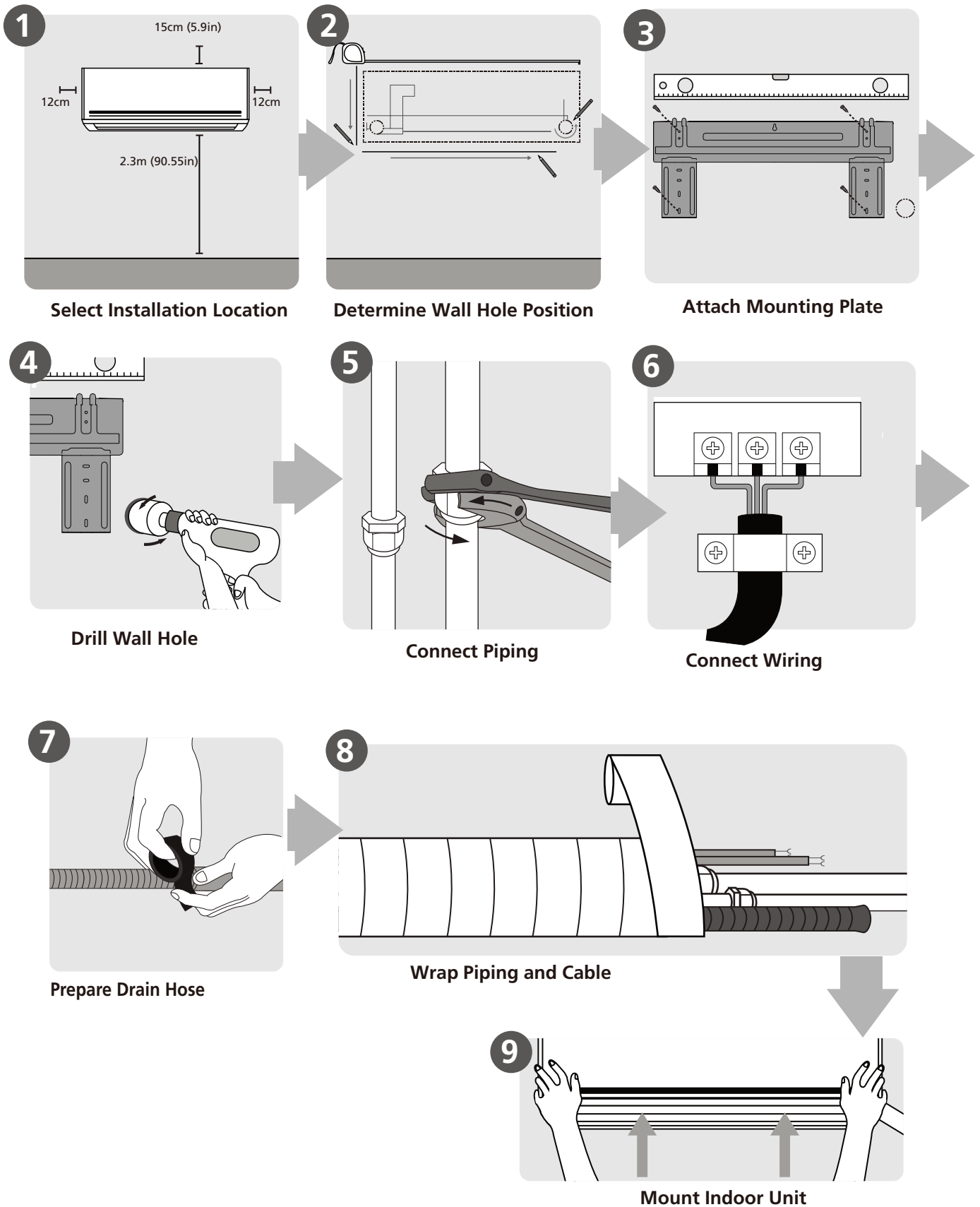
The air conditioning system comes with the following accessories. Use all of the installation parts and accessories to install the air conditioner. Improper installation may result in water leakage, electrical shock and fire, or cause the equipment to fail. The items are not included with the air conditioner must be purchased separately.

Name of Accessories	Q'ty(pc)	Shape	Name of Accessories	Q'ty(pc)	Shape
Manual	2~3		Remote controller	1	
Drain joint (Cooling only models not include)	1		Battery	2	
Seal (Cooling only models not include)	1		Remote controller holder(optional)	1	
Mounting plate	1		Fixing screw for remote controller holder(optional)	2	
Anchor	5~8 (depending on models)		Small Filter	1~2 (depending on models)	
Mounting plate fixing screw	5~8 (depending on models)				

Accessories

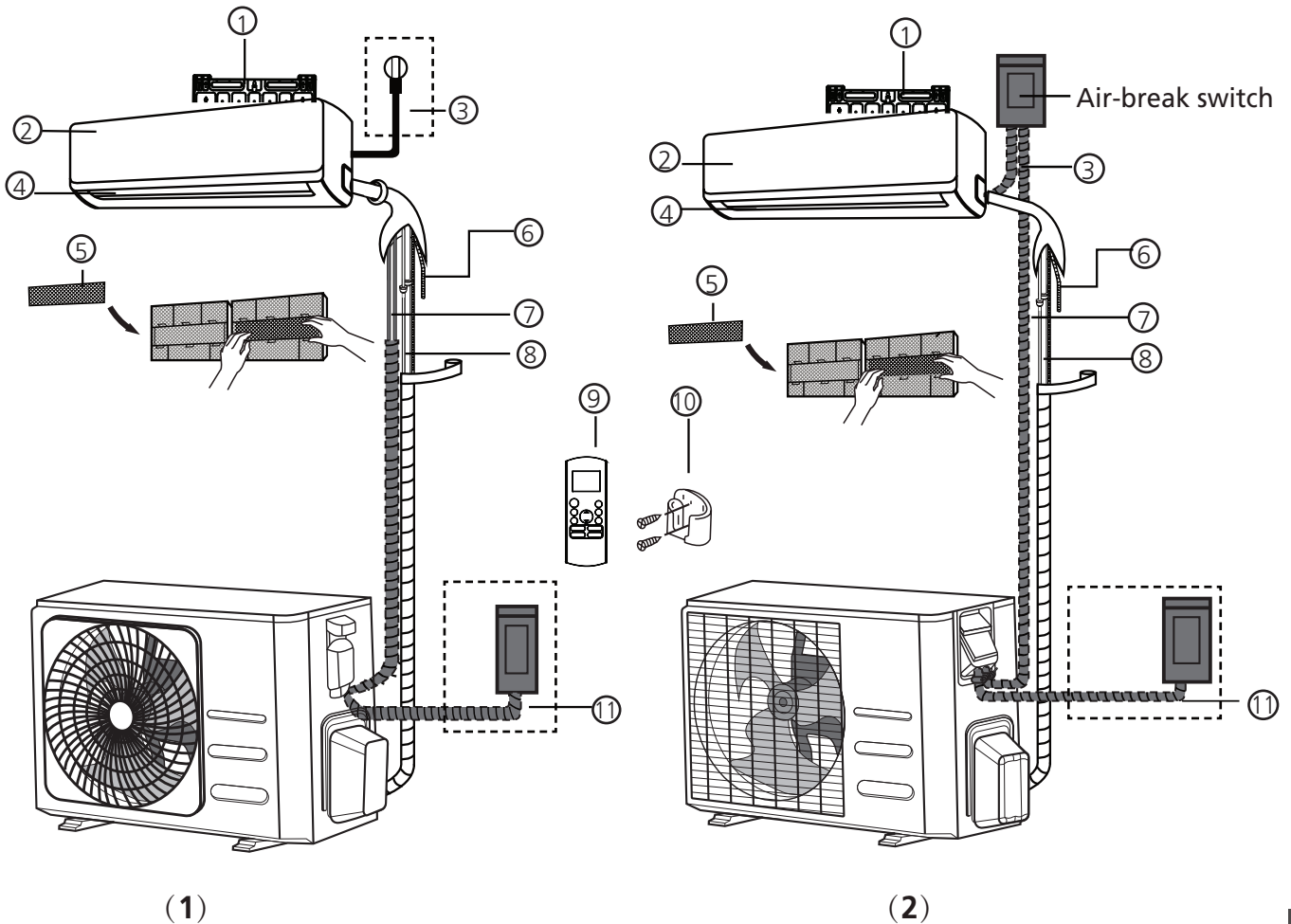
Name	Shape	Quantity(PC)
Connecting pipe assembly	Liquid side	Φ 6.35(1/4in)
		Φ 9.52(3/8in)
	Gas side	Φ 9.52(3/8in)
		Φ 12.7(1/2in)
		Φ 16(5/8in)
	Φ 19(3/4in)	
Parts you must purchase separately. Consult the dealer about the proper pipe size of the unit you purchased.		
Magnetic ring and belt (if supplied ,please refer to the wiring diagram to install it on the connective cable.)	  <p>Pass the belt through the hole of the Magnetic ring to fix it on the cable</p>	Varies by model

Installation Summary - Indoor Unit



Unit Parts

NOTE: The installation must be performed in accordance with the requirement of local and national standards. The installation may be slightly different in different areas.



- | | | |
|-----------------------|-------------------------|----------------------------|
| ① Wall Mounting Plate | ⑤ Air Freshening Filter | ⑨ Remote Controller |
| ② Front Panel | ⑥ Drainage Pipe | ⑩ Remote controller Holder |
| ③ Power Cable | ⑦ Signal Cable | ⑪ Outdoor Unit Power Cable |
| ④ Louver | ⑧ Refrigerant Piping | |

NOTE ON ILLUSTRATIONS

Illustrations in this manual are for explanatory purposes. The actual shape of your indoor unit may be slightly different. The actual shape shall prevail.

Indoor Unit Installation

Installation Instructions – Indoor unit

PRIOR TO INSTALLATION

Before installing the indoor unit, refer to the label on the product box to make sure that the model number of the indoor unit matches the model number of the outdoor unit.

Step 1: Select installation location

Before installing the indoor unit, you must choose an appropriate location. The following are standards that will help you choose an appropriate location for the unit.

Proper installation locations meet the following standards:

- ☑ Good air circulation
- ☑ Convenient drainage
- ☑ Noise from the unit will not disturb other people
- ☑ Firm and solid—the location will not vibrate
- ☑ Strong enough to support the weight of the unit
- ☑ A location at least one meter from all other electrical devices (e.g., TV, radio, computer)

DO NOT install unit in the following locations:

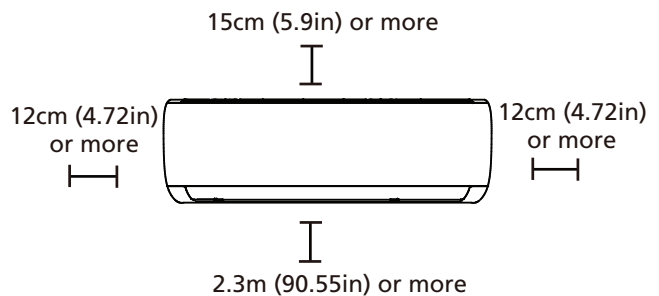
- ⊘ Near any source of heat, steam, or combustible gas
- ⊘ Near flammable items such as curtains or clothing
- ⊘ Near any obstacle that might block air circulation
- ⊘ Near the doorway
- ⊘ In a location subject to direct sunlight

NOTE ABOUT WALL HOLE:

If there is no fixed refrigerant piping:

While choosing a location, be aware that you should leave ample room for a wall hole (see **Drill wall hole for connective piping** step) for the signal cable and refrigerant piping that connect the indoor and outdoor units. The default position for all piping is the right side of the indoor unit (while facing the unit). However, the unit can accommodate piping to both the left and right.

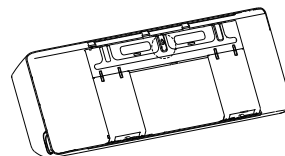
Refer to the following diagram to ensure proper distance from walls and ceiling:



Step 2: Attach mounting plate to wall

The mounting plate is the device on which you will mount the indoor unit.

- Take out the mounting plate at the back of the indoor unit.



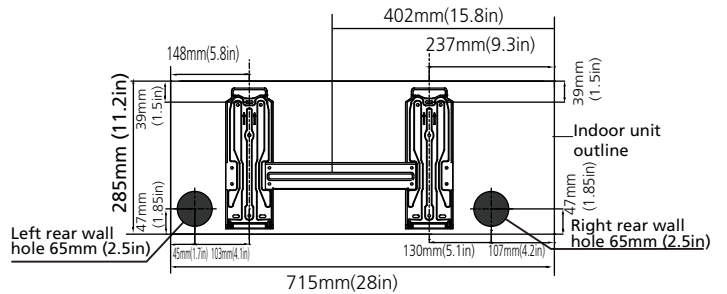
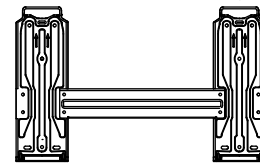
- Secure the mounting plate to the wall with the screws provided. Make sure that mounting plate is flat against the wall.

NOTE FOR CONCRETE OR BRICK WALLS:

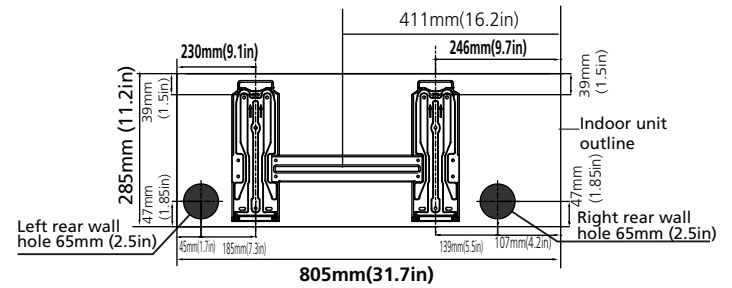
If the wall is made of brick, concrete, or similar material, drill 5mm-diameter (0.2in-diameter) holes in the wall and insert the sleeve anchors provided. Then secure the mounting plate to the wall by tightening the screws directly into the clip anchors.

Step 3: Drill wall hole for connective piping

1. Determine the location of the wall hole based on the position of the mounting plate. Refer to **Mounting Plate Dimensions**.
2. Using a 65mm (2.5in) or 90mm(3.54in) (depending on models)core drill, drill a hole in the wall. Make sure that the hole is drilled at a slight downward angle, so that the outdoor end of the hole is lower than the indoor end by about 5mm to 7mm (0.2-0.275in). This will ensure proper water drainage.
3. Place the protective wall cuff in the hole. This protects the edges of the hole and will help seal it when you finish the installation process.



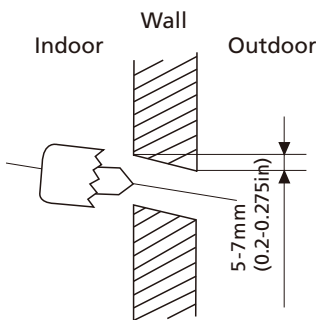
Model A



Model B

⚠ CAUTION

When drilling the wall hole, make sure to avoid damage wires, plumbing, and other sensitive components.

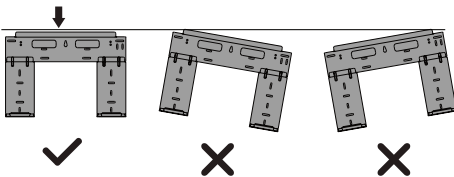


NOTE: When the gas side connective pipe is Φ 16mm(5/8in) or more, the wall hole should be 90mm(3.54in).

MOUNTING PLATE DIMENSIONS

Different models have different mounting plates. For the different customization requirements, the shape of the mounting plate may be slightly different. But the installation dimensions are the same for the same size of indoor unit. See for example:

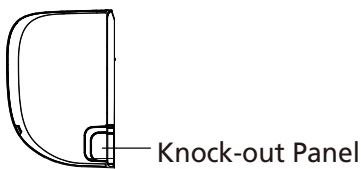
Correct orientation of Mounting Plate



Step 4: Prepare refrigerant piping

The refrigerant piping is inside an insulating sleeve attached to the back of the unit. You must prepare the piping before passing it through the hole in the wall.

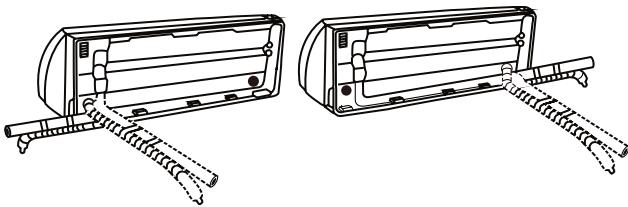
1. Based on the position of the wall hole relative to the mounting plate, choose the side from which the piping will exit the unit.
2. If the wall hole is behind the unit, keep the knock-out panel in place. If the wall hole is to the side of the indoor unit, remove the plastic knock-out panel from that side of the unit. This will create a slot through which your piping can exit the unit. Use needle nose pliers if the plastic panel is too difficult to remove by hand.
3. Groove has been made in the knock-out panel in order to cut it conveniently. The size of the slot is determined by the diameter of piping.



4. If existing connective piping is already embedded in the wall, proceed directly to the **Connect Drain Hose** step. If there is no embedded piping, connect the indoor unit's refrigerant piping to the connective piping that will join the indoor and outdoor units. Refer to the **Refrigerant Piping Connection** section of this manual for detailed instructions.

NOTE ON PIPING ANGLE

Refrigerant piping can exit the indoor unit from four different angles: Left-hand side, Right-hand side, Left rear, Right rear.



CAUTION

Be extremely careful not to dent or damage the piping while bending them away from the unit. Any dents in the piping will affect the unit's performance.

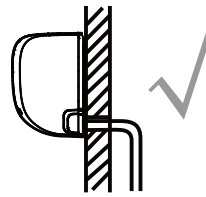
Step 5: Connect drain hose

By default, the drain hose is attached to the left-hand side of unit (when you're facing the back of the unit). However, it can also be attached to the right-hand side. To ensure proper drainage, attach the drain hose on the same side that your refrigerant piping exits the unit. Attach drain hose extension (purchased separately) to the end of drain hose.

- Wrap the connection point firmly with Teflon tape to ensure a good seal and to prevent leaks.
- For the portion of the drain hose that will remain indoors, wrap it with foam pipe insulation to prevent condensation.
- Remove the air filter and pour a small amount of water into the drain pan to make sure that water flows from the unit smoothly.

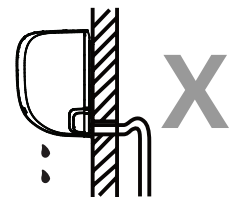
NOTE ON DRAIN HOSE PLACEMENT

Make sure to arrange the drain hose according to the following figures.



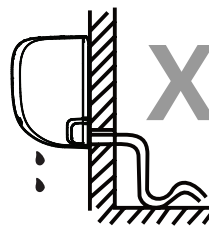
CORRECT

Make sure there are no kinks or dent in drain hose to ensure proper drainage.



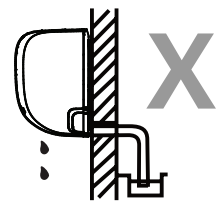
INCORRECT

Kinks in the drain hose will create water traps.



INCORRECT

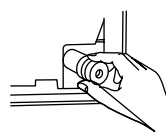
Kinks in the drain hose will create water traps.



INCORRECT

Do not place the end of the drain hose in water or in containers that collect water. This will prevent proper drainage.

PLUG THE UNUSED DRAIN HOLE



To prevent unwanted leaks you must plug the unused drain hole with the rubber plug provided.



BEFORE PERFORMING ANY ELECTRICAL WORK, READ THESE REGULATIONS

1. All wiring must comply with local and national electrical codes, regulations and must be installed by a licensed electrician.
2. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
3. If there is a serious safety issue with the power supply, stop work immediately. Explain your reasoning to the client, and refuse to install the unit until the safety issue is properly resolved.
4. Power voltage should be within 90-110% of rated voltage. Insufficient power supply can cause malfunction, electrical shock, or fire.
5. If connecting power to fixed wiring, a surge protector and main power switch should be installed.
6. If connecting power to fixed wiring, a switch or circuit breaker that disconnects all poles and has a contact separation of at least 1/8in (3mm) must be incorporated in the fixed wiring. The qualified technician must use an approved circuit breaker or switch.
7. Only connect the unit to an individual branch circuit outlet. Do not connect another appliance to that outlet.
8. Make sure to properly ground the air conditioner.
9. Every wire must be firmly connected. Loose wiring can cause the terminal to overheat, resulting in product malfunction and possible fire.
10. Do not let wires touch or rest against refrigerant tubing, the compressor, or any moving parts within the unit.
11. If the unit has an auxiliary electric heater, it must be installed at least 1 meter (40in) away from any combustible materials.
12. To avoid getting an electric shock, never touch the electrical components soon after the power supply has been turned off. After turning off the power, always wait 10 minutes or more before you touch the electrical components.



WARNING

BEFORE PERFORMING ANY ELECTRICAL OR WIRING WORK, TURN OFF THE MAIN POWER TO THE SYSTEM.

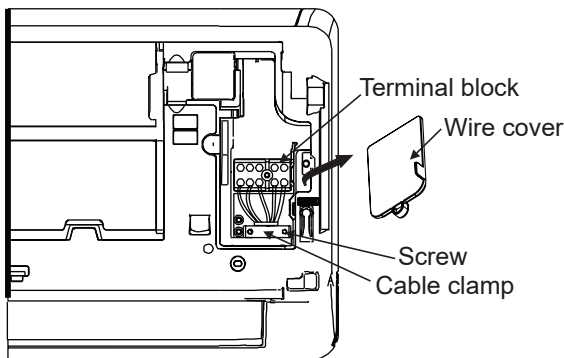
Step 6: Connect signal and power cables

The signal cable enables communication between the indoor and outdoor units. You must first choose the right cable size before preparing it for connection.

CHOOSE THE RIGHT CABLE SIZE

The size of the power supply cable, signal cable, fuse, and switch needed is determined by the maximum current of the unit. The maximum current is indicated on the nameplate located on the side panel of the unit. Refer to this nameplate to choose the right cable, fuse, or switch.

1. Open front panel of the indoor unit.
2. Using a screwdriver, open the wire box cover on the right side of the unit. This will reveal the terminal block.



! WARNING

ALL WIRING MUST BE PERFORMED STRICTLY IN ACCORDANCE WITH THE WIRING DIAGRAM LOCATED ON THE BACK OF THE INDOOR UNIT'S FRONT PANEL .

3. Unscrew the cable clamp below the terminal block and place it to the side.
4. Facing the back of the unit, remove the plastic panel on the bottom left-hand side.
5. Feed the signal wire through this slot, from the back of the unit to the front.
6. Facing the front of the unit, connect the wire according to the indoor unit's wiring diagram, connect the u-lug and firmly screw each wire to its corresponding terminal.

! CAUTION

DO NOT MIX UP LIVE AND NULL WIRES

This is dangerous, and can cause the air conditioning unit to malfunction.

7. After checking to make sure every connection is secure, use the cable clamp to fasten the signal cable to the unit. Screw the cable clamp down tightly.
8. Replace the wire cover on the front of the unit, and the plastic panel on the back.

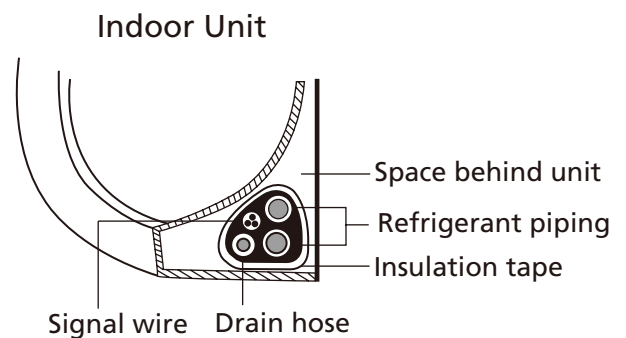
! NOTE ABOUT WIRING

THE WIRING CONNECTION PROCESS MAY DIFFER SLIGHTLY BETWEEN UNITS AND REGIONS.

Step 7: Wrap piping and cables

Before passing the piping, drain hose, and the signal cable through the wall hole, you must bundle them together to save space, protect them, and insulate them.

1. Bundle the drain hose, refrigerant pipes, and signal cable as shown below:



DRAIN HOSE MUST BE ON BOTTOM

Make sure that the drain hose is at the bottom of the bundle. Putting the drain hose at the top of the bundle can cause the drain pan to overflow, which can lead to fire or water damage.

DO NOT INTERTWINE SIGNAL CABLE WITH OTHER WIRES

While bundling these items together, do not intertwine or cross the signal cable with any other wiring.

2. Using adhesive vinyl tape, attach the drain hose to the underside of the refrigerant pipes.
3. Using insulation tape, wrap the signal wire, refrigerant pipes, and drain hose tightly together. Double-check that all items are bundled.

DO NOT WRAP ENDS OF PIPING

When wrapping the bundle, keep the ends of the piping unwrapped. You need to access them to test for leaks at the end of the installation process (refer to **Electrical and Gas Leak Checks** section of this manual).

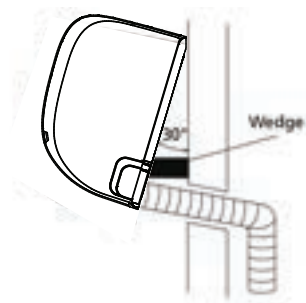
Step 8: Mount indoor unit

If you installed new connective piping to the outdoor unit, do the following:

1. If you have already passed the refrigerant piping through the hole in the wall, proceed to Step 4.
 2. Otherwise, double-check that the ends of the refrigerant pipes are sealed to prevent dirt or foreign materials from entering the pipes.
 3. Slowly pass the wrapped bundle of refrigerant pipes, drain hose, and signal wire through the hole in the wall.
 4. Hook the top of the indoor unit on the upper hook of the mounting plate.
 5. Check that unit is hooked firmly on mounting by applying slight pressure to the left and right-hand sides of the unit. The unit should not jiggle or shift.
 6. Using even pressure, push down on the bottom half of the unit. Keep pushing down until the unit snaps onto the hooks along the bottom of the mounting plate.
 7. Again, check that the unit is firmly mounted by applying slight pressure to the left and the right-hand sides of the unit.
3. Connect drain hose and refrigerant piping (refer to **Refrigerant Piping Connection** section of this manual for instructions).
 4. Keep pipe connection point exposed to perform the leak test (refer to **Electrical and Gas Leak Checks** section of this manual).
 5. After the leak test, wrap the connection point with insulation tape.
 6. Remove the bracket or wedge that is propping up the unit.
 7. Using even pressure, push down on the bottom half of the unit. Keep pushing down until the unit snaps onto the hooks along the bottom of the mounting plate.

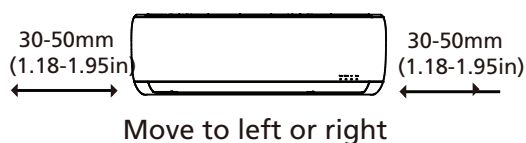
If refrigerant piping is already embedded in the wall, do the following:

1. Hook the top of the indoor unit on the upper hook of the mounting plate.
2. Use a bracket or wedge to prop up the unit, giving you enough room to connect the refrigerant piping, signal cable, and drain hose.



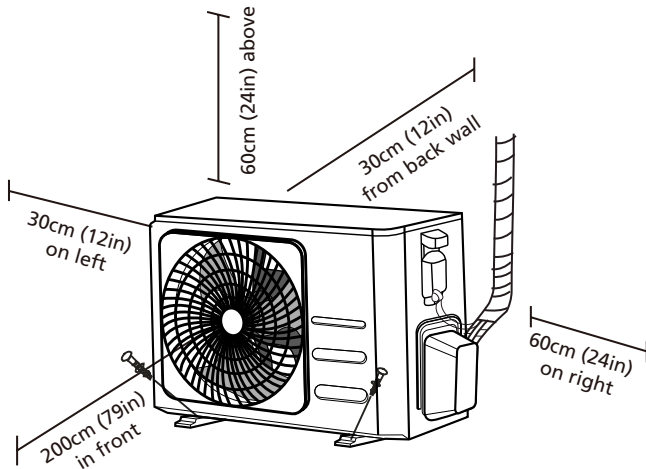
UNIT IS ADJUSTABLE

Keep in mind that the hooks on the mounting plate are smaller than the holes on the back of the unit. If you find that you don't have ample room to connect embedded pipes to the indoor unit, the unit can be adjusted left or right by about 30-50mm (1.18-1.95in), depending on the model.



Outdoor Unit Installation

Install the unit by following local codes and regulations, there may be differ slightly between different regions.



Installation Instructions – Outdoor unit

Step 1: Select installation location

Before installing the outdoor unit, you must choose an appropriate location. The following are standards that will help you choose an appropriate location for the unit.

Proper installation locations meet the following standards:

- Meets all spatial requirements shown in Installation Space Requirements above.
- Good air circulation and ventilation
- Firm and solid—the location can support the unit and will not vibrate
- Noise from the unit will not disturb others
- Protected from prolonged periods of direct sunlight or rain
- Where snowfall is anticipated, take appropriate measures to prevent ice buildup and coil damage.

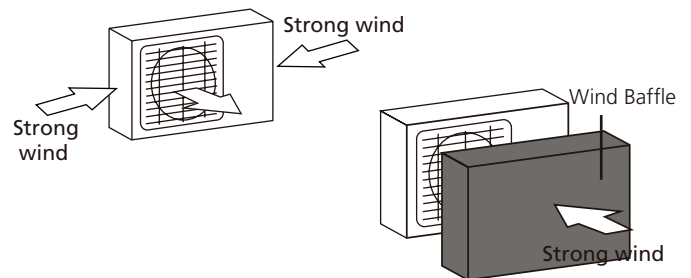
DO NOT install unit in the following locations:

- ⊘ Near an obstacle that will block air inlets and outlets
- ⊘ Near a public street, crowded areas, or where noise from the unit will disturb others
- ⊘ Near animals or plants that will be harmed by hot air discharge
- ⊘ Near any source of combustible gas
- ⊘ In a location that is exposed to large amounts of dust
- ⊘ In a location exposed to a excessive amounts of salty air

SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

If the unit is exposed to heavy wind:

Install unit so that air outlet fan is at a 90° angle to the direction of the wind. If needed, build a barrier in front of the unit to protect it from extremely heavy winds. See Figures below.



If the unit is frequently exposed to heavy rain or snow:

Build a shelter above the unit to protect it from the rain or snow. Be careful not to obstruct air flow around the unit.

If the unit is frequently exposed to salty air (seaside):

Use outdoor unit that is specially designed to resist corrosion.

Step 2: Install drain joint(Heat pump unit only)

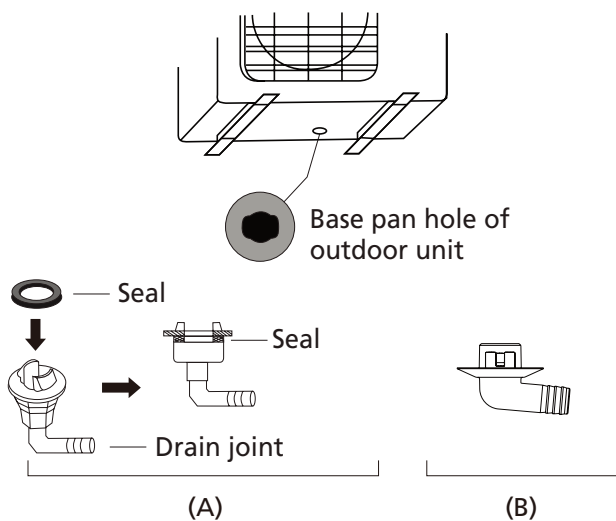
Before bolting the outdoor unit in place, you must install the drain joint at the bottom of the unit. Note that there are two different types of drain joints depending on the type of outdoor unit.

If the drain joint comes with a rubber seal (see Fig. A), do the following:

1. Fit the rubber seal on the end of the drain joint that will connect to the outdoor unit.
2. Insert the drain joint into the hole in the base pan of the unit.
3. Rotate the drain joint 90° until it clicks in place facing the front of the unit.
4. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.

If the drain joint doesn't come with a rubber seal (see Fig. B), do the following:

1. Insert the drain joint into the hole in the base pan of the unit. The drain joint will click in place.
2. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.



! IN COLD CLIMATES

In cold climates, make sure that the drain hose is as vertical as possible to ensure swift water drainage. If water drains too slowly, it can freeze in the hose and flood the unit.

Step 3: Anchor outdoor unit

The outdoor unit can be anchored to the ground or to a wall-mounted bracket with bolt(M10). Prepare the installation base of the unit according to the dimensions below.

If you will install the unit on the ground or on a concrete mounting platform, do the following:

1. Mark the positions for four expansion bolts based on dimensions chart.
2. Pre-drill holes for expansion bolts.
3. Place a nut on the end of each expansion bolt.
4. Hammer expansion bolts into the pre-drilled holes.
5. Remove the nuts from expansion bolts, and place outdoor unit on bolts.
6. Put washer on each expansion bolt, then replace the nuts.
7. Using a wrench, tighten each nut until snug.

! WARNING

WHEN DRILLING INTO CONCRETE, EYE PROTECTION IS RECOMMENDED AT ALL TIMES.

If you will install the unit on a wall-mounted bracket, do the following:

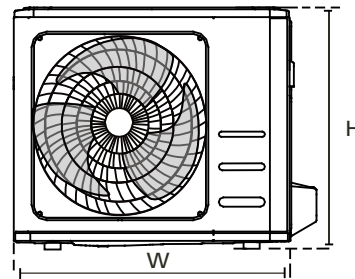
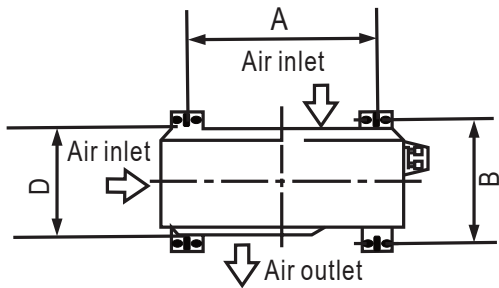
! CAUTION

Make sure that the wall is made of solid brick, concrete, or of similarly strong material. **The wall must be able to support at least four times the weight of the unit.**

1. Mark the position of bracket holes based on dimensions chart.
2. Pre-drill the holes for the expansion bolts.
3. Place a washer and nut on the end of each expansion bolt.
4. Thread expansion bolts through holes in mounting brackets, put mounting brackets in position, and hammer expansion bolts into the wall.
5. Check that the mounting brackets are level.
6. Carefully lift unit and place its mounting feet on brackets.
7. Bolt the unit firmly to the brackets.
8. If allowed, install the unit with rubber gaskets to reduce vibrations and noise.

UNIT MOUNTING DIMENSIONS

The following is a list of different outdoor unit sizes and the distance between their mounting feet. Prepare the installation base of the unit according to the dimensions below.



Outdoor Unit Dimensions (mm) W x H x D	Mounting Dimensions	
	Distance A (mm)	Distance B (mm)
720x495x270 (28.3"x 19.5"x 10.6")	452 (17.8")	255 (10.0")
765x555x303 (30.1"x 21.8"x 11.9")	452 (17.8")	286(11.3")
890x673x342 (35.0"x 26.5"x 13.5")	663 (26.1")	354 (13.9")

Step 4: Connect signal and power cables

The outside unit's terminal block is protected by an electrical wiring cover on the side of the unit. A comprehensive wiring diagram is printed on the inside of the wiring cover.

WARNING

BEFORE PERFORMING ANY ELECTRICAL OR WIRING WORK, TURN OFF THE MAIN POWER TO THE SYSTEM.

1. Prepare the cable for connection:

CHOOSE THE RIGHT CABLE SIZE

The size of the power supply cable, signal cable, fuse, and switch needed is determined by the maximum current of the unit. The maximum current is indicated on the nameplate located on the side panel of the unit.

- a. Using wire strippers, strip the rubber jacket from both ends of cable to reveal about 40mm (1.57in) of the wires inside.
- b. Strip the insulation from the ends of the wires.
- c. Using a wire crimper, crimp u-lugs on the ends of the wires.

PAY ATTENTION TO LIVE WIRE

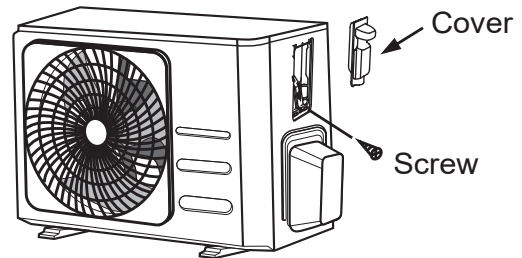
While crimping wires, make sure you clearly distinguish the Live ("L") Wire from other wires.

WARNING

ALL WIRING WORK MUST BE PERFORMED STRICTLY IN ACCORDANCE WITH THE WIRING DIAGRAM LOCATED INSIDE OF WIRE COVER OF THE OUTDOOR UNIT .

2. Unscrew the electrical wiring cover and remove it.
3. Unscrew the cable clamp below the terminal block and place it to the side.
4. Connect the wire according to the wiring diagram, and firmly screw the u-lug of each wire to its corresponding terminal.
5. After checking to make sure every connection is secure, loop the wires around to prevent rain water from flowing into the terminal.
6. Using the cable clamp, fasten the cable to the unit. Screw the cable clamp down tightly.
7. Insulate unused wires with PVC electrical tape. Arrange them so that they do not touch any electrical or metal parts.
8. Replace the wire cover on the side of the unit, and screw it in place.

NOTE: The unit you purchased may be slightly different. The illustrations below are for explanatory purposes. The actual shape shall prevail.



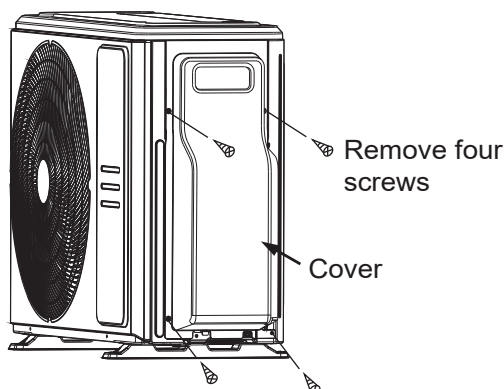
NOTE: If the cable clamp looks like the following, please select the appropriate through-hole according to the diameter of the wire.



Three size hole: Small, Large, Medium



When the cable is not fasten enough, use the buckle to prop it up , so it can be clamped tightly.



Refrigerant Piping Connection

When connecting refrigerant piping, **do not** let substances or gases other than the specified refrigerant enter the unit. The presence of other gases or substances will lower the unit's capacity, and can cause abnormally high pressure in the refrigeration cycle. This can cause explosion and injury.

Note on Pipe Length

The length of refrigerant piping will affect the performance and energy efficiency of the unit. Nominal efficiency is tested on units with a pipe length of 5 meters (16.5ft). A minimum pipe run of 3 metres is required to minimise vibration & excessive noise.

Refer to the table below for specifications on the maximum length and drop height of piping.

Maximum Length and Drop Height of Refrigerant Piping per Unit Model

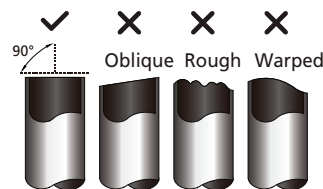
Model	Capacity (BTU/h)	Max. Length (m)	Max. Drop Height (m)
R32 Fixed-speed Split Air Conditioner	< 18,000	20 (66ft)	8(26ft)
	≥ 18,000 and < 36,000	25 (82ft)	10(33ft)
	≥ 36,000 and < 60,000	30 (98.5ft)	15 (49ft)

Connection Instructions – Refrigerant Piping

Step 1: Cut pipes

When preparing refrigerant pipes, take extra care to cut and flare them properly. This will ensure efficient operation and minimize the need for future maintenance.

1. Measure the distance between the indoor and outdoor units.
2. Using a pipe cutter, cut the pipe a little longer than the measured distance.
3. Make sure that the pipe is cut at a perfect 90° angle.



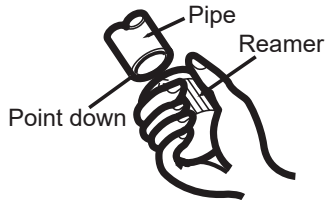
DO NOT DEFORM PIPE WHILE CUTTING

Be extra careful not to damage, dent, or deform the pipe while cutting. This will drastically reduce the heating efficiency of the unit.

Step 2: Remove burrs

Burrs can affect the air-tight seal of refrigerant piping connection. They must be completely removed.

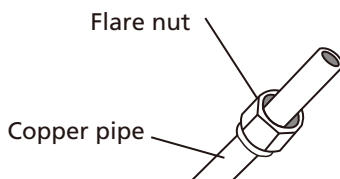
1. Hold the pipe at a downward angle to prevent burrs from falling into the pipe.
2. Using a reamer or deburring tool, remove all burrs from the cut section of the pipe.



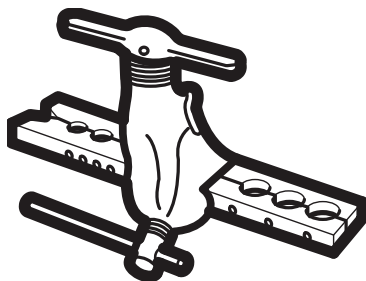
Step 3: Flare pipe ends

Proper flaring is essential to achieve an airtight seal.

1. After removing burrs from cut pipe, seal the ends with PVC tape to prevent foreign materials from entering the pipe.
2. Sheath the pipe with insulating material.
3. Place flare nuts on both ends of pipe. Make sure they are facing in the right direction, because you can't put them on or change their direction after flaring.

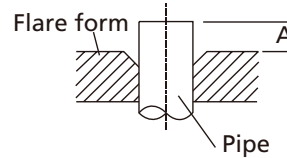


4. Remove PVC tape from ends of pipe when ready to perform flaring work.
5. Clamp flare form on the end of the pipe. The end of the pipe must extend beyond the edge of the flare form in accordance with the dimensions shown in the table below.



PIPING EXTENSION BEYOND FLARE FORM

Outer Diameter of Pipe (mm)	A (mm)	
	Min.	Max.
Ø 6.35 (Ø 0.25")	0.7 (0.0275")	1.3 (0.05")
Ø 9.52 (Ø 0.375")	1.0 (0.04")	1.6 (0.063")
Ø 12.7 (Ø 0.5")	1.0 (0.04")	1.8 (0.07")
Ø 16 (Ø 0.63")	2.0 (0.078")	2.2 (0.086")
Ø 19 (Ø 0.75")	2.0 (0.078")	2.4 (0.094")



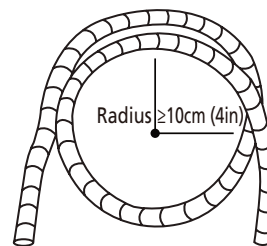
6. Place flaring tool onto the form.
7. Turn the handle of the flaring tool clockwise until the pipe is fully flared.
8. Remove the flaring tool and flare form, then inspect the end of the pipe for cracks and even flaring.

Step 4: Connect pipes

When connecting refrigerant pipes, be careful not to use excessive torque or to deform the piping in any way. You should first connect the low-pressure pipe, then the high-pressure pipe.

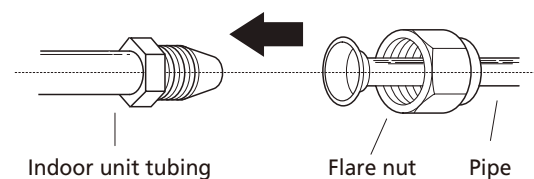
MINIMUM BEND RADIUS

When bending connective refrigerant piping, the minimum bending radius is 10cm.

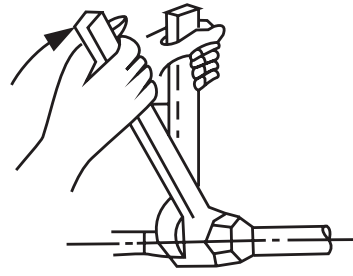


Instructions for Connecting Piping to Indoor Unit

1. Align the center of the two pipes that you will connect.



2. Tighten the flare nut as tightly as possible by hand.
3. Using a spanner, grip the nut on the unit tubing.
4. While firmly gripping the nut on the unit tubing, use a torque wrench to tighten the flare nut according to the torque values in the **Torque Requirements** table below. Loosen the flaring nut slightly, then tighten again.



TORQUE REQUIREMENTS

Outer Diameter of Pipe (mm)	Tightening Torque (N•m)	Flare dimension(B) (mm)	Flare shape
Ø 6.35 (Ø 0.25")	18~20(180~200kgf.cm)	8.4~8.7 (0.33~0.34")	
Ø 9.52 (Ø 0.375")	32~39(320~390kgf.cm)	13.2~13.5 (0.52~0.53")	
Ø 12.7 (Ø 0.5")	49~59(490~590kgf.cm)	16.2~16.5 (0.64~0.65")	
Ø 16 (Ø 0.63")	57~71(570~710kgf.cm)	19.2~19.7 (0.76~0.78")	
Ø 19 (Ø 0.75")	67~101(670~1010kgf.cm)	23.2~23.7 (0.91~0.93")	

⊘ DO NOT USE EXCESSIVE TORQUE

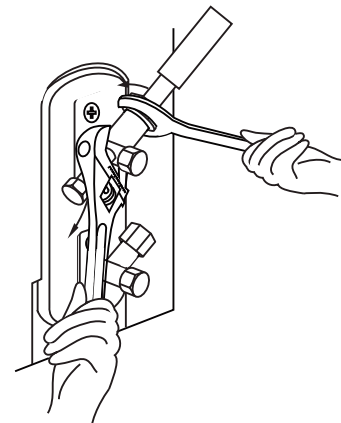
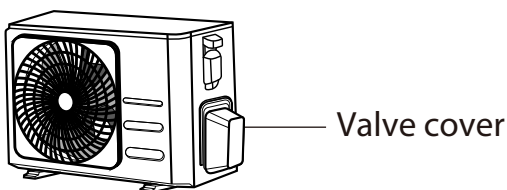
Excessive force can break the nut or damage the refrigerant piping. You must not exceed torque requirements shown in the table above.

Instructions for Connecting Piping to Outdoor Unit

1. Unscrew the cover from the packed valve on the side of the outdoor unit.
2. Remove protective caps from ends of valves.
3. Align flared pipe end with each valve, and tighten the flare nut as tightly as possible by hand.
4. Using a spanner, grip the body of the valve. Do not grip the nut that seals the service valve.
5. While firmly gripping the body of the valve, use a torque wrench to tighten the flare nut according to the correct torque values.
6. Loosen the flaring nut slightly, then tighten again.
7. Repeat Steps 3 to 6 for the remaining pipe.

! USE SPANNER TO GRIP MAIN BODY OF VALVE

Torque from tightening the flare nut can snap off other parts of valve.



5. While firmly gripping the body of the valve, use a torque wrench to tighten the flare nut according to the correct torque values.

Air Evacuation

Preparations and Precautions

Air and foreign matter in the refrigerant circuit can cause abnormal rises in pressure, which can damage the air conditioner, reduce its efficiency, and cause injury. Use a vacuum pump and manifold gauge to evacuate the refrigerant circuit, removing any non-condensable gas and moisture from the system.

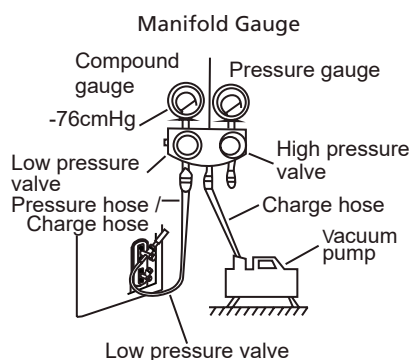
Evacuation should be performed upon initial installation and when unit is relocated.

BEFORE PERFORMING EVACUATION

- ☑ Check to make sure the connective pipes between the indoor and outdoor units are connected properly .
- ☑ Check to make sure all wiring is connected properly.

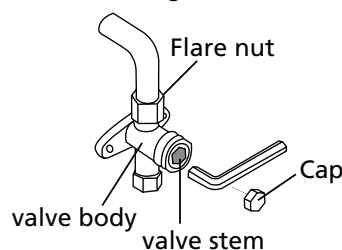
Evacuation Instructions

1. Connect the charge hose of the manifold gauge to service port on the outdoor unit's low pressure valve.
2. Connect another charge hose from the manifold gauge to the vacuum pump.
3. Open the Low Pressure side of the manifold gauge. Keep the High Pressure side closed.
4. Turn on the vacuum pump to evacuate the system.
5. Run the vacuum for at least 15 minutes, or until the Compound Meter reads -76cmHG (-10 Pa).



6. Close the Low Pressure side of the manifold gauge, and turn off the vacuum pump.
7. Wait for 5 minutes, then check that there has been no change in system pressure.

8. If there is a change in system pressure, refer to Gas Leak Check section for information on how to check for leaks. If there is no change in system pressure, unscrew the cap from the packed valve (high pressure valve).
9. Insert hexagonal wrench into the packed valve (high pressure valve) and open the valve by turning the wrench in a 1/4 counterclockwise turn. Listen for gas to exit the system, then close the valve after 5 seconds.
10. Watch the Pressure Gauge for one minute to make sure that there is no change in pressure. The Pressure Gauge should read slightly higher than atmospheric pressure.
11. Remove the charge hose from the service port.



12. Using hexagonal wrench, fully open both the high pressure and low pressure valves.
13. Tighten valve caps on all three valves (service port, high pressure, low pressure) by hand. You may tighten it further using a torque wrench if needed.

! OPEN VALVE STEMS GENTLY

When opening valve stems, turn the hexagonal wrench until it hits against the stopper. Do not try to force the valve to open further.

Note on Adding Refrigerant

Some systems require additional charging depending on pipe lengths. The standard pipe length varies according to local regulations. For example, in North America, the standard pipe length is 7.5m (25'). In other areas, the standard pipe length is 5m (16'). The refrigerant should be charged from the service port on the outdoor unit's low pressure valve. The additional refrigerant to be charged can be calculated using the following formula:

ADDITIONAL REFRIGERANT PER PIPE LENGTH

Connective Pipe Length (m)	Air Purging Method	Additional Refrigerant	
≤ Standard pipe length	Vacuum Pump	N/A	
> Standard pipe length	Vacuum Pump	Liquid Side: Ø 6.35 (ø 0.25") R32: (Pipe length – standard length) x 12g/m (Pipe length – standard length) x 0.13oz/ft	Liquid Side: Ø 9.52 (ø 0.375") R32: (Pipe length – standard length) x 24g/m (Pipe length – standard length) x 0.26oz/ft



CAUTION DO NOT mix refrigerant types.

Electrical and Gas Leak Checks

Before Test Run

Only perform test run after you have completed the following steps:

- **Electrical Safety Checks** – Confirm that the unit's electrical system is safe and operating properly
- **Gas Leak Checks** – Check all flare nut connections and confirm that the system is not leaking
- Confirm that gas and liquid (high and low pressure) valves are fully open

Electrical Safety Checks

After installation, confirm that all electrical wiring is installed in accordance with local and national regulations, and according to the Installation Manual.

BEFORE TEST RUN

Check Grounding Work

Measure grounding resistance by visual detection and with grounding resistance tester. Grounding resistance must be less than 0.1Ω .

DURING TEST RUN

Check for Electrical Leakage

During the **Test Run**, use an electroprobe and multimeter to perform a comprehensive electrical leakage test.

If electrical leakage is detected, turn off the unit immediately and call a licensed electrician to find and resolve the cause of the leakage.



WARNING – RISK OF ELECTRIC SHOCK

ALL WIRING MUST COMPLY WITH LOCAL AND NATIONAL ELECTRICAL CODES, AND MUST BE INSTALLED BY A LICENSED ELECTRICIAN.

Gas Leak Checks

There are two different methods to check for gas leaks.

Soap and Water Method

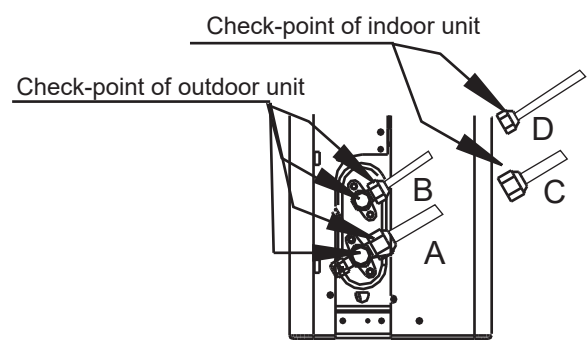
Using a soft brush, apply soapy water or liquid detergent to all pipe connection points on the indoor unit and outdoor unit. The presence of bubbles indicates a leak.

Leak Detector Method

If using leak detector, refer to the device's user manual for proper usage instructions.

AFTER PERFORMING GAS LEAK CHECKS

After confirming that the all pipe connection points DO NOT leak, replace the valve cover on the outside unit.



A: Low pressure stop valve
B: High pressure stop valve
C & D: Indoor unit flare nuts

Test Run

Test Run Instructions

You should perform the **Test Run** for at least 30 minutes.

1. Connect power to the unit.
2. Press the **ON/OFF** button on the remote controller to turn it on.
3. Press the **MODE** button to scroll through the following functions, one at a time:
 - COOL – Select lowest possible temperature
4. Let each function run for 5 minutes, and perform the following checks:

List of Checks to Perform	PASS/FAIL	
No electrical leakage		
Unit is properly grounded		
All electrical terminals properly covered		
Indoor and outdoor units are solidly installed		
All pipe connection points do not leak	Outdoor (2):	Indoor (2):
Water drains properly from drain hose		
All piping is properly insulated		
Unit performs COOL function properly		
Indoor unit louvers rotate properly		
Indoor unit responds to remote controller		

DOUBLE-CHECK PIPE CONNECTIONS

During operation, the pressure of the refrigerant circuit will increase. This may reveal leaks that were not present during your initial leak check. Take time during the Test Run to double-check that all refrigerant pipe connection points do not have leaks. Refer to **Gas Leak Check** section for instructions.

5. After the Test Run is successfully completed, and you confirm that all checks points in List of Checks to Perform have PASSED, do the following:
 - a. Using remote control, return unit to normal operating temperature.
 - b. Using insulation tape, wrap the indoor refrigerant pipe connections that you left uncovered during the indoor unit installation process.

The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details. Any updates to the manual will be uploaded to the service website, please check for the latest version.

● Special Avowal

- 1. The information above has been checked; our company reserves the hermeneutic power to any print errors or misunderstanding on the content.**
- 2. Any technology improvement will add into new instruction without any prior notices. The product appearance and color refer to the practical air conditioner.**
- 3. The e-copy of user manual can be sent by e-mail on requested, please call Shun Hing Electric Works & Engineering Co. Ltd. hotline at 2861 2767.**

● After sale service

Guarantee period state from the date of purchasing to one year. If the product is damaged under proper use, a free repair service is available. Please present the official invoice and the guarantee certificate with the sales point's chop / redemption center's chop for free maintenance. For enquiries, please contact Shun Hing Electric Service Centre Limited hotline at 2406 5666.

Turn off the power and contact Shun Hing Electric Service Centre Ltd. as soon as any of the following events occur.

- The circuit breaker frequently trips or the fuse blows regularly.
- If water or foreign objects have accidentally entered the air conditioner.
- If there is abnormal sound during operation.

信興電工工程有限公司

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