Rasonic

R32變頻式分體冷氣機

A2L

使用說明書及安裝說明書

室內機型號:	室外機型號:
RS-TS9R	RU-TS9R
RS-TS12R	RU-TS12R
RS-TS18R	RU-TS18R
RS-TS24R	RU-TS24R

重要提示:

本設備使用R32輕度易燃製冷劑。
在安裝或操作之前，請仔細閱讀本說明書。
請妥善保存本說明書以備將來參考。

目錄

安全注意事項

在操作和安裝前閱讀安全預防措施真的非常重要
忽略指示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程度分為警告或注意。

符號說明

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壞或嚴重後果。

注意
此信號詞表示重要信息（例如，財產損壞），但不表示危險。

產品使用警告

- 在進行任何清潔、安裝或維修之前，請關閉冷氣機並斷開電源。否則可能會造成觸電。
- 如果出現異常情況（如燒焦的氣味），立即關閉設備並斷開電源。請聯繫您的經銷商以獲取指示，以避免觸電、火災或受傷。
- 切勿將手指、棍棒或其他物品插入進氣口或出氣口。這可能會造成傷害，因為風扇可能以高速旋轉。
- 切勿在設備附近使用易燃噴霧，如髮膠、亮漆或油漆。
  這可能會引起火災或燃燒。
- 切勿在易燃氣體附近或周圍操作冷氣機。
  排放的氣體可能會在設備周圍聚集並引起爆炸。
- 切勿在浴室或洗衣房等潮濕的房間操作冷氣機。過多的水可能會導致電氣部件短路。
- 切勿長時間讓身體直接暴露在冷氣中。
- 切勿讓兒童玩耍冷氣機。兒童在機器附近時必須隨時有人監督。
- 如果冷氣機與燃燒器或其他加熱設備一起使用，
  請充分通風，以避免氧氣不足。
- 在某些功能性環境中，如廚房、伺服器房等，建議使用專門設計的冷氣機。
- 此電器可由8歲及以上兒童和身體、感官或精神能力減弱或缺乏經驗和知識的人士使用，但前提是他們已接受監督或指導，以安全方式使用電器並瞭解涉及的危險。兒童不得玩此設備。在無監督的情況下，兒童不得清潔或維護此設備。

- 此設備不應由身體、感官或精神能力減弱，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使用設備的指導。兒童應在監督下使用，以確保他們不會玩弄電器。

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、其服務代理商或具有同等資格的人員更換，以避免危險。
- 安裝時必須正確接地，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線標準、法規和安裝手冊。緊固連接電纜，並牢固夾緊，以防止外部力量損壞端子。不正確的電氣連接可能會過熱並引起火災，也可能導致觸電。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。
- 所有線路必須妥善排列，以確保控制板蓋可以正確關閉。如果控制板蓋未正確關閉，可能會導致腐蝕，並使端子上的連接點發熱、著火或引起觸電。
- 必須按照配線規則在固定配線中設置斷開裝置。
- 切勿拉電源線來拔掉裝置。牢固地握住插頭，從插座中拔出。直接拉電源線可能會損壞電源線，這可能會導致火災或觸電。
- 切勿更改電源線的長度或使用延長線來供電。
- 切勿與其他電器共用插座。不正確或不足的電源供應可能會導致火災或電擊。
- 保持電源插頭清潔。清除積聚在插頭上或周圍的灰塵或污垢。骯髒的插頭可能會導致火災或觸電。
- 如果將電源連接到固定配線，則必須設置具有至少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，並且必須按照配線規則在固定配線中設置斷開裝置。

產品安裝警告

- 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、電擊或火災。

- 安裝必須按照安裝說明進行。
  安裝不當可能會導致漏水、電擊或火災。
- 請聯繫授權服務技術人員進行此機器的維修或保養。
  本機器應依照國家電線規範安裝。
- 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、電擊、火災，並可能導致機器故障。

- 將機器安裝在能夠支撐機器重量的堅固位置。如果選擇的位置無法支撐機器的重量，或安裝不當，機器可能會掉落並造成嚴重傷害和損壞。

- 根據本說明書中的指示安裝排水管。不當排水可能會對您的房屋和財產造成水損。

- 對於具有輔助電熱器的機器，切勿將機器安裝在距離任何可燃材料1米（3英尺）以內的位置。
- 切勿將機器安裝在可能暴露於可燃氣體泄漏的位置。如果可燃氣體在機器周圍積聚，可能會引起火災。
- 在所有工作完成之前，請勿接通電源。
- 當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。

- 如何將設備安裝到其支撐上，請詳細閱讀「室內機安裝」和「室外機安裝」部分的信息。

注意

- 如果您長時間不使用冷氣機，請關閉冷氣機並斷開電源。

- 在暴風雨期間，請關閉並拔掉設備的插頭。
- 確保冷凝水能從設備中無阻礙地排出。
- 切勿用濕手操作冷氣機。這可能會引起觸電。
- 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。
- 切勿在門窗打開或濕度非常高的情況下讓冷氣機長時間運行。

清潔和維護警告

- 在清潔前請關閉裝置並斷開電源。未能如此操作
  可能會引電擊。
- 切勿用過量的水清潔冷氣機。
- 切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。

環境保護

2018年12月31日起，被棄置受管制電器處置管制、進出口管制及堆填區棄置禁令正式實施。任何人儲存、處理、再加工或循環再造被棄置受管制電器，均須取得廢物處置牌照；輸入及輸出被棄置受管制電器均須領有許可證。堆填區及其他指定廢物處置設施（例如廢物轉運站）則不會再接收和處置被棄置受管制電器。

使用**R32**製冷劑之警告

- 當使用易燃製冷劑時，設備應存放在通風良好的區域，該區域的房間大小應符合操作規定 。
- 室內不得使用可重複使用的機械連接器和擴口接頭。
- 當室內重複使用機械連接器時，密封部件應更換。
  當室內重複使用擴口接頭時，擴口部分應重新製造。
- 室內使用的機械連接器應符合ISO 14903。
- 除製造商推薦的方法外，不得使用其他方法加速除霜過程或清潔。

- 本設備應存放在沒有持續運行的點火源（例如：明火、正在運行的燃氣設備或正在運行的電熱器）的房間內。

- 請勿刺穿或燃燒。
- 請注意，製冷劑可能不含氣味。

規格

產品型號	RS-TS9R/RU-TS9R	RS-TS12R/RU-TS12R	RS-TS18R/RU-TS18R	RS-TS24R/RU-TS24R
電源	220-240V~50Hz,1Ph			
製冷量	2600W	3500 W	5300W	7000W
製暖量	/	/	/	/
額定電流	9.0A	9.0A	13.5A	16.0A
額定功率輸入	2050W	2050W	3000W	3550W
防水等級	IPX4			

開始前確認

注意 : 運行溫度

當您使用冷氣機超出以下溫度範圍時，某些安全保護功能可能會啟動，導致機器停用。

變頻分體式

	製冷模式	除濕模式
室內溫度	16°C~32°C(60°F~90°F)	10°C~32°C(50°F~90°F)
室外溫度	0°C~50°C(32°F~122°F)	0°C~50°C(32°F~122°F)

對於帶有輔助電加熱的室外機

當室外溫度低於0°C (32°F) 時，我們強烈建議始終保持機器插電，以確保平穩運行。

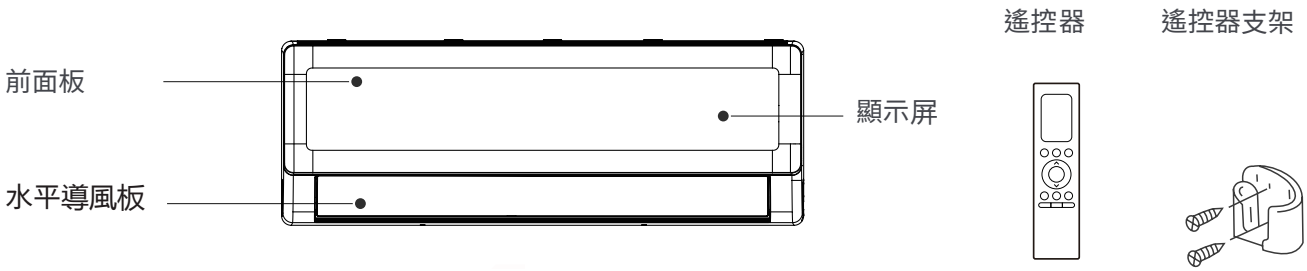
注意:室內相對濕度低於80%。如果冷氣機運行超出此數值，冷氣機表面可能會吸引冷凝水。請將垂直送風百葉設置到最大角度（垂直於地面），並設置為高風速模式。

認識冷氣機

注意

- 不同型號的前面板和顯示窗可能不同。您購買的冷氣機可能不包含以下所有指示燈。請檢查您購買的室內機顯示窗。
- 本說明書中的插圖僅供說明使用。您室內機的實際外形可能略有不同。以實際外形為準。

室內機顯示



顯示代碼	顯示代碼含義
88 888 kW A	• 顯示溫度、運行功能和錯誤代碼。
	• 當負離子功能開啟時。
ECO	• 當 ECO+功能開啟時。
	• 當無線遙控功能啟用時。
0n （3秒時）	• 定時開機已設置（如果機器關機，“ 0n ”在定時開機設置時保持亮起）。 • 搖擺、強力或寧靜功能已啟動。。
0F （3秒時）	• 定時關機已設置。 • 搖擺、強力或寧靜功能已關閉。
CL	• 當自動清潔功能啟動時。
dF	• 當除霜啟動時。

為了進一步優化您的裝置性能，請執行以下操作：

· 保持門窗關閉。

. 通過使用定時開機和定時關機功能限制能源使用。

. 切勿阻塞進風口或出風口。

. 定期檢查並清潔空氣過濾網。

更多功能

注意

您購買的冷氣機並非所有功能都可用，請檢查您的室內機顯示屏和遙控器。

- **自動重啟**
  如果機體斷電，它將在恢復供電後自動以之前的設置重新啟動。

- **負離子功能**
  離子發生器將被激活，並有助於淨化室內空氣。

- **主動清潔功能**
  --自動清潔技術會在灰塵附著於熱交換器時，自動結霜然後迅速解凍，以洗掉灰塵。會聽到“pipi”的聲音。
  自動清潔運行用於產生更多的冷凝水以提高清潔效果，冷空氣將吹出。清潔後，內部風輪然後繼續運行 ，以熱空氣吹乾蒸發器，從而保持內部清潔。

  --當此功能打開時，室內機顯示窗口會出“CL”，20到45分鐘後，機器將自動關閉並取消自動清潔功能。

- **風葉角度記憶**
  當您啟動冷氣機時，風葉將自動恢復到之前的角度。

- ECO+ 功能
  在製冷模式下，風扇速度將變為自動，設定溫度保持不變，這帶來了更舒適的感覺和節能效果 ，並減少了溫度波動。

- **製冷劑泄漏檢測**
  當室內機檢測到製冷劑泄漏時，將自動顯示“ELOC”。

- **增強功能**
  急速冷凍功能可以非常迅速地冷卻整個房間 。這是通過產生大風量和高氣流來實現的。

- **無線控制**
  無線控制允許您使用手機和無線連接控制空調。

- **睡眠運行**
  SLEEP 功能用於在您睡覺時減少能源使用。
  當 SLEEP 功能啟動時，空調將智能調整溫度和風扇速度，以提供更舒適的睡眠環境。
  在睡眠運行模式下，您可以自由設置風扇速度和風向角度。睡眠功能在運行 9 小時後將自動退出。

  注意：

  -SLEEP 功能在風扇和除濕模式下不可用。

- **智能濕度控制功能**
  在製冷模式下，當此功能啟動時，風扇速度將變為自動，設定溫度保持不變，系統可以控制室內濕度，確保濕度既不太乾燥也不太潮濕，同時保持舒適的溫度。

  此功能只能通過遙控器或應用程式控制啟動。

手動操作（無遙控器）

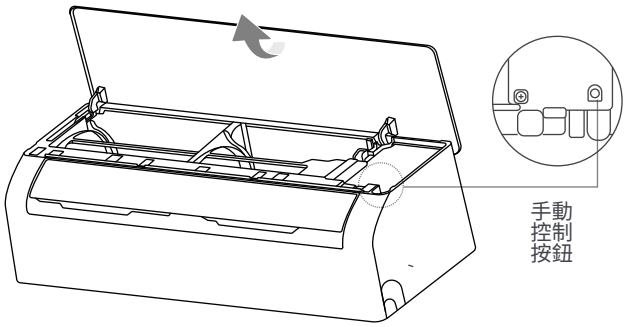
⚠ 注意：產品使用

手動按鈕僅用於測試和緊急操作。

除非遙控器遺失且絕對必要時，
勿使用此功能。要恢復
正常操作，使用遙控器
啟動冷氣機。
冷氣機必須在手動操作前關閉。

要手動操作您的冷氣機：

- 按下面板兩側的按鈕，然後將面板向上提起，直到聽到卡嗒聲。
- **找到手動控制按鈕**
  電氣控制箱的右側。
- **按下手動控制按鈕一次**
  以啟動強制自動模式。
- 再次按壓**手動控制按鈕**以啟動強制製冷模式。
- **第三次按下手動控制按鈕**
  關閉冷氣機。
- 關閉前面板。



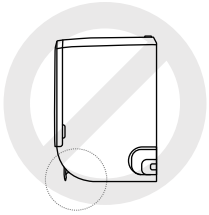
設定氣流角度

注意 : 設定上下氣流（遙控器）

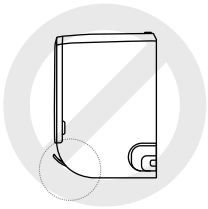
在裝置開啟時，使用遙控器上的搖擺按鈕設定氣流方向。請參閱遙控器操作說明。

關於導風板角度的注意事項

- 在使用製冷或除濕模式時，不要將導風板設置得太垂直角度長時間使用。這會使水在導風板上凝結，滴到您的地板或傢俱上。



- 在使用製冷模式時，將導風板設置得太小角度可能會因空氣流量受限而降低冷氣機的性能。



注意

不要用手移動百葉窗。您可以關閉裝置並拔下插頭幾秒鐘以重新啟動裝置。當您嘗試時，百葉窗將被重置。

設置左右風向

左右風向可通過遙控器設置。請參閱遙控器說明書。

注意

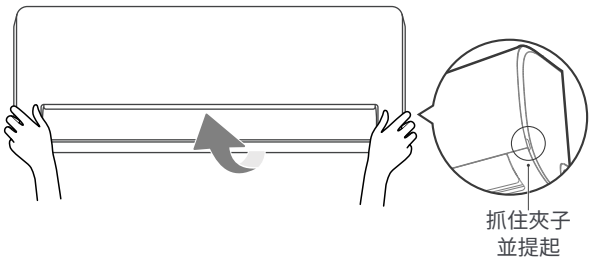
不要將手指放入或靠近冷氣機的風扇和吸氣側。冷氣機內的高速風扇可能會造成傷害。

保養和維護

⚠ 注意

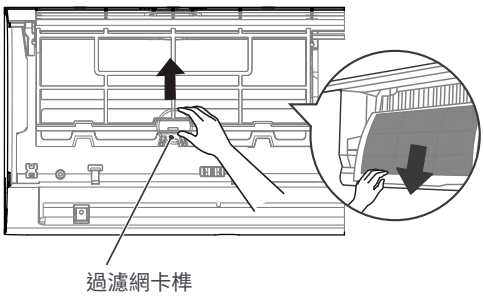
- 如果冷氣機堵塞，您的裝置冷卻效率和健康可能會受到損害。請確保每兩週清潔一次過濾網。
- 在清潔或維護之前，請始終關閉您的冷氣機系統並斷開其電源。
- 在關閉裝置後至少10分鐘內，不要觸碰銀離子濾網。
- 只能使用柔軟的乾布擦拭裝置。如果裝置特別骯髒，可以使用浸過溫水的布擦拭乾淨。
- 不要使用化學品或化學處理的布清潔裝置。
- 不要使用苯、油漆稀釋劑、拋光粉或其他溶劑清潔裝置。它們可能會導致塑料表面開裂或變形。
- 不要使用超過40°C（104°F）的熱水清潔前面板。這可能會導致面板變形或變色。

清潔您的室內機和空氣濾網



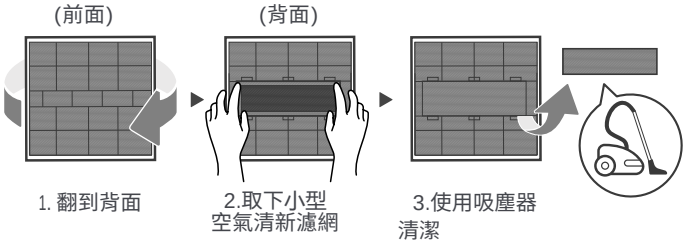
步驟 1：

打開室內機的前面板。



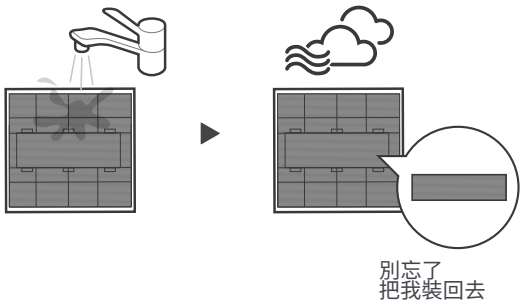
步驟 2：

首先按下過濾網末端的卡榫以鬆開扣環，然後將其抬起，再向自己方向拉出。



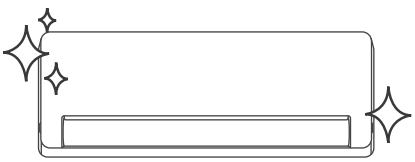
步驟 3：

如果您的濾網有一個小型空氣清新濾網，將其從較大的濾網上解開。使用手持吸塵器清潔此空氣清新濾網 。



步驟 4：

用溫肥皂水清潔大型空氣濾網。務必使用溫和的洗滌劑。
用新鮮水沖洗濾網，然後搖掉多餘的水。在涼爽乾燥的地方晾乾，並避免直接日曬。



步驟 5：

晾乾後，將小型空氣清新濾網重新夾到較大的濾網上，然後滑回室內機。最後，關閉室內機的前面板。

⚠ 注意

- 在更換過濾網或清潔之前，請關閉裝置並斷開其電源供應。
- 在取出過濾網時，請勿觸碰裝置內的金屬部件。尖銳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引發電擊。
- 在晾乾濾網時，不要讓其直接暴露在陽光下。這可能會使濾網收縮。
- 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。
- 任何機器維修都應由授權經銷商或有執照的服務提供商進行。

維護您的冷氣機。

維護 –長期不使用

如果您計劃長時間不使用冷氣機，請按照以下步驟操作：

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

確保沒有任何東西阻塞所有進氣口和出氣口

更換電池

故障排除

⚠ 注意

如果發生以下任何情況，請立即關閉您的設備！
- 電線損壞或異常發熱
- 您聞到燒焦的氣味
- 設備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設備中流出

不要嘗試自行修理！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，機器無法啟動	機器具有3分鐘保護功能，可防止機器過載。機器在關機後的三分鐘內無法重新啟動。
設備從製冷模式切換到風扇模式	機器可能會更改設置以防止機器上結霜。 一旦溫度升高，機器將再次以先前選擇的模式運行。 設定溫度已達到，此時裝置關閉壓縮機。當溫度再次波動時，裝置將繼續運行。
室內機產生白色霧氣	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。
室內機和室外機均產生白色霧氣	當裝置在除霜後重新啟動於制熱模式時，由於除霜過程中產生的濕氣，可能會排放白色霧氣。
室內機發出噪音	當風葉重置其位置時，可能會產生風聲。
室內機和室外機均發出噪音	運行期間產生低嘶嘶聲：這是正常的，是由於製冷劑氣體通過室內和室外機時造成的。 系統啟動、剛剛停止運行或正在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	設備會根據其當前運行模式發出不同的聲音。
灰塵從室內或室外機散出	裝置在長時間不使用期間可能會積累灰塵，當裝置開啟時會散發出來。這可以通過在長時間不活動期間覆蓋裝置來減輕。
裝置散發出異味	裝置可能會吸收環境中的氣味（如傢俱、烹飪、香菸等），這些氣味在運行期間會散發出來。
	裝置的濾網已發黴，需要清潔。
室外機的風扇不運轉	在運行期間，風扇速度會被控制以優化產品運行。
運行不穩定，不可預測，或裝置無回應	手機基站和遙控增強器的幹擾可能會導致裝置故障。 在此情況下，請嘗試以下操作： • 斷開電源，然後重新連接。 • 按遙控器上的開/關按鈕重新啟動運行。

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。請詳細描述冷氣機故障情況以及您的型號。

⚠ 注意

當故障發生時，請在聯繫維修公司之前檢查以下幾點。某些情況下可能不需要維修。

問題	可能的原因	解決方案
冷卻性能差	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	聯繫信興電器服務中心有限公司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
	任一單元的進風口或出風口被阻塞	關閉冷氣機，移除阻塞物並重新開啟
	門窗打開	在運行冷氣機時確保所有門窗都關閉
	過多的熱量由陽光產生	在高溫或強烈陽光期間關閉窗戶和窗簾
	房間內熱源太多（人、電腦、電子設備等）	減少熱源數量
	由於泄漏或長期使用導致製冷劑不足	聯繫信興電器服務中心有限公司。
	靜音功能已啟用（可選功能）	靜音功能通過降低運行頻率來降低產品性能。關閉靜音功能。

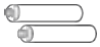
問題	可能的原因	解決方案
裝置未工作	停電	等待電力恢復
	電源已關閉	打開電源
	保險絲燒斷	聯繫信興電器服務中心有限公司更換保險絲
	遙控器電池耗盡	更換電池
	裝置的3分鐘保護已啟用	重新啟動冷氣機後等待三分鐘
	定時器已啟用	關閉定時器
冷氣機頻繁啟動和停止	系統中的製冷劑過多或過少	聯繫信興電器服務中心有限公司
	不可壓縮的氣體或水分已進入系統。	聯繫信興電器服務中心有限公司
	壓縮機已損壞	聯繫信興電器服務中心有限公司
	電壓過高或 過低	聯繫信興電器服務中心有限公司安裝壓力調節器以調節電壓
指示燈 持續閃爍	此裝置可能會停止運作或繼續安全運行。如果指示燈繼續閃爍或顯示錯誤代碼，請等待約10分鐘。問題可能會自行解決。 如果未解決，請斷開電源，然後再次連接。打開裝置。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。	
室內機顯示窗中出現並以以下字母開頭的錯誤代碼： • E(x), P(x), F(x) • EH(xx), EL(xx), EC(xx) • PH(xx), PL(xx), PC(xx)		

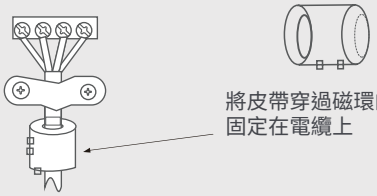
注意:如果您在進行上述檢查和診斷後問題仍然存在，請立即關閉裝置並聯繫信興電器服務中心有限公司。

開始安裝您的冷氣機

檢查配件

冷氣機隨附以下配件。使用所有安裝部件和配件安裝冷氣機。不正確的安裝可能會導致漏水、電擊和火災，或導致設備故障。未隨冷氣機提供的項目必須單獨購買。

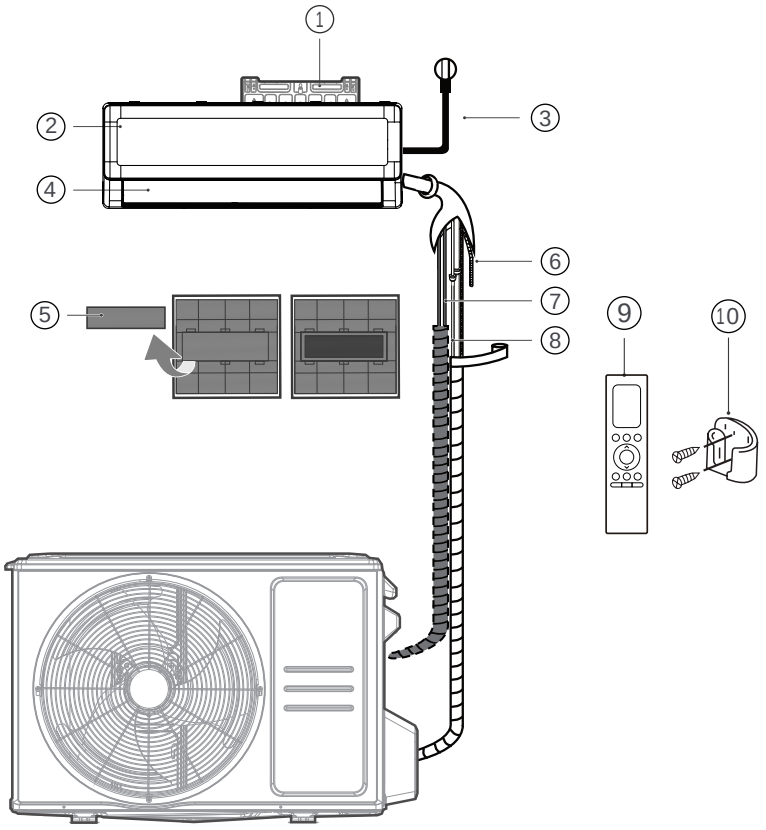
名稱	數量	外形	名稱	數量	外形
說明書	4		遙控器	1	
固定托板	1		乾電池	2	
夾式錨具	5~8 (視型號而定)		遙控器座架	1	
定位螺絲	5~8 (視型號而定)		遙控器支架固定螺絲	2	
銅螺帽 - 用於連接室內機和室外機之間的管路	2		小型空氣清新濾網	2 (視型號而定)	

名稱	形狀		數量(件)
連接管組件	液體側	Φ 6.35(1/4 in)	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。
		Φ 9.52(3/8in)	
	氣體側	Φ 9.52(3/8in)	
		Φ12.7(1/2in)	
		Φ16(5/8in)	
		Φ19(3/4in)	
磁環和皮帶 (如隨機提供，請參閱接線圖將其安裝在連接電纜上。)			視型號而定

安裝概覽

圖示說明：

本說明書中的插圖僅供說明使用。您室內機的實際外形可能略有不同。以實際外形為準。



室內電源供應型號

① 牆壁安裝板

② 前面板

③ 電源線(部分機型)

④ 導風板

⑤ 小型空氣清新濾網

⑥ 排水管

⑦ 信號線

⑧ 製冷劑管路

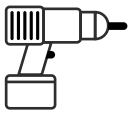
⑨ 遙控器

⑩ 遙控器支架

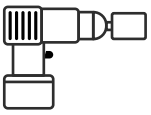
如果您有這些工具就再好不過了

手套

螺絲批 & 扳手



電鑽



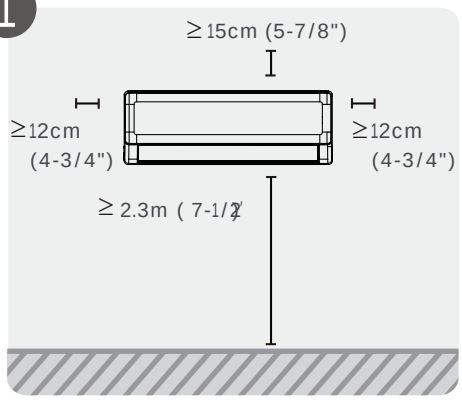
擴孔鑽

護目鏡 & 面罩

電工膠帶

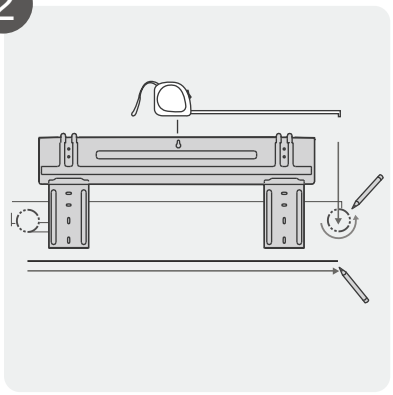
安裝概要 - 室內機

1



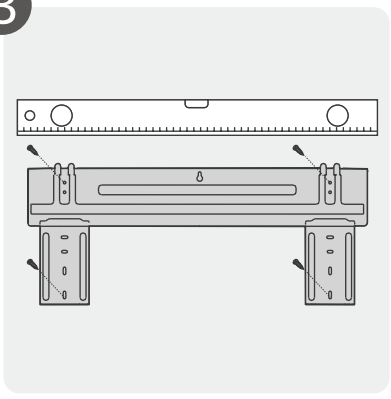
選擇安裝位置

2



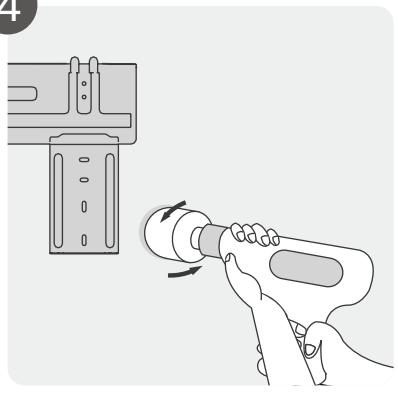
安裝安裝板

3



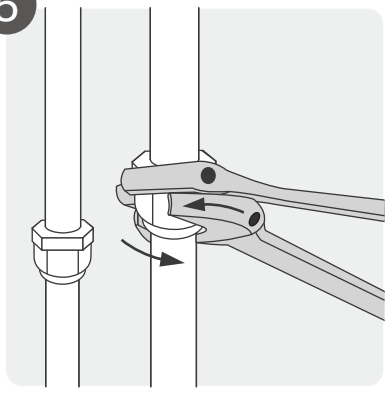
確定牆孔位置

4



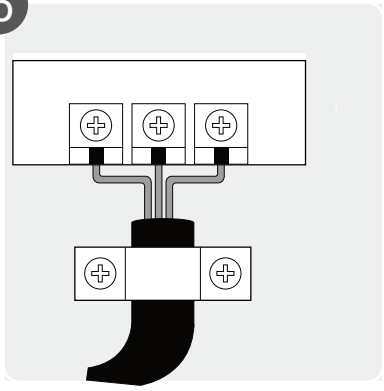
鑽牆孔

5



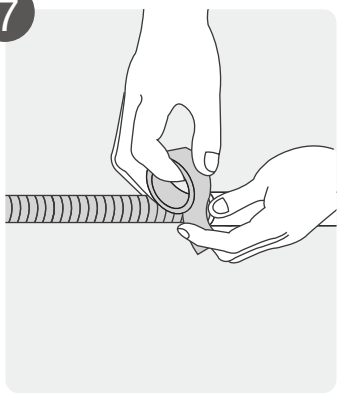
連接管路

6



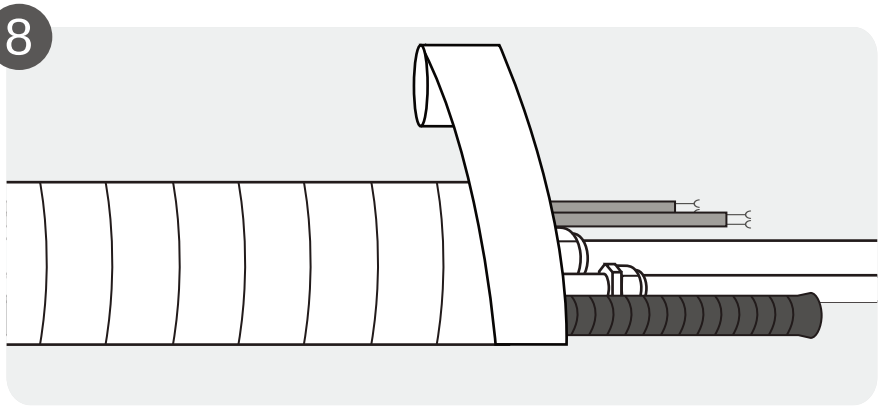
連接電線

7



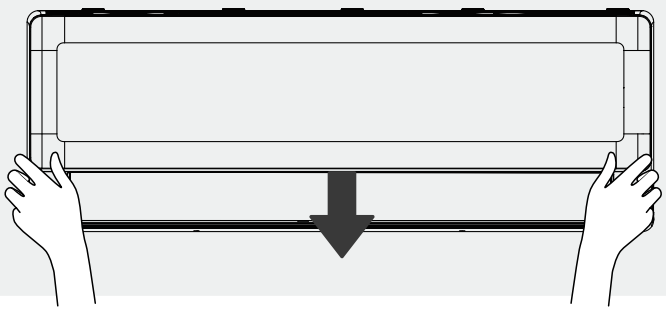
準備排水管

8



包裹管路和電纜

9



安裝室內機

安裝室內機。

1 選擇安裝位置

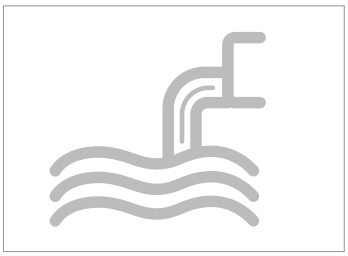
注意: 安裝前

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匹配。

以下標準將幫助您選擇合適的安裝位置。

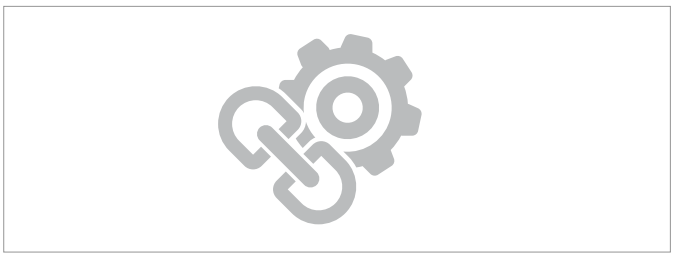
合適的安裝位置應符合以下標準：

☑ 良好的空氣流通



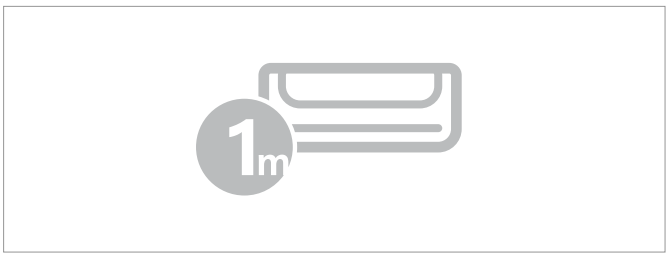
☑ 方便排水

☑ 機器的噪音不會打擾其他人。



☑ 堅固且穩固—位置不會震動

☑ 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

請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

⊘ 直接日光照射的位置

注意：對於產品安裝

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鉆牆孔（見連接管路的鑽牆孔步驟），以便安裝連接室內和室外機的信號電纜和製冷劑管路。所有管路的預設位置均為室內機的右側（面對室內機時）。然而，該機器可以容納左側和右側的管路。

2 鑽牆孔以連接管路

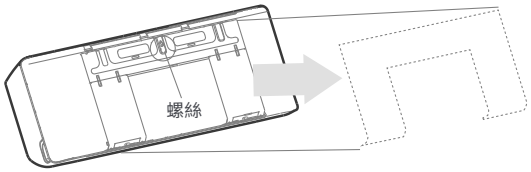
確定牆孔位置

注意：適用於混凝土或磚牆

如果牆壁是由磚、混凝土或類似材料製成，請在牆上鑽5毫米直徑（0.2英寸直徑）的孔，並插入提供的套筒錨。然後通過將螺絲直接擰入夾具錨中，將安裝板固定到牆上。

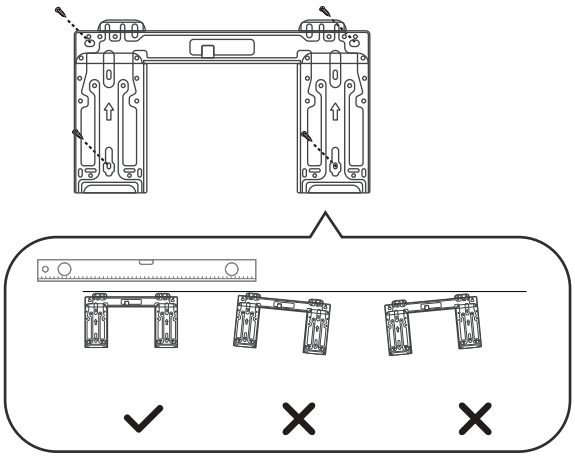
步驟 1：

卸下固定安裝板到室內機背面的螺絲。



步驟 2：

使用提供的螺絲將安裝板固定到牆上。確保安裝板緊貼牆面。

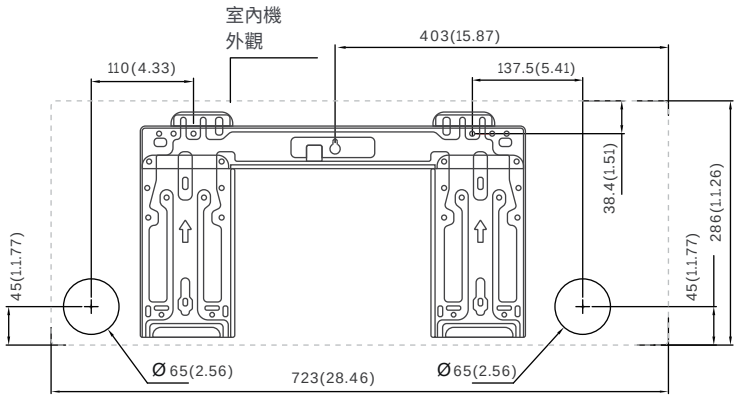


安裝板的正確方向

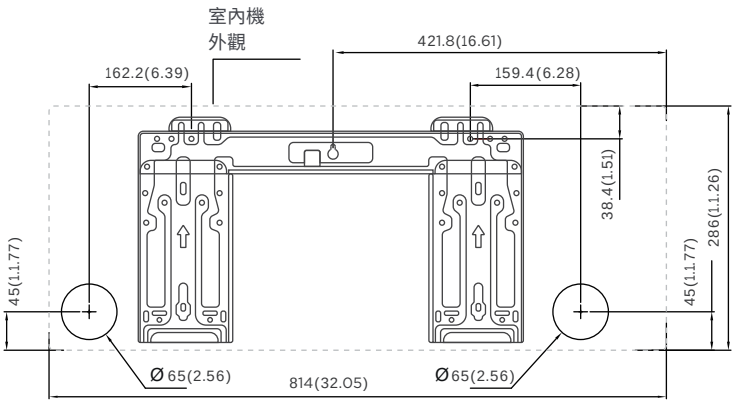
步驟 3：

確認您擁有的安裝板。不同型號有不同的安裝板。參閱以下安裝板尺寸，以幫助您確定最佳位置。

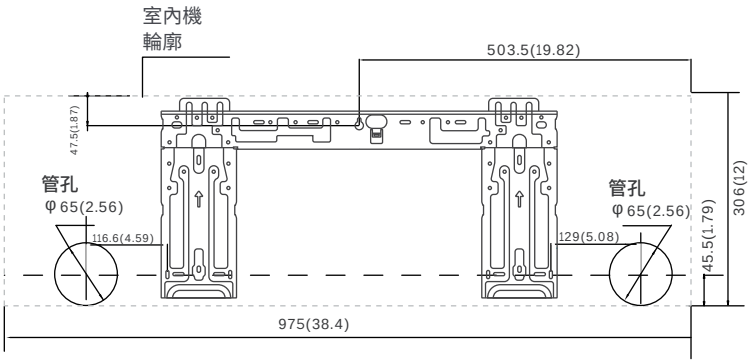
單位：mm(**英寸**)



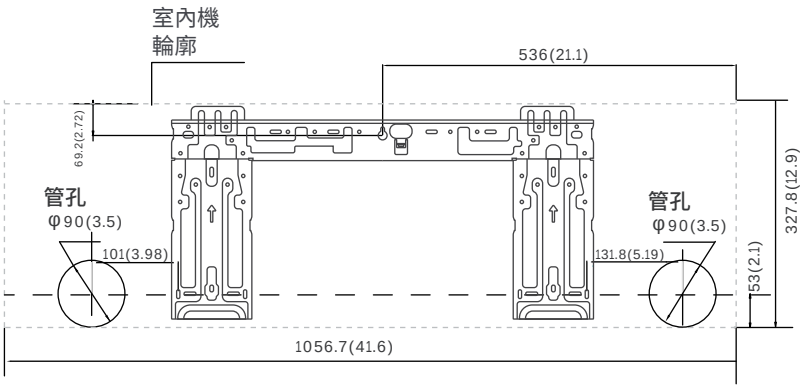
型號 A



型號 B



型號 C

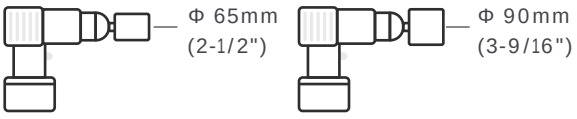


型號 D

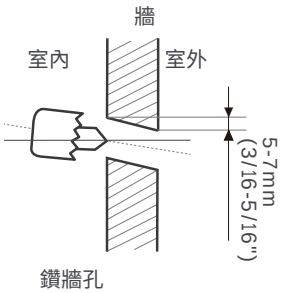
鑽牆孔

⚠ 注意

在鑽牆孔時，請確保避開電線、管道和其他敏感部件。

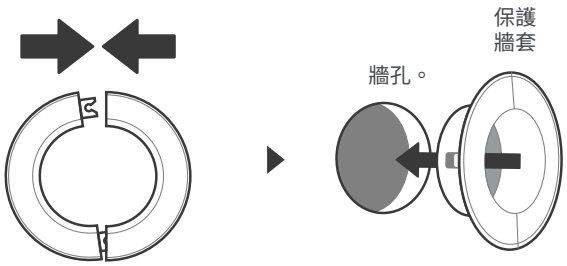


使用65mm (2-1/2") 或 90mm(3-9/16") 的空心鑽（取決於型號）



步驟 1：

使用 65mm (2.5") 或 90mm(3.54") 的空心鑽（取決於型號），在牆上鑽一個孔。確保孔以略微向下傾斜的角度鑽，使孔的室外端比室內端低約 5mm 至 7mm (3/16-5/16")。這將確保正確的排水。



將保護牆套放入孔中。

步驟 2：

將保護牆套放入孔中。
這可以保護孔的邊緣，並在您完成安裝過程時幫助密封孔。

注意：牆孔的大小

牆孔的大小由連接管的直徑決定。當氣體側的管徑為Φ16mm(5/8") 或更大時，牆孔應為 90mm(3.54in)。當氣體側的管徑小於Φ16mm(5/8") 時，牆孔應為 65mm(2.56in)。

3 安裝製冷劑管路 & 排水管

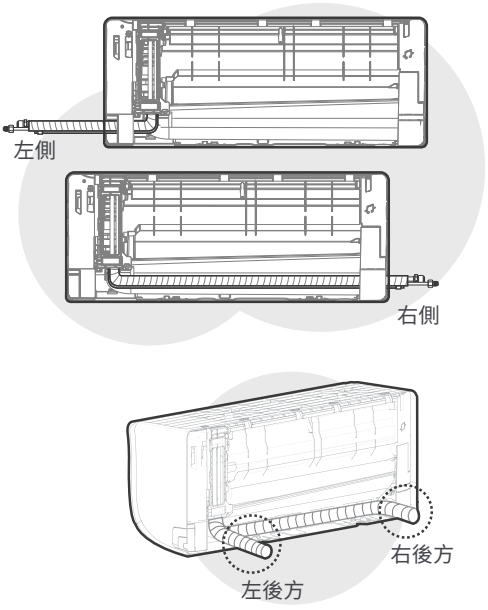
注意

製冷劑管路位於裝置背面附有的絕緣套內。您必須在將管路穿過牆上的孔之前做好準備。請參閱本說明書的『製冷劑管路連接』部分，以獲取有關管路擴口和擴口扭矩要求、技術等的詳細說明。

連接製冷劑管路

四面出管

根據牆孔相對於安裝板的位置，選擇管路從哪一側穿出機體。您有四個管路出口方向的選擇。



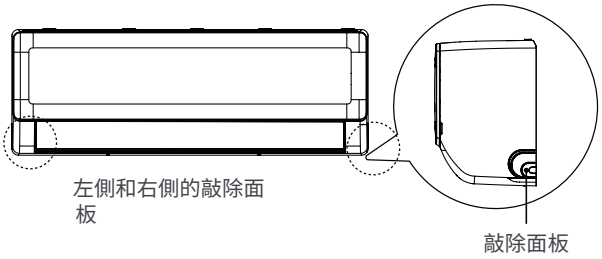
管路連接注意事項為了確保管路運行和機器安裝後靠牆時有足夠的空間，建議將排水管連接到右側（當您面對機體背面時）。

當選擇左側或右側管路時，請確保管路水平穿出，以免影響下前面板的安裝。

⚠ 注意

在彎曲管路使其遠離設備時，請極其小心，不要使管路變形或損壞。管路上的任何凹陷都會影響設備的性能。

連接製冷劑管路



1. 如果牆孔位於機體後方，請保留敲除面板。 如果牆孔位於室內機的一側，請從該側移除塑料敲除面板。 如果塑料面板難以手動移除，可以使用鉗子或剪刀。

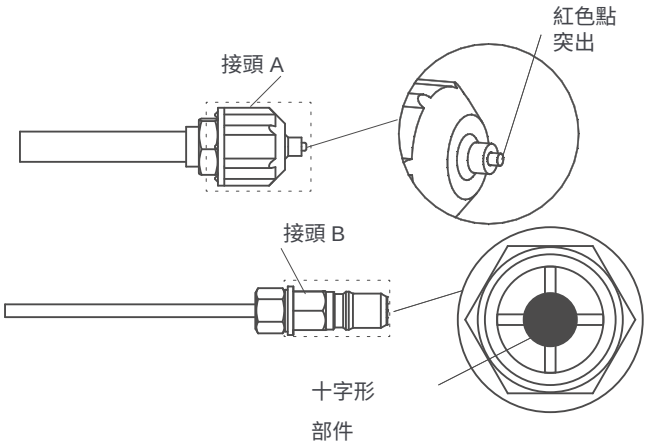
2. 敲除面板上已製作出凹槽，以便於切割。 槽的大小由管路的直徑決定。

3 . 如果牆內已嵌入連接管路，請直接進行連接排水管步驟。 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的連接管路上。

詳細說明請參閱本說明書的製冷劑管路連接部分。

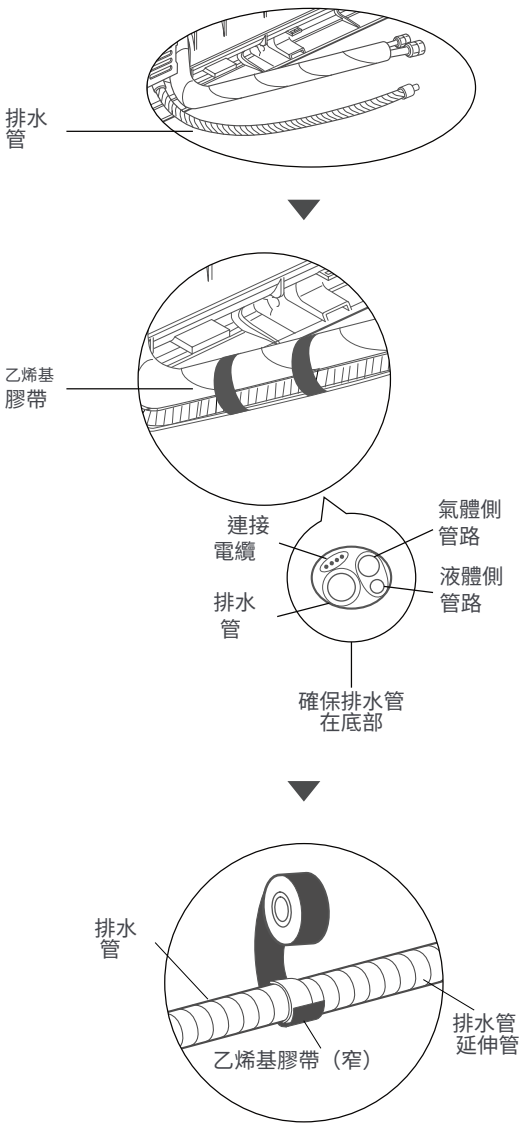
⚠ 注意

對於採用以下管接頭的裝置，請嚴格按照以下指示進行管路工作。



- 在進行製冷劑管路連接之前，務必佩戴工作手套和護目鏡，並記住接頭 A 和 B 不得直接對準人。
- 使用工具壓住接頭 B 的十字形部件約 5~10 秒，直到接頭 A 的紅色突出點完全縮回。
- 拆除連接器 A 和 B，然後進行室內機和室外機之間的製冷劑管路連接。

連接排水管



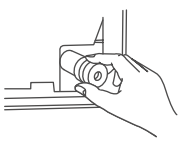
步驟 1：

排水管可以連接在左側或右側.為了確保正確排水，請將排水管連接在與製冷劑管路離開機器同一側。將排水管延伸管（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，請用泡沫管保溫材料包裹，以防止結露。
- 取下空氣過濾網，向排水盤倒入少量水，確保水能從機器中順暢流出。

⚠ 注意

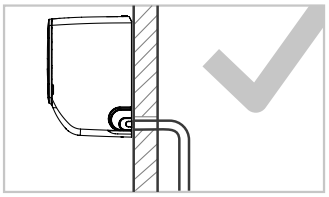
封堵未使用的排水孔



為防止不必要的 泄漏，您必須使用提供的橡膠塞封堵未使用的排水孔。

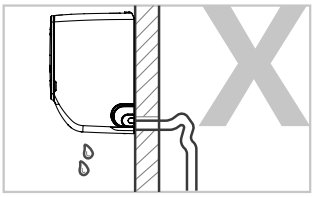
排水管放置注意事項

請按照以下圖示安排排水管。



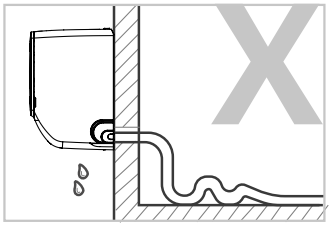
正確

確保排水管沒有彎曲或凹陷以確保正常排水。



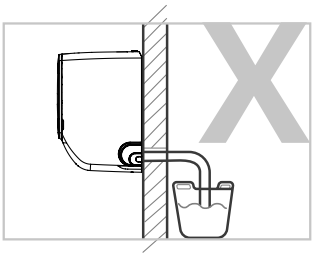
不正確

排水管中的彎曲會形成水陷阱。



不正確

排水管中的彎曲會形成水陷阱。



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。

4 電氣工作準備

⚠ 警告

- **在進行任何電氣工作之前，請閱讀這些規定。**
- **在進行任何電氣或配線工作之前，請關閉系統的主電源。**

1. 所有電線必須符合當地和國家的電氣規範，並由合格電工安裝。
2. 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。
3. 如果電源供應存在嚴重的安全問題，請立即停止工作。向客戶解釋您的理由，並在安全問題得到妥善解決之前拒絕安裝設備。
4. 如果將電源連接到固定線路，則必須在固定線路中整合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批准的斷路器或開關。
5. 僅將裝置連接到單獨的分支電路插座。不要將其他電器連接到該插座。
6. 確保正確接地冷氣機。
7. 每根電線都必須牢固連接。鬆動的電線可能會導致端子過熱，導致產品故障和可能的火災。
8. 不要讓電線接觸或靠在製冷劑管、壓縮機或機器內的任何運動部件上。
9. 為了避免觸電，切勿在斷開電源後立即觸摸電氣部件。關閉電源後，等待10分鐘或更長時間，再觸碰電氣部件。
10. 電源電壓應在額定電壓的90-110%之內。電源不足可能會導致故障、電擊或火災。

⚠警告

所有配線必須嚴格按照室內機前面板背面的配線圖進行。
位於室內機前面板的背面。

連接信號和電源線纜

信號線纜實現室內機和室外機之間的通信。您必須首先選擇合適的線纜規格，然後再進行連接準備。

電纜類型

- 室內電源電纜（如適用）：
  H05VV-F　　或H05V2V2-F
- 室外電源電纜：H07RN-F　　或H05RN-F
- 信號線纜：H07RN-F

小截面積電源和信號線纜（供參考）

電器的額定電流(A)	名義截面 面積 (mm)
> 3 且　　≤6	0.75
> 6 且 ≤　10	1
> 10 且　　≤16	1.5
> 16 且　　≤25	2.5
> 25 且　　≤32	4
> 32 且　　≤40	6

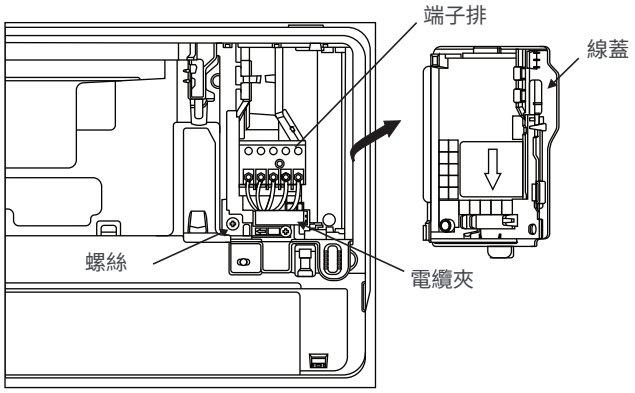
選擇合適的電纜尺寸

電源電纜、信號電纜、熔斷器和開關的尺寸由冷氣機的最大電流決定。最大電流標記在冷氣機側面板上的銘牌上。請參閱此銘牌以選擇合適的電纜、熔斷器或開關。

1. 打開室內機的前面板。
2. 使用螺絲批，打開室內機右側的線盒蓋。這將露出端子排。
3. 鬆開端子排下方的線夾，並將其放在一旁。
4. 面對冷氣機的背面，卸下左下角的塑料面板。
5. 將信號線從冷氣機的背面穿過此槽到前面。
6. 面對冷氣機的前面，根據室內機的接線圖連接線路 ，連接U形端子並牢固地將每根線固定到其對應的端子上。
7. 檢查每一個連接是否牢固，使用電纜夾將信號電纜固定到冷氣機上。將電纜夾緊緊地擰緊。
8. 將線路蓋板重新安裝到冷氣機的前面，並將塑料面板重新安裝到背面。

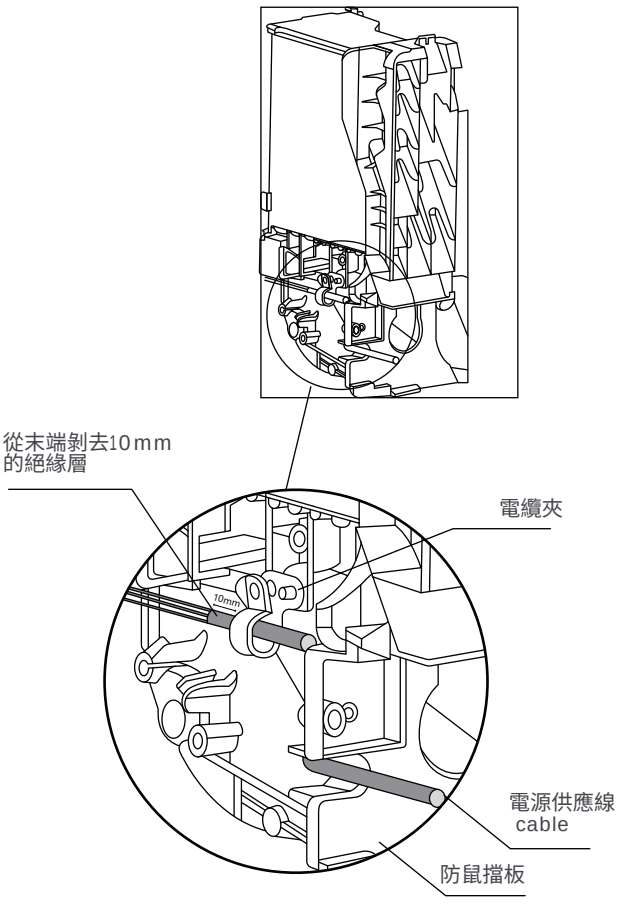
不要混淆火線和零線

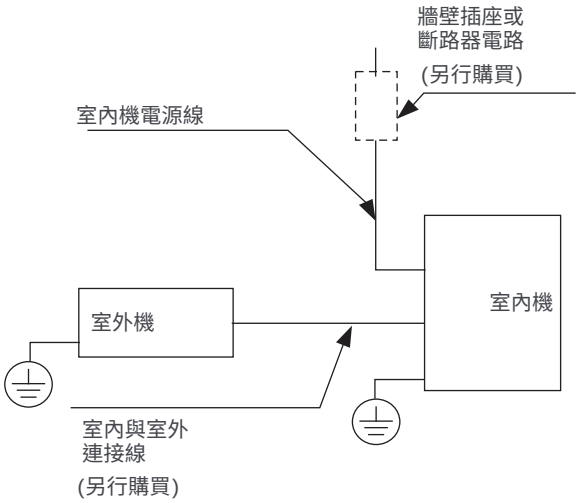
這很危險，可能會導致冷氣機故障。



注意：
對於需要現場連接電源線的某些機型，首先需要拆下前面板，將電源線穿過室內機後部的鼠擋板上的電纜穿孔，然後從前面拉出，並用電纜夾固定，如下圖所示。

電源線通過電纜夾後，從末端剝去10mm的絕緣層，然後將電線連接到端子上。



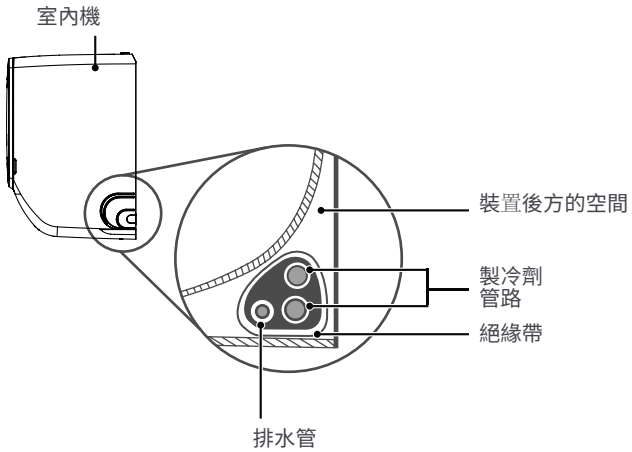


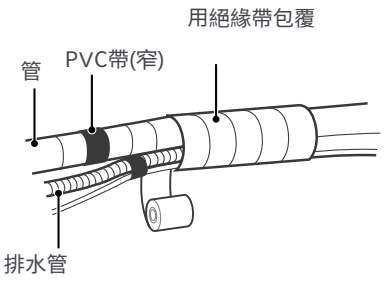
室內電源供應型號

5 包裹管路和電纜

注意

在將管路和排水管穿過牆孔之前，必須將它們捆綁在一起以節省空間、保護它們並隔熱。





步驟 1：

如上所示，將排水管和製冷劑管捆綁在一起。

步驟 2：

使用粘性PVC帶，將排水管固定在製冷劑管的底部。

步驟 3：

使用絕緣帶，將製冷劑管和排水管緊密地纏繞在一起 。再次檢查所有物品是否已捆綁。

步驟 4：

完成配線和管路連接後，重新安裝下框架。

排水管必須在底部

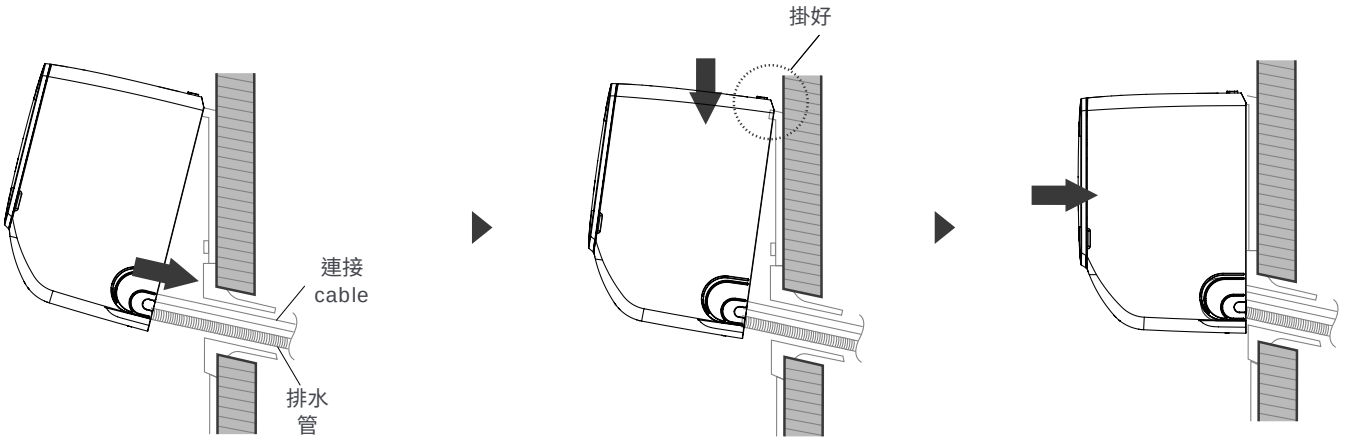
確保排水管位於捆綁物的底部。將排水管放在捆綁物的頂部可能會導致排水盤溢出，進而引發火災或水損。

不要包覆管路末端

在包覆捆綁物時，保持管路末端不包覆。您需要在安裝過程結束時檢查泄漏（請參閱本說明書的電氣檢查和泄漏檢查部分）。

6 安裝室內機

如果您已安裝新的連接管路到室外機，請按照以下步驟操作：



將管子放入牆孔　　將其鉤住並輕輕按下以固定　　檢查裝置是否牢固安裝

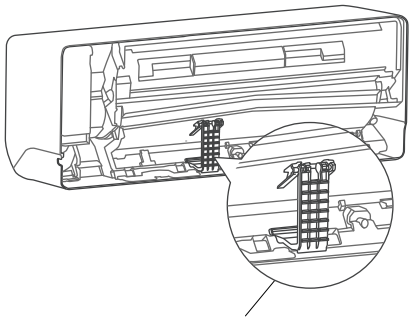
- 如果您已經將製冷劑管路穿過牆壁上的孔，請進行到第4點。
- 否則，請再次檢查製冷劑管的兩端是否已密封，以防止灰塵或外來物質進入管內。

- 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穿過。

- 將室內機的頂部掛在安裝板的上鉤上。
- 檢查冷氣機是否牢固地掛在安裝板上，方法是對機體的左側和右側施加輕微的壓力。機體不應晃動或移位。

- 均勻施力，向下按壓機體的下半部分。繼續向下按壓，直到機體卡入安裝板底部的鉤子上。

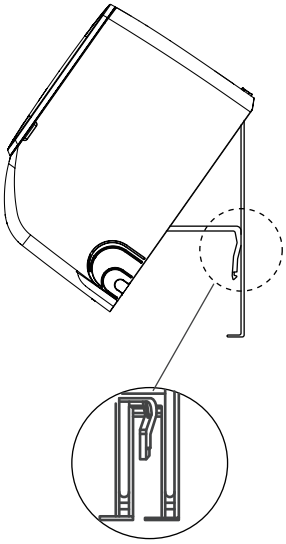
- 再次檢查機體是否牢固地固定，方法是對機體的左側和右側施加輕微的壓力。



裝置後方的支架

如果製冷劑管路已嵌入牆壁，
請按照以下步驟操作：

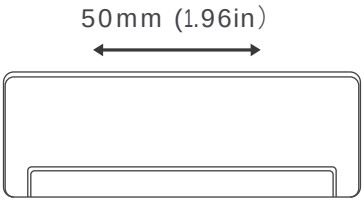
- 將室內機的頂部掛在安裝板的上鉤上。
- 使用機體後部的支架支撐機體，
  以便連接製冷劑管路，信號電纜和排水管。
- 連接排水管和製冷劑管路（請參閱本說明書的製冷劑管路
  連接部分的說明）。
- 保持管路連接點暴露以進行漏檢（請參閱本說明書的電氣檢查和
  漏檢部分）。
- 漏檢後，用絕緣帶包裹連接點。
- 釋放支撐機體的支架。
- 使用均勻的壓力，向下按壓機體的下半部分。繼續向下按壓，直
  到單元卡入安裝板底部的鉤子上。



使用機器背面的支架抵住安裝
板以支撐機器

注意：機器可調整

請注意，安裝板上的鉤子比機器背面的孔小。
如果您發現沒有足夠的空間將嵌入式管道連接到室內機，則可以根據型號將機器向左或向右調整約50mm（1.96英寸）。



向左或向右移動

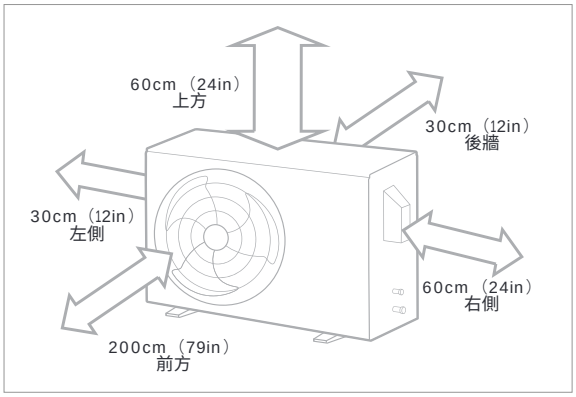
安裝室外機。

1 選擇安裝位置

注意：安裝前

在安裝室外機之前，您必須選擇一個合適的位置。以下標準將幫助您選擇安裝室外機的合適位置。

合適的安裝位置應符合以下標準：



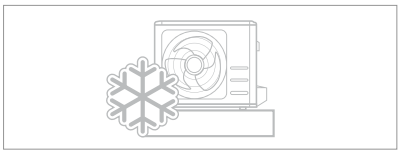
☑ 符合上述安裝空間要求的所有空間要求。

☑ 良好的空氣流通和通風。

☑ 堅固—位置可以支撐裝置且不會震動。

☑ 裝置產生的噪音不會打擾其他人。

☑ 避免長時間直接日曬或雨淋。



☑ 在預期會下雪的地方，採取適當措施防止冰層積聚和線圈損壞。

注意： 按照當地法規和規定安裝設備，不同地區可能有所差異。

⚠注意：

極端天氣的特殊考慮

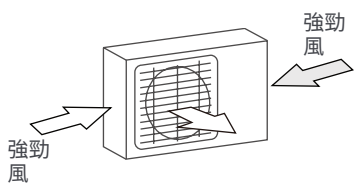
如果裝置暴露在強風中：

安裝裝置時，使空氣出口風扇與風向呈90°角。如有需要，在裝置前方建造屏障，以保護其免受極強風的侵襲。請參閱下圖。

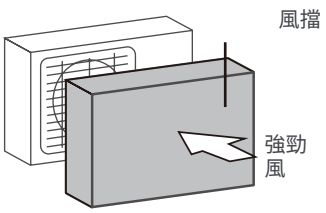
如果裝置經常暴露在大雨或雪中：

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

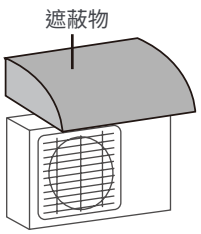
如果裝置經常暴露在鹽霧中（海邊）：使用專門設計以抵抗腐蝕的室外機。



與風向呈90°角



建造風擋
以保護裝置



建造遮蔽物
以保護裝置

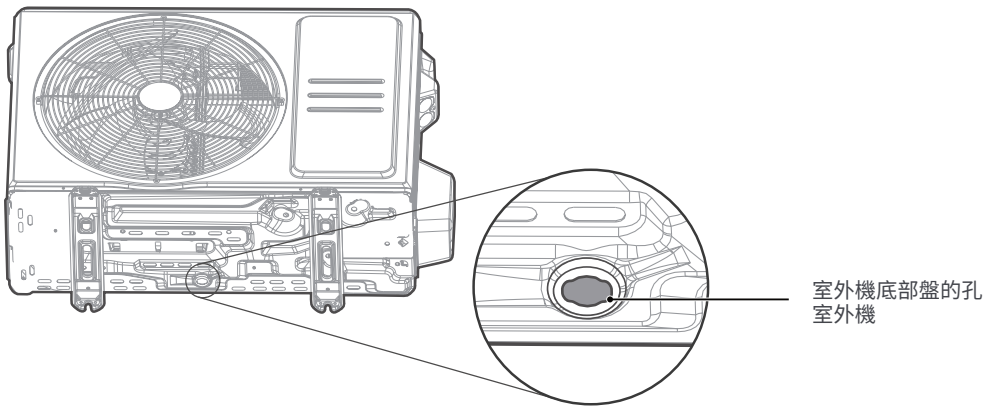
請勿在以下位置安裝機器：

- ⊘ 靠近會阻擋進風口和出風口的障礙物。
- ⊘ 靠近會被熱風排放傷害的動物或植物。
- ⊘ 在會接觸到大量灰塵的位置。
- ⊘ 靠近公共街道、人羣聚集的地方，或噪音會干擾他人的地方。
- ⊘ 靠近任何可能產生可燃氣體的來源。
- ⊘ 在會接觸到過多鹽分空氣的位置。

2 安裝排水接頭

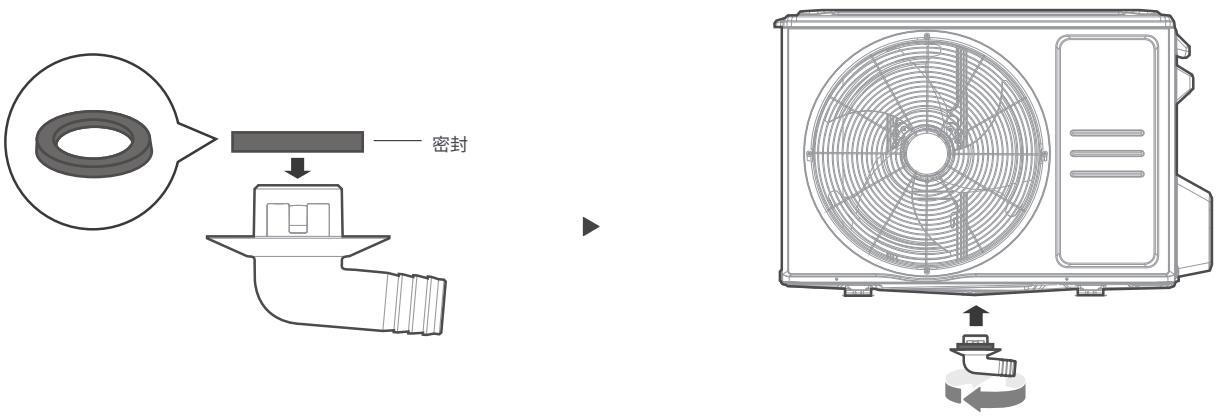
注意: **安裝前**

在將室外機固定到位之前，必須在機器底部安裝排水接頭。
對於底部盤內建有多個孔以在除霜時適當排水的機型，無需安裝排水接頭。



步驟 1：

找到室外機底部盤的孔。



步驟 2：

- 將橡膠密封圈套在將要連接到室外機的排水接頭端。
- 將排水接頭插入機器底部盤的孔中。排水接頭會卡入到位。
- 連接排水管延長管（未附）到排水接頭，以在加熱模式下將水從機器中引出。

注意 : **在寒冷氣候下**

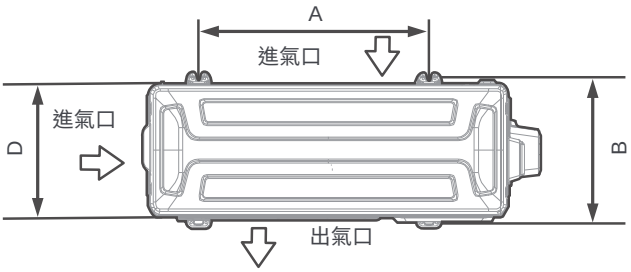
在寒冷氣候下，請確保排水管盡可能垂直，以確保水迅速排出。
如果水排出得太慢，可能會在水管中結冰並淹沒機器。

3 固定室外機

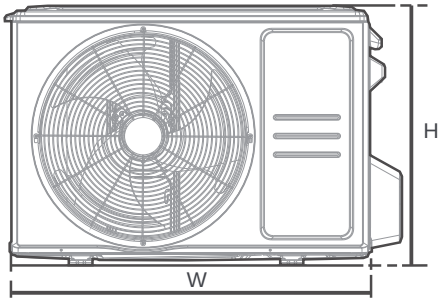
⚠ 警告

在鑽混凝土時，建議全程佩戴護目鏡。

- 室外機可以使用螺栓(M10)固定在地面上或牆壁支架上。準備根據以下尺寸準備裝置的安裝基座。
- 以下是不同室外機的尺寸及其安裝腳之間的距離列表。根據以下尺寸準備裝置的安裝基座。



俯視圖



前視圖

室外機尺寸 (mm) W x H x D	**安裝尺寸**	
	距離 A (mm)	**距離** B (mm)
668x469x252 (26.3”x 18.5”x 9.9”)	430 (16.9”)	231 (9.1”)
765x555x303 (30.1”x 21.8”x 11.9”)	452 (17.8”)	286(11.3”)
805x554x330 (31.7”x 21.8”x 12.9”)	511 (20.1”)	317 (12.5”)

如果您將裝置安裝在地面或混凝土基座上平臺，請執行以下操作：

- 標記四個膨脹螺栓的位置根據尺寸圖表。
- 預鉆膨脹螺栓的孔。
- 在每個膨脹螺栓的末端放置一個螺母。
- 將膨脹螺栓敲入預鑽的孔中。
- 從膨脹螺栓上取下螺母，並將室外機放置在螺栓上。
- 在每個膨脹螺栓上放置一個墊圈，然後重新安裝螺母。
- 使用扳手，將每個螺母擰緊至合適位置。

如果將裝置安裝在牆壁支架上，請按照以下步驟操作：

- 根據尺寸圖標記支架孔的位置。
- 預鑽擴張螺栓的孔。
- 在每個擴張螺栓的末端放置一個墊圈和螺母。
- 將擴張螺栓穿過支架上的孔，將支架定位，並用錘子將擴張螺栓敲入牆壁。
- 檢查支架是否水平。
- 小心地抬起裝置，並將其安裝腳放在支架上。
- 將裝置牢固地固定在支架上。
- 如果允許，可以使用橡膠墊片減少振動和噪音。

⚠ 注意

確保牆壁由實心磚、混凝土或類似堅固材料製成。材料。牆壁必須能夠承受至少四倍於裝置的重量。

4 連接信號和電源電纜

⚠ 警告 - 在操作前

- 所有電氣工作必須嚴格按照室外機電線蓋內的電路圖進行。
- 在進行任何電氣或電線工作之前，請關閉系統的主電源。

選擇合適的電纜尺寸

電源電纜、信號電纜、保險絲和開關的尺寸由機體的最大電流決定。最大電流標示在裝置側面板上的名牌上。

請根據第26頁的「電纜類型」選擇合適的電纜。

- 使用電線剝皮器，剝去電纜兩端的橡膠護套，露出約40毫米（1.57英寸）的內部電線。
- 剝去電線末端的絕緣層。
- 使用電線壓接鉗，在電線末端壓接U形端子。

注意火線

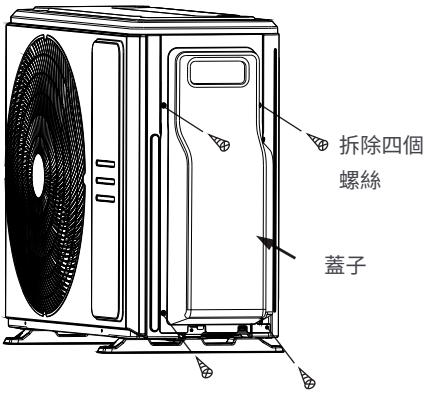
在壓接電線時，確保清楚區分火線（“L”）與其他電線。

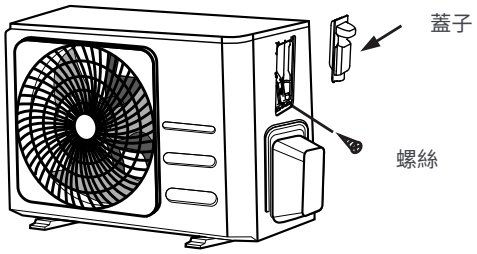
室外機的端子排由裝置側面的電氣布線蓋保護。

綜合布線圖粘貼在布線蓋的內側。

- 拆下電氣接線蓋並取下。
- 鬆開端子排下方的線夾，並將其放在一旁。
- 根據接線圖連接電線，並將每根電線的U形端子牢固地擰到相應的端子上。
- 檢查每個連接是否牢固後，將電線繞成環以防止雨水流入端子。
- 使用電纜夾將電纜固定到裝置上。將電纜夾牢固地擰緊。
- 用PVC電工膠帶包裝未使用的電線。將它們排列，使其不接觸任何電氣或金屬部件。
- 將電線蓋裝回裝置側面，並擰緊固定。

注意：您購買的裝置可能略有不同。圖示僅供說明用途。以實際外形為準。





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。

三種尺寸孔：小、大、中

當電纜固定不夠時，使用扣件將其支撐，以便緊密夾緊。

製冷劑管路連接

1 管路連接指示

⚠ 警告

連接製冷劑管路時，勿讓非指定製冷劑的物質或氣體進入裝置。其他氣體或物質的存在會降低裝置的效能，並可能在製冷循環中造成異常高壓。這可能會導致爆炸和傷害。

管長注意事項

製冷劑管路的長度將影響機器的性能和能源效率。額定效率是在管路長度為5米（16.5英尺）的機器上測試的。最小管路長度為3米，以減少振動和過大噪音。

每種機型的製冷劑管路最大長度和最大落差高度

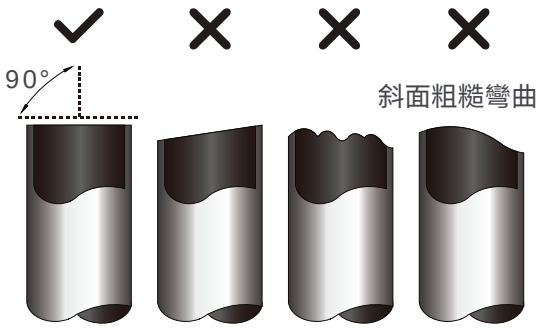
型號	容量 (BTU/h)	最大長度 (m)	最大落差高度 (m)
R32 變頻分體冷氣機	< 15,000	25 (82ft)	10 (33ft)
	≥ 15,000 和 < 24,000	30 (98.5ft)	20 (66ft)
	≥ 24,000 和 < 36,000	50 (164ft)	25 (82ft)

連接指示 – 製冷劑管路

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。

- 測量室內機和室外機之間的距離。
- 使用管切刀，將管子切成比測量距離稍長一些。
- 確保管子切口為完美的90°角。



⊘ 切管時勿使管子變形

切管時要格外小心，不要損壞、壓扁或變形管子。這將大幅降低機器的加熱效率。

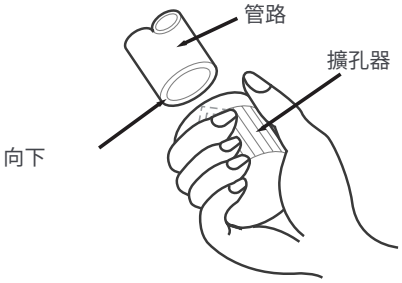
⚠ 注意

必須檢查管端是否有裂紋和均勻擴口。確保管子密封。

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。

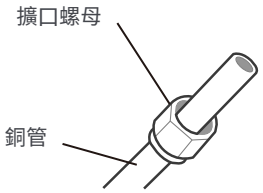
- 以向下角度握住管子，以防止毛刺落入管子中。
- 使用倒角器或去毛刺工具，清除管子切割部分的所有毛刺。



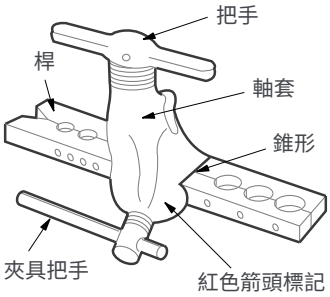
步驟3：擴大管端

適當的擴大對於實現密封至關重要。

- 清除管子切口的毛刺後，用PVC膠帶密封管子的兩端，以防止外來物質進入管子。
- 用絕緣材料包裹管子。
- 在管子的兩端放置擴口螺母。確保它們朝向正確的方向，因為在擴口加工後，您無法再將其安裝或更改方向。

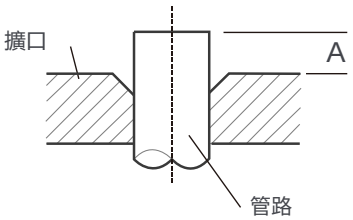


- 在準備進行擴口加工時，從管子的兩端移除PVC膠帶。
- 將擴口模具夾在管子的末端。
  管子的末端必須超出擴口模具的邊緣，具體尺寸請參見下表。



超出擴大形狀的管路延伸

管路 外徑（毫米）	A (mm)	
	最小	最大
Ø 6.35 (Ø 1/4”)	0.7 (0.0275”)	1.3 (0.05”)
Ø 9.52 (Ø 3/8”)	1.0 (0.04”)	1.6 (0.063”)
Ø12.7 (Ø 1/2”)	1.0 (0.04”)	1.8 (0.07”)
Ø 16 (Ø 5/8”)	2.0 (0.078”)	2.2 (0.086”)
Ø 19 (Ø 3/4”)	2.0 (0.078”)	2.4 (0.094”)



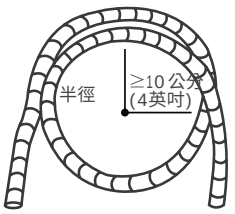
- 將擴口工具放置在模具上。
- 順時針旋轉擴口工具的手柄，直到管子完全喇叭形。
- 移除擴口工具和擴口形狀，然後檢查管端是否有裂紋和均勻擴口。

步驟4：連接管路

注意：連接製冷劑管時，請小心不要使用過大的扭矩或以任何方式變形管路。應先連接低壓管，然後連接高壓管。

最小彎曲半徑

當彎曲連接製冷劑管路時，最小彎曲半徑為10公分。

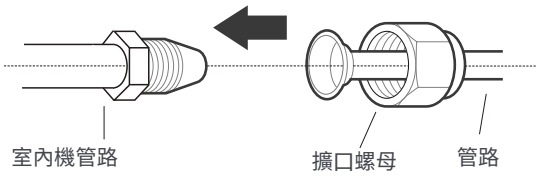


2 將管路連接到室內機

將管路連接到室內機的指示

步驟 1：

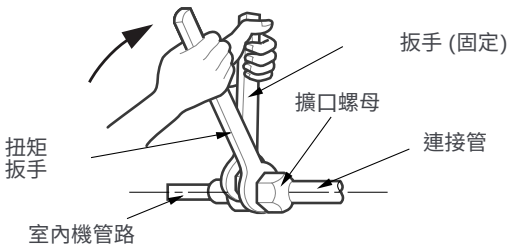
- 對齊您要連接的兩根管子的中心。



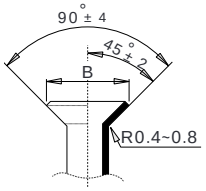
步驟 2：

- 用手盡可能緊固擴口螺母。
- 使用扳手夾緊機組管上的螺母。
- 在牢固夾緊機組管上的螺母的同時，使用扭矩扳手根據下表的扭矩值緊固擴口螺母。

稍微鬆開擴口螺母，然後再擰緊。



扭矩要求

管外徑(mm)	擰緊扭矩(N·m)	擴口尺寸(B)(mm)	擴口形狀
Ø 6.35 (Ø 1/4")	18~20(180~200kgf.cm)	8.4~8.7 (0.33~0.34")	
Ø 9.52 (Ø 3/8")	32~39(320~390kgf.cm)	13.2~13.5 (0.52~0.53")	
Ø 12.7 (Ø 1/2")	49~59(490~590kgf.cm)	16.2~16.5 (0.64~0.65")	
Ø 16 (Ø 5/8")	57~71(570~710kgf.cm)	19.2~19.7 (0.76~0.78")	
Ø 19 (Ø 3/4")	67~101(670~1010kgf.cm)	23.2~23.7 (0.91~0.93")	

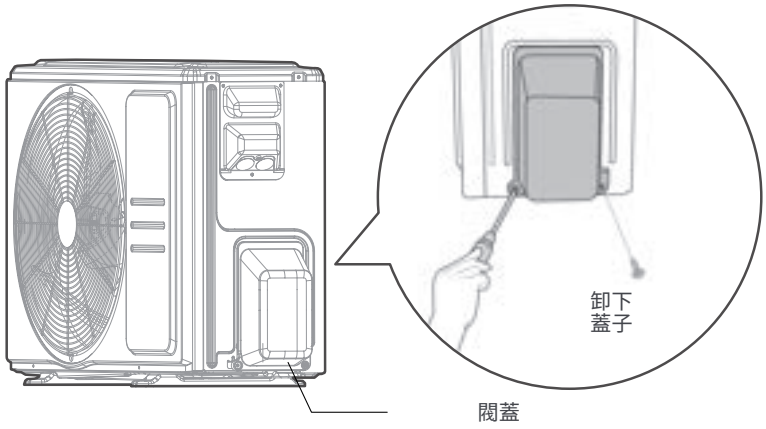
⊘ 不得使用過大扭矩

過大的力會使螺母斷裂或損壞製冷劑管路。不得超過上表所示的扭矩要求。

3 連接管道至室外機

注意

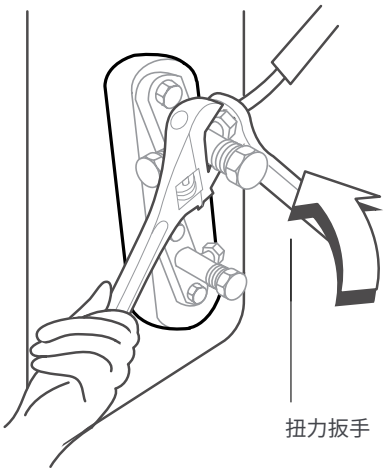
本節仍需根據前頁的**扭矩要求**表進行操作。



室外機

1. 從室外機側面的包裝閥上拆下蓋子。
2. 取下閥門末端的保護蓋。
3. 將擴口管端對準每個閥門，並盡可能用手將擴口螺母擰緊。
4. 使用扳手夾住閥門主體。不要夾住密封服務閥的螺母。

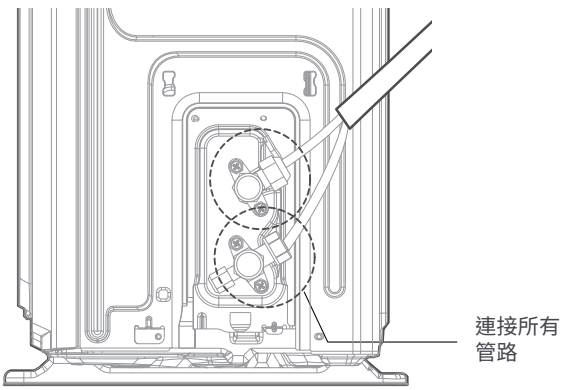
使用扳手夾住閥門主體 扭緊擴口螺母的扭矩可能會使閥門的其他部分斷裂。



5.在牢固夾住閥門主體的情況下，使用扭力扳手根據正確的扭矩值擰緊擴口螺母。

6.稍微鬆開擴口螺母，然後再次擰緊。

7.重複步驟3至6，完成剩餘管道的連接。



抽真空

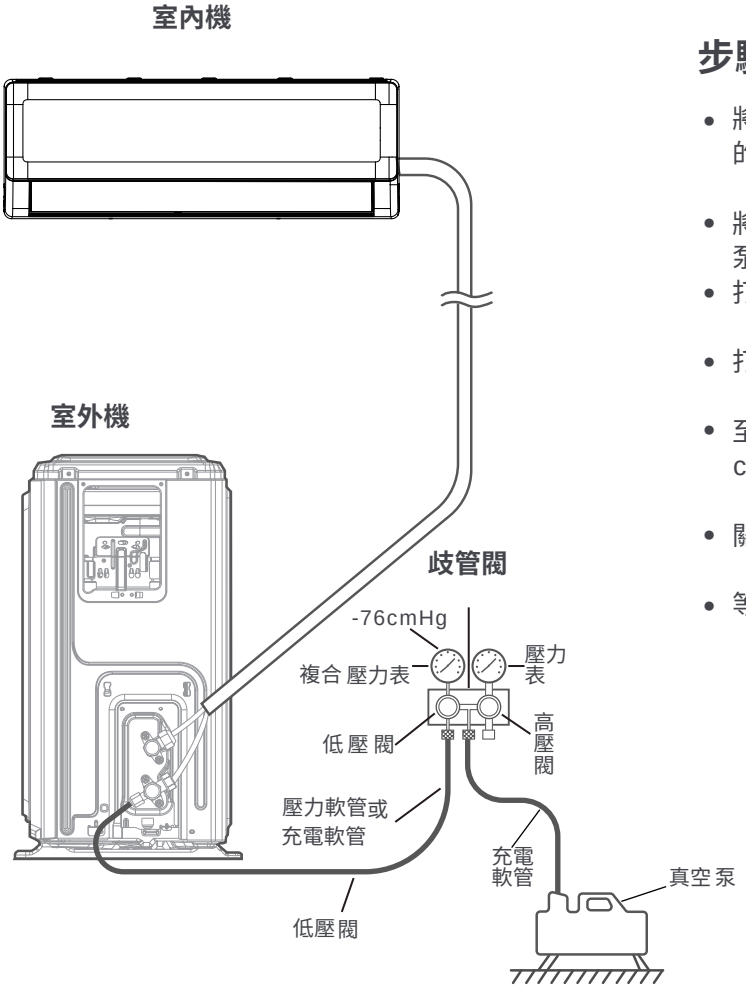
注意: 準備和預防措施

製冷劑迴路中的空氣和異物會導致壓力異常升高，可能會損壞冷氣機，降低其效率，並造成傷害。請使用真空泵抽空室內機和管路內的空氣。使用真空泵和歧管表抽空製冷劑迴路，以去除系統中的不凝氣體和水分。抽真空應在初次安裝和機器移位時進行。忽略說明導致的安裝不正確將對機器造成嚴重問題。

進行抽真空前

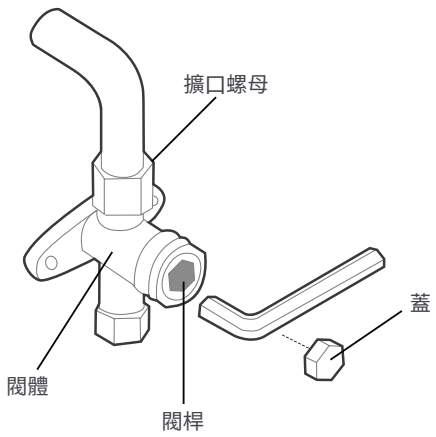
- ☑ 確保室內機和室外機之間的連接管路已正確連接。
- ☑ 檢查所有線路是否已正確連接。

抽真空指示



步驟 1：

- 將歧管壓力表的充電軟管連接到室外機低壓閥的服務接口上。
- 將另一根充電軟管從歧管壓力表連接到真空泵。
- 打開歧管壓力表的低壓側。保持高壓側關閉。
- 打開真空泵以抽空系統。
- 至少運行真空泵15分鐘，或直到複合表顯示-76 cmHG（-10 Pa）。
- 關閉歧管壓力表的低壓側，並關閉真空泵。
- 等待5分鐘，然後檢查系統壓力是否有變化。



步驟 2：

- 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。如果系統壓力沒有變化，請旋開包裝閥（高壓閥）的蓋子。
- 將六角扳手插入包裝閥（高壓閥）中，逆時針轉動1/4圈打開閥門。聽取氣體從系統中排出，5秒後關閉閥門。
- 觀看壓力表一分鐘，確保壓力無變化。壓力表應顯示略高於大氣壓力。
- 從服務接口上拆下充填製冷劑軟管。
- 使用六角扳手，完全打開高壓和低壓閥門。
- 用手擰緊所有三個閥門（服務接口、高壓、低壓）的閥門蓋。如有需要，可使用扭矩扳手進一步擰緊。

輕輕打開閥桿

確保抽真空後打開所有閥門。當打開閥桿時，轉動六角扳手直到碰到止動器。不要試圖強行打開閥門。

注意充注製冷劑時

某些系統需要根據管長額外充注製冷劑。標準管長為5m (16‘)。應從室外機低壓閥的服務接口充注製冷劑。
需充注的額外製冷劑量可使用以下公式計算：

每增加管道長度所需的額外製冷劑

連接管長度（m）	排空方法	額外製冷劑	
≤ 標準管道長度	真空泵	不適用	
> 標準管道長度	真空泵	液體側：Ø 6.35 (1/4”) R32: (管長 – 標準長度) x 12g/m (管長 – 標準長度) x 0.13oZ/ft	液體側：Ø 9.52 (3/8”) R32: (管長 – 標準長度) x 24g/m (管長 – 標準長度) x 0.26oZ/ft

切勿混合不同類型的製冷劑。

電氣和氣體洩漏檢查

⚠ 警告 - 觸電風險

所有電線必須符合當地和國家電氣規範，並必須由合資格電工安裝。

測試運行前

只有在完成以下步驟後才能進行試運行：

- 電氣安全檢查 – 確認冷氣機的電氣系統安全且運行正常
- 瓦斯洩漏檢查 – 檢查所有擴口連接並確認系統無洩漏
- 確認氣體和液體（高壓和低壓）閥門已完全打開

電氣安全檢查

安裝後，請確認所有電氣線路均按照當地和國家法規，以及《安裝說明書》的要求安裝。

測試運行前

檢查接地工作

通過視覺檢查和接地電阻測試儀測量接地電阻。

測試運行中

檢查電氣漏電

在測試運行中，使用電筆和萬用錶進行全面的電氣漏電測試。

如果檢測到電氣漏電，立即關閉設備並請合格電工查找並解決漏電原因。

氣體泄漏檢查

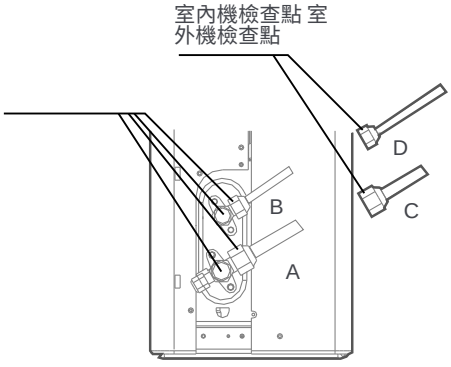
有兩種不同的方法來檢查氣體泄漏。

肥皂水法

使用軟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。

泄漏檢測器法

如果使用泄漏檢測器，請參閱設備的使用說明書以獲取正確的使用說明。



A: 低壓截止閥
B: 高壓截止閥
C & D: 室內機喇叭口

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。

試運行

試運行指示

您應進行試運行至少30分鐘。

- 將電源連接到單元。
- 按下遙控器上的啟動/關閉按鈕以打開它。
- 按模式按鈕循環選擇以下功能，每次選擇一個 ：
- 製冷–選擇最低可能溫度
- 讓每個功能運行5分鐘，並進行以下檢查：

檢查清單 通過 / 未通過		
無電氣漏電		
設備已妥善接地		
所有電氣端子均已妥善 覆蓋		
室內和室外機 已牢固安裝		
所有管道連接 點無泄漏	室外 (2):	室內 (2):
水從排水管 正常排出		
所有管道均已妥善絕緣		
設備正常執行COOL功能		
設備正常執行HEAT 功能		
室內機風葉正常旋轉		
室內機響應遙控器		

再次檢查管道連接

在運行期間，製冷劑迴路的壓力將增加。這可能會暴露出在您最初的漏檢中未發現的漏點。在試運行期間花時間再次檢查所有製冷劑管道連接點是否有漏點。參閱氣體泄漏檢查部分以獲取指示。

- 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：

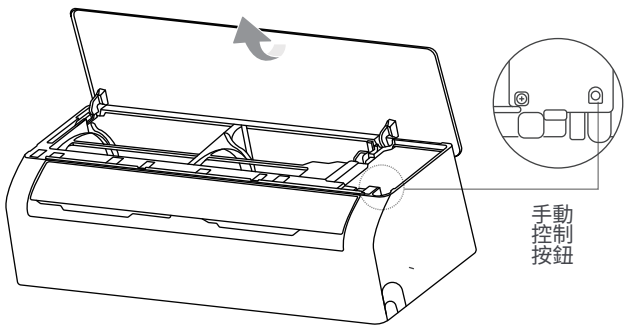
a.使用遙控器，將裝置恢復到正常運行溫度。

b.使用絕緣帶，包裹在室內機安裝過程中未覆蓋的室內製冷劑管道連接處。

若環境溫度低於16°C(60°F)

當環境溫度低於16°C (60°F) 時，您無法使用遙控器打開冷卻功能。在這種情況下，您可以使用手動控制按鈕來測試冷卻功能。

- 抬起前面板，並將其抬起到卡入位置為止。
- 手動控制按鈕位於電氣控制箱的右側。按兩次以選擇冷卻模式。
- 按正常程序進行測試運行。



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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。

Rasonic 樂信牌

SHUN HING GROUP
信興集團
SINCE 1953

信興電工工程有限公司
SHUN HING ELECTRIC WORKS & ENGINEERING CO., LTD

辦公室: 香港九龍尖沙咀東部麼地道 67 號半島中心 9 樓
OFFICE: 9/F, PENINSULA CENTRE, 67 MODY ROAD, TSIMSHATSUI EAST, KOWLOON, HONG KONG
電話 TEL: (852) 2861 2767　　傳真 FAX: (852) 2865 6706
網址 WEBSITE: www.shew.com.hk　　電郵 EMAIL: shew@shunhinggroup.com

保養及維修 MAINTENANCE AND REPAIR SERVICE
信興電器服務中心有限公司
SHUN HING ELECTRIC SERVICE CENTRE LTD.

辦公室: 香港新界葵涌勝耀街2號信興中心11樓
OFFICE: 11TH FLOOR, SHUN HING CENTRE, 2 SHING YIU STREET, KWAI CHUNG, NEW TERRITORIES, HONG KONG
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RSTS/A/2512

Rasonic

R32 INVERTER COOLING
SPLIT-TYPE ROOM AIR CONDITIONER

A2L

OPERATION MANUAL & INSTALLATION MANUAL

Indoor Model:
RS-TS9R
RS-TS12R
RS-TS18R
RS-TS24R

Outdoor Model:
RU-TS9R
RU-TS12R
RU-TS18R
RU-TS24R

IMPORTANT NOTE:
This appliance is using R32 mildly flammable refrigerant.
Read this manual carefully before installing or operating.
Make sure to save this manual for future reference.

CONTENTS

Safety Precautions

It's really important you 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.

Explanation of Symbols

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.

Attention
The signal word indicates important information (e.g. damage to property), but not danger.

⚠ WARNING FOR PRODUCT USE

- Turn off the air condtioner and disconnect the power before performing any cleaning, installation or repairing. Failure to do so can cause electric shock.
- 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.
- 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.

⚠ 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.
- The product must be properly grounded at the time of installation, or electric 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 electric shock.
- Disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.
- 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.
- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric 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

- Installation must be performed by an authorized dealer or specialist. Defective installation can cause water leakage, electrical shock, or fire.
- Installation must be performed according to the installation instructions. Improper installation can cause water leakage, electrical shock, or fire.
- Contact an authorized service technician for repair or maintenance of this unit. This appliance shall be installed in accordance with national wiring regulations.
- 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.
- 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.
- Install drainage piping according to the instructions in this manual. Improper drainage may cause water damage to your home and property.
- For units that have an auxiliary electric heater, do not install the unit within 1 meter (3 feet) of any combustible materials.
- 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.
- Do not turn on the power until all work has been completed.
- When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
- How to install the appliance to its support, please read the information for details in "indoor unit installation" and "outdoor unit installation" sections .

⚠ 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.

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.

Environment

Effective from 31 December 2018, the disposal licensing control, import and export permit control and landfill disposal ban in respect of abandoned regulated electrical equipment (REE) have commenced .Any person who is engaged in the storage, treatment, reprocessing or recycling of abandoned REE must obtain a waste disposal licence; a permit is required for the import and export of abandoned REE; and abandoned REE is no longer be accepted for disposal at the landfills and other designated waste disposal facilities (e.g. refuse transfer stations).

⚠ 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.
- Reusable mechanical connectors and flared joints are not allowed indoors. When mechanical connectors are reused indoors, sealing parts shall be renewed.
- When flared joints are reused indoors, the flare part shall be re-fabricated.
- Mechanical connectors used indoors shall comply with ISO 14903.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that refrigerants might not contain an odour.

Specification

Product Model	RS-TS9R/RU-TS9R	RS-TS12R/RU-TS12R	RS-TS18R/RU-TS18R	RS-TS24R/RU-TS24R
Power source	220-240V~50Hz,1Ph			
Cooling capacity	2600W	3500 W	5300W	7000W
Heating capacity	/	/	/	/
Rated current	9.0A	9.0A	13.5A	16.0A
Rated power input	2050W	2050W	3000W	3550W
Moisture resistance class	IPX4			

Confirmed It Before You Get Started

NOTE ：Operating Temperature

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

Inverter Split Type

	COOL Mode	DRY Mode
Room Temp.	16°C~32°C(60°F~90°F)	10°C~32°C(50°F~90°F)
Outdoor Temp.	0°C~50°C(32°F~122°F)	0°C~50°C(32°F~122°F)

FOR OUTDOOR UNITS WITH AUXILIARY ELECTRIC HEATER

When outside temperature is below 0°C (32°F), we strongly recommend keeping the unit plugged in at all time to ensure smooth ongoing performance.

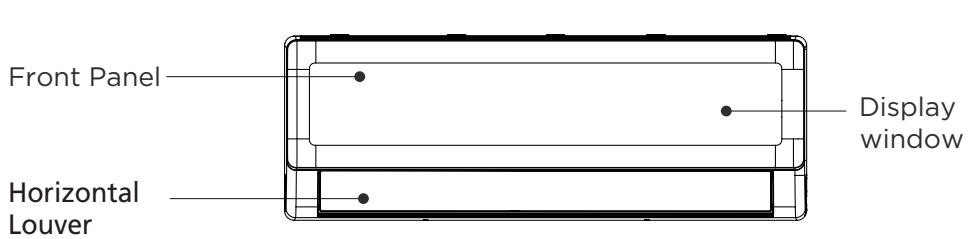
NOTE: Room relative humidity less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation. Please sets the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.

Get to Know Your AC

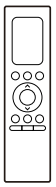
NOTE

- Different models have different front panel and display window. Not all the indicators describing below are available for the air conditioner you purchased. Please check the indoor display window of the unit you purchased.
- Illustrations in this manual are for explanatory purposes. The actual shape of your indoor unit may be slightly diffrent. The actual shape shall prevail.

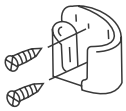
Indoor Unit Display



Remote Control

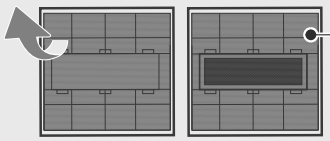


Remote Control Holder

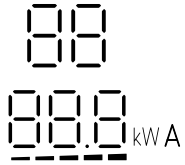


Functional Filter (On Back of Main Filter-Some Units)

Air Filter



Display Window

Display Code	Display Code Meanings
	• Displays temperature, operation feature and error codes.
	• When Fresh feature is turned on.
ECO	• When ECO+ feature is turned on.
	• When Wireless Control feature is activated(some units).
 (for 3s when)	• Timer On is set (if the unit is OFF, " " remains on when Timer On is set). • Fresh, Swing, Turbo or Silent feature is turned on.
 (for 3s when)	• Timer Off is set . • Fresh, Swing, Turbo or Silent feature is turned off.
	• When Active Clean feature is turned on.
	• When defrosting is turned on.

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.

More features

NOTE

Not all the functions are available for the air conditioner you purchased, please check the indoor display and remote control of your unit.

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

- **Air Fresh function**
  The ion generator is energized and will help to purify the air in the room.

- **Active Clean function(some units)**

-- The Active Clean Technology washes away dust when it adheres to the heat exchanger by automatically freezing and then rapidly thawing the frost. A “pi-pi” sound will be heard. The Active clean operation is used to produce more condensed water to improve the cleaning effect, and the cold air will blow out. After cleaning, the internal wind wheel then keeps operating with hot air to blow-dry the evaporator, thus keeping the inside clean.

-- When this function is turned on, the indoor unit display window appears “CL ” , after 20 to 45 minutes, the unit will turn off automatically and cancel Active Clean function.

- **Louver Angle Memory**
  When turning on your unit, the louver will automatically resume its former angle.

- **ECO+ function**
  Under cooling/heating mode, the fan speed will change to Auto, the set temperature will remain unchanged which brings more comfortable feelings and power-saving, and reduces temperature fluctuations.

- **Refrigerant Leakage Detection**
  The indoor unit will automatically display “EL0C” when it detects refrigerant leakage.

- **Turbo Function**
  The Turbo function can cool down an entire room quickly. This is achieved by generating a large volume of air and a high airflow.

- **Wireless Control**
  Wireless control allows you to control your air conditioner using your mobile phone and a wireless connection.

- **Sleep Operation**
  The SLEEP function is used to decrease energy use while you sleep.
  When the sleep function is activated, the air conditioner will intelligently adjust temperature, fan speed to provide a more comfortable sleeping environment. You can freely set the fan speed and airflow angle when in sleep operation. The sleep function will automatically exit after running for 9 hours.
  Note:
  -The sleep function is not available in Fan and Dry mode.

- **Intelligent Humidity Control Function (some units)**

  Under cooling mode, when this function is activated, the fan speed will change to Auto, the set temperature will remain unchanged, and the system can control the room humidity to ensure that it is not too dry or too damp while maintaining a comfortable temperature. This function can only be activated by the remote controller or APP control.

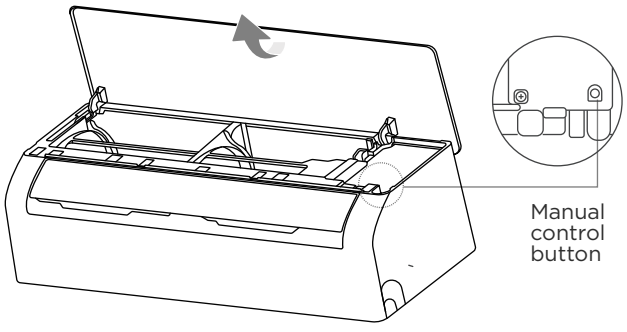
Manual Operation(without remote)

⚠ **CAUTION :** For product use

The manual button is intended for testing purposes and emergency operation only.
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:

- Press down the buttons on both side of the panel, then lift the panel up until it clicks.
- Locate the **MANUAL CONTROL button** on the right-hand side of the electrical control box.
- Press the **MANUAL CONTROL button** one time to activate FORCED AUTO mode.
- Press the **MANUAL CONTROL button** again to activate FORCED COOLING mode.
- Press the **MANUAL CONTROL button** a third time to turn the unit off .
- Close the front panel.



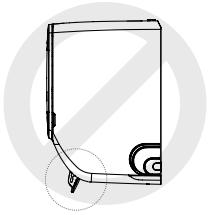
Setting angle of airflow

NOTE : Setting up and down airflow (Remote control)

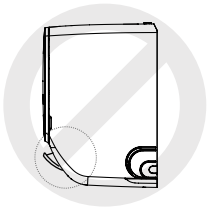
While the unit is on, use the SWING button on remote control to set the direction of airflow. Please refer to the Remote Control operationl for details.

Note on louver angles

- Do not set louver at too vertical an angle for long periods of time When using COOL or DRY mode. It would be condense the water on the louver blade, which will drop on your floor or furnishings.



- Setting the louver at too small an angle when using COOL mode, can reduce the performance of the AC due to restricted air flow.



NOTE

Do not move louver by hand. You can turn off the unit and unplug it for a few seconds to restart the unit. It will be reset the louver when you try.

Setting left and right air flow

The left and right airflow can be set by remote control. Please refer to the Remote Control Manual.

⚠ CAUTION

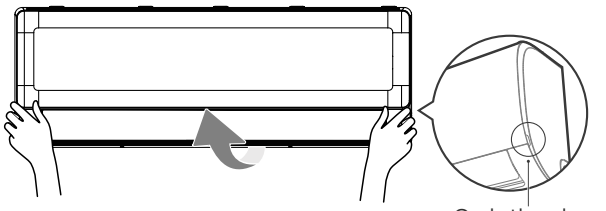
Do not put your fingers in or near the blower and suction side of the unit. The high-speed fan inside the unit may cause injury.

Care and Maintenance

⚠ CAUTION

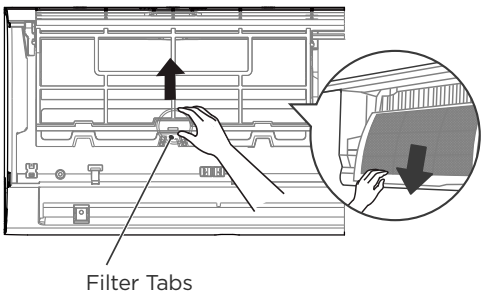
- The cooling efficiency of your unit and your health would be damaged for the glogged AC. Make sure to clean the filter every two weeks.
- Always **TURN OFF** your AC system and disconnect its power supply before cleaning or maintenance.
- **Do not** touch air freshening (Plasma) filter at least 10 minutes after turning off the unit.
- Only use a soft, dry cloth to wipe the unit clean. You can use a cloth soaked in warm water to wipe it clean if the unit is especially dirty.
- **Do not** use chemicals or chemically treated clothes 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 Indoor Unit, Air Filter



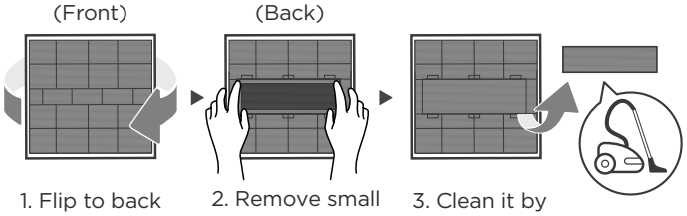
Step 1:

Lift the front panel of the indoor unit.



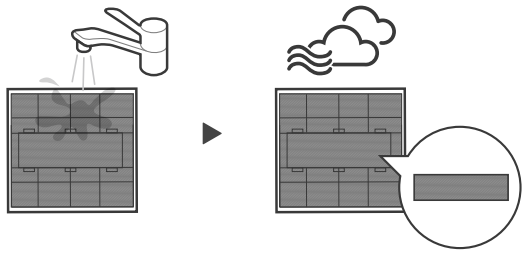
Step 2:

First press the tab on the end of filter to loosen the buckle, lift it up, then pull it towards yourself.



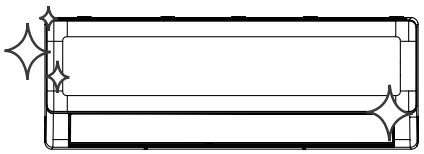
Step 3:

If your filter has a small air freshening filter, unclip it from the larger filter. Clean this small air freshening filter with a vacuum cleaner.



Step 4:

Clean the large air filter with warm, soapy water. Be sure to use a mild detergent. Rinse the filter with fresh water, then shake off excess water. Dry it in a cool, dry place, and refrain from exposing it to direct sunlight.



Step 5:

When dry, re-clip the small air freshening filter to the larger filter, then slide it back into the indoor unit. Finally, Close the front panel of the indoor 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.
- 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 your AC.

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

Make sure nothing is blocking all air inlets and outlets

Replace batteries

Troubleshooting

⚠ CAUTION

If any of the following conditions occurs, turn off your unit immediately!
- The wire is damaged or abnormally warm
- Emit 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 SERVICE CENTRE LTD.

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: • Disconnect the power, then reconnect. • Press ON/OFF button on remote control to restart operation.

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

⚠ CAUTION

When troubles occur, please check the following points before contacting a repair company. some situations will not require repairs.

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	Contact an authorized service center to 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	Contact an authorized service center.
	SILENCE function is activated (optional function)	SILENCE function can lower product performance by reducing operating frequency. Turn off SILENCE function.

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	Contact an authorized service center to replace the fuse
	Remote control batteries are dead	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	Contact an authorized service center
	Incompressible gas or moisture has entered the system.	Contact an authorized service center
	The compressor is broken	Contact an authorized service center
	The voltage is too high or too low	Contact an authorized service center go install a manostat to regulate the voltage
Indicator lamps continue flashing	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. If not, disconnect the power, then connect it again. Turn the unit on. If the problem persists, disconnect the power and contact your nearest customer service center.	
Error code appears and begins with the letters as the following in the window display of indoor unit: • E(x), P(x), F(x) • EH(xx), EL(xx), EC(xx) • PH(xx), PL(xx), PC(xx)		

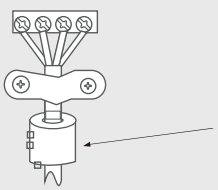
NOTE: If your problem persists after performing the checks and diagnostics above, turn off your unit mmediately and contact Shun Hing Electric Servies Centre Ltd.

Let's Start Installing Your AC

Check over the 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.

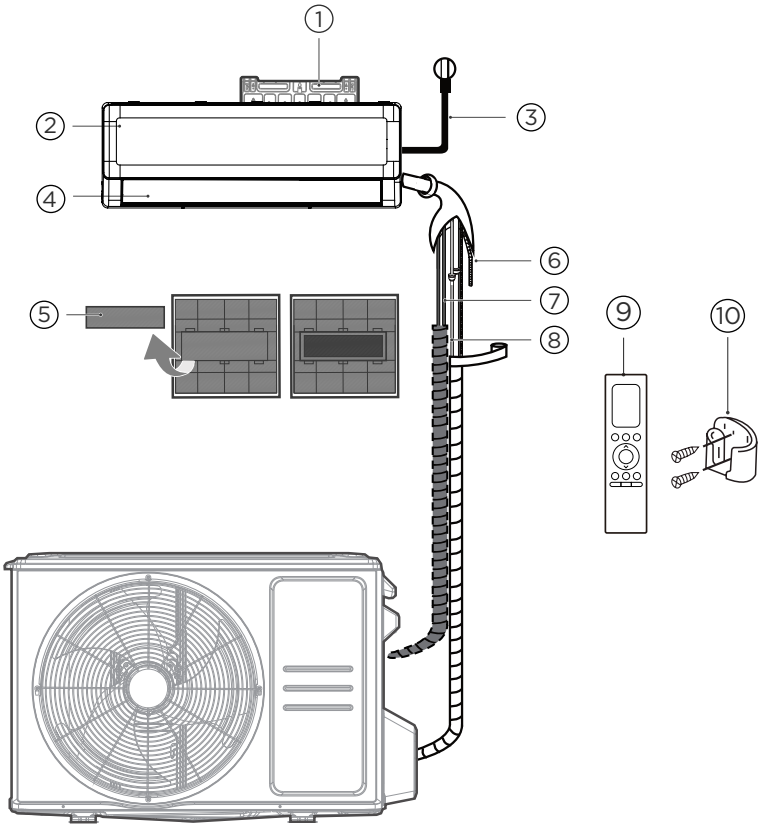
Name of Accessories	Qty.(pc)	Shape	Name of Accessories	Qty.(pc)	Shape
Manual	4		Remote controller	1	
Mounting plate	1		Battery	2	
Anchor	5~8 (depending on models)		Remote controller holder	1	
Mounting plate fixing screw	5~8 (depending on models)		Fixing screw for remote controller holder	2	
Copper nut — used to connect the pipes between the indoor and outdoor units	2		**Small Air Freshening Filter**	2 (depending on models)	

Name	Shape		Quantity(PC)
Connecting pipe assembly	Liquid side	Φ6.35(1/4in)	Parts you must purchase separately. Consult the dealer about the proper pipe size of the unit you purchased.
		Φ9.52(3/8in)	
	Gas side	Φ9.52(3/8in)	
		Φ12.7(1/2in)	
		Φ16(5/8in)	
		Φ19(3/4in)	
Magnetic ring and belt (if supplied ,please refer to the wiring diagram to install it on the connective cable.)	  Pass the belt through the hole of the Magnetic ring to fix it on the cable		Varies by model

Installation Overview

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 power supply models

① Wall Mounting Plate

② Front Panel

③ Power Cable(some units)

④ Louver

⑤ Small Air Freshing

⑥ Drainage Pipe

⑦ Signal Cable

⑧ Refrigerant Piping

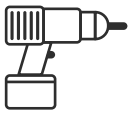
⑨ Remote Controller

⑩ Remote controller Holder

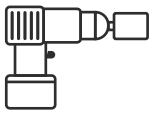
It would be perfect you had these tools

Gloves

Screwdriver & wrench



Hammer drill



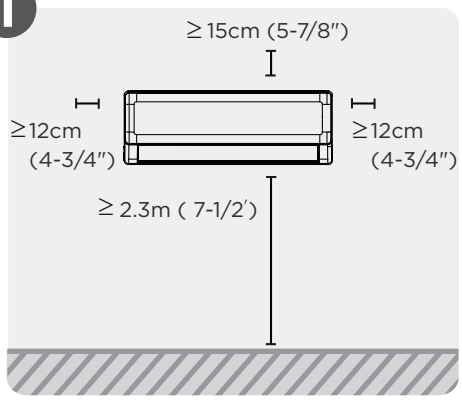
Core drill

Goggles & masks

Vinyl tape

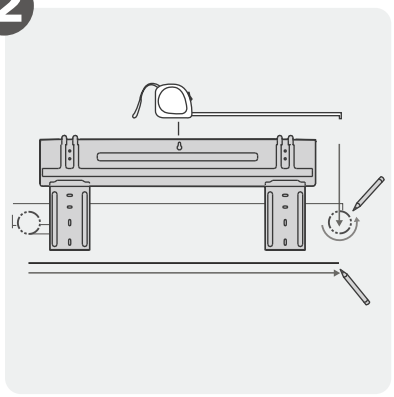
Installation Summary - Indoor Unit

1



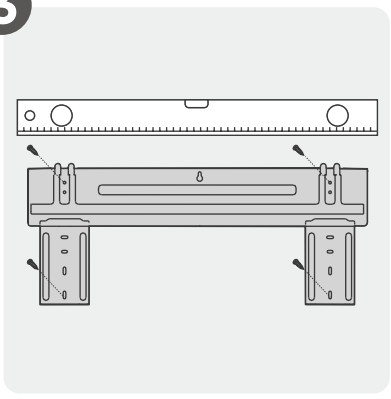
Select Installation Location

2



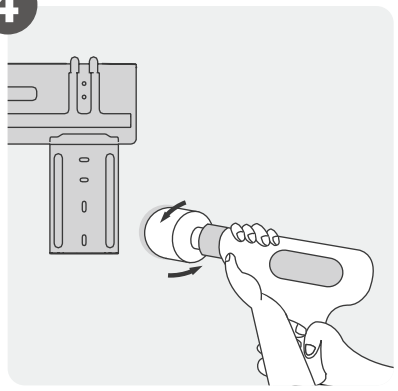
Attach Mounting Plate

3



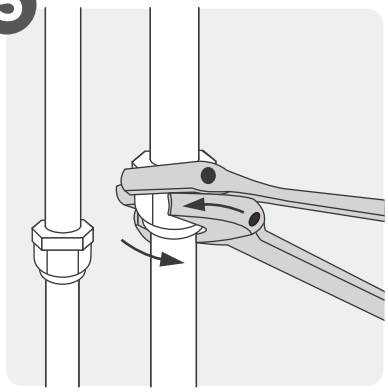
Determine Wall Hole Position

4



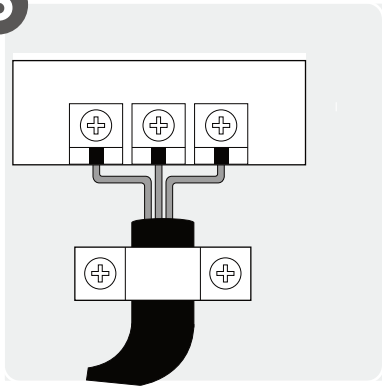
Drill Wall Hole

5



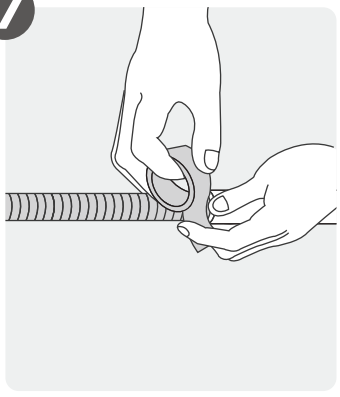
Connect Piping

6



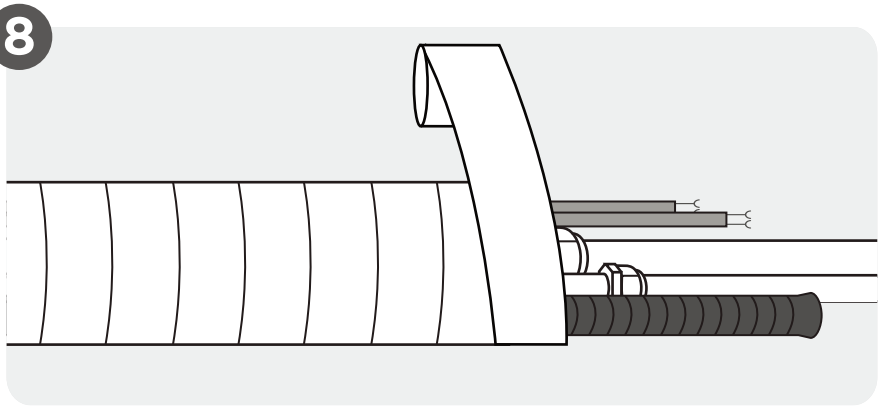
Connect Wiring

7



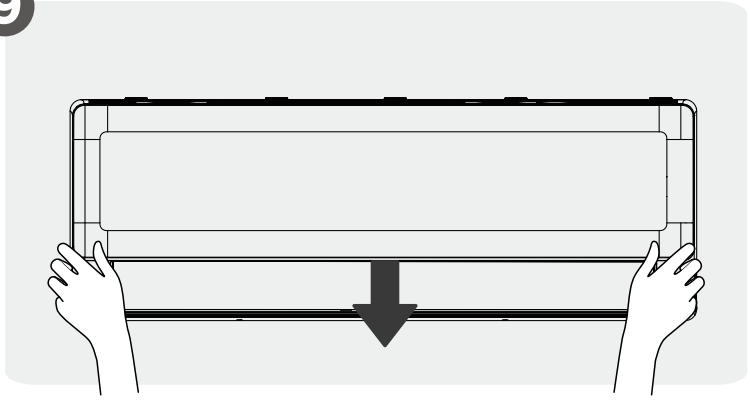
Prepare Drain Hose

8



Wrap Piping and Cable

9



Mount Indoor Unit

Install Your Indoor Unit

1 Select installation location

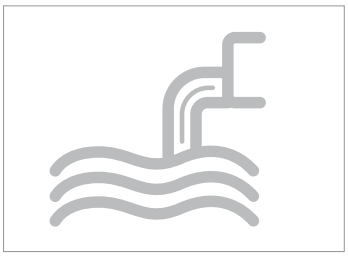
NOTE : PRIOR TO INSTALLATION

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.

The following are standards that will help you choose an appropriate location for the unit.

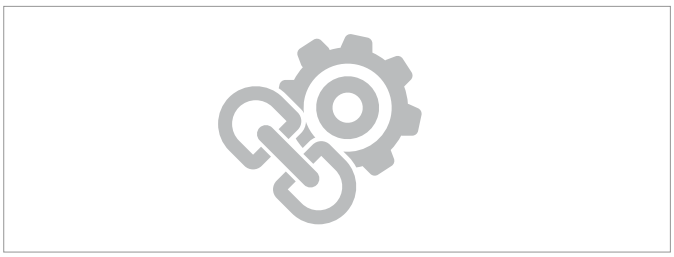
Proper installation locations meet the following standards:

☑ Good air circulation



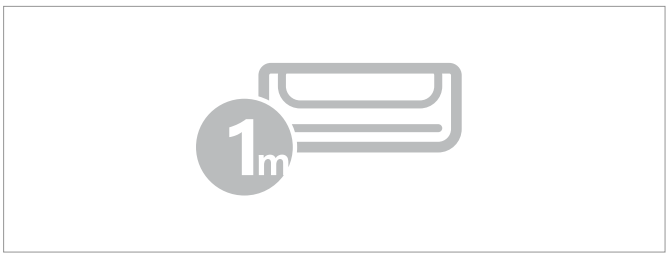
☑ Convenient drainage

☑ 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: FOR PRODUCT INSTALLATION

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.

2 Drill wall hole for connective piping

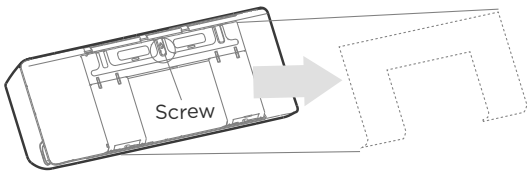
Determine wall hole location

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.

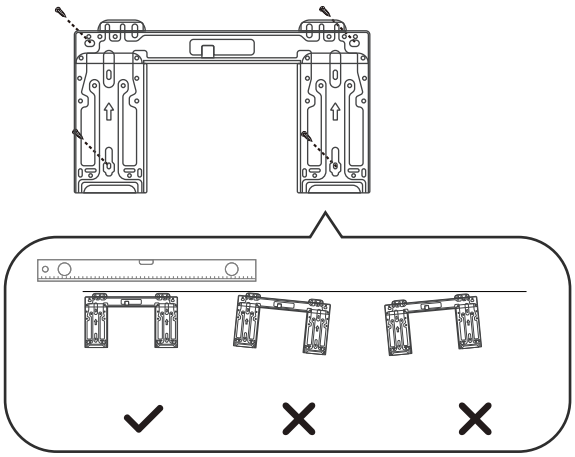
Step 1:

Remove the screw that attaches the mounting plate to the back of the indoor unit.



Step 2:

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

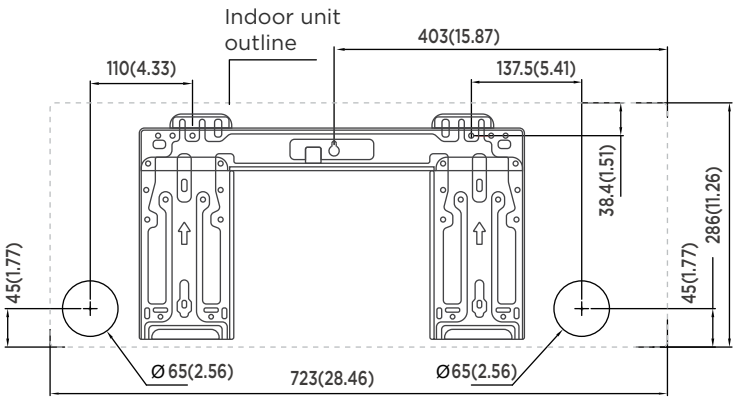


Correct orientation of Mounting Plate

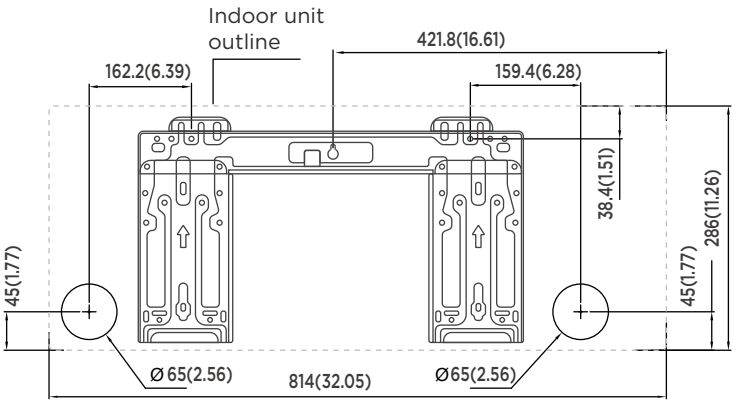
Step 3:

Confirm the mounting plate you own. Different models have different mounting plates. Refer to following mounting plate dimensions to help you determine the optimal position.

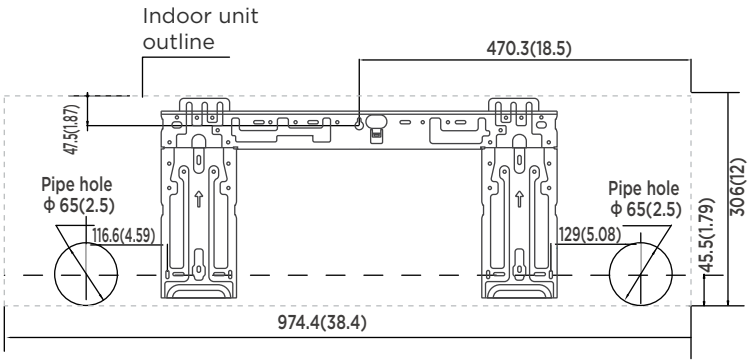
Unit:mm(in)



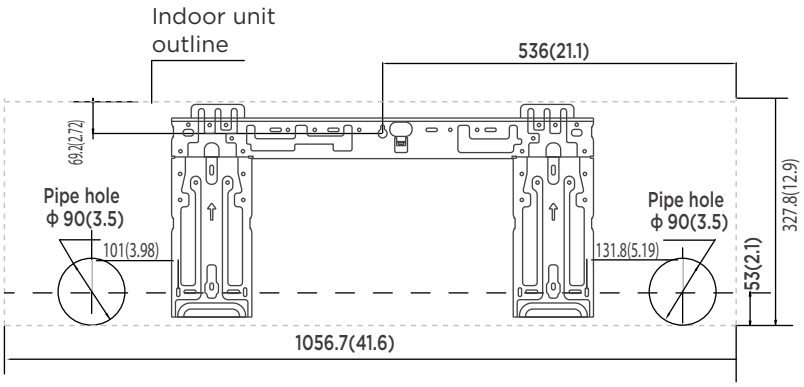
Model A



Model B



Model C

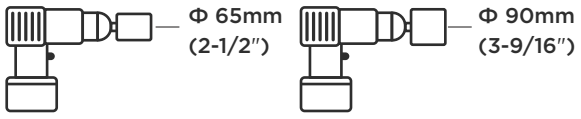


Model D

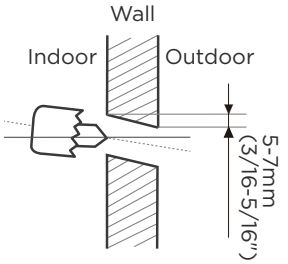
Drill wall hole

⚠ CAUTION

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



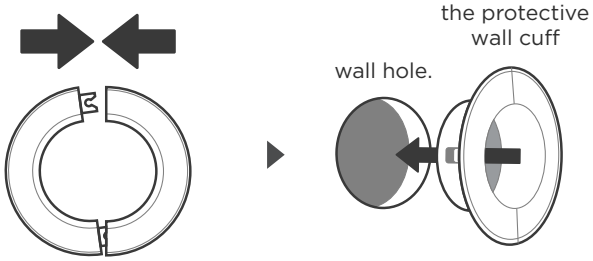
Using a 65mm (2-1/2″) or 90mm(3-9/16″) core drill(depending on models)



Drill the wall hole

Step 1:

Using a 65mm (2.5″) or 90mm(3.54″) core drill(depending on models), 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 (3/16-5/16″). This will ensure proper water drainage.



Place the protective wall cuff in the hole .

Step 2:

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.

NOTE : THE WALL HOLE SIZE

The size of the wall hole is determined by the connective pipes. When the pipe size of the gas side is Φ16mm(5/8″) or more, the wall hole should be 90mm(3.54in). When the pipe size of gas side is less than Φ16mm(5/8″), the wall hole should be 65mm(2.56in).

3 Install refrigerant pipe & drain hose

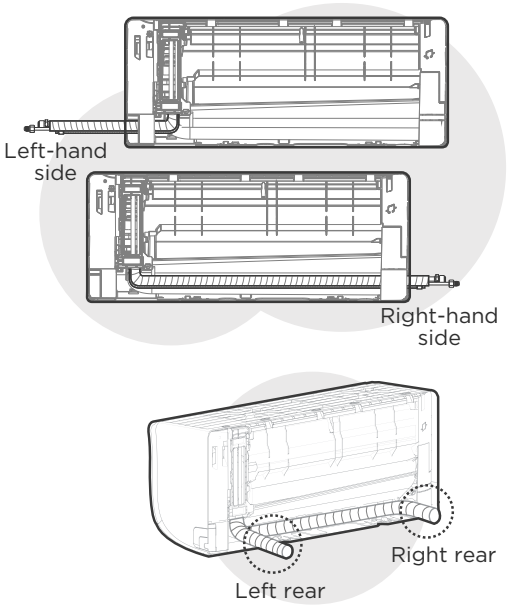
NOTE

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. Refer to the Refrigerant Piping connection section of this manual for detailed instructions on pipe flaring and flare torque requirements, technique, etc.

Connect refrigerant piping

Four sides to exit the piping

Based on the position of the wall hole relative to the mounting plate, choose the side from which the piping will exit the unit. You have four options for the exit direction of the piping.



NOTE ON PIPING CONNECTING

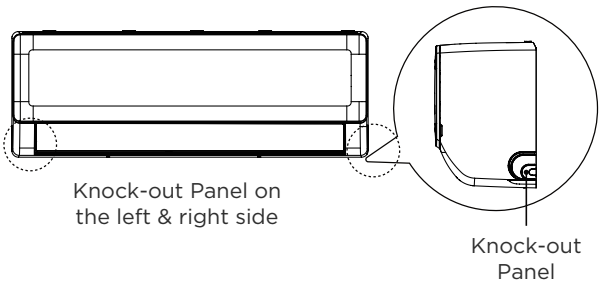
To ensure an enough space for the pipes running and the machine is against the wall after installation, It is recommended to attach the drain hose to the right-hand side (when you're facing the back of the unit).

When choose Left-hand side or Right-hand side piping, please make sure that the pipes come out horizontally so as not to a°ect the lower frame installation.

⚠ 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.

Connect refrigerant piping

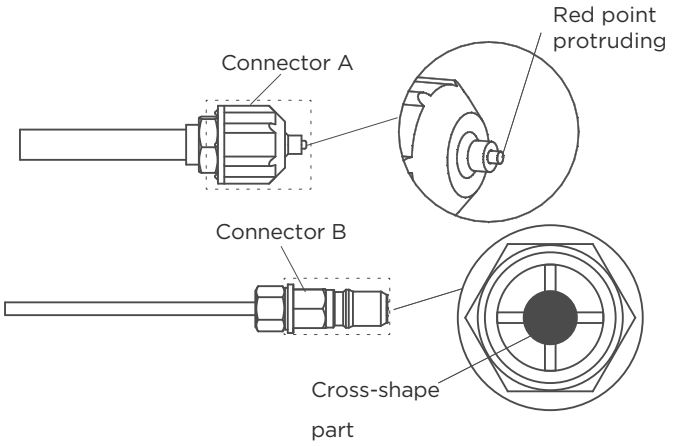


1. If the wall hole is behind the unit, keep the knock-out panel in place. If the wall hole is to the side of the indoor unit, remove the plastic knock-out panel from that side of the unit. Use pliers or scissors if the plastic panel is too difficult to remove by hand.
2. Groove has been made in the knock-out panel in order to cut it conveniently. The size of the slot is determined by the diameter of piping.
3. 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.

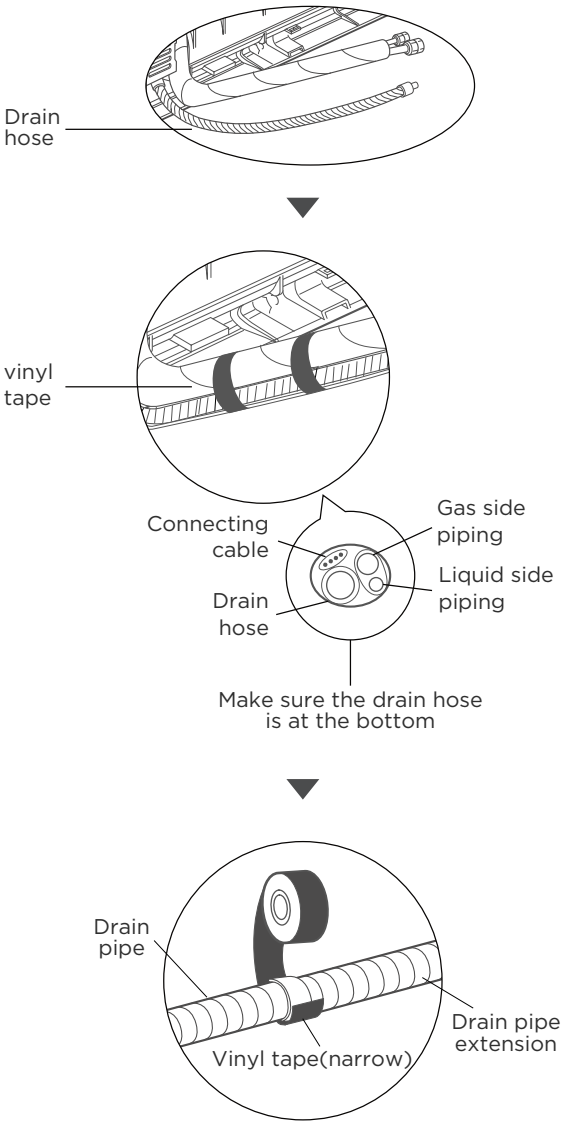
⚠ CAUTION

For the units adopt the following pipe connectors, please strictly perform the piping work in accordance with the following instructions.



- Before performing the refrigerant piping connection, always wear work gloves and goggles, and remember that the connectors A and B are not allowed to face people directly.
- Keep pressing the cross-shape part of connector B with a tool for about 5~10 seconds until the red protuding point of connector A retracts completely.
- Remove connectors A and B, then perform the refrigerant piping connection between indoor unit and outdoor unit.

Connect drain hose



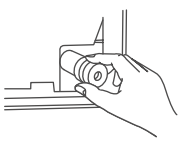
Step 1:

The drain hose can be attached to the left or right 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.

⚠ CAUTION

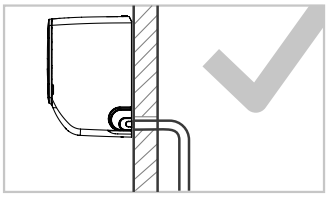
PLUG THE UNUSED DRAIN HOLE



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

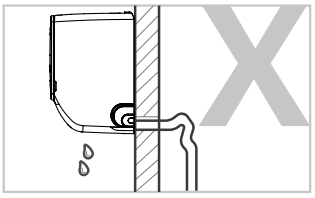
NOTE ON DRAIN HOSE PLACEMENT

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



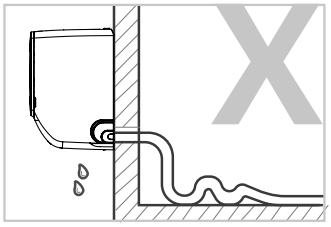
CORRECT

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



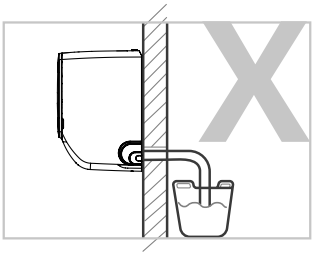
NOT CORRECT

Kinks in the drain hose will create water traps.



NOT CORRECT

Kinks in the drain hose will create water traps.



NOT CORRECT

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

4 Electrical work preparation

⚠ WARNING

- **BEFORE PERFORMING ANY ELECTRICAL WORK, READ THESE REGULATIONS**
- **BEFORE PERFORMING ANY ELECTRLCAL OR WIRING WORK, TURN OFF THE MAIN POWER TO THE SYSTEM.**

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. 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.
5. Only connect the unit to an individual branch circuit outlet. Do not connect another appliance to that outlet.
6. Make sure to properly ground the air conditioner.
7. Every wire must be firmly connected. Loose wiring can cause the terminal to overheat, resulting in product malfunction and possible fire.
8. Do not let wires touch or rest against refrigerant tubing, the compressor, or any moving parts within the unit.
9. 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.
10. Power voltage should be within 90-110% of rated voltage. Insufficient power supply can cause malfunction, electrical shock, or fire.

⚠ WARNING

All wiring must be performed strictly in accordance with the wiring diagram located on the back of the Indoor Unit's front panel.

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.

Cable Types

- Indoor Power Cable (if applicable): H05VV-F or H05V2V2-F
- Outdoor Power Cable: H07RN-F or H05RN-F
- Signal Cable: H07RN-F

Minimum Cross-Sectional Area of Power and Signal Cables (For reference)

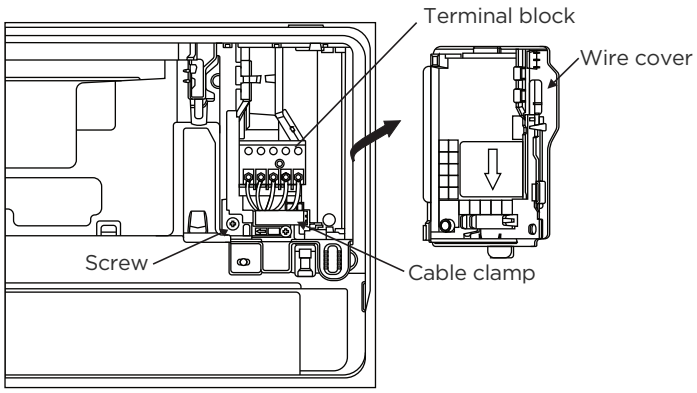
Rated Current of Appliance (A)	Nominal Cross-Sectiona Area (mm^2)
> 3 and ≤6	0.75
> 6 and ≤10	1
> 10 and ≤16	1.5
> 16 and ≤25	2.5
> 25 and ≤32	4
> 32 and ≤40	6

CHOOSE THE RIGHT CABLE SIZE

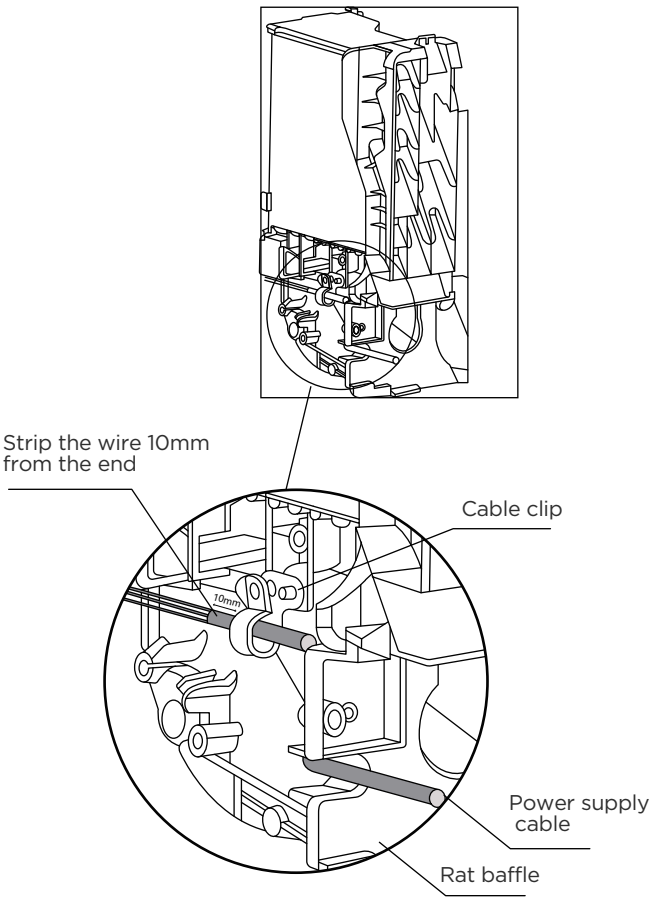
The size of the power supply cable, signal cable, fuse, and switch needed is determined by the maximum current of the unit. The maximum current is indicated on the nameplate located on the side panel of the unit. Refer to this nameplate to choose the right cable, fuse, or switch.

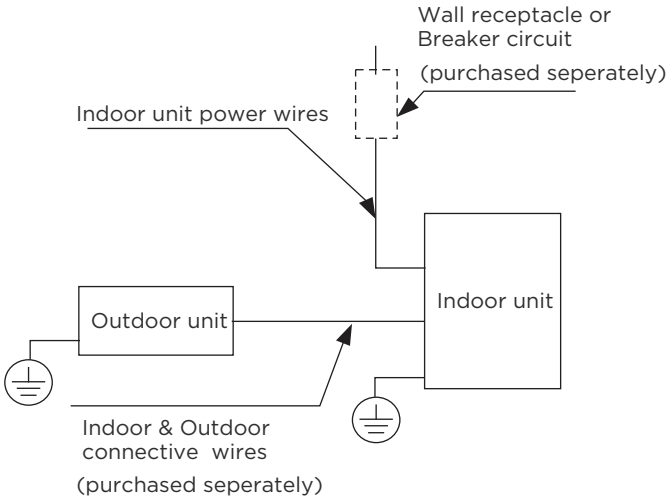
1. Open front panel of the indoor unit.
2. Using a screwdriver, open the wire box cover on the right side of the unit. This will reveal the terminal block.
3. Unscrew the cable clamp below the terminal block and place it to the side.
4. Facing the back of the unit, remove the plastic panel on the bottom 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.
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.

⚠ DO NOT MIX UP LIVE AND NULL WIRES
This is dangerous, and can cause the air conditioning unit to malfunction.



Note:
For some units that require on-site connection of power cords, it is necessary to remove the front frame first, thread the power cable through the cable-cross hole in the rat baffle at the back of the indoor unit, and then pull it out from the front side, secure it with a cable clip as shown in the following diagram.
After the power cord passes through the cable clamp, strip the wire 10mm from the end, and then connect the wire to the terminal.



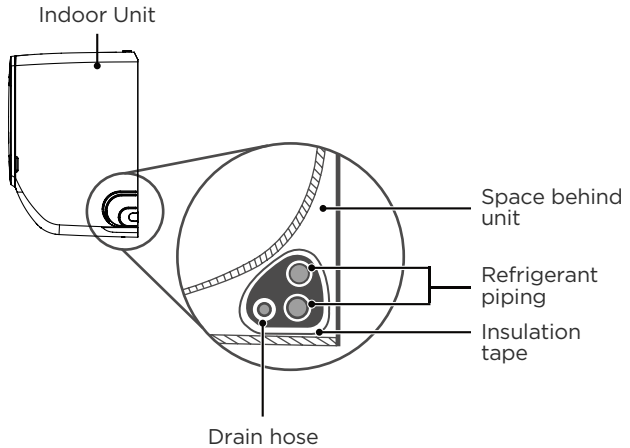


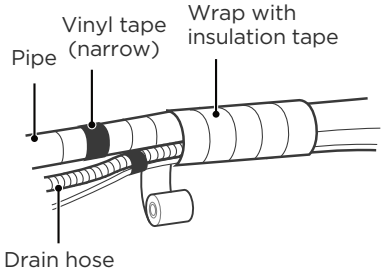
Indoor power supply models

5 Wrap piping & Cables

NOTE

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





Step 1:

Bundle the drain hose, refrigerant pipes as shown above.

Step 2:

Using adhesive vinyl tape, attach the drain hose to the underside of the refrigerant pipes.

Step 3:

Using insulation tape, wrap the refrigerant pipes, and drain hose tightly together. Double-check that all items are bundled.

Step 4:

After completing the wiring and piping connection, reinstall the lower frame.

DRAIN HOSE MUST BE ON BOTTOM

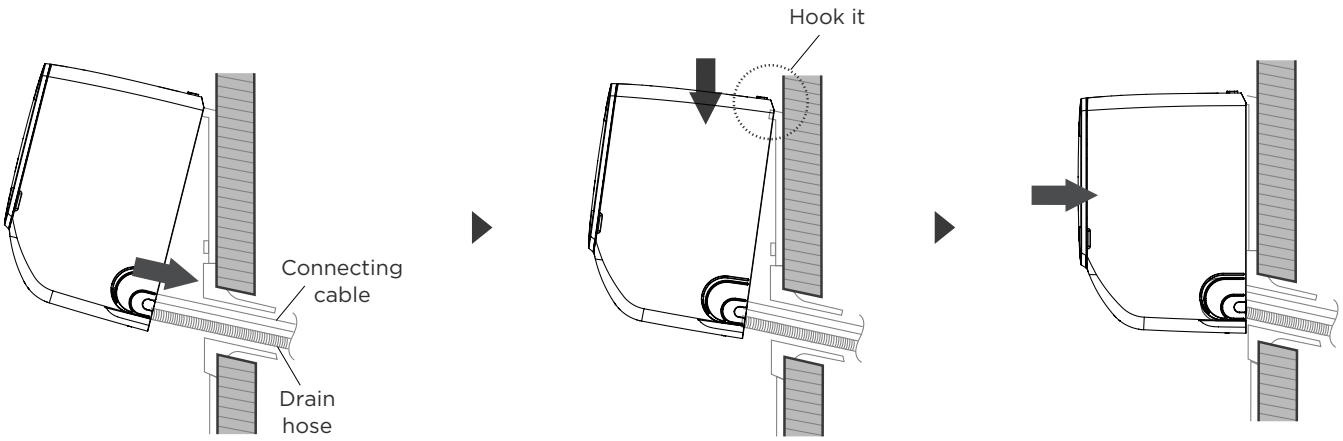
Make sure that the drain hose is at the bottom of the bundle. Putting the drain hose at the top of the bundle can cause the drain pan to overflow, which can lead to fire or water damage.

DO NOT 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 Checks and Leak Checks section of this manual).

6 Mount indoor unit

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

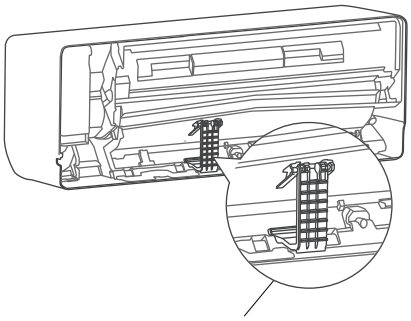


Put pipes in wall hole

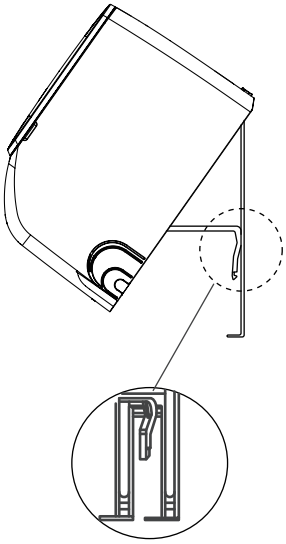
Hook it and press down lightly to secure

Check that the unit is firmly mounted

- If you have already passed the refrigerant piping through the hole in the wall, proceed to Point 4.
- Otherwise, double-check that the ends of the refrigerant pipes are sealed to prevent dirt or foreign materials from entering the pipes.
- Slowly pass the wrapped bundle of refrigerant pipes, drain hose, and signal wire through the hole in the wall.
- Hook the top of the indoor unit on the upper hook of the mounting plate.
- 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.
- 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.
- Again, check that the unit is firmly mounted by applying slight pressure to the left and the right-hand sides of the unit.



Holder at the back of the unit



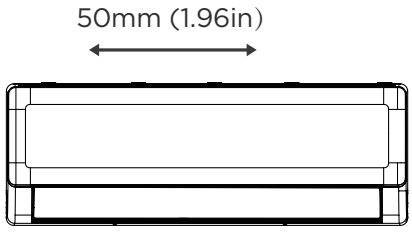
Use the holder at the back of the unit against on the mounting plate to prop up the unit

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

- Hook the top of the indoor unit on the upper hook of the mounting plate.
- Use the holder at the back of the unit to prop up the unit, giving you enough room to connect the refrigerant piping, signal cable, and drain hose.
- Connect drain hose and refrigerant piping (refer to **Refrigerant Piping Connection** section of this manual for instructions).
- Keep pipe connection point exposed to perform the leak test (refer to **Electrical Checks** and **Leak Checks section** of this manual).
- After the leak test, wrap the connection point with insulation tape.
- Release the holder that is propping up the unit.
- 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.

NOTE : 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 50mm (1.96in), depending on the model.



Move to left or right

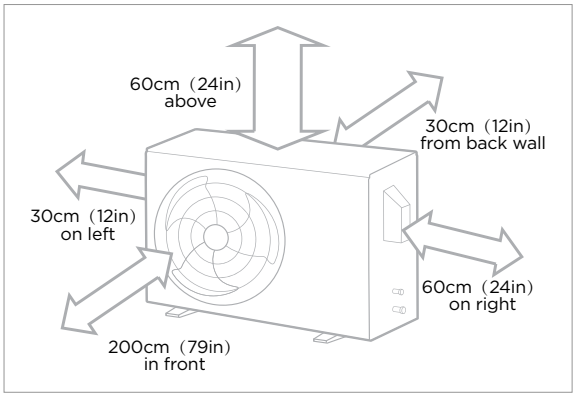
Install Your Outdoor Unit

1 Select installation location

NOTE : PRIOR TO INSTALLATION

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:



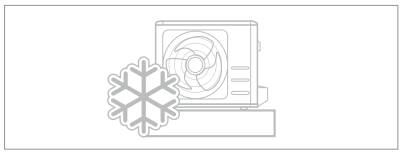
☑ Meets all spatial requirements shown in Installation Space Requirements above.

☑ 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 other people.

☑ Protected from prolonged periods of direct sunlight or rain.



☑ Where snowfall is anticipated, take appropriate measures to prevent ice buildup and coil damage.

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

⚠ CAUTION:

SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

If the unit is exposed to heavy wind:

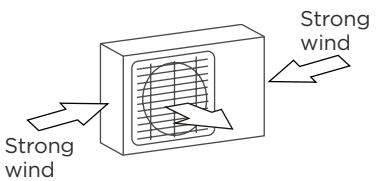
Install unit so that air outlet fan is at a 90° angle to the direction of the wind. If needed, build a barrier in front of the unit to protect it from extremely heavy winds. See Figures below.

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

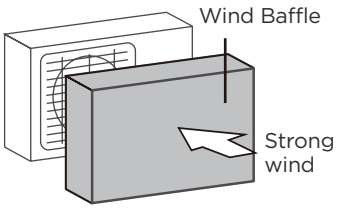
Build a shelter above the unit to protect it from the rain or snow. Be careful not to obstruct air flow around the unit.

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

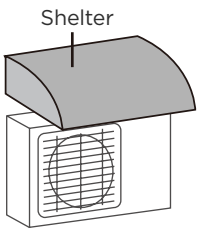
Use outdoor unit that is specially designed to resist corrosion.



90° angle to the direction of the wind



Build a wind Baffle to protect the unit



Build a shelter to protect the unit

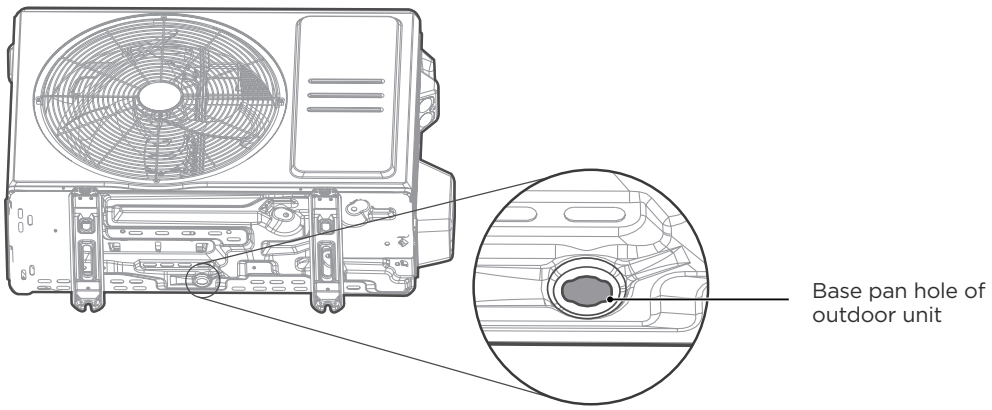
DO NOT install unit in the following locations:

- ⊘ 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.

2 Install drain joint

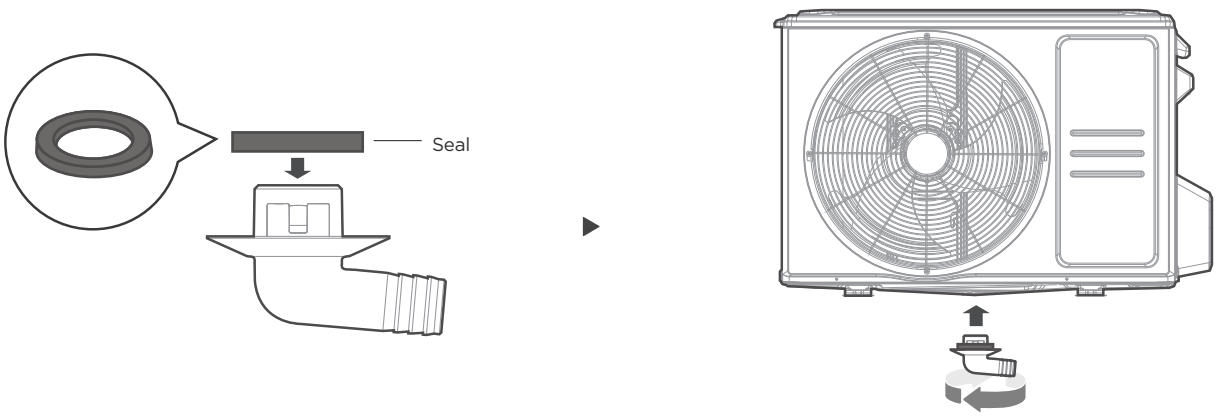
NOTE : PRIOR TO INSTALLATION

Before bolting the outdoor unit in place, you must install the drain joint at the bottom of the unit. For the units with base pan built-in with multiple holes for proper draining during defrost, the drain joint is no need to be installed.



Step 1:

Find out the base pan hole of outdoor unit.



Step 2:

- Fit the rubber seal on the end of the drain joint that will connect to the outdoor unit.
- Insert the drain joint into the hole in the base pan of the unit. The drain joint will click in place.
- Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.

NOTE : IN COLD CLIMATES

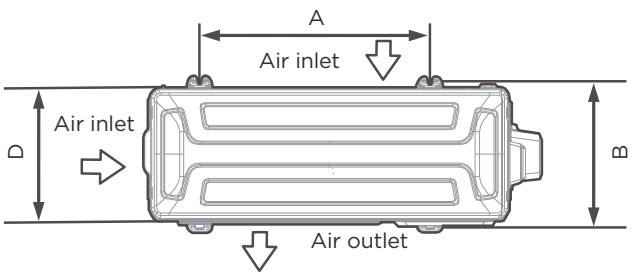
In cold climates, make sure that the drain hose is as vertical as possible to ensure swift water drainage. If water drains too slowly, it can freeze in the hose and flood the unit.

3 Anchor Outdoor Unit

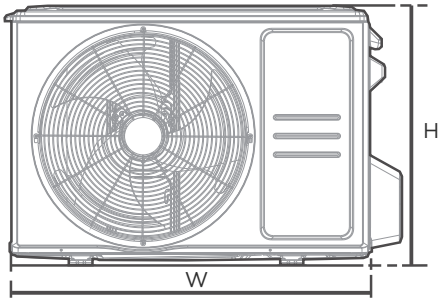
⚠ WARNING

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

- 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.
- 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.



Top view



Front view

Outdoor Unit Dimensions (mm) W x H x D	Mounting Dimensions	
	Distance A (mm)	Distance B (mm)
668x469x252 (26.3”x 18.5”x 9.9”)	430 (16.9”)	231 (9.1”)
765x555x303 (30.1”x 21.8”x 11.9”)	452 (17.8”)	286(11.3”)
805x554x330 (31.7”x 21.8”x 12.9”)	511 (20.1”)	317 (12.5”)

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

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

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

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

⚠ 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.

4 Connect signal and power cables

⚠ WARNING - Before the Operation

- ALL WIRING WORK MUST BE PERFORMED STRICTLY IN ACCORDANCE WITH THE WIRING DIAGRAM LOCATED INSIDE OF WIRE COVER OF THE OUTDOOR UNIT.
- BEFORE PERFORMING ANY ELECTRICAL OR WIRING WORK,TURN OFF THE MAIN POWER TO THE SYSTEM.

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.
Please choose the right cable according to the "Cable types" in page 26.

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

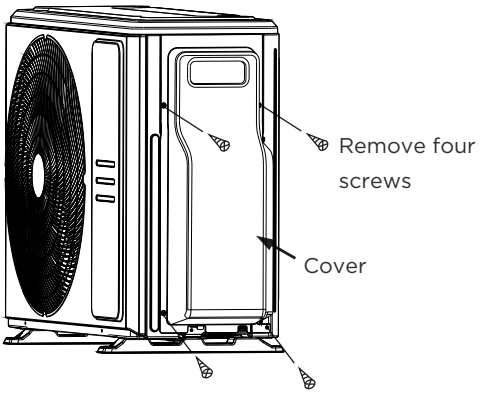
Pay attention to live wire

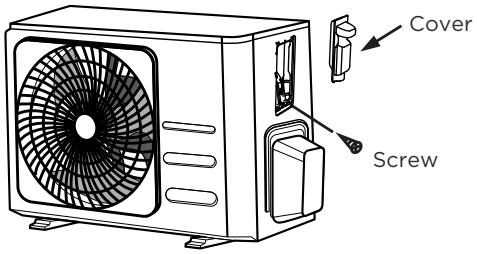
While crimping wires, make sure you clearly distinguish the Live ("L") Wire from other wires.

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

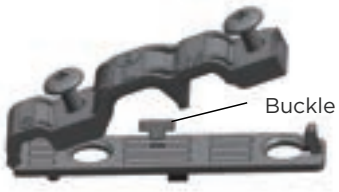
- Unscrew the electrical wiring cover and remove it.
- Unscrew the cable clamp below the terminal block and place it to the side.
- Connect the wire according to the wiring diagram, and firmly screw the u-lug of each wire to its corresponding terminal.
- After checking to make sure every connection is secure, loop the wires around to prevent rain water from flowing into the terminal.
- Using the cable clamp, fasten the cable to the unit. Screw the cable clamp down tightly.
- Insulate unused wires with PVC electrical tape. Arrange them so that they do not touch any electrical or metal parts.
- 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 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 calbe is not fasten enough, use the buckle to prop it up , so it can be clamped tightly.

Refrigerant Piping Connection

1 Piping Connection Instructions

⚠ WARNING

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.

Maximum Length and Drop Height of Refrigerant Piping per Unit Model

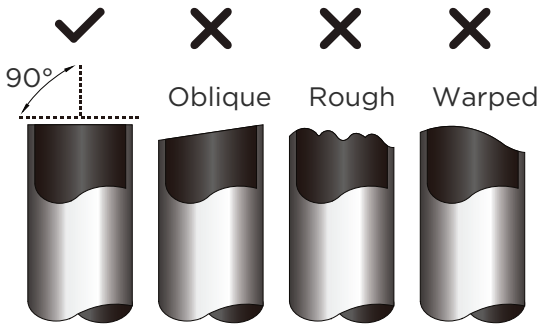
Model	Capacity (BTU/h)	Max. Length (m)	Max. Drop Height (m)
R32 Inverter Split Air Conditioner	< 15,000	25 (82ft)	10 (33ft)
	≥ 15,000 and < 24,000	30 (98.5ft)	20 (66ft)
	≥ 24,000 and < 36,000	50 (164ft)	25 (82ft)

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.

- Measure the distance between the indoor and outdoor units.
- Using a pipe cutter, cut the pipe a little longer than the measured distance.
- 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.

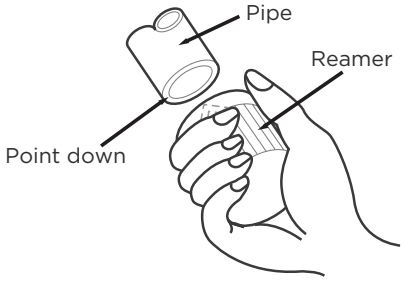
⚠ CAUTION

MUST BE CHECK OVER THE END OF THE PIPE FOR CRACKS AND EVEN FLARING. ENSURE THE PIPE IS SEALED.

Step 2: Remove burrs

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

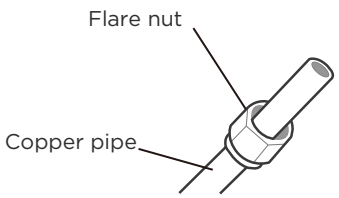
- Hold the pipe at a downward angle to prevent burrs from falling into the pipe.
- Using a reamer or deburring tool, remove all burrs from the cut section of the pipe.



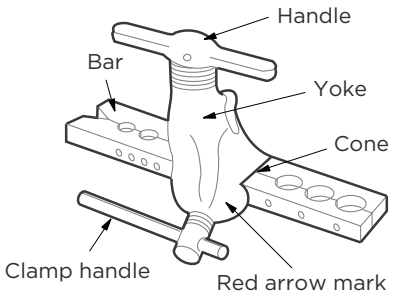
Step 3: Flare pipe ends

Proper flaring is essential to achieve an airtight seal.

- After removing burrs from cut pipe, seal the ends with PVC tape to prevent foreign materials from entering the pipe.
- Sheath the pipe with insulating material.
- 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.

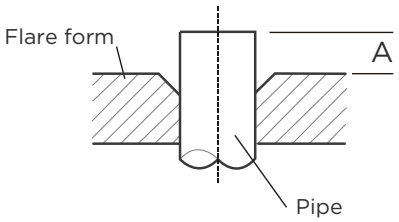


- Remove PVC tape from ends of pipe when ready to perform flaring work.
- Clamp flare form on the end of the pipe. The end of the pipe must extend beyond the edge of the flare form in accordance with the dimensions shown in the table below.



PIPING EXTENSION BEYOND FLARE FORM

Outer Diameter of Pipe (mm)	A (mm)	
	Min.	Max.
Ø 6.35 (Ø 1/4")	0.7 (0.0275")	1.3 (0.05")
Ø 9.52 (Ø 3/8")	1.0 (0.04")	1.6 (0.063")
Ø12.7 (Ø 1/2")	1.0 (0.04")	1.8 (0.07")
Ø 16 (Ø 5/8")	2.0 (0.078")	2.2 (0.086")
Ø 19 (Ø 3/4")	2.0 (0.078")	2.4 (0.094")



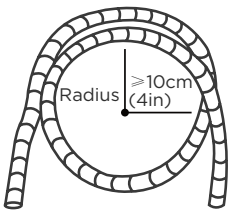
- Place flaring tool onto the form.
- Turn the handle of the flaring tool clockwise until the pipe is fully flared.
- Remove the flaring tool and flare form, then inspect the end of the pipe for cracks and even flaring.

Step 4: Connect pipes

NOTE: 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.

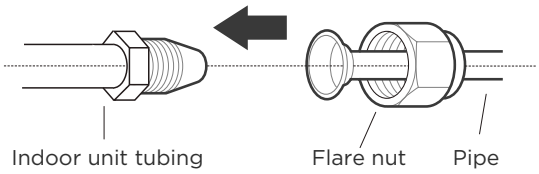


2 Connecting Piping to Indoor Unit

Instructions for Connecting Piping to Indoor Unit

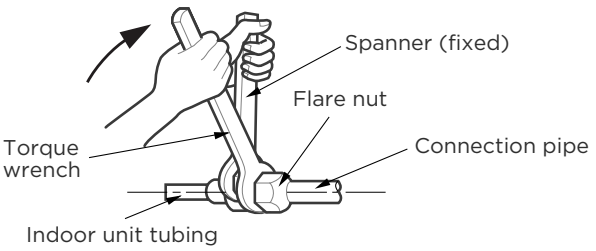
Step 1:

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

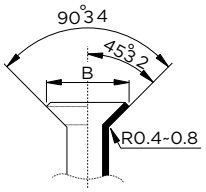


Step 2:

- Tighten the flare nut as tightly as possible by hand.
- Using a spanner, grip the nut on the unit tubing.
- 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 1/4")	18~20(180~200kgf.cm)	8.4~8.7 (0.33~0.34")	
Ø 9.52 (Ø 3/8")	32~39(320~390kgf.cm)	13.2~13.5 (0.52~0.53")	
Ø 12.7 (Ø 1/2")	49~59(490~590kgf.cm)	16.2~16.5 (0.64~0.65")	
Ø 16 (Ø 5/8")	57~71(570~710kgf.cm)	19.2~19.7 (0.76~0.78")	
Ø 19 (Ø 3/4")	67~101(670~1010kgf.cm)	23.2~23.7 (0.91~0.93")	

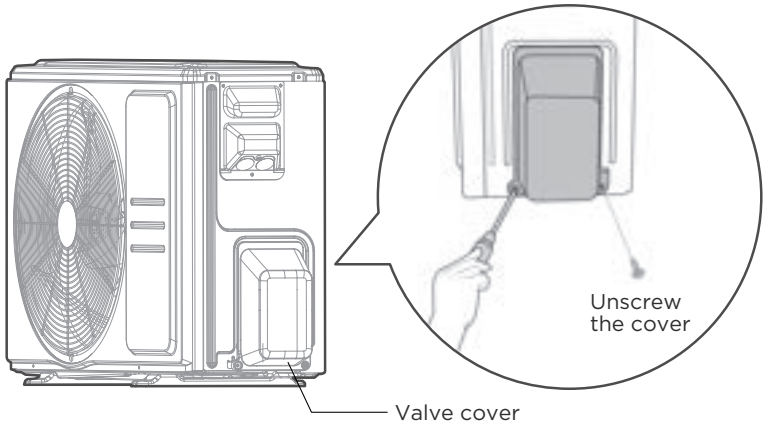
⊘ DO NOT USE EXCESSIVE TORQUE

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

3 Connecting Piping to Outdoor Unit

NOTE

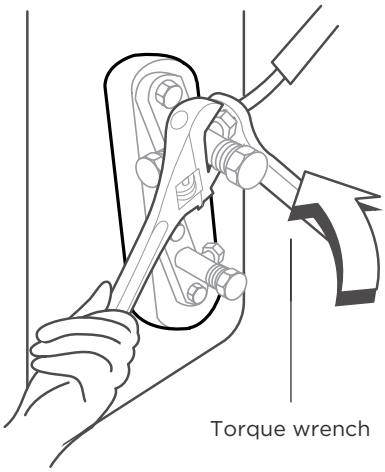
This section still needs to be operated according to the **TORQUE REQUIREMENTS** chart on the previous page.



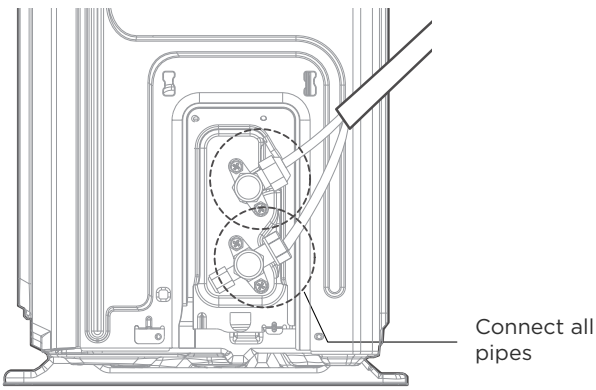
1. Unscrew the cover from the packed valve on the side of the outdoor unit.
2. Remove protective caps from ends of valves.
3. Align flared pipe end with each valve, and tighten the flare nut as tightly as possible by hand.
4. Using a spanner, grip the body of the valve. **Do not** grip the nut that seals the service valve.

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.
6. Loosen the flaring nut slightly, then tighten again.
7. Repeat Steps 3 to 6 for the remaining pipe.



Air Evacuation

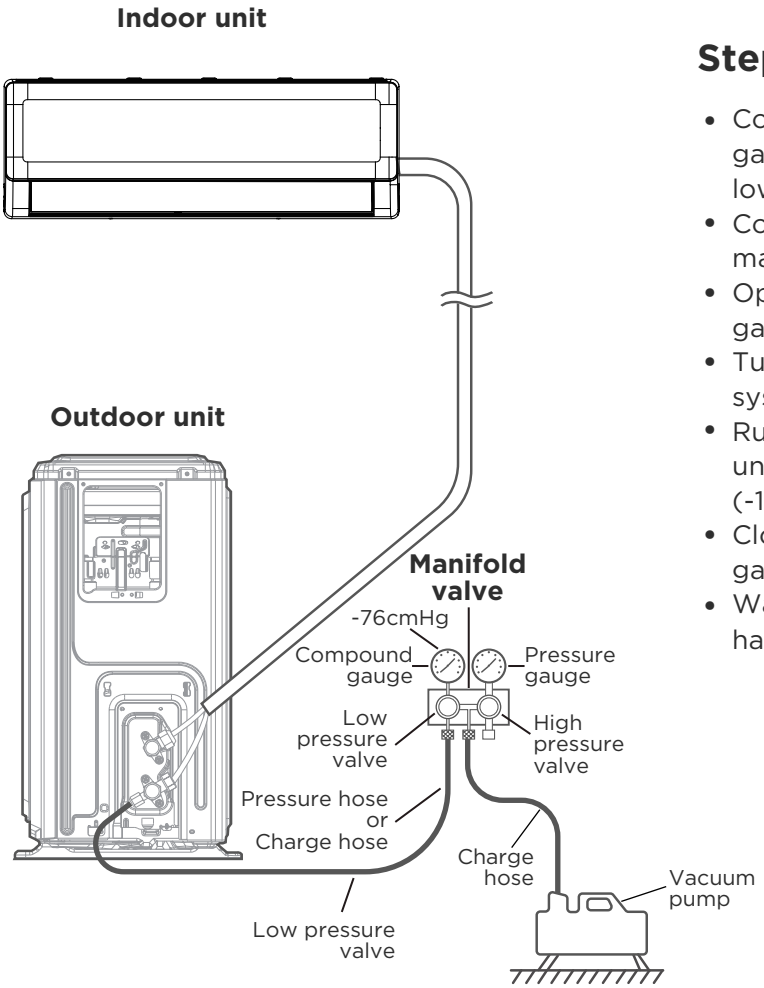
NOTE : PREPARATIONS AND PRECAUTIONS

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. Ensure to evacuate the air inside the indoor unit and pipes with vacuum pump. 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. Incorrect installation due to ignoring of the Instruction will cause serious problem to the machine.

BEFORE PERFORMING EVACUATION

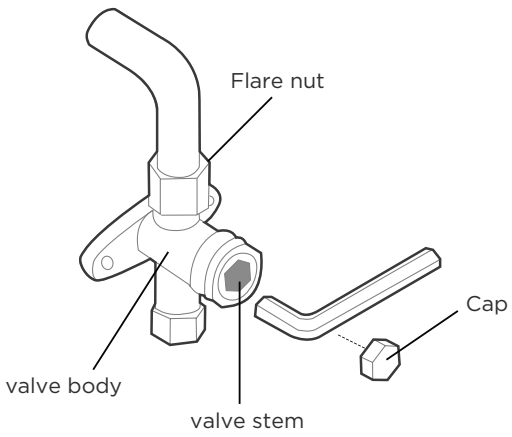
- ☑ Make sure the connective pipes between the indoor and outdoor units are connected properly.
- ☑ Check to make sure all wiring is connected properly.

Evacuation Instructions



Step 1:

- Connect the charge hose of the manifold gauge to service port on the outdoor unit's low pressure valve.
- Connect another charge hose from the manifold gauge to the vacuum pump.
- Open the Low Pressure side of the manifold gauge. Keep the High Pressure side closed.
- Turn on the vacuum pump to evacuate the system.
- Run the vacuum for at least 15 minutes, or until the Compound Meter reads -76cmHG (-10^5Pa).
- Close the Low Pressure side of the manifold gauge, and turn off the vacuum pump.
- Wait for 5 minutes, then check that there has been no change in system pressure.



Step 2:

- 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).
- 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.
- 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.
- Remove the charge hose from the service port.
- Using hexagonal wrench, fully open both the high pressure and low pressure valves.
- 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

Ensure to open all the valves after evacuation. 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 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 (1/4") R32: (Pipe length – standard length) x 12g/m (Pipe length – standard length) x 0.13oZ/ft	Liquid Side: Ø 9.52 (3/8") R32: (Pipe length – standard length) x 24g/m (Pipe length – standard length) x 0.26oZ/ft

DO NOT MIX REFRIGERANT TYPES.

Electrical and Gas Leak Checks

⚠ WARNING - RISK OF ELECTRIC SHOCK

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

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.

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.

Gas Leak Checks

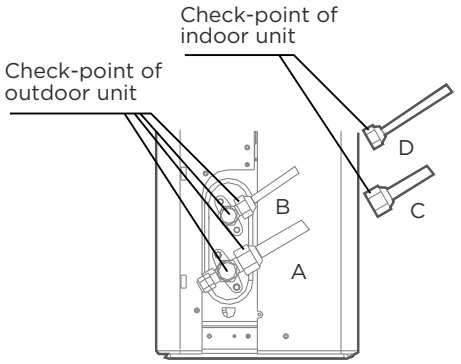
There are two different methods to check for gas leaks.

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 operation manual for proper usage instructions.



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

AFTER PERFORMING GAS LEAK CHECKS

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

Test Run

Test Run Instructions

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

- Connect power to the unit.
- Press the **ON/OFF** button on the remote controller to turn it on.
- Press the **MODE** button to scroll through the following functions, one at a time:
  - COOL–Select lowest possible temperature
- 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		
Unit performs HEAT function properly		
Indoor unit louvers rotate properly		
Indoor unit responds to remote controller		

DOUBLE-CHECK PIPE CONNECTIONS

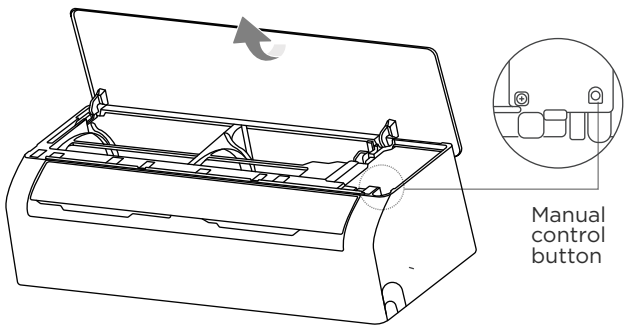
During operation, the pressure of the refrigerant circuit will increase. This may reveal leaks that were not present during your initial leak check. Take time during the Test Run to double-check that all refrigerant pipe connection points do not have leaks. Refer to **Gas Leak Check** section for instructions.

- 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.

IF AMBIENT TEMPERATURE IS BELOW 16°C(60°F)

You can't use the remote controller to turn on the COOL function when the ambient temperature is below 16°C (60°F). In this instance, you can use the **MANUAL CONTROL** button to test the COOL function.

- Lift the front panel and raise it until it clicks in place.
- The **MANUAL CONTROL** button is located on the right-hand side of the electriacal control box. Press two times to select cool mode.
- Perform Test Run as normal.



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 user manual 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.

Rasonic 樂信牌

SHUN HING GROUP
信興集團
SINCE 1953

信興電工工程有限公司
SHUN HING ELECTRIC WORKS & ENGINEERING CO., LTD

辦公室: 香港九龍尖沙咀東部麼地道 67 號半島中心 9 樓
OFFICE: 9/F, PENINSULA CENTRE, 67 MODY ROAD, TSIMSHATSUI EAST, KOWLOON, HONG KONG
電話 TEL: (852) 2861 2767　　傳真 FAX: (852) 2865 6706
網址 WEBSITE: www.shew.com.hk　　電郵 EMAIL: shew@shunhinggroup.com

保養及維修 MAINTENANCE AND REPAIR SERVICE
信興電器服務中心有限公司
SHUN HING ELECTRIC SERVICE CENTRE LTD.

辦公室: 香港新界葵涌勝耀街2號信興中心11樓
OFFICE: 11TH FLOOR, SHUN HING CENTRE, 2 SHING YIU STREET, KWAI CHUNG, NEW TERRITORIES, HONG KONG
電話 TEL: (852) 2406 5666　　傳真 FAX: (852) 2408 0316
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