



*The Comfortable Choice*

## **SPLIT-TYPE ROOM AIR CONDITIONER**

### **Platinum 3D Inverter Series**

# **Operation & Installation Manual**

**Heat Pump Model:**

**TWS-TSO26H3DVJT**

**TWS-TSO35H3DVJT**

**TWS-TSO52H3DVJT**

**TWS-TSO72H3DVJT**

**TWS-TSO88H3DVJT**



#### **IMPORTANT NOTE:**

Thank you for selecting a TECO quality Air Conditioner. Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details.

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# SAFETY PRECAUTIONS

Read Safety Precautions Before Operation and Installation.

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

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

## **WARNING**

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

## **CAUTION**

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



Warning;  
Risk of fire/flammable materials



Please read operator's manual carefully!



Please read operating instructions carefully!



Please read technical manual carefully!

## **WARNING**

- 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.
- 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 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 operate the air conditioner with wet hands. This may cause electric shock.
- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.

## SAFETY PRECAUTIONS

### CAUTION

- 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 expose your body directly to cool air for a prolonged period of time.
- In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.
- Make sure that water condensation can drain unhindered from the unit.
- 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.
- Turn off the air conditioner and disconnect the power if you are not going to use it for a long time.
- Turn off the unit during storms.

### 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.

### DISPOSAL GUIDELINES

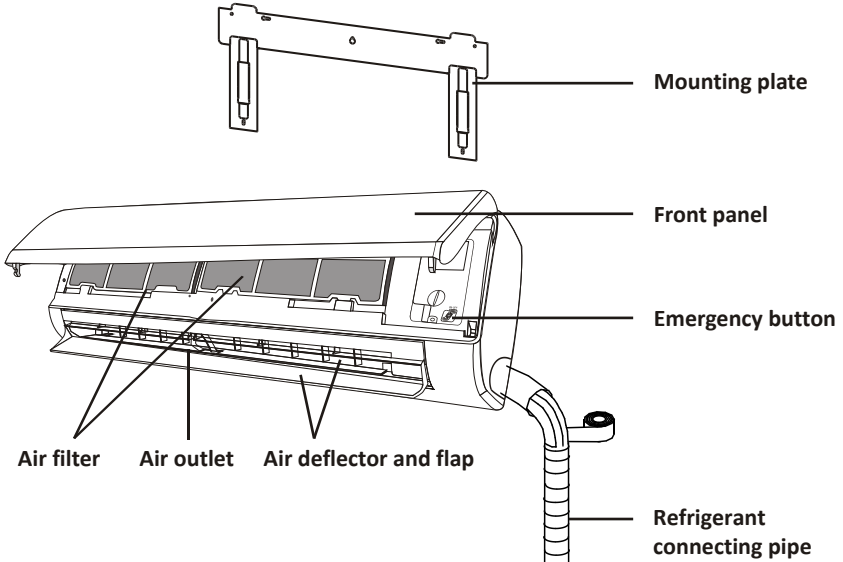
This marking shown on the product or its literature, indicates that waste electrical and electrical equipment should not be mixed with general household waste.

- Young children should be supervised to ensure that they do not play with the appliance and packaging.
- Packing (e.g. wraps, polystyrene etc.) can be dangerous for children. There is a risk of suffocation . Keep packaging materials away from children.
- Contact your local authorities for correct method of disposal. Dispose of all packaging in a responsible manner in accordance with local regulations.

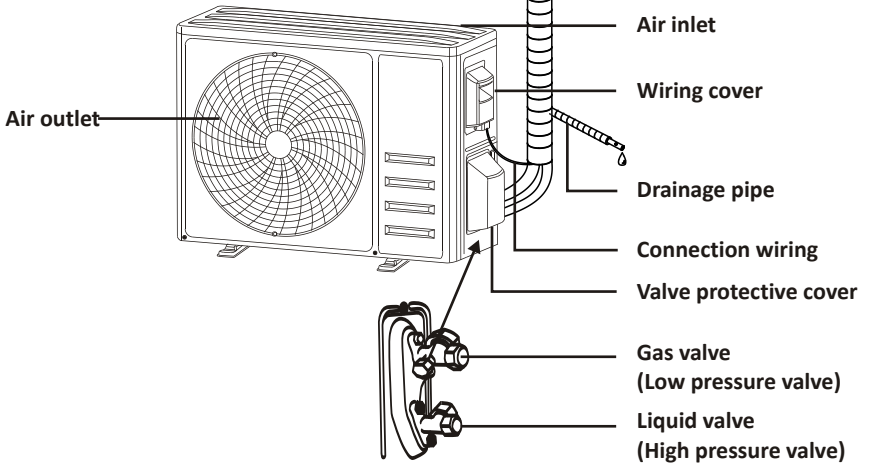


# NAME OF PARTS

## INDOOR UNIT



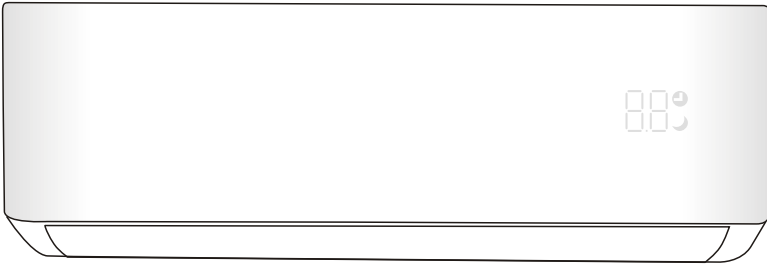
## OUTDOOR UNIT






With the protective cover removed

## NAME OF PARTS

### INDOOR DISPLAY



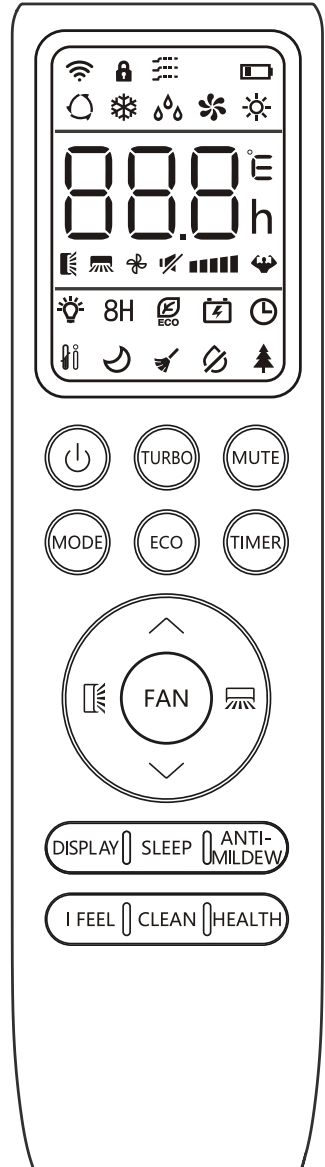
No.	LED	Function
1		Indicator for Timer, Temperature or Error codes.
2		Lights up during Timer operation.
3		SLEEP mode

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

# REMOTE CONTROL & FUNCTIONS




## REMOTE CONTROL DISPLAY

No.	Symbols	Meaning
1		Battery indicator
2		Auto Mode
3		Cooling Mode
4		Dry Mode
5		Fan only Mode
6		Heating Mode
7		ECO Mode
8		Timer
9		Temperature indicator
10		Fan speed: Auto/ low/ low-mid/ mid/ mid-high/ high
11		Mute function
12		TURBO function
13		Up-down auto swing
14		Left-right auto swing
15		SLEEP function
16		Health function
17		I FEEL function
18	8H	8°C heating function
19		Signal indicator
20		Gentle wind
21		Child-Lock
22		Display ON/OFF
23		GEN function
24		Self-Clean function
25		Anti-Mildew



**NOTE:** The display and some functions of the remote control may vary according to the model.

## REMOTE CONTROL & FUNCTIONS

No.	Button	Function
1		To turn on/off the air conditioner .
2	^	To increase temperature, or Timer setting hours.
3	v	To decrease temperature, or Timer setting hours.
4	MODE	To select the mode of operation (AUTO, COOL, DRY, FAN, HEAT).
5	ECO	To activate/deactivate the ECO function.
		Long press to activate/deactivate the 8°C heating function (Not avail).
6	TURBO	To activate/deactivate the TURBO function.
7	FAN	To select the fan speed of auto/mute/low/low-mid/mid/mid-high/high/turbo.
8	TIMER	To set the time for timer on/off.
9	SLEEP	To switch-on/off the function SLEEP.
10	DISPLAY	To switch-on/off the LED display.
11		To stop or start horizontal flaps louver movement or set the desired up/down air flow direction.
12		To stop or start vertical deflectors louver movement or set the desired left/right air flow direction.
13	I FEEL	To switch-on/off the I FEEL function.
14	MUTE	To switch-on/off the MUTE function.
		Long press to activate/deactivate the GEN function (depending on models).
15	MODE + TIMER	To activate/deactivate the CHILD-LOCK function.
16	CLEAN	To activate/deactivate the SELF-CLEAN function (depending on models).
17	FAN + MUTE or GENTLE WIND	To activate/deactivate the GENTLE WIND function (depending on models).
18	HEALTH	To activate/deactivate the HEALTH function (depending on models).
19	ANTI-MILDEW	To activate/deactivate the ANTI-MILDEW function.

### NOTE:

- The display and some functions of the remote control may vary according to the model.
- The shape and position of buttons and indicators may vary according to the model, but their function is the same.
- The unit confirms the correct reception of each button with the beep.



# REMOTE CONTROL & FUNCTIONS

## COOLING MODE

**COOL** ❄️

The cooling function allows the air conditioner to cool the room and reduce Air humidity at the same time.

To activate the cooling function (COOL), press the **MODE** button until the symbol ❄️ appears on the display.

With the button  $\nabla$  or  $\blacktriangle$  set a temperature lower than that of the room.

## FAN MODE (Not FAN button)

**FAN** 🌀

Fan mode, air ventilation only.

To set the FAN mode, press **MODE** until 🌀 appears on the display.

## DRY MODE

**DRY** 💧

This function reduces the humidity of the air to make the room more comfortable.

To set the DRY mode, Press **MODE** until 💧 appears in the display. An automatic function of pre-setting is activated.

## AUTO MODE

**AUTO** 🔄

Automatic mode.

To set the AUTO mode, press **MODE** until 🔄 appears on the display.

In AUTO mode the run mode will be set automatically according to the room temperature.

## HEATING MODE

**HEAT** ☀️

The heating function allows the air conditioner to heat the room.

To activate the heating function (HEAT), press the **MODE** button until the symbol ☀️ appears on the display.

With the button  $\nabla$  or  $\blacktriangle$  set a temperature higher than that of the room.

⚠️ In HEATING operation, the appliance can automatically activate a defrost cycle, which is essential to clean the frost on the condenser so as to recover its heat exchange function. This procedure usually lasts for 2-10 minutes. During defrosting, indoor unit fan stop operation. After defrosting, it resumes to HEATING mode automatically.

⚠️ (For North American market)

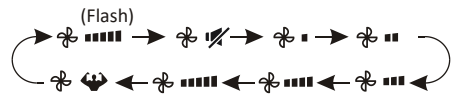
If necessary, you can press ECO button 10 times within 8 seconds under heating mode to start the forced defrosting. It will defrost the outdoor ice much more fast.

## FAN SPEED function (FAN button)

**FAN** 🌀  
■■■■

Change the operating fan speed.

Press **FAN** button to set the running fan speed, it can be set to AUTO/ MUTE/ LOW/ LOW-MID / MID/ MID-HIGH/ HIGH/ TURBO speed circularly.




## Child-Lock function

1. Long press **MODE** and **TIMER** button together to active this function, and do it again to deactivate this function.
2. Under this function, no single button will active.



# REMOTE CONTROL & FUNCTIONS

## TIMER function ---- TIMER ON

**TIMER**  To automatic switch on the appliance.


When the unit is switch-off, you can set the TIMER ON.

To set the time of automatic switch-on as below:

1. Press **TIMER** button first time to set the switch-on,  and  will appear on the remote display and flashes.
2. Press  $\wedge$  or  $\vee$  to button to set desired Timer-on time. Each time you press the button, the time increases/decreases by half an hour between 0 and 10 hours and by one between 10 and 24 hours.
3. Press **TIMER** button second time to confirm.
4. After Timer-on setting, set the needed mode (Cool/ Heat/ Auto/ Fan/ Dry), by press the **MODE** button. And set the needed fan speed, by press **FAN** button. And press  $\wedge$  or  $\vee$  to set the needed operation temperature.

CANCEL it by press **TIMER** button.

## TIMER function ---- TIMER OFF

**TIMER**  To automatic switch off the appliance.

When the unit is switch-on, you can set the TIMER OFF.

To set the time of automatic switch-off, as below:







1. Confirm the appliance is ON.
2. Press the **TIMER** button at first time to set the switch-off.  
Press  $\wedge$  or  $\vee$  to set the needed timer.
3. Press **TIMER** button at the second time to confirm.

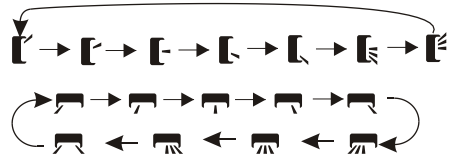
CANCEL it by press **TIMER** button.



**Note:** All programming should be operated within 5 seconds, otherwise the setting will be cancelled.

## SWING function




1. Press the button **SWING** to activate the louver,
  - 1.1 Press  to activate the horizontal flaps to swing from up to down, the  will appear on the remote display.
  - 1.2 Press  to activate the vertical deflectors to swing from left to right, the  will appear on the remote display.
  - 1.3 Do it again to stop the swing movement at the current angle.
2. If the vertical deflectors are positioned manually which placed under the flaps, they allow to move the air flow direct to rightward or leftward.
3. Long press  or  over 3 seconds to select more angles of the airflow direction.



-  Never position “Flaps” manually, the delicate mechanism might seriously damaged!
-  Never put fingers, sticks or other objects into the air inlet or outlet vents. Such accidental contact with live parts might cause unforeseeable damage or injury.

## TURBO function




To activate turbo function, press the **TURBO** button, and  will appear on the display. Press again to cancel this function.

In COOL/ HEAT mode, when you select TURBO feature, the appliance will turn to quick COOL or quick HEAT mode, and operate the highest fan speed to blow strong airflow.

## REMOTE CONTROL & FUNCTIONS

### MUTE function


**MUTE** 

1. Press **MUTE** button to activate this function, and  will appear on the remote display. Do it again to deactivate this function.
2. When the MUTE function runs, the remote controller will display the auto fan speed, and the indoor unit will operate at lowest fan speed to be quiet feeling.
3. When press FAN/ TURBO button, the MUTE function will be cancel. MUTE function can not be activated under dry mode.

### SLEEP function

**SLEEP** 

Pre-setting automatic operating program.

Press **SLEEP** button to activate the SLEEP function, and  appears on the display. Press again to cancel this function.

After 10 hours running in sleep mode, the air conditioner will change to the previous setting mode.

### DISPLAY function (Indoor display)

**DISPLAY**


Switch ON/OFF the LED display on panel.

Press **DISPLAY** button to switch off the LED display on the panel. Press again to switch on the LED display.

### ECO function

**ECO** 


In this mode the appliance automatically sets the operation to save energy.

Press the **ECO** button, the  appears on the display, and the appliance will run in ECO mode. Press again to cancel it.

**Note:** The ECO function is available in both COOLING and HEATING modes.

### I FEEL function

**I FEEL** 

Press **I FEEL** button to activate the function, the  will appear on the remote display. Do it again to deactivate this function.


This function enables the remote control to measure the temperature at its current location, and send this signal to the air conditioner to optimize the temperature around you and ensure the comfort.


It will automatically deactivate 2 hours later.

# REMOTE CONTROL & FUNCTIONS


## SELF-CLEAN function


Only optional for some heating pump inverter appliance.

To active this function, turn off the indoor unit at first, then press **CLEAN** button then you will hear a beep, [ AC ] will appear on the indoor LED, and  will appear on the remote display .


1. This function helps carry away the accumulated dirt, bacteria, etc from the indoor evaporator.
2. This function will run about 30 minutes, and it will return to the pre-setting mode. You can press  button to cancel this function during the process.

You will hear 2 beeps when it's finished or cancelled.

 It's normal if there is some noise during this function process, as plastic materials expand with heat and contract with cold.


 We suggest operating this function at the following ambient conditions to avoid certain safety protection features.

Indoor unit	Temp < 86°F (30°C)
Outdoor unit	41°F (5°C) < Temp < 86°F (30°C)

 It's suggested to utilize this function every 3 months.

## ANTI-MILDEW function



Press **ANTI-MILDEW** button to activate the ANTI-MILDEW function,  will appear on the display. Do it again to deactivate this function. After running COOL/ DRY for more than 30 minutes, you can operate this function, the unit will blow airflow for about 15 minutes to dry the inner parts to avoid mildew, then shuts off the unit.

**Note:** ANTI-MILDEW function only available in DRY/COOLING mode.

# REPLACE OF BATTERIES

## Replacement of Batteries

Remove the battery cover plate from the rear of the remote control, by sliding it in direction as the arrow.

Install the batteries according the direction (+ and -) shown on the Remote Control.  
Reinstall the battery cover by sliding it into place.

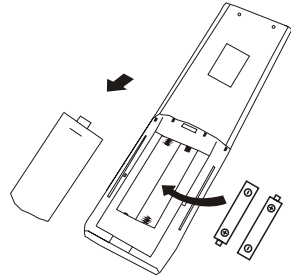
⚠ Use 2 pieces LRO3 AAA (1.5V) batteries.

Do not use rechargeable batteries.

Replace the old batteries with new ones of the same type when the display is no longer legible.

Do not dispose batteries as unsorted municipal waste.

Collection of such waste separately for special treatment is necessary.



⚠ For some model, each time when insert the batteries in the remote controller for the first time, you can set the Cooling only or Heating pump control type. As soon as you insert the batteries, turn off the remote controller, and operate as below.

1. Long press the **MODE** button, until the (❄) icon flash, to set the Cooling only type.

2. Long press the **MODE** button, until the (🔥) icon flash, to set the Heating pump type.

**Note:** If you set the remote control in cooling mode, it will not be possible to activate the heating function in units with a heating pump. If you need to reset, take out the batteries and install again.

⚠ For some model of remote controller, you can program the temperature display between °C and °F.

1. Press and hold the **TURBO** button over 5 seconds to get into the change mode;

2. Press and hold the **TURBO** button, until it switch to °C and °F;

3. Then release the pressing and wait for 5 seconds, the function will be selected.

### Note:

1. Direct the remote control toward the Air conditioner.
2. Check that there are no objects between the remote control and the Signal receptor in the indoor unit.
3. Never leave the remote control exposed to the rays of the sun.
4. Keep the remote control at a distance of at least 1m from the television or other electrical appliances.

# OPERATION INSTRUCTIONS

- ⓘ Attempt to use the air conditioner under the temperature beyond the specified range may cause the air conditioner protection device to start and the air conditioner may fail to operate. Therefore, try to use the air conditioner in the following temperature conditions.

## Inverter air conditioner:

MODE	Heating	Cooling	Dry
Room temperature	0°C~27°C (32°F~80°F)	17°C~32°C (63°F~90°F)	
Outdoor temperature	-15°C~24°C (5°F~75°F)	T1 climate: 15°C~50°C (59°F~122°F)	

With the power supply connected, restart the air conditioner after shutdown, or switch it to other mode during operation, and the air conditioner protection device will start. The compressor will resume operation after 3 minutes.

## ⓘ Characteristics of heating operation (applicable to Heating pump)

### Preheating:

When the heating function is enabled, the indoor unit will take 2~5 minutes for preheating, after that the air conditioner will start heating and blows warm air.

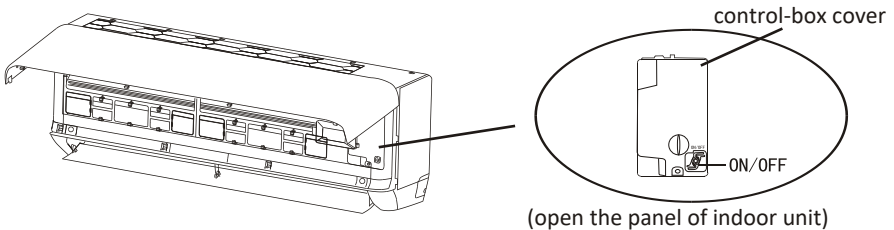
### Defrosting:

During heating, when the outdoor unit frosted, the air conditioner will enable the automatic defrosting function to improve the heating effect. During defrosting, the indoor and outdoor fans stop running. The air conditioner will resume heating automatically after defrosting finish.


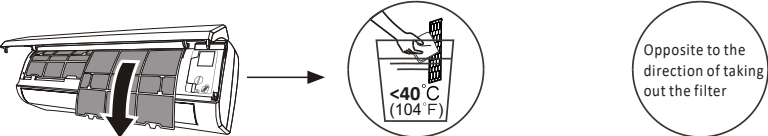
## ⓘ Emergency button:

Open the panel and find the emergency button on the electronic control box when the remote controller fails. (Always press the emergency button with insulation material.)

Current status	Operation	Respond	Enter mode
Standby	Press the emergency button once	It beeps briefly once.	Cooling mode
Standby (Only for heating pump)	Press the emergency button twice in 3 seconds	It beeps briefly twice.	Heating mode
Running	Press the emergency button once	It keeps beeping for a while	Off mode



# MAINTENANCE

<p><b>Warning</b></p>	<ul style="list-style-type: none"> <li>• When cleaning, you must shut down the machine and cut off the power supply for more than 5 minutes.</li> <li>• Under no circumstances should the air conditioner be flushed with water.</li> <li>• Volatile liquid (e.g. thinner or gasoline) will damage the air conditioner, so only use soft dry cloth or wet cloth dipped with neutral detergent to clean the air conditioner.</li> <li>• Pay attention to cleaning the filter screen regularly to avoid dust covering which will affect the filter screen effect. When the operating environment is dusty, the cleaning frequency should be increased appropriately.</li> <li>• After removing the filter screen, do not touch the fins of the indoor unit to avoid scratching.</li> </ul>
<p><b>Clean the unit</b></p>	 <p>Wring it dry    Gentle wipe the unit surface</p> <p>Tip: Wipe frequently to keep air conditioner clean and good appearance .</p>
<p><b>Clean the filter</b></p>	 <p>Take out the filter from the unit      Clean the filter with soapy water and air dry it      Replace the filter</p> <p>Tip: When you find accumulated dust in the filter, please clean the filter in time to ensure the clean, healthy and efficient operation inside the air conditioner.</p>
<p><b>Service and maintenance</b></p>	<ul style="list-style-type: none"> <li>• When the air conditioner is not in use for a long time, do the following work: Take out the batteries of the remote controller and disconnect the power supply of the air conditioner.</li> <li>• When starting to use after long-term shutdown:             <ol style="list-style-type: none"> <li>1. Clean the unit and filter screen;</li> <li>2. Check whether there are obstacles at the air inlet and outlet of indoor and outdoor units;</li> <li>3. Check whether the drain pipe is unobstructed;</li> </ol>             Install the batteries of the remote controller and check whether the power is on.           </li> </ul>

## INSTALLATION SERVICE PRECAUTIONS (R32)

1. Check the information in this manual to find out the dimensions of space needed for prop installation of the device, including the minimum distances allowed compared to adjacent structures.
2. Appliance shall be installed, operated and stored in a room with a floor area larger than 4m<sup>2</sup>.
3. The installation of pipe-work shall be kept to a minimum.
4. The pipe-work shall be protected from physical damage, and shall not be installed in an unventilated space if the space is smaller than 4m<sup>2</sup>.
5. The compliance with national gas regulations shall be observe
6. The mechanical connections shall be accessible for maintenance purpose
7. Follow the instructions given in this manual for handling, installing, cleaning, maintaining a disposing of the refrigerant.
8. Make sure ventilation openings clear of obstruction.
9. **Notice:** The servicing shall be performed only as recommended by the manufacturer.
10. **Warning:** The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.
11. **Warning:** The appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater).
12. The appliance shall be stored so as to prevent mechanical damage from occurring.
13. It is appropriate that anyone who is called upon to work on a refrigerant circuit should hold a valid and up-to-date certificate from an assessment authority accredited by the industry and recognizing their competence to handle refrigerants, in accordance with the assessment specification recognized in the industrial sector concerned. Service operations should only be carried out in accordance with the recommendations of the equipment manufacturer. Maintenance and repair operations that require the assistance of other qualified persons must be conducted under the supervision of the person competent for the use of flammable refrigerants.
14. Every working procedure that affects safety means shall only be carried out by competent persons.
15. **Warning:**
  - 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 may not contain an odor.



Caution: Risk of fire



Operating instructions



Read technical manual



## INSTALLATION SERVICE PRECAUTIONS (R32)

### 16. Information on servicing:

#### 1) Checks to the area

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.

#### 2) Work procedure

Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.

#### 3) General work area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material

#### 4) Checking for presence of refrigerant

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

#### 5) Presence of fire extinguisher

If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO<sub>2</sub> fire extinguisher adjacent to the charging area.

#### 6) No ignition sources

No person carrying out work in relation to a refrigeration system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. No Smoking signs shall be displayed.

#### 7) Ventilated area

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out.

The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

#### 8) Checks to the refrigeration equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed.

If in doubt consult the manufacturer's technical department for assistance.

## INSTALLATION SERVICE PRECAUTIONS (R32)

The following checks shall be applied to installations using flammable refrigerants:

- The charge size is in accordance with the room size within which the refrigerant containing parts are installed;
- The ventilation machinery and outlets are operating adequately and are not obstructed;
- If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
- Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
- Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

### 9) Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include:

- That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
- That there no live electrical components and wiring are exposed while charging, recovering or purging the system;
- That there is continuity of earth bonding.

### 17. Repairs to sealed components

- 1) During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- 2) Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc. Ensure that apparatus is mounted securely. Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

**NOTE:** The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

### 18. Repair to intrinsically safe components

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use. Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating. Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

## INSTALLATION SERVICE PRECAUTIONS (R32)

### 19. Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

### 20. Detection of flammable refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

### 21. Leak detection methods

The following leak detection methods are deemed acceptable for systems containing flammable refrigerants.

Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed. Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work. If a leak is suspected, all naked flames shall be removed/ extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

### 22. Removal and evacuation

When breaking into the refrigerant circuit to make repairs or for any other purpose conventional procedures shall be used. However, it is important that best practice is followed since inflammability is a consideration. The following procedure shall be adhered to:

- Remove refrigerant;
- Purge the circuit with inert gas;
- Evacuate;
- Purge again with inert gas;
- Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be flushed with OFN to render the unit safe. This process may need to be repeated several times.

Compressed air or oxygen shall not be used for this task.

Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place.

Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

### 23. Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

## INSTALLATION SERVICE PRECAUTIONS (R32)

- a) Become familiar with the equipment and its operation.
- b) Isolate system electrically.
- c) Before attempting the procedure, ensure that:
  - . mechanical handling equipment is available, if required, for handling refrigerant cylinders;
  - . all personal protective equipment is available and being used correctly;
  - . the recovery process is supervised at all times by a competent person;
  - . recovery equipment and cylinders conform to the appropriate standards.
- d) Pump down refrigerant system, if possible.
- e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- F) Make sure that cylinder is situated on the scales before recovery takes place.
- g) Start the recovery machine and operate in accordance with manufacturer's instructions.
- h) Do not overfill cylinders. (No more than 80 % volume liquid charge).
- i) Do not exceed the maximum working pressure of the cylinder, even temporarily.
- J) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- K) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

### 24. Labeling

Equipment shall be labeled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

### 25. Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labeled for that refrigerant (i.e. Special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt. The recovered refrigerant shall be returned to the refrigerant supplier in the correct recover cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

## INSTALLATION SERVICE PRECAUTIONS (R32)



### WARNINGS FOR PRODUCT INSTALLATION

1. All electrical wiring must be installed in compliance with the safety requirements of the current Australian Standards AS/NZS 3000 Wiring Rules.
2. The air conditioner must be installed by professional personnel and the Installation manual is used only for the professional installation personnel! The installation specifications should be subject to our after-sale service regulations.
3. All equipment must be installed in compliance with your local and national Electricity Authority Rules and Regulations.
4. The product must be properly grounded at the time of installation or electrical shock may occur.
5. For all electrical work, select the appropriate cable sizes relevant to the model. Connect cables tightly, and clamp them securely to prevent external forces from causing loose connections. Improper electrical connections can overheat and cause fire, and may also cause shock.
6. All wiring must be properly arranged to ensure that the control board cover can be closed properly. If the control board cover is not closed properly, it can lead to corrosion and cause the connection points on the terminal to heat up, catch fire, or cause electrical shock.
7. Installation must be performed according to the installation instructions. Improper installation may cause Refrigerant leakage, water leakage, electrical shock, or fire.
8. Do not connect other appliances to the same circuit. Use an independent circuit to supply power. Improper or insufficient power supply can cause fire or electrical shock.
9. The installation site should be well-ventilated.
10. The sites for installing and maintaining an air conditioner using Refrigerant R32 should be free from open fire or welding, smoking, drying oven or any other heat source higher than 548 which easily produces open fire.
11. When installing an air conditioner, it is necessary to take appropriate anti-static measures such as wear anti-static clothing and/or gloves.
12. It is necessary to choose the site convenient for installation or maintenance wherein the air inlets and outlets of the indoor and outdoor units should be not surrounded by obstacles or close to any heat source or combustible and/or explosive environment.
13. If the indoor unit suffers refrigerant leak during the installation, it is necessary to immediately turn off the valve of the outdoor unit and all the personnel should go out till the refrigerant leaks completely for 15 minutes. If the product is damaged, it is a must to carry such damaged product back to the maintenance station and it is prohibited to weld the refrigerant pipe or conduct other operations on the user's site.
14. It is necessary to choose the place where the inlet and outlet air of the indoor unit is even.
15. It is necessary to avoid the places where there are other electrical products, power switch plugs and sockets, kitchen cabinet, bed, sofa and other valuables right under the lines on two sides of the indoor unit.
16. When filling the combustible refrigerant, any of your rude operations may cause serious injury or injuries to human body and objects.

## INSTALLATION SERVICE PRECAUTIONS (R32)

17. A leak test must be done after the installation completed.
18. It is a must to do the safety inspection before maintaining or repairing an air conditioner using combustible refrigerant in order to ensure that the fire risk is reduced to minimum.
19. It is necessary to operate the machine under a controlled procedure in order to ensure that any risk arising from the combustible gas or vapor during the operation is reduced to minimum.
20. Requirements for the total weight of filled refrigerant and the area of a room to be equipped with an air conditioner (are shown as in the following Tables GG.1 and GG.2)

### **The maximum charge and the required minimum floor area**

$$m_1 = (4 \text{ m}^3) \times LFL, \quad m_2 = (26 \text{ m}^3) \times LFL, \quad m_3 = (130 \text{ m}^3) \times LFL$$

Where  $LFL$  is the lower flammable limit in  $\text{kg}/\text{m}^3$ , R32  $LFL$  is  $0.038 \text{ kg}/\text{m}^3$ .

**For the appliances with a charge amount  $m_1 < M = m_2$ :**

The maximum charge in a room shall be in accordance with the following:

$$m_{\max} = 2.5 \times (LFL)^{(5/4)} \times h_0 \times (A)^{1/2}$$

The required minimum floor area  $A_{\min}$  to install an appliance with refrigerant charge  $M$  (kg) shall be in accordance with following:  $A_{\min} = (M / (2.5 \times (LFL)^{(5/4)} \times h_0))^2$

Where:

**Table GG.1 - Maximum charge (kg)**

Category	LFL (kg/m <sup>3</sup> )	h <sub>0</sub> (m)	Floor area (m <sup>2</sup> )						
			4	7	10	15	20	30	50
R32	0.306	1	1.14	1.51	1.8	2.2	2.54	3.12	4.02
		1.8	2.05	2.71	3.24	3.97	4.58	5.61	7.254
		2.2	2.5	3.31	3.96	4.85	5.6	6.86	8.85

**Table GG.2 - Minimum room area (m<sup>2</sup>)**

Category	LFL (kg/m <sup>3</sup> )	h <sub>0</sub> (m)	Charge amount (M) (kg)						
			Minimum room area (m <sup>2</sup> )						
R32	0.306		1.224kg	1.836kg	2.448kg	3.672kg	4.896kg	6.12kg	7.956kg
		0.6		29	51	116	206	321	543
		1		10	19	42	74	116	196
		1.8		3	6	13	23	36	60
		2.2		2	4	9	15	24	40

# INDOOR UNIT INSTALLATION

## 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.

Select installation location before installing the indoor unit, you must choose an appropriate location. The following guidelines will help you choose an appropriate location for the unit.

### Proper installation locations should meet the following requirements

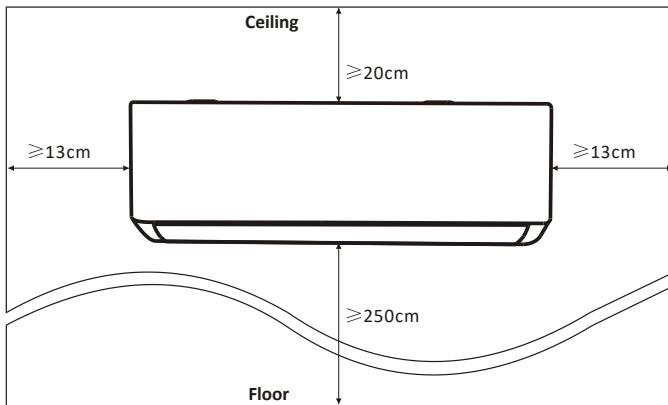
- Good air circulation
- Convenient drainage
- Noise from the Outdoor unit will not disturb other people
- Firm and solid—the location will not vibrate
- Strong enough to support the weight of the unit
- The Indoor Unit should be located at least one meter from all other electrical devices (e.g., TV,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

### DO NOT install unit in the following locations:

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

### NOTE ABOUT WALL HOLE

If there is no fixed refrigerant piping: While choosing a location, be aware that you should leave ample room for a wall hole for refrigerant piping, drainage pipe and connection cables 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 or right.



**⚠ Note:** The information supplied to our knowledge is correct; however is subject to change without notice, therefore before relying on any important matter, please carefully evaluate its accuracy, completeness and relevance for the purpose.

# INDOOR UNIT INSTALLATION

## ATTACH MOUNTING PLATE TO WALL

The mounting plate is the part which you will mount the indoor unit. (See Mounting Plate Dimensions below for detailed information).

1. Place the mounting plate against the wall in a location that meets the standards in the select installation location step.
2. Adjust the mounting plate to a horizontal state with a spirit level.
3. Mark, then drill holes for mounting screws in places that:
  - have studs and can support the weight of the unit.
  - correspond to screw holes on the mounting plate.
4. Secure the mounting plate to the wall with the screws.
5. Make sure the mounting plate is flat against the wall.

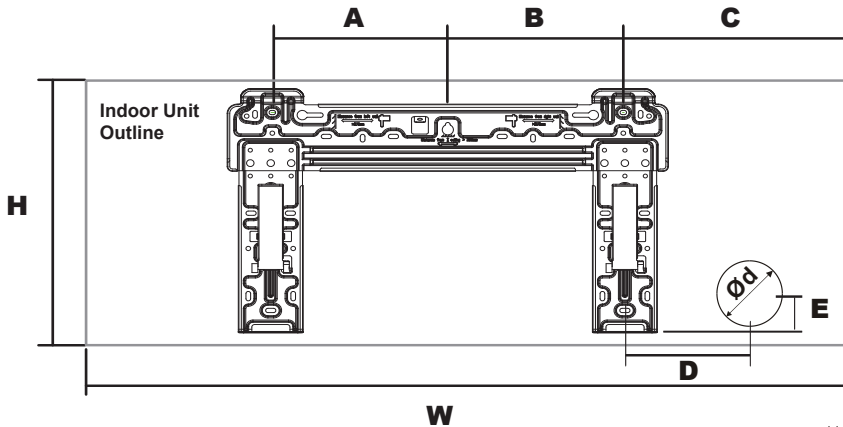
## NOTE FOR CONCRETE OR BRICK WALLS

If the wall is made of brick, concrete, or similar material, drill holes in the wall and insert the sleeve anchors before securing the mounting plate to the wall by tightening the screws directly into the clip anchors.

## MOUNTING PLATE DIMENSIONS

Different models may have different mounting plates. In order to ensure that you have ample room to mount the indoor unit, the diagram below shows the following dimensions:

- Width of common mounting positions
- Width of indoor unit relative to plate
- Height of indoor unit relative to plate
- Recommended position of wall hole



Unit: mm

Indoor Model	H	W	A	B	C	D	E	Ød
TWS26H3DVJT	292	811	188	188	215	145.8	44.4	65
TWS35H3DVJT	292	811	188	188	215	145.8	44.4	65
TWS52H3DVJT	315	1010	264	266	275	234.4	35.6	65
TWS72H3DVJT	315	1010	264	266	275	234.4	35.6	65
TWS88H3DVJT	360	1191	344	311	305	265	45	70



# INDOOR UNIT INSTALLATION

## DRILL WALL HOLE

A hole in the wall should be drilled for refrigerant piping, the drainage pipe and connecting cables that connect the indoor and outdoor units.

1. Determine the location of the wall hole based on the position of the mounting plate.
2. Drill a hole in the wall at least the diameter indicated (see Mounting Plate Dimensions). 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. This will ensure proper water drainage.
3. Place the pipe protection ring in the hole. This protects the edges of the hole and will help seal it when you finish the installation process.

## PREPARE REFRIGERANT PIPING

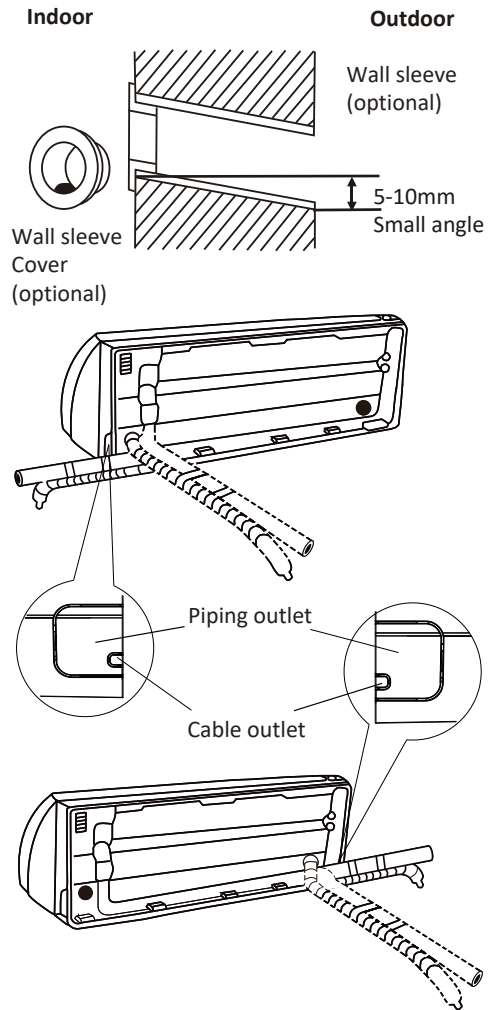
The refrigerant piping is inside an insulating sleeve attached to the back of the unit. You must prepare the piping before passing it through the hole in the wall. Refer to the Refrigerant Piping Connection section of this manual for detailed instructions on pipe flaring and flare torque requirements, technique etc.

## NOTE ON PIPING ANGLE

Refrigerant piping can exit the indoor unit from four different angles: Left-hand side. Left rear. Right-hand side. Right rear. If the wall hole is behind the unit, keep the knock-out panel in place. If the wall hole is to the side of the indoor unit, remove the plastic knock-out panel from that side of the unit. This will create a slot through which your piping can exit the unit. Use needle nose pliers if the plastic panel is too difficult to remove by hand.

## ! CAUTION

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



## ! CAUTION

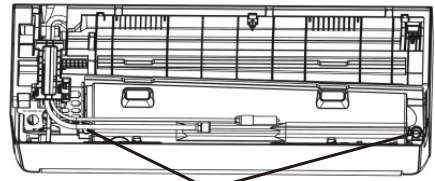
Be extremely careful not to dent or damage the piping while bending them away from the unit. Any kinks in the piping will affect the unit's performance.

# INDOOR UNIT INSTALLATION

## CONNECT DRAIN HOSE

By default, the drain hose is attached to the left-hand side of the unit (when you are facing the back of the unit). However, it can also be attached to the right-hand side.

1. To ensure proper drainage, attached the drain hose on the same side that your refrigerant piping exits the unit.
2. Attach drain hose extension (not supplied) to the end of the drain hose.
3. Wrap the connection point firmly with Teflon tape to ensure a good seal and to prevent leaks.
4. For the section of the drain hose that remain indoors, wrap it with foam pipe insulation to prevent condensation.
5. Remove the air filter and pour a small amount of water into the drain pan to make sure that water drain from the unit smoothly.

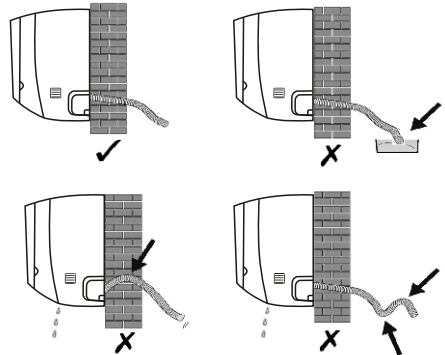


Drainage ports

## NOTE ON DRAIN HOSE PLACEMENT

Make sure to arrange the drain hose properly.

- DO NOT kink the drain hose.
- DO NOT create a water trap.
- DO NOT put the end of drain hose in water or a container that will collect water.



## PLUG THE UNUSED DRAIN HOLE

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

## ELECTRICAL WIRING WORK

### WARNING

Before performing any electrical or wiring work, turn off the main power and read the instructions carefully.

- All wiring must comply with the latest Australian Wiring Rules AS/NZS 3000 and must be installed by a licensed electrician.
- All electrical connections must be made according to the Wiring Diagram located on the panels of the indoor and outdoor units.
- Power voltage should be same as rated voltage. Insufficient power supply can cause malfunction, electrical shock, or fire.

- 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.
- The unit must be hardwired to the switchboard with a weather proof isolation switch fitted in close proximity to the outdoor unit, that disconnects all poles and has a contact separation of at least 1/8in (3mm). The qualified electrician must install an appropriate RCD/circuit breaker at the switchboard.
- The air conditioner should have its own dedicated circuit. Do not connect another appliance to that outlet.

# INDOOR UNIT INSTALLATION

- Every wire must be firmly connected. Loose wiring can cause the terminal to overheat, resulting in product malfunction and possible fire.
- Do not let wires touch or rub against refrigerant tubing, the compressor, or any moving parts within the unit.
- The electrical system is configured so that mains power is transferred from the Outdoor Unit to the Indoor unit and back to the Outdoor Unit via the interconnecting cabling to run the Inverter Compressor. Therefore, the interconnecting cabling is load bearing and should be capable of carrying full load current of the Air Conditioner.
- The selection of interconnecting cable size should be determined by the maximum current draw of the corresponding Air Conditioner.
- Failure to do so will result in the overheating of cables and may cause the risk of fire and product failure.
- The local electricity supply authority may require limits on starting currents and voltage drops. Please check prior to purchase. Ensure that the rated voltage of the unit corresponds to that of the name plate before commencing wiring work.
- The unit must be EARTHED to prevent possible shock to avoid any accidents.



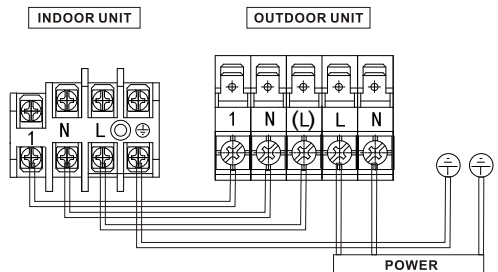
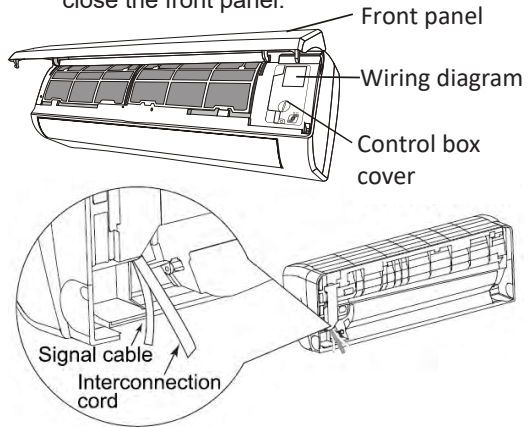
## WARNING

- The cable connecting the outdoor and indoor units must be suitable for outdoor use.
- A Weather Proof Isolator Switch must be installed in close proximity to the outdoor unit.
- An efficient earth connection must be ensured.
- An appropriate RCD/Circuit Breaker must be installed at the switchboard.

## PAY ATTENTION TO LIVE WIRE

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

1. Open the front panel, remove the screw on the wiring cover and then remove the cover to reveal the terminal block.
2. Unscrew the cable clamp.
3. Insert one end of the cable into the position of control box from the rear of the unit.
4. Connect the wires to corresponding terminal according to the wiring diagram on the control box cover.
5. Tighten the screw and then fix the interconnection cord with the cable clamp.
6. Reinstall the control box cover and close the front panel.

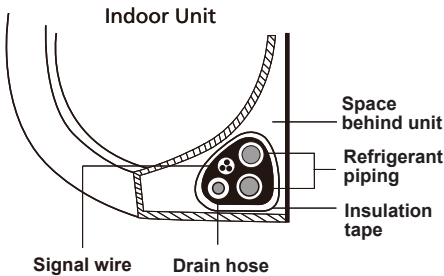


# INDOOR UNIT INSTALLATION

## WRAP PIPING AND CABLES

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

1. Bundle the drain hose, refrigerant pipes, and signal cable properly.



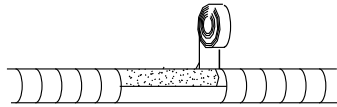
## ! DRAIN HOSE MUST BE ON BOTTOM

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

## ! DO NOT INTERTWINE SIGNAL CABLE WITH OTHER WIRES

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

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



## ! 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.

## MOUNT INDOOR UNIT

1. Slowly pass the wrapped bundle of refrigerant pipes, drain hose, and signal wire through the hole in the wall.
2. Hook the top of the indoor unit on the upper hook of the mounting plate.
3. 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.
4. 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.
5. Again, check that the unit is firmly mounted by applying slight pressure to the left and the right-hand sides of the unit.

**Sometimes, if the refrigerant pips were already embedded in the wall, or if you want to connecting the pips and wires on the wall, do as below:**

- i. Hook the top of the indoor unit on the mounting plate without piping and wiring.
- ii. Lift the indoor unit opposite the wall, unfold the bracket on the mounting plate, and use this bracket to prop up the indoor unit, there will be a big space for operation.
- iii. Do the refrigerant piping, wiring, connect drainage hose, and wrap them as instructed.

# OUTDOOR UNIT INSTALLATION

## SELECT INSTALLATION LOCATION

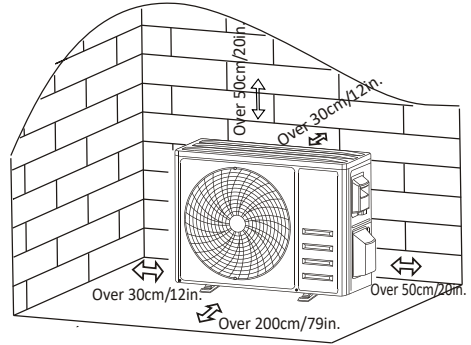
Before installing the outdoor unit, you must choose an appropriate location. The following guidelines will help you choose the appropriate location for the unit.

### Proper installation locations should meet the following requirements

- Meets all spatial requirements shown in Installation Space Requirements.
- 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 neighbors.
- Protected from prolonged periods of direct sunlight, rain or exposed to heavy wind.

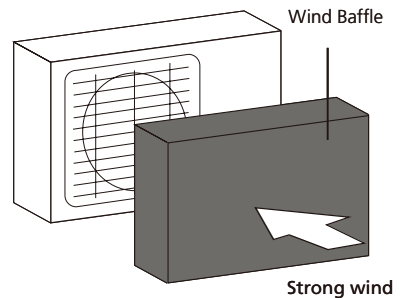
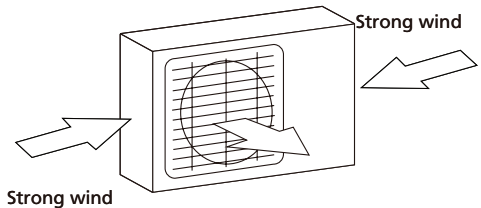
### DO NOT install unit in the following locations:

- Near any 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 excessive amounts of salty air.



## SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

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

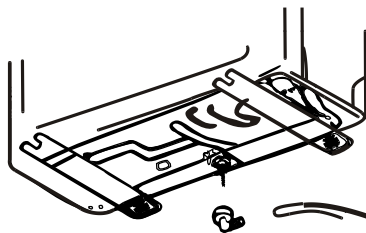


# OUTDOOR UNIT INSTALLATION

## INSTALL DRAINAGE HOSE

The drain hose must install at the bottom of the outdoor unit before bolting the outdoor unit in place.

1. Insert the drainage joint to the hole at the bottom of the outdoor unit.
2. Connect the drainage hose extension (not included) to the drain joint to redirect water from the unit during heating mode.



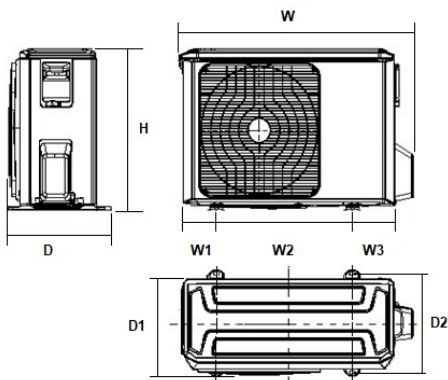
Drainage joint      Drainage hose

## ANCHOR OUTDOOR UNIT

The outdoor unit can be anchored to the ground or to a wall-mounted bracket. The wall-mounted bracket must be able to support at least 4 times of the weight of the outdoor unit.

## UNIT MOUNTING DIMENSIONS

The following is a list of different outdoor unit sizes and the distance between their mounting feet.



Unit: mm

Outdoor Model	W	D	H	W1	W2	W3	D1	D2
TSO26H3DVJT	810	305	549	143	433	151	282	278
TSO35H3DVJT	810	305	549	143	433	151	282	278
TSO52H3DVJT	863	349	602	194	433	151	319	314
TSO72H3DVJT	927	380	699	129.5	586	129.5	375	347.5
TSO88H3DVJT	978	421	803	153	607	148	391	390

### Install the unit on the ground or on a concrete mounting platform

1. According to the outdoor unit mounting dimensions to mark the installation position for expansion bolts.
2. Drill holes and clean the concrete dust and place the expansion bolts.
3. Place the outdoor unit base on the bolts and the pre-drilled holes.
4. Use wrench to fix the outdoor unit firmly with bolts.

### Install the unit on a wall-mounted bracket

1. Mark the position of bracket holes based on the outdoor unit mounting dimensions.
2. Drill holes and clean the concrete dust.
3. Thread expansion bolts through holes in mounting brackets, put mounting brackets in position and make sure brackets are level before place bolts into the wall.
4. Carefully lift the unit and place the mounting feet on brackets.
5. Use wrench to fix the outdoor unit firmly with bolts to the brackets.

## UNIT MOUNTING DIMENSIONS

If applicable install rubber blankets on the mounting feet to reduce vibrations and noise.

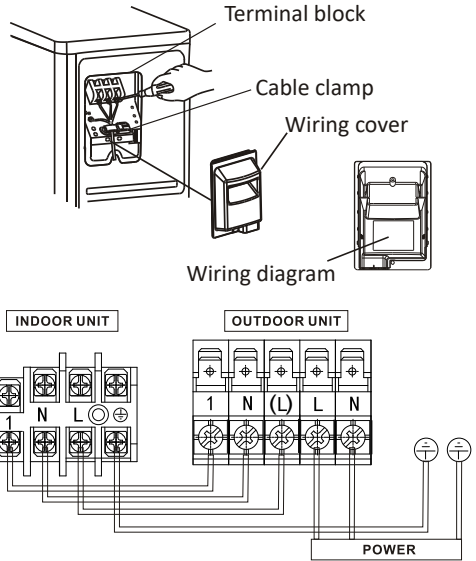
# OUTDOOR UNIT INSTALLATION

## ELECTRICAL WIRING WORK

### WARNING

Before performing any electrical or wiring work, turn off the main power and read the electrical wiring work under indoor unit instruction and other instructions carefully.

1. Unscrew on the wiring cover and then remove the cover to reveal the terminal block.
2. Unscrew the cable clamp.
3. According to the wiring diagram pasted inside the wiring cover, connect the connecting wires to the corresponding terminals, and ensure all connections are firmly and securely.
4. Reinstall the cable clamp and wiring cover.



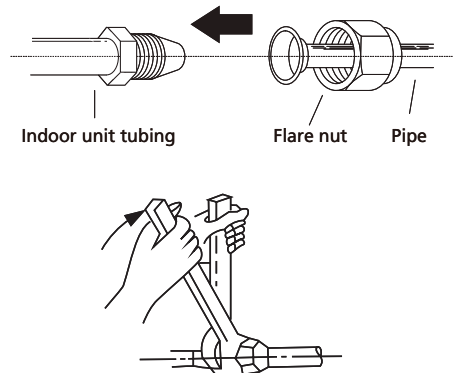
### WARNING

- The cable connecting the outdoor and indoor units must be suitable for outdoor use.
- A Weather Proof Isolator Switch must be installed in close proximity to the outdoor unit.
- An efficient earth connection must be ensured.
- An appropriate RCD/Circuit Breaker must be installed at the switchboard.
- The information supplied to our knowledge is correct; however is subject to change without notice, therefore before relying on any important matter, please carefully evaluate its accuracy, completeness and relevance for the purpose.

# REFRIGERANT PIPING CONNECTION

## CONNECTING PIPING TO INDOOR UNIT

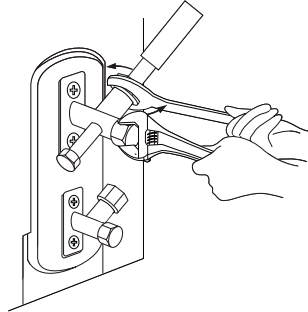
1. Align the center of the two pipes that you will connect.
2. Tighten the flare nut as tightly as possible by hand.
3. Using a spanner grip the nut on the unit tubing.
4. While firmly gripping the nut on the unit tubing, use a torque wrench to tighten the flare nut according to the torque values in the Torque Requirements table below.



# REFRIGERANT PIPING CONNECTION

## CONNECTING PIPING TO OUTDOOR UNIT

1. Unscrews the valve cover, grasp and press it down gently to take it down.
2. Remove the protective caps from the end of valves.
3. Remove the plastic cover from the pipes and check whether there is any sundry on the port of the connecting pipe and make ensure the ports are clean.
4. After align the center, rotate the flare nut of the connecting pipe to tighten the nut according to the torque values in the torque requirements table.
5. Use a spanner hold the body of the valve and use a torque wrench to tighten the flare nut according to the correct torque values.



### Torque Requirements

PIPE Size	Newton meter[N x m]	Pound-force foot (1bf-ft)	Kilogram-force meter (kgf-m)
1/4" (Ø6.35)	18 - 20	24.4 - 27.1	2.4 - 2.7
3/8" (Ø9.52)	30 - 35	40.6 - 47.4	4.1 - 4.8
1/2" (Ø12)	45 - 50	61.0 - 67.7	6.2 - 6.9
5/8" (Ø15.88)	60 - 65	81.3 - 88.1	8.2 - 8.9

### Product Pipe Sizes

Model	Liquid Pipe Size	Gas Pipe Size
TWS-TSO26H3DVJT	1/4" (Ø6.35)	3/8" (Ø9.52)
TWS-TSO35H3DVJT	1/4" (Ø6.35)	3/8" (Ø9.52)
TWS-TSO52H3DVJT	1/4" (Ø6.35)	1/2" (Ø12)
TWS-TSO72H3DVJT	1/4" (Ø6.35)	1/2" (Ø12)
TWS-TSO88H3DVJT	1/4" (Ø6.35)	5/8" (Ø15.88)

### CAUTION

- Be extra careful not to damage, dent or deform the pipe while cutting or bending. This will drastically reduce the heating/cooling efficiency of the unit.
- When connecting refrigerant pipes, be careful not to use excessive torque. You should first connect the low-pressure pipe, then the high-pressure pipe.
- Make sure the pipe is properly connected. Over tightening may damage the bell mouth and under tightening may lead to leakage.
- Ensure to wrap insulation around the piping. Direct contact with the bare pipes may result in burns or frostbite.
- Check to make sure there is no refrigerant leak after connecting the pipes. If there is a refrigerant leak, ventilate the area immediately and evacuate the system.



# EVACUATION INSTRUCTIONS



## WARNING

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

## EVACUATION INSTRUCTIONS

Before using the manifold gauge and vacuum pump, read their operation manuals to familiarize yourself with how to use them properly.

1. Use a spanner to remove the protective caps from the service port, low pressure valve and high pressure valve of the outdoor unit.
2. Connect the pressure hose of manifold gauge to the service port on the outdoor unit low pressure valve.
3. Connect the charge hose from the manifold gauge to the vacuum pump.
4. Open the low pressure valve of the manifold gauge and close the high pressure valve.
5. Turn on the vacuum pump to vacuum the system.
6. The vacuum time should not be less than 15 minutes, or make sure the compound gauge indicates -0.1 MPa (-76 cmHg)

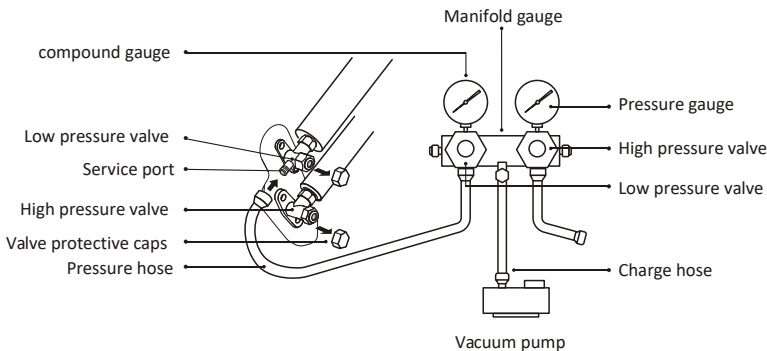
7. Close the low pressure valve of the manifold gauge and turn off the vacuum.
8. Hold the pressure for 5 minutes, make sure that the rebound of compound gauge pointer does not exceed 0.005MPa.
9. Open the low pressure valve counterclockwise for 1/4 turn with hexagonal wrench to let a little refrigerant fill in the system, and close the low pressure valve after 5 seconds and quickly remove the pressure hose.
10. Check all indoor and outdoor joints for leakage with soapy water or leak detector.
11. Fully open the low pressure valve and high pressure valve of the outdoor unit with hexagonal wrench.
12. Reinstall the protective caps of the service port, low pressure valve and high pressure valve of the outdoor unit. Reinstall the valve cover.

## ADDING REFRIGERANT

Standard Pipe Length	Min. Pipe Length	Max. Pipe Length	Max. Difference In Level
Pre-charged 5 m	3 m	15 m	10 m

### Additional Refrigerant

(Pipe Length - Standard Pipe Length) x \*A / m  
 \*A = 15g for TSO26H3DVJT & TSO35H3DVJT  
 \*A = 16g for TSO52H3DVJT & TSO72H3DVJT  
 \*A = 40g for TSO88H3DVJT



# INSTALLATION FINAL CONFIRMATION

## Inspections Before Test Run

Do the following checks before test run.

Description	Inspection method
Electrical safety inspection	<ul style="list-style-type: none"> <li>• Check whether the power supply voltage complies with specification.</li> <li>• Check whether there is any wrong or missing connection between the power lines, signal line and earth wires.</li> <li>• Check whether the earth resistance and insulation resistance comply with requirements.</li> </ul>
Installation safety inspection	<ul style="list-style-type: none"> <li>• Confirm the direction and smoothness of drainage pipe.</li> <li>• Confirm that the joint of refrigerant pipe is installed completely.</li> <li>• Confirm the safety of outdoor unit, mounting plate and indoor unit installation.</li> <li>• Confirm that the valves are fully open.</li> <li>• Confirm that there are no foreign objects or tools left inside the unit.</li> <li>• Complete installation of indoor unit air inlet grille and panel.</li> </ul>
Refrigerant leakage detection	<ul style="list-style-type: none"> <li>• The piping joint, the connector of the two valves of the outdoor unit, the valve spool, the welding port, etc., where leakage may occur.</li> <li>• Foam detection method: Apply soapy water or foam evenly on the parts where leakage may occur, and observe whether bubbles appear or not, if not, it indicates that the leakage detection result is safe.</li> <li>• Leak detector method: Use a professional leak detector and read the instruction of operation, detect at the position where leakage may occur.</li> <li>• The duration of leak detection for each position should last for 3 minutes or more; If the test result shows that there is leakage, the nut should be tightened and tested again until there is no leakage; After the leak detection is completed, wrap the exposed pipe connector of indoor unit with thermal insulation material and wrap with insulation tape.</li> </ul>

# INSTALLATION FINAL CONFIRMATION

## Test Run Instruction

1. Turn on the power supply.
2. Press the ON/OFF button on the remote controller to turn on the air conditioner.
3. Press the Mode button to switch the mode COOL and HEAT.  
In each mode set as below:  
COOL-Set the lowest temperature  
HEAT-Set the highest temperature
4. Run about 8 minutes in each mode and check all functions are properly run and respond the remote controller. Functions check as recommended:
  - 4.1 If the outlet air temperature respond the cool and heat mode
  - 4.2 If the water drains properly from the drainage hose
  - 4.3 If the Louver and deflectors(optional) rotate properly
5. Observe the test run state of the air conditioner at least 30 minutes.
6. After the successfully test run, return the normal setting and press ON/OFF button on the remote controller to turn off the unit.
7. Inform the user to read this manual carefully before use, and demonstrate to the user how to use the air conditioner, the necessary knowledge for service and maintenance, and the reminder for storage of accessories.

### **Note:**

If the ambient temperature is excess the range refer to section OPERATION INSTRUCTIONS, and it can not run COOL or HEAT mode, lift the front panel and refer to the emergency button operation to run the COOL and HEAT mode.

## TROUBLESHOOTING

MALFUNCTION	POSSIBLE CAUSES
The appliance does not operate	Power failure/plug pulled out.
	Damaged indoor/outdoor unit fan motor.
	Faulty compressor thermomagnetic circuit breaker.
	Faulty protective device or fuses.
	Loose connections or plug pulled out.
	It sometimes stops operating to protect the appliance.
	Voltage higher or lower than the voltage range.
	Active TIMER-ON function.
Damaged electronic control board.	
Strange odor	Dirty air filter.
Noise of running water	Back flow of liquid in the refrigerant circulation.
A fine mist comes from the air outlet	This occurs when the air in the room becomes very cold, for example in the “COOLING” or “DEHUMIDIFYING/DRY” modes.
A strange noise can be heard	This noise is made by the expansion or contraction of the front panel due to variations in temperature and does not indicate a problem.
Insufficient airflow, either hot or cold	Unsuitable temperature setting.
	Obstructed air conditioner intakes and outlets.
	Dirty air filter.
	Fan speed set at minimum.
	No refrigerant.
The appliance does not respond to commands	Remote control is not close enough to indoor unit.
	The batteries of remote control need to be replaced.
	Obstacles between remote control and signal receiver in indoor unit.
The display is off	Active DISPLAY function.
	Power failure.
Switch off the air conditioner immediately and cut off the power supply in the event of:	Strange noises during operation.
	Faulty electronic control board.
	Faulty fuses or switches.
	Spraying water or objects inside the appliance.
	Overheated cables or plugs.
	Very strong smells coming from the appliance.

## REPAIRS, SERVICE & WARRANTY

It is hazardous for anyone installing, removing, altering, repairing, servicing, testing or certifying the gas system of a gas device (i.e. charging, discharging or breaking into the refrigeration system that uses hydrocarbon refrigerants).

Only an Authorised Service Person can carry out servicing or repairs to this appliance. Individuals will need to hold appropriate refrigeration/air conditioning competencies and also training in hydrocarbon refrigerants. This type of authorisation is provided to individuals only.

### **IF SERVICE IS REQUIRED**

If you have a problem, and the problem persists after you have made the checks mentioned in this manual, contact:  
TECO Australia's Service on 1300 660 037 (8:30am - 4pm Mon~Fri AEST).

For warranty details please visit

[www.teco.com.au](http://www.teco.com.au)

Service Email : [had.service@teco.com.au](mailto:had.service@teco.com.au)

Spare Parts : [had.parts@teco.com.au](mailto:had.parts@teco.com.au)



*Did you know?*

**TECO Australia's product range** also includes:

- ◆ Top Load Clothes Washers
- ◆ Front Load Clothes Washers
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- ◆ Chest and Vertical Freezers
- ◆ Bar Fridges
- ◆ Televisions
- ◆ Air Curtains
- ◆ Air Conditioners

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# WARRANTY INFORMATION

Teco's warranty information for the product purchased is available at [www.teco.com.au](http://www.teco.com.au).

A copy of the warranty may also be obtained by contacting Teco's Warranty and Service Department on 1300 660 037 during business hours (Mon - Fri 8.30am – 4pm AEST).

To arrange for servicing of a Teco product, please contact our Warranty and Service Department on 1300 660 037 during business hours (Mon - Fri 8.30am – 4pm AEST).

To assist in processing any warranty claim that you may have Teco recommends that you:

1. Complete the following information in relation to your purchase:

Name of retailer: \_\_\_\_\_

Name of owner: \_\_\_\_\_

Date of purchase: \_\_\_\_\_

Model No. : \_\_\_\_\_

Serial No. : \_\_\_\_\_

MFG code: \_\_\_\_\_

2. Retain proof of your purchase for any warranty claim. Ideally this proof of purchase will be the tax invoice issued for your purchase.

3. Complete the following information in relation to the person that installed your Teco appliance (if applicable):

Installer's name: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Licence No.: \_\_\_\_\_

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