MADE IN CHINA

TOSOT

OWNER'S MANUAL

TM12HKDI

TM18HKDI

User Notice

◆ When operating, the entire capacity of the cooperating indoor unit should be not larger than 150% of outdoor unit. Otherwise, it will cause the shortage of cooling (heating) capacity.

◆ A Breaker(or fuse) need to be installed in every indoor unit, and the capacity should in according with indoor unit’s electrical parameter; all the indoor units are required to be centralized controlled by a total Switch, this Switch can cut off the electric power supply in case of emergency. The Breaker(or fuse) on each indoor units have the function of short circuit prevention and abnormal overload avoiding, it should be connected in normal situation. The total switch controlling the power supply of all the indoor units. Before clearing and maintenance job being carried out to the indoor units, it is very important to turn off the total power supply switch.

◆ In order to turn on the units successfully, the main power switch should be opened 8 hours before the operation.

◆ After receiving the turn off signal, every indoor unit will continue to work for 20-70sec to make use of the rest cool air or the rest heat air in the heat exchanger, while preparing for the next operation. And this is normal.

◆ When the selected operating mode of the indoor unit are clash with the operating mode of the outdoor unit, the malfunction light will blink after 5s on the indoor unit or remote controller showing that the operation clash, then the indoor unit will stop. At this time, change the operation mode of the indoor unit to the one that would not clash with the outdoor operating mode to make the operation normal. The cooling mode is not clash with the dry mode, while the fan mode is not clash with any mode.

◆ The appliance shall not be installed in the laundry.

◆ An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

◆ Information regarding transport/storage temperature (-25-55°C) is missing.

◆ Main switch provided by end user: main switch handle should be black or gray, it can be locked in “OFF” position with padlock.

◆ The main disconnection device should be explained in user manual and the height should be recommended at 0.6-1.7m. over current protection is required(UL 1995,CSA C22.2).

◆ The cooling range of the unit is the outdoor environment temp.-5~48°C DB, the heating range of the unit(only for the heat pump type unit) is the outdoor environment temp. -15~27°C WB.

This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.

Thank you for your selecting of Tosot air conditioner, please read this usage and install instruction carefully and keep it well in order to use this unit correctly.

Contents

1 Safety Information

Please read this manual carefully before use this unit, and operate it correctly according to the guide in this manual.

Please take specially note to the meaning of these two marks:

⚠ **Warning!:** This mark means that it may cause casualty or badly heart if the operation is incorrect.

⚠ **Note!:** This mark means that it may cause casualty or property loss if the operation is incorrect.

⚠ **Warning:**

◆ Do not adopt fuse with unsuitable capacity or adopt iron thread instead of fuse, otherwise malfunction or fire may happened.

◆ Cut down the main power switch immediately if malfunction (such as smell the burning odor etc.) happened.

◆ Maintain ventilation to prevent oxygen leakage in room.

◆ Don’t insert finger or stick like things into discharge vent or outlet grill.

◆ Please make sure that the unit is installed in the place that can bear the weight of it adequately. If the place is not strong enough, the air conditioner may drop and cause casualty event.

◆ Don’t spray or smear any oil paint or insecticide on the surface of unit, otherwise, fire may be leaded.

(1). Do not refit the conditioner. Please contact the agency or prefect ional personnel to repair or move the conditioner.

An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

⚠ **Note!:**

◆ Please check and make sure that the cord, drainage pipe and tubes are connected in the correct way to prevent leakage of water, refrigerant, electric shock or fire.

◆ The main power must connectable to the earth in order to assure the conditioner earthing effectively and to prevent electric shock. Please don’t connect the earthing line with the gas pipe, water pipe, lightening rod or the connecting line of telephone.

◆ The air conditioner should be turned off at least after 5 mins’ operation; otherwise it would affect the duration of the unit.

◆ Don’t let the children operate the air conditioner.

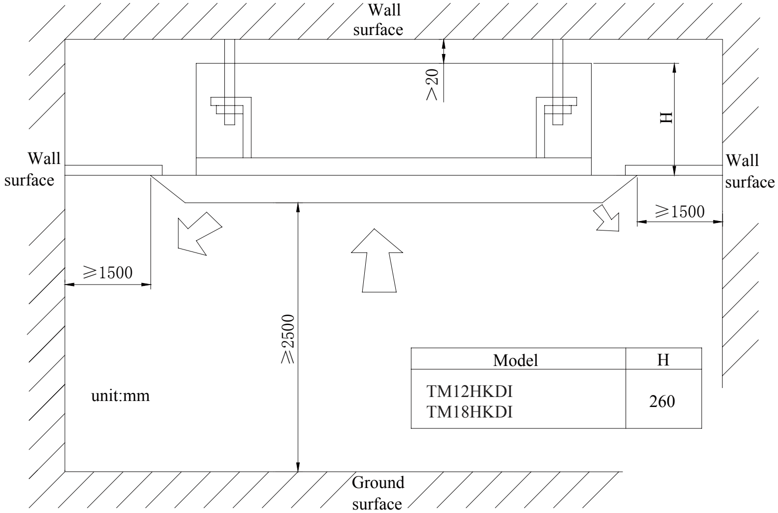
◆ Please don’t operate the unit by wet hand.

◆ Please turn off the main power of the unit before cleaning the conditioner or change the filter.

◆ Please cut off the main power if the conditioner will be used for a long time.

2 Install of The Compact Panel Cassette Type Indoor Unit

2.1 Schematic diagram of installation spaces



Model	H
TM12HKDI TM18HKDI	260

Fig.1

2.2 Select install location of the indoor unit

(1). Obstruct should put away from the intake or outlet vent of the indoor unit so that the airflow can be blown though all the room.

(2). Make sure that the installation had accord with the requirement of the schematic diagram of installation spaces.

(3). Select the place where can stand 4 times of the weight of the indoor unit and would not increase the operating noise and oscillate.

(4). The horizontally of the installation place should be guaranteed.

(5). Select the place where easy drain condensated coagulated water, and easy connect with outdoor unit.

(6). Make sure that there are enough space for care and maintenance. Make sure that the weight between the indoor unit and ground is above 2500mm.

(7). When installing the steeve bolt, check if the install place can stand the weight 4 times of the unit’s. If not, reinforce before installation. (Refer to the install cardboard and find where should be reinforced)

⚠ **Note!**

There will be lots of lampblack and dust stick on the acentric, heat exchanger and water pump in dining room and kitchen, which would reduce the capacity of heat exchanger, lead water leakage and abnormal operation of the water pump. **The following treatment should be taken under this circumstance:**

(8). Ensure that the smoke trap above cooker has enough capacity to obviate lampblack to prevent the indraft of the lampblack by the air conditioner.

(9). Keep the air conditioner far from the kitchen so that the lampblack would not be indraft by the air conditioner.

2.3 Important notice

◆ To guarantee the good performance, the unit must be installed by professional personnel according with this instruction.

◆ Please contact the local Tosot special nominated repair department before installation. Any malfunction caused by the unit that is installed by the department that is not special nominated by Tosot would not deal with on time by the inconvenience of the business contact.

2.4 Dimension of ceiling opening and location of the hoisting screw (M10)

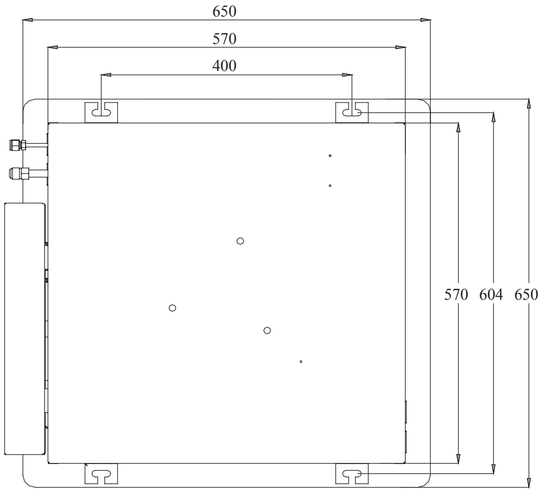


Fig.2 Install dimension of mode TM12HKDI,TM18HKDI

◆ The drilling of holes in the ceiling must be done by the professional personnel.

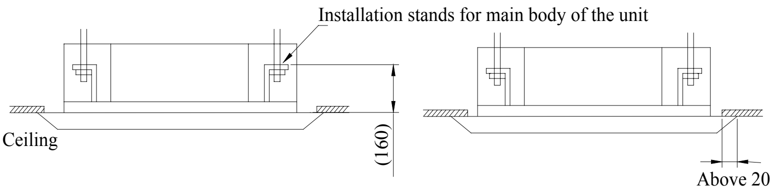


Fig.3

Notes: The dimension for the ceiling openings with * marks can be as large as 610mm. But the overlapping sections of the ceiling and the decorated surface boards should be maintained at no less than 20mm.

2.5 Main body of hoisting air conditioner

(1). The primary step for install the indoor unit.

◆ When attach the hoisting stand on hoisting screw, do use nut and gasket individually at the upper and lower of the hoisting stand to fix it. The use of gasket anchor board can prevent gasket break off.

(2). Use install cardboard.

◆ Please refer to the install cardboard about the dimension of ceiling opening.

◆ The central mark of the ceiling opening is marked on the install cardboard.

◆ Install the install cardboard on the unit by bolt (3 piece), and fix the angle of the drainage pipe at the outlet vent by bolt.

(3). Adjust the unit to the suitable install place. (Refer to the fig.3)

(4). Check if the unit is horizontal.

◆ Inner drainage pump and bobber switch are included in the indoor unit, check if 4 angle of every unit are horizontal by water lever. (If the unit is slant toward the opposite of the coagulate water flow, there may be malfunction of the bobber switch and lead water drop.)

(5). Backout the gasket anchor board used to prevent gasket break off and tighten the nut on it.

(6). Backout the install cardboard.

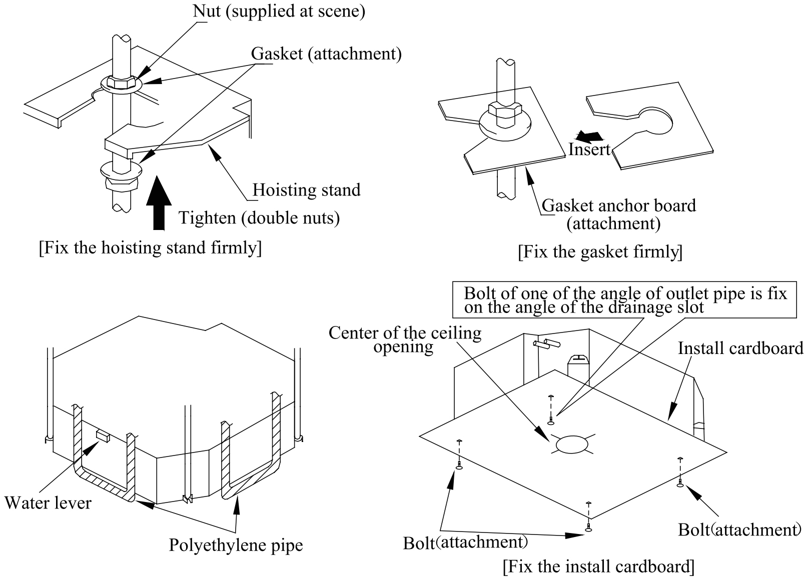


Fig.4

⚠ **Note!**: Please do tighten the nuts and bolts to prevent air conditioner break off.

2.6 Connection of the refrigerant pipe

◆ When connect the pipe to the unit or backout it from the unit, please do use both spanner and torque wrench. as shown in fig.5.

◆ When connect, smear both inside and outside of the flare nut with freeze motor oil, screw it by hand and then tighten it with spanner.

◆ Refer to form 1 to check if the wrench had been tightened (too tight would mangle the nut and lead leakage).

◆ Examine the connection pipe to see if it had gas leakage, then take the treatment of heat insulation, as shown in the fig.5.

◆ Only use median sponge to entwine the wiring interface of the gas pipe and heat preservation sheath of the gas collection tube.

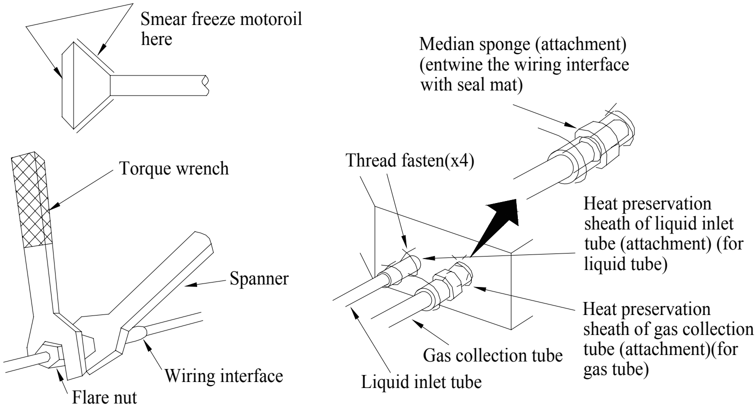


Fig.5

Form 1: The tightening torque needed for tightening nut

Diameter（Inch）	Surface thickness（mm）	Tightening torque (N • m)
φ1/4’’	⩾ 0.5	15-30 (N • m)
φ3/8’’	⩾ 0.71	30-40 (N • m)
φ1/2’’	⩾ 1	45-50 (N • ·m)
φ5/8’’	⩾ 1	60-65 (N • m)
φ3/4’’	⩾ 1	70-75 (N • ·m)

2.7 Drainage hose

(1). Install the drain hose

◆ The diameter of the drain hose should be equal or bigger than the connection pipe’s. (The diameter of polythene pipe: Outer diameter 25mm Surface thickness ⩾ 1.5mm)

◆ Drain hose should be short and drooping gradient should at less 1/100 to prevent the formation of air bubble.

◆ If drain hose cannot has enough drooping gradient, drain raising pipe should be added.

◆ To prevent bent of the drain hose, the distance between hoisting stand should is 1 to 1.5m.

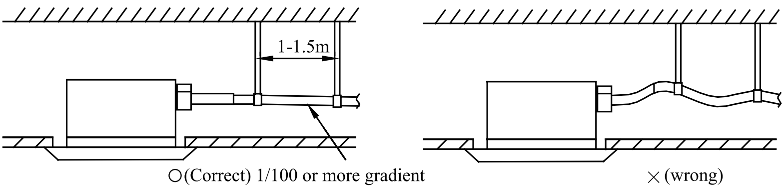


Fig.6

◆ Use the drain hose and clamp attached. Insert the drain hose to the drain vent, and then tighten the clamp.

◆ Entwine the big sponge on the clamp of drain hose to insulate heat.

◆ Heat insulation should be done to indoor drain hose.

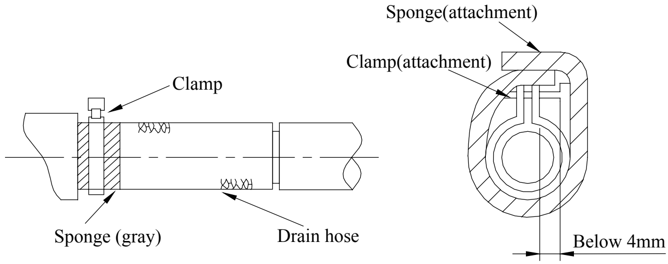


Fig.7

Drain stepup pipe note

◆ The install height of the drain raising pipe should less than 280mm.

◆ The drain raising pipe should form a right angle with the unit, and distance to unit should not beyond 300mm.

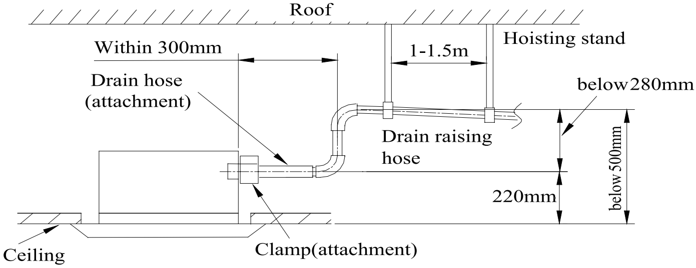


Fig.8

Instruction

◆ The slant gradient of the attached drain hose should be within 75mm so that the drain hole doesn't has to endure the unnecessary outside force.

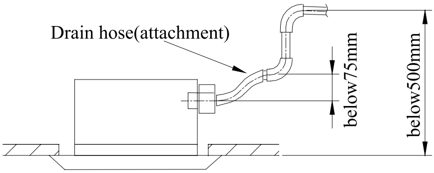
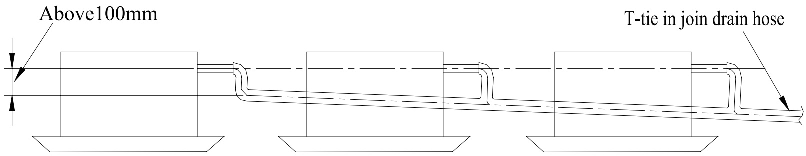


Fig.9

◆ Please install the drain hose according to the following process if several drain hoses join together.



The specs of the selected join drain hose should fits the running capacity of the unit.

Fig.10

(2). Check the smoothness of drain after installation.

◆ Check the drain state by immitting 600cc water slowly from the outlet vent or test hole.

◆ Check the drain in the state of refrigerating after installation of the electric circuit.

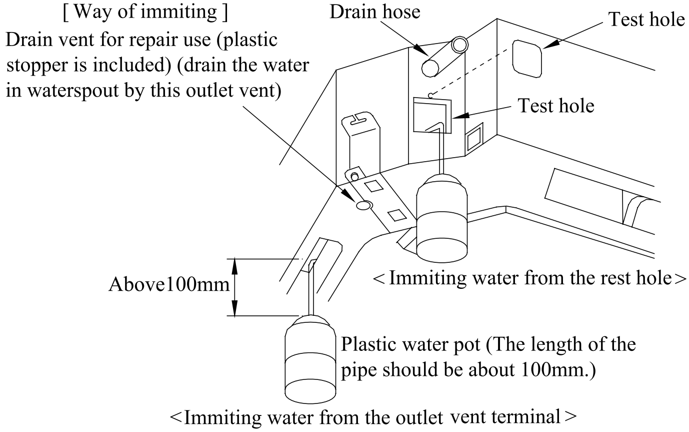


Fig.11

2.8 Electrical wiring

⚠ **Note:The power of the entire indoor unit must be connected in outdoor unit.**

◆ About the electrical wiring, please see the circuit diagram attached with the unit.

◆ All the installation of electrical wiring must be done by professional personnel.

◆ Please do take the earthing treatment.

Wiring method of connection unit and controller

◆ Connection wiring (communication):

① Open electric box cover, drag the wiring (communication)from the rubber plug A, and impact them well individually by impact fastener.

② Wiring according to the indoor side circuit diagram.

◆ Fix the impact fastener after connection.

◆ Entwine the small sponge on the electric wire(do entwine it to prevent condensation).

◆ Impact tightly by impact fastener after connection and then fit on the electric box.

◆ Connect the 3 cord rubber wire to the counter terminal of the 3 way terminal board.

The power cord reference Power cord standard recommending table

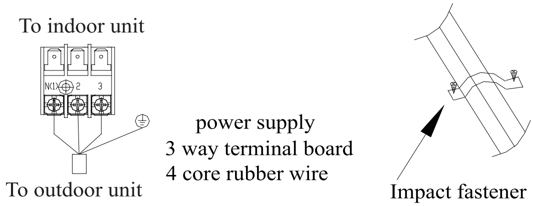


Fig.12

Power cord standard recommending table

Model	Power Supply (V, Ph, Hz)	Min. Sectional Area of Earth Wire(AWG)	Min. Sectional Area of Power Cord(AWG)
TM12HKDI	208~203V-1Ph-60Hz	UL1015 AWG 18*1	UL1015 AWG 18*3
TM18HKDI	208~203V-1Ph-60Hz	UL1015 AWG 18*1	UL1015 AWG 18*3

2.9 Install the panel

(1). Set the panel to the indoor unit body by matching the position of the swing flap motor of the panel to the piping position of the panel to the piping position of the indoor unit as shown by fig.13.

(2). Install the panel

① . Install the panel on the indoor unit temporarily. When install, hang the latch on the hook that is located on the opposite side of the swing flap on the panel of the indoor unit. (2 positions)

② . Hang the remaining 2 latches to the hooks on the sides of the indoor unit.(Be careful not to let the swing motor lead wire get caught in the sealing material.)

③ . Screw the 4 hexagon head screws under the latches in about 15mm. (The panel would rise)

④ . Adjust the panel by turning it toward the direction pointed by the arrow as shown in fig.13, so that the adjust board connect the ceiling well.

⑤ . Tighten the screws until the thickness of the sealing material between panel and indoor unit reduced to 5-8mm.

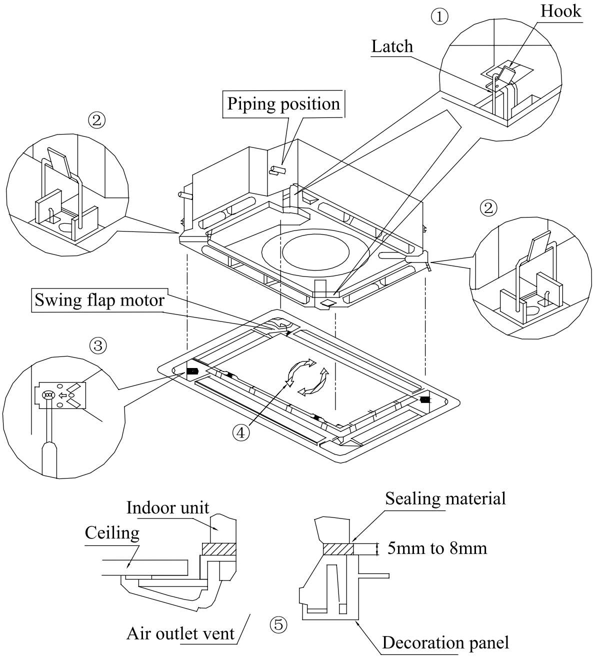


Fig.13

Notes:

① . Improper screwing of the screws may cause the troubles shown in fig.14.

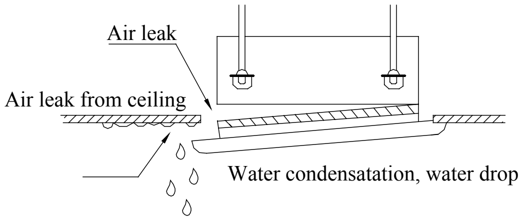


Fig.14

②. If gap still exist between ceiling and decoration panel after tightening the screws, readjust the height of the indoor unit. (As shown in fig.15)

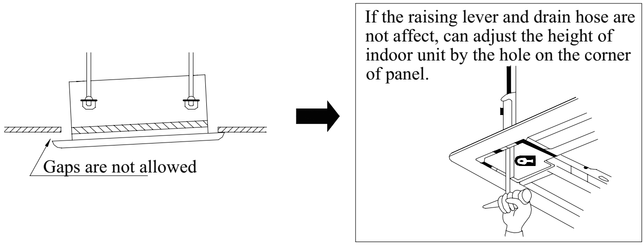


Fig.15

※ After fixing, be sure no gap left between the ceiling and the panel.

③. Wiring of the decoration panel (Fig.16)

Connect the joints for swing flap motor lead wire (at 2 places) installed on the panel.

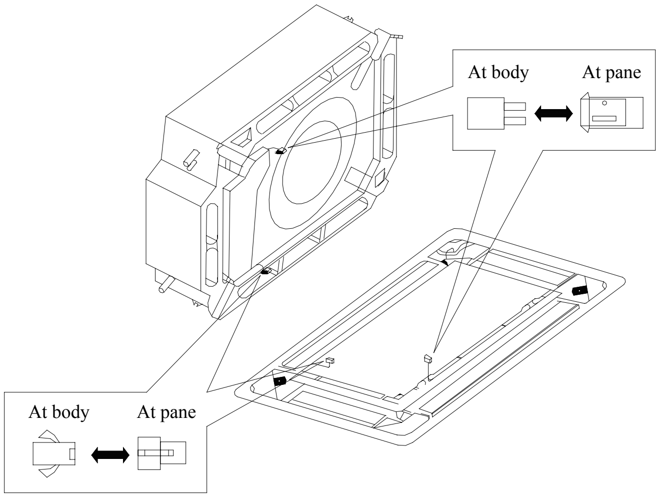
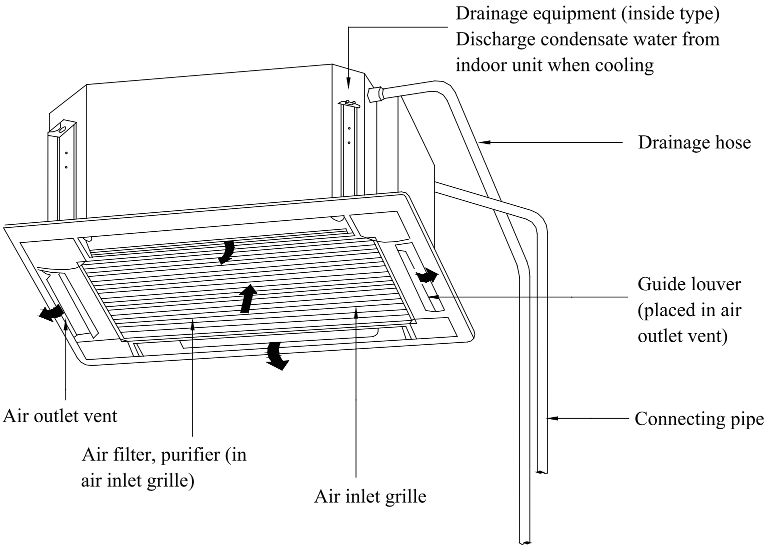


Fig.16

3 Constitutes and Names of Parts of Compact Panel Cassette Type Indoor Unit



TM12HKDI

TM18HKDI

4 Working Temperature Range

Working Temperature Range

	Indoor side state		Outdoor side stae	
	Dry bulb temp. ℃	Wet bulb temp. ℃	Dry bulb temp. ℃	Wet bulb temp. ℃
Rated Cooling	27	19	35	24
Max. cooling	32	23	48	26
Min. cooling	21	15	18	—
Rated Heating	20	15	7	6
Max. heating	27	—	24	18
Min. heating	20	15	－15	－16

5 Malfunction Debarring

Warning!

◆ Cut down the main power switch immediately if malfunction (such as smell the burning odor etc.) happened, and then contact service center. If the abnormal state is maintained, the unit may be damaged or electric shock or fire may be happened.

◆ Do not refit the conditioner. Please contact service center to repair or move the conditioner.

5.1 Check the following items before contacting maintenance center

Phenomena	Reason	Remedial Measures
Air conditioner doesn’t run at all	Blow of fuse or breaker	Change fuse or close breaker
	Power cut	Restart when there is power supply
	Don’t connect with power	Connect power well
	Low batteries of wireless remote controller	Change new batteries
	Wireless remote controller exceed remote control area	Signal could be received within 8m
Air conditioner runs but stops immediately	Blockage in inlet or outlet vent of indoor or outdoor unit	Clean out blockage
Abnormal cooling or heating	Blockage in inlet or outlet vent of indoor or outdoor unit	Clean out blockage
	Improper of temp. setting	Adjust settings in wireless remote controller
	Low setting of fan speed	Adjust settings in wireless remote controller
	Incorrect of wind direction	Adjust settings in wireless remote controller
	Door or window opened	Close
	Direct sun burn	Hang curtain or jalousie before windows
	Too many people in room	
	Too many heater in room	
	Filter blocked by dirt	Clean filter

5.2 Instruction

If problem still cannot found out after above checking, please contact service center and instruct phenomena and model.

5.3 The following circumstance are not malfunction

“Malfunction”		Reason
Air conditioner doesn’t run	Start up unit immediately after turned off	The overload protects switch makes it run after 3 minutes delay.
	When opening power	Run for about 1 minute without other actions
Mist is blown from air conditioner	When cooling	The high humidity air in room is cooled rapidly
Noise is heard from air conditioner	Slight click sound heard once begin running	Sound of initialization for electric expand valve
	Hissing sound heard continuously when cooling	The sound for gas refrigerant flowing in the unit
	Hissing sound heard when staring or stopping	The sound for gas refrigerant stops flow
	Slight hissing sound heard when running or after running	Sound for running of drainage system
	Creak sound heard when running or after running	The grating sound caused by expands of panel and other parts for the change of temperature
Dust be blown for air conditioner	Started up after long time’s doesn’t runs	Dust in indoor unit be blown out
Odor gives out from air conditioner	When running	This is because when air conditioning, odors or cigarette smoke from the room that was sucked in is discharged again.

5.4 After-sales Service

When having quality or other problems when purchasing air conditioner, please contact the local service center.

6 Maintenance Method

When air conditioner won't be used for a long time, please cut off the main power supply of air conditioner.

⚠**Warning!**

◆ Do turn off the unit and cut off the main power supply when cleaning the air conditioner, otherwise electric shock or harm may happen.

◆ It is forbidden to wash air conditioner by water rinsing, otherwise electric shock may happen.

6.1 Cleaning air filter

Air filters should be cleaned by professionals with proper operation to ensure personal safety.

When the usage environment has lots of dust, air filter should be cleaned more frequently (about once 6 months).

(1). Open air inlet grille

Loosen two screws on the air inlet grille with a screwdriver. And pull the 2 handle on air inlet grille at the same time with the direction showed by arrow in fig.17, pull down slowly. (Reverse when closing)

(2). Disassembly air filter

As shown in fig.18, pull the handle behind air inlet grille, raise it and disassembly. Then discharge the 3 purifier fixed on filter.

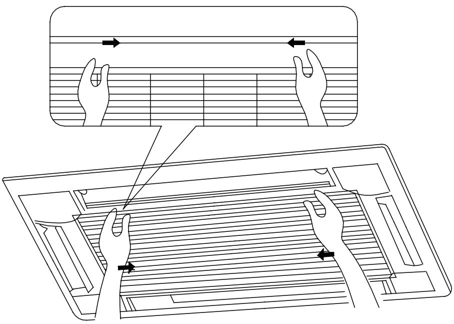


Fig.17

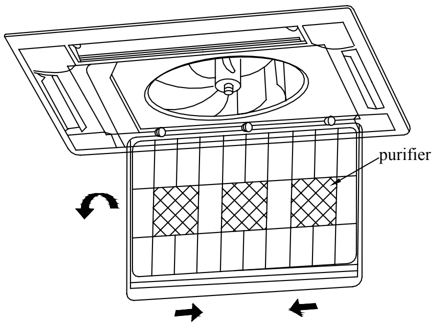


Fig.18

(3). Clean

Adopts cleaner or water to wash filter; if the filter is too dirty (like oil stain on it), adopts warm water (lower than 45℃) with neutral scourer to clean it, then dry it in the shade.

⚠**Note** !

Do not clean the filter by hot water whose temp. is higher than 45 ℃ to prevent fade or deformation.

Do not burn it on fire or the filter would catches fire or deformation.

(4). Install air filter

Fix the 3 purifiers on filter, install filter on the several bulges on top of air inlet grille, pull the handle behind air inlet grille toward inside to fix filter. As shown in fig.19.

(5). Close air inlet grille (Refer to the 1st step)

Maintenance Method

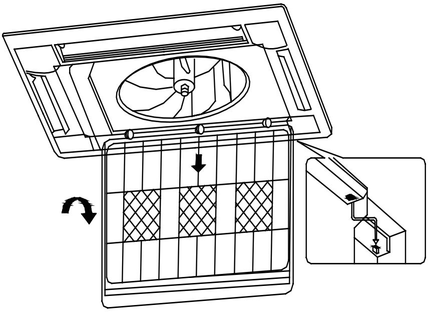


Fig.19

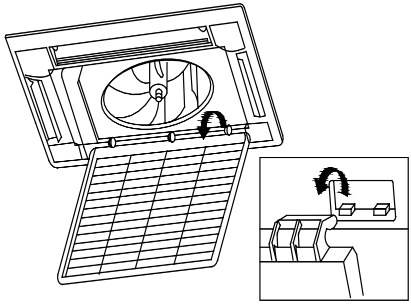


Fig.20

6.2 Clean air inlet grille

(1). Open air inlet grille (the same with the 1st step of Clean Air Filter)

(2). Take out air filter (the same with the 2nd step of Clean Air Filter)

(3). Take out air inlet grille

Open air inlet grille for an angle of 45°, as shown in fig.20, rise it.

(4). Clean

Clean it by pubescence brush, water and neutral cleaning, then throw water or dry it.

⚠ **Note** ！

Do not use water above 45℃ to wash the panel to prevent fade or deformation.

(5). Install air inlet grille (refer to 3rd step)

(6). Install air filter (refer to the 4th step of Clean Air Filter)

(7). Close air inlet grille (refer to the 1st step)

6.3 Install and change of air purifier

(1). Open air inlet grille (the same the 1st step of Clean Air Filter)

(2). Disassembly purifier

As shown in fig.21, disassembly air filter, screw out fixing bolts fixed on purifier on filter, then purifier could be disassembly.

(3). Take out the package sack of static fiber net filter, then install the filter in stand of purifier, and fix purifier on air filter.

(4). Install air filter (the same with the 4th step of Clean Air Filter)

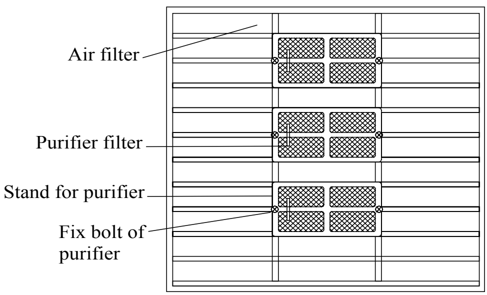


Fig.21

Function and usage period for air purifying

◆ Could adsorb CO, CO_2, benzene, aldehydes and odor of gasoline etc..

◆ Could adsorb deleterious material that is smaller than 1μm in air, as dust, pollen, bacteria, and virus.

◆ Usage period is 6 months to 1 year. If it is necessary to be changed, purchase new purifier in the nearest Tosot special engaged maintenance center.

6.4 Clean Outlet vent and Surface Panel

◆ Clean the surface panel by soft dry cloth or wet cloth with neutral scourer.

◆ It is forbidden to clean surface panel by gasoline, benzene, diluents, cleansing powder etc..

◆ If the guide louver is too dirty, it may be removed to be cleaned. (As narrated below)

Disassembly and install of guide louver

(1). Disassembly guide louver

Screw bolts in both end of guide louver to loose.

⚠**Note** !

Do not wipe guide louver powerfully when cleaning, otherwise fluff on surface would fall off.

(2). Install guide louver

Rotate guide louver slightly could install the protruding edge of both end into grooves on both end of guide louver, and then tighten bolts.

6.5 Maintenance before or after usage season

Check before the usage season

◆ Check if there is blockage in inlet or outlet vent of air conditioner.

◆ Check if the earthing wire had earthed reliably.

◆ Check if the air filter had been installed well.

◆ In order to start up the air conditioner smoothly after long time's turned off, turn on the main power supply 8 hours before turning on the air conditioner.

Maintenance after usage season

◆ Clean filter and body of air conditioner.

◆ Cut off the main power supply of air conditioner.

◆ The cooling or heating capacity and sound level are tested before leaving factory.

◆ If the parameter changed, refer to the data offered on nameplate.

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OWNER'S MANUAL

TM24HKDI

User Notice

◆ The total capacity of the indoor units which runs at the same time can not exceed 150% of that of outdoor units; otherwise, the cooling (heating) effect of each unit would be poor.

◆ A breaker (or fuse) needs to be installed in every indoor unit, and the capacity should be in accordance with indoor unit's electrical parameter; all the indoor units are required to be centralized controlled by a main switch, this switch can cut off the electric power supply in case of emergency. The breaker (or fuse) on each indoor unit has the function of preventing short circuit and avoiding abnormal overload, it should be connected in normal situation. The main switch controls the power supply of all the indoor units. Before cleaning and maintaining the indoor units, it is very important to turn off the main power supply switch.

◆ In order to turn on the units successfully, the main power switch should be opened 8 hours before the operation.

◆ It is a normal phenomenon that the indoor unit will still run for 20-70 seconds after the indoor unit receives the "stop" signal so as to make full use of after-heat for the next operation.

◆ When the running modes of the indoor and outdoor units conflict, it will be indicated on the display of the wired controller in five seconds and then the indoor unit will stop. At this time, change the operation mode of the indoor unit to the one that would not clash with the outdoor operating mode to make the operation normal. The HEAT mode conflicts with each of the COOL mode, DRY mode and FAN mode, while the COOL mode, DRY mode and FAN mode are compatible between each other.

◆ The appliance shall not be installed in moist places, such as laundry.

◆ An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

◆ Main switch is provided by end user. Main switch knob should be in black or gray, it can be locked on "OFF" with padlock.

◆ The instruction of main power switch should be included in user manual and the recommended installing height should be at 0.6-1.7m. And also over current protection is required (UL 1995,CSA C22.2).

◆ The outdoor ambient temperature of the unit under cooling mode ranges from -5~48°C DB. The outdoor ambient temperature of the unit (only for the heat pump type unit) under heating mode ranges from -15~27°C WB.

◆ 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.

This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.

Thank you for selecting Tosot air conditioner. Before use, please read this manual carefully and keep it properly for furthur reference.

Contents

1 Safety Precautions

Please read this manual carefully before using this unit, and operate it correctly according to the guide in this manual.

Please take special attention to the meaning of these two marks:

⚠ **Warning!** It indicates improper operation which will lead to human casualty or severe injury.

⚠ **Note!** It indicates improper operation which will lead to injury or property damage.

⚠ **Warning:**

◆ Do not adopt fuse with unsuitable capacity or adopt iron wire instead of fuse, otherwise malfunction or fire may happen.

◆ Turn off the main power switch immediately if malfunction (such as smell the burning odor etc.) happens.

◆ Keep good ventilation in the room to avoid oxygen deficit.

◆ Don’t insert finger or stick-like objects into the air inlet/outlet grille.

◆ Please install the unit in a place where is strong enough to withstand the weight of the unit; otherwise, the unit would fall down and cause injury or death.

◆ Don’t apply or spray and paint or insecticide on the surface of unit, otherwise, fire may happen.

◆ Never refit the unit and contact the sales agent or the professional installation personnel for the repair or relocation of the unit.

An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

⚠ **Note:**

◆ Before using the unit, please check if the piping and wiring are correct to avoid water leakage, refrigerant leakage, electric shock, or fire etc.

◆ The main power supply must be earthed soundly to avoid the hazard of electric shock and never connect this earth wire to the gas pipe, running water pipe, lightening rod or phone cable's earth lead.

◆ Turn off the unit after it runs at least five minutes; otherwise its service life will be shortened.

◆ Don’t allow children operate the air conditioner.

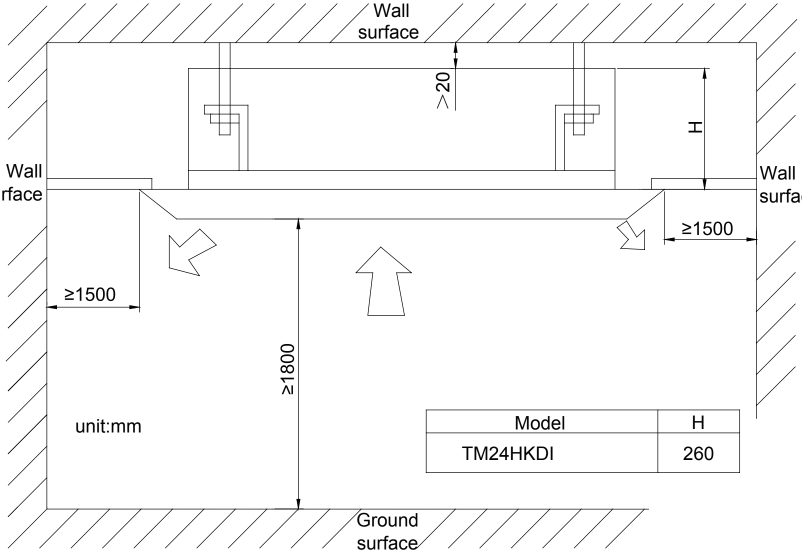
◆ Don’t allow children operate the air conditioner.

◆ Please turn off the main power of the unit before cleaning the conditioner or change the filter.

◆ Please cut off the main power if the conditioner will not be used for a long time.

2 Installation of the Cassette Type Indoor Unit

2.1 Schematic Diagram of Installation Spaces



Model	H
TM24HKDI	260

Fig.1

2.2 Installation Location of the Indoor Unit

(1). Obstruct should be taken away from the inlet or outlet of the indoor unit so that the airflow can be blown though all the room.

(2). Ensure the installation work is done as per the schematic diagram of installation spaces.

(3). Select a place where is strong enough to withstand 4 times of the weight of the indoor unit; otherwise it would incur vibration and noise.

(4). Ensure the installation place is at horizontal level.

(5). Select a place where the condensate water is easily drained out and the drain pipe can be easily connected with outdoor unit.

(6). Make sure that there is enough space for care and maintenance. Make sure that the distance between the indoor unit and ground is above 1800mm.

(7). When installing the steeve bolt, check if the installing place can stand 4 times of the weight of the units. If not, reinforce before installation. (Refer to the installation cardboard and find where should be reinforced)

⚠ **Note!**

There will be lots of lampblack and dust sticking on the acentric, heat exchanger and water pump in dining room and kitchen, which would reduce the capacity of heat exchanger, lead water leakage and abnormal operation of the water pump. **The following treatment should be taken under this circumstance:**

1). Ensure that the smoke trap above cooker has enough capacity to obviate lampblack to prevent the indraft of the lampblack by the air conditioner.

2). Keep the air conditioner far from the kitchen so that the lampblack would not be indraft by the air conditioner.

2.3 Important Notice:

◆ To guarantee the good performance, the unit must be installed by technician according with this instruction.

◆ Please contact the local Tosot special nominated repair department before installation. Any malfunction caused by the unit that is installed by the department that is not special nominated by Tosot would not deal without time by the inconvenience of the business contact.

2.4 Dimension of Ceiling Opening and Location of the Hoisting Screw (M10)

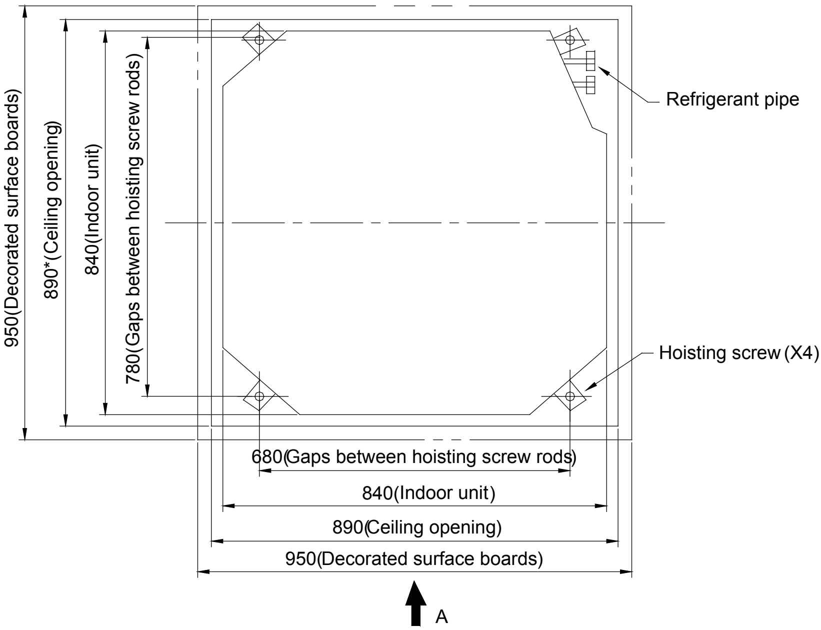


Fig.2 Install Dimension of Mode TM24HKDI

◆ The drilling of holes in the ceiling must be done by the technicians.

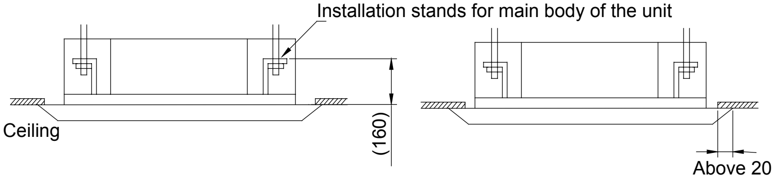


Fig.3

Notes: The dimension for the ceiling openings with * marks can be as large as 910mm. But the overlapping sections of the ceiling and the decorated surface boards should be maintained at no less than 20mm.

2.5 Main Body of Hoisting Air Conditioner

(1). The primary step for installing the indoor unit.

◆ When attach the hoisting stand with hoisting screw, do use nut and gasket respectively at the upper and lower of the hoisting stand to fix it. The use of gasket anchor board can prevent gasket from breaking off.

(2). Use installation cardboard

◆ Please refer to the installation cardboard about the dimension of ceiling opening.

◆ The central mark of the ceiling opening is marked on the installation cardboard.

◆ Install the installation cardboard on the unit by bolts (3 pieces), and fix the angle of the drainage pipe at the outlet vent by bolt.

(3). Adjust the unit to the suitable install place. (Refer to the Fig.4)

(4). Check if the unit is horizontal.

◆ Inner drainage pump and float switch are included in the indoor unit, check if 4 angle of every unit are horizontal by water level. (If the unit is slant toward the opposite of the coagulate water flow, there may be malfunction of the float switch and lead water drop.)

(5). Back-out the gasket anchor board used to prevent gasket from breaking off and tighten the nut on it.

(6). Back-out the installation cardboard.

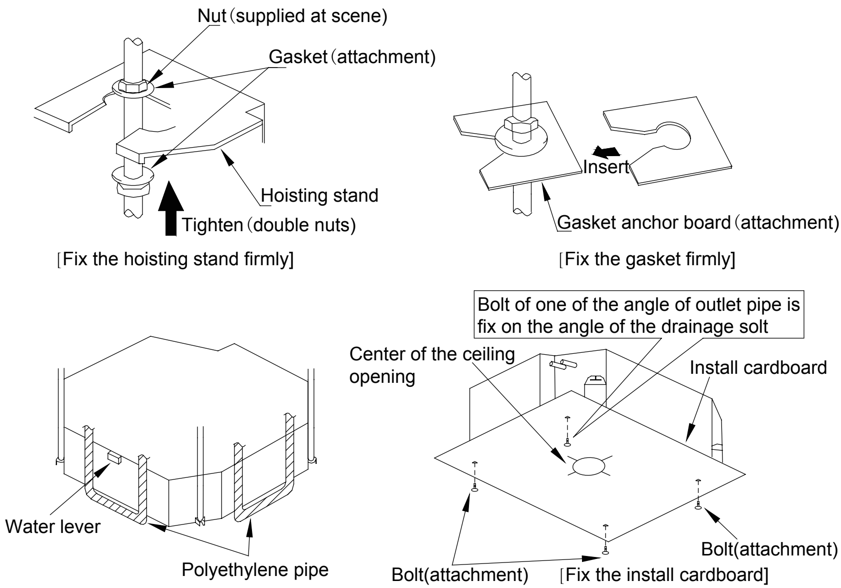


Fig.4

⚠ **Note!**

- Please do tighten the nuts and bolts to prevent air conditioner from falling down.

2.6 Connection of the Refrigerant Pipe

◆ When connect the pipe to the unit or remove it from the unit, please do use both spanner and torque wrench. as shown in Fig.5.

◆ When connect, smear both inside and outside of the flare nut with freeze motor oil, screw it by hand and then tighten it with spanner.

◆ Refer to Table 1 to check if the nut has been tightened (tighten too greatly would damage the nut and lead to leakage).

◆ Examine the connection pipe to see if it has gas leakage, then take the treatment of heat insulation, as shown in the Fig.5.

◆ Only use medium-sized sponge to entwine the wiring interface of the gas pipe and heat insulation of the gas collection tube.

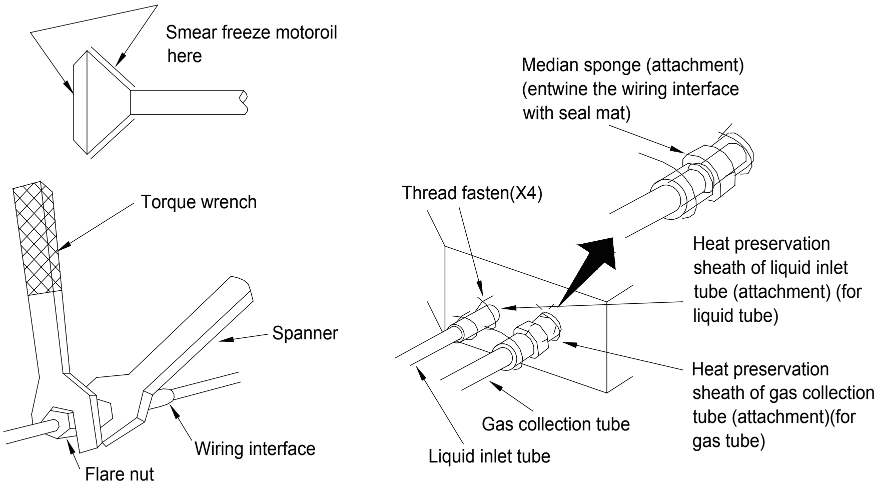


Fig.5

Table 1: The moment of torque for tightening nut

Diameter（Inch）	Surface thickness（mm）	Moment of torque (N • m)
φ1/4’’	⩾ 0.5	15-30 (N • m)
φ3/8’’	⩾ 0.71	30-40 (N • m)
φ1/2’’	⩾ 1	45-50 (N • ·m)
φ5/8’’	⩾ 1	60-65 (N • m)
φ3/4’’	⩾ 1	70-75 (N • ·m)

If the specification of the outdoor unit pipe joint does not conform to that of the indoor unit, then the joint specification of the outlet pipe of the indoor unit takes precedence. A reducing nipple shall be installed at the joint of the outdoor unit so as to make the joint of the outdoor unit compatible with that of the indoor unit.

2.7 Drain Hose

(1). Install the drain hose

◆ The diameter of the drain hose should be equal or larger than that of connection pipes. (The diameter of polythene pipe: Outer diameter: 25mm; Surface thickness ≥1.5mm)

◆ Drain hose should be short and drooping gradient should at least 1/100 to prevent the formation of air bubble.

◆ If drain hose cannot has enough drooping gradient, drain raising pipe should be added.

◆ To prevent bent of the drain hose, the distance between hoisting stand and the drain hose should be 1 to 1.5m.

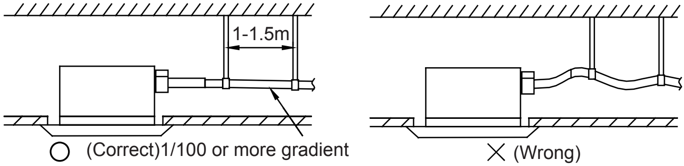


Fig.6

◆ Use the drain hose and clamp attached. Insert the drain hose to the drain vent, and then tighten the clamp.

◆ Wrap clamp with sponge on the drain hose to insulate heat.

◆ Heat insulation should be done to indoor drain hose.

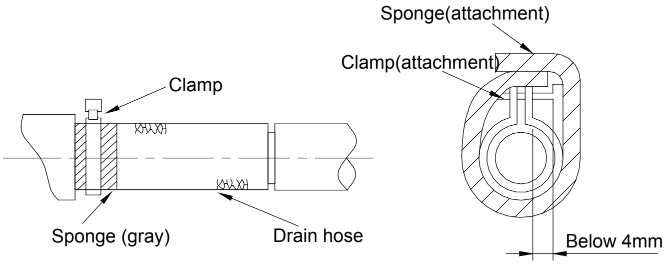


Fig.7

Drain Stepup Pipe Note

◆ The installation height of the drain raising pipe should less than 280mm.

◆ The drain raising pipe should form a right angle with the unit, and distance to unit should not beyond 300mm.

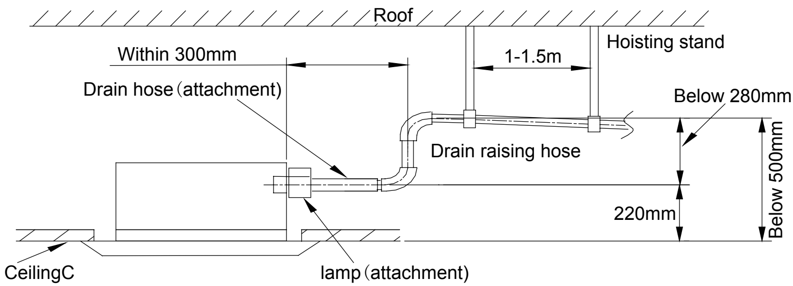


Fig.8

Instruction

◆ The fall of the attached drain hose should be within 75mm so that the joint of the drain pipe doesn’t have to endure the unnecessary outside force.

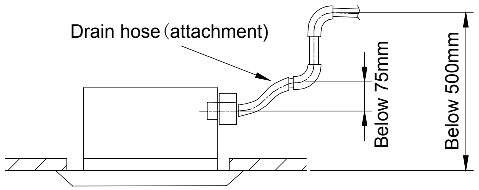
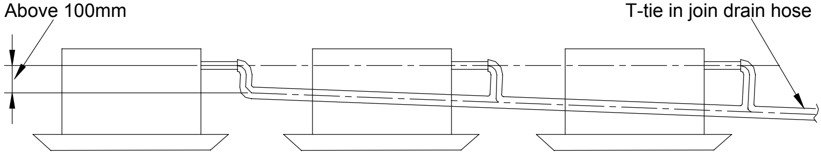


Fig.9

◆ Please install the drain hose according to the following process if several drain hoses join together.



The specs of the selected jion drain hose should fits the running capacity of the unit

Fig.10

(2). Check the drain state after installation

◆ Check the drain state by immitting 600ml water slowly from the outlet vent or test hole.

◆ Check the drain state under cooling mode after electric circuit installation work is done.

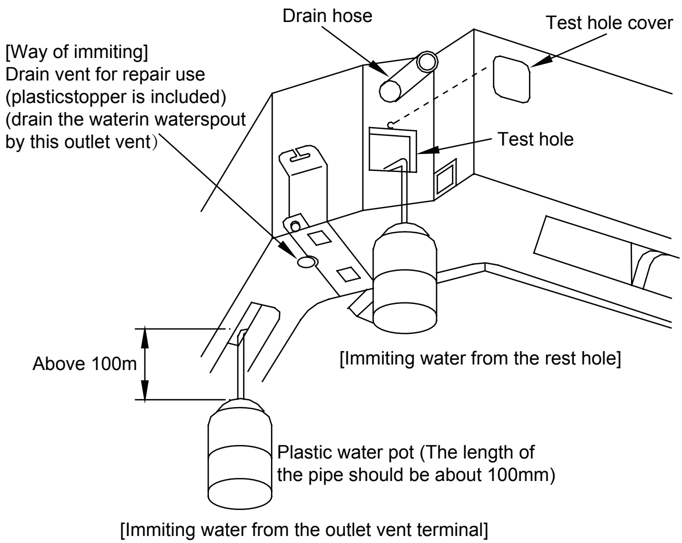


Fig.11

2.8 Electrical wiring

⚠ **Note:The power of the entire indoor unit must be connected with outdoor unit.**

◆ About the electrical wiring, please see the circuit diagram attached with the unit.

◆ All the installation of electrical wiring must be done by technicians.

◆ Please do take the earthing treatment.

Wiring Method of Connection Unit and Controller

◆ Connection wiring (communication):

① Open electric box cover(1), drag the wiring (communication)from the rubber plug A, and impact them well individually by impact fastener.

② Wiring according to the indoor side circuit diagram.

◆ Fix the impact fastener after connection.

◆ Wrap the small-sized sponge on the electric wire (do entwine it to prevent condensation).

◆ Impact tightly by impact fastener after connection and then fit on the electric box (1) and (2).

◆ Put the 4-core cable through the hole of the chassis and the bottom of the appliance upward, and then connect the power line and the communication line from the outdoor unit to the corresponding terminals N(1), 2, 3 , and grounding terminal of the indoor unit. Wiring shall be done properly as per the wiring diagram. (Note: Be sure the wring terminals A/B/C/D and piping joints A/B/C/D of the indoor unit match with that of the outdoor unit respectively).

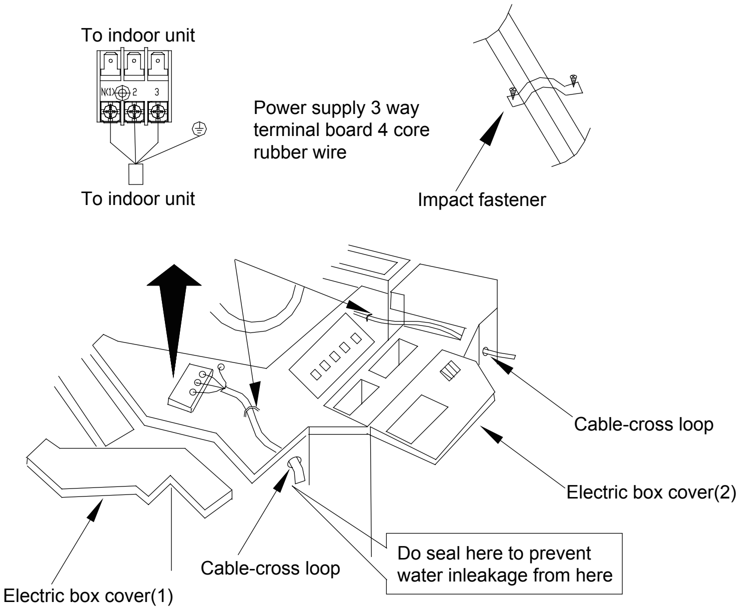


Fig.12

2.9 Install the Panel

1. Set the panel to the indoor unit body by matching the position of the swing flap motor of the panel to the piping position of the panel to the piping position of the indoor unit as shown by Fig.13.

2. Install the panel

(1). Install the panel on the indoor unit temporarily. When install, hang the latch on the hook that is located on the opposite side of the swing flap on the panel of the indoor unit. (2 positions)

(2). Hang the remaining 2 latches to the hooks on the sides of the indoor unit.(Be careful not to let the swing motor lead wire get caught in the sealing material.)

(3). Screw the 4 hexagon head screws under the latches in about 15mm. (The panel would rise)

(4). Adjust the panel by turning it toward the direction pointed by the arrow as shown in Fig.13, so that the adjust board connect the ceiling well.

(5). Tighten the screws until the thickness of the sealing material between panel and indoor unit reduced to 5-8mm.

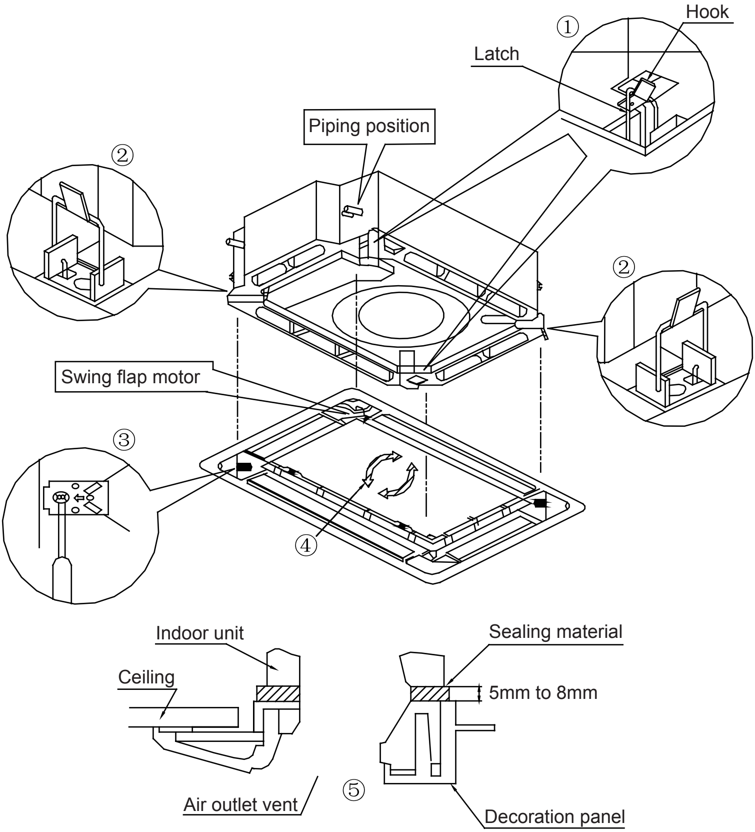


Fig.13

Notes:

① . Improper screwing of the screws may cause the troubles shown in Fig.14.

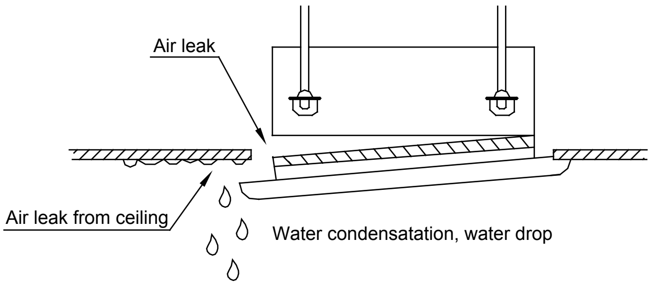


Fig.14

②. If gap still exist between ceiling and decoration panel after tightening the screws, readjust the height of the indoor unit. (As shown in Fig.15)

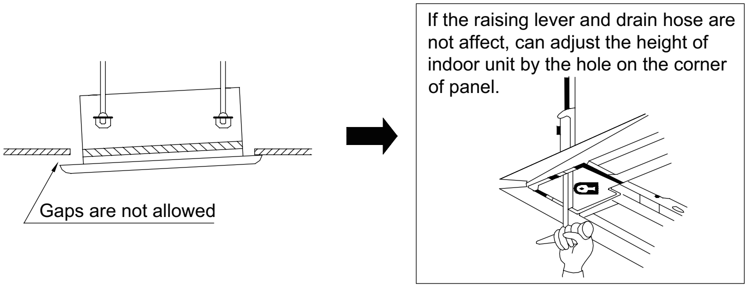


Fig.15

※ After fixing, be sure that there is no gap between the ceiling and the panel.

③. Wiring of the decoration panel (Fig.16)

Connect the joints for swing flap motor lead wire (at 2 places) installed on the panel.

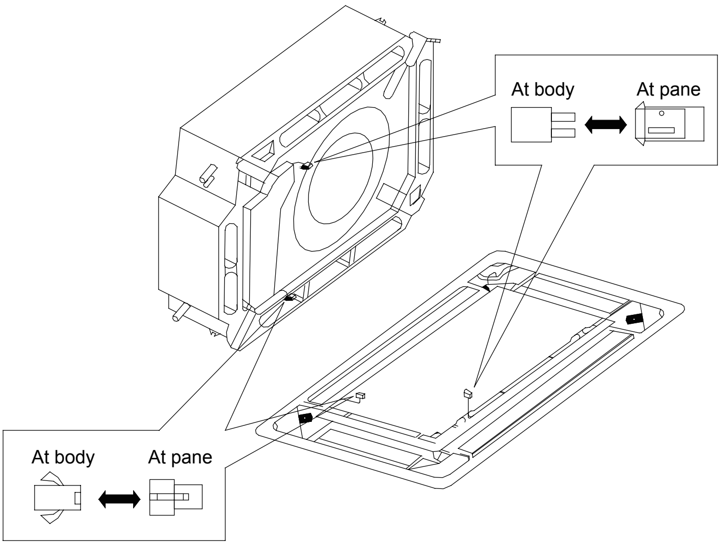


Fig.16

3 Parts and Components of Cassette Type Indoor Unit

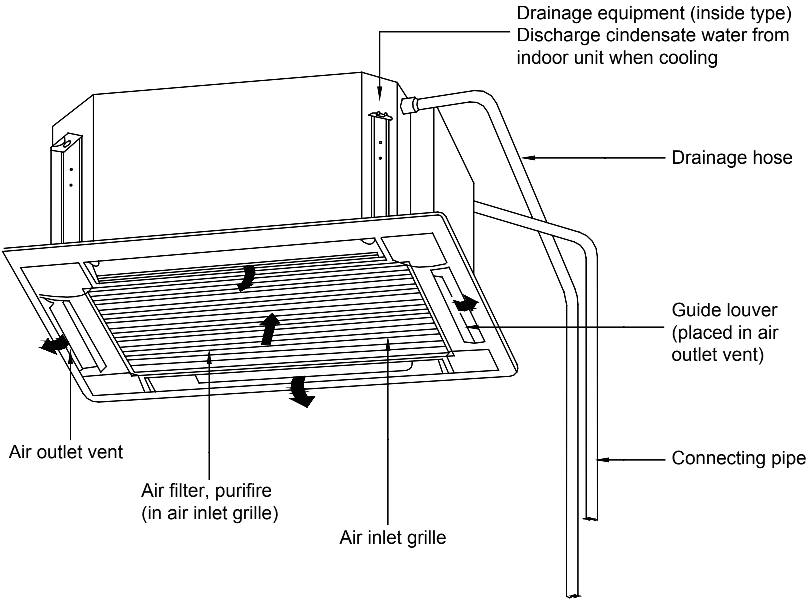


Fig.17 TM24HKDI

4 Working Temperature Range

Working Temperature Range

	Indoor side state ℉（℃）		Outdoor side state ℉（℃）	
	Dry bulb temp. ℉（℃）	Wet bulb temp. ℉（℃）	Dry bulb temp. ℉（℃）	Wet bulb temp. ℉（℃）
Rated. Cooling	80.0(26.7)	67.0(19.4)	95.0(35.0)	75.0(23.9)
Max. cooling	80.0(26.7)	67.0(19.4)	115.0(46.1)	75.0(23.9)
Min. cooling	67.0(19.4)	57.0(13.9)	67.0(19.4)	57.0(13.9)
Rated. Heating	70.0(21.1)	60.0(15.6)	47.0(8.3)	43.0(6.1)
Max. heating	80.0(26.7)	—	75.0(23.9)	65.0(18.3)
Low Ambient heating	70.0(21.1)	60.0(15.6)	5.0(-15.0)	3.2(-16.0)

5 Trouble Shooting

⚠ **Warning!**

◆ Cut down the main power switch immediately if malfunction (such as smell the burning odor etc.) happens, and then contact service center. If the abnormal state is maintained, the unit may be damaged or electric shock or fire may happen.

◆ Do not refit the conditioner. Please contact service center to repair or move the conditioner.

★ **Check the following items before contacting maintenance center**

Phenomena	Reason	Remedial Measures
Air conditioner doesn't run at all	Blow of fuse or breaker	Change fuse or close breaker
	Power cut	Restart when there is power supply
	Don't connect with power	Connect power well
	Low batteries of wireless remote controller	Change new batteries
	Wireless remote controller exceed remote control area	Signal could be received within 8m
Air conditioner runs but stops immediately	Blockage in inlet or outlet vent of indoor or outdoor unit	Clean out blockage
Abnormal cooling or heating	Blockage in inlet or outlet vent of indoor or outdoor unit	Clean out blockage
	Improper of temp. setting	Adjust settings in wireless remote controller
	Low setting of fan speed	Adjust settings in wireless remote controller
	Incorrect of wind direction	Adjust settings in wireless remote controller
	Door or window opened	Close
	Direct sun burn	Hang curtain or jalousie before windows
	Too many people in room	
	Too many heater in room	
	Filter blocked by dirt	Clean filter

★ **Instruction**

If problem still cannot be solved after above checking, please contact service center.

★ The following circumstance doesn't belong to malfunction

"Malfunction"		Reason
Air conditioner doesn't run	Start up unit immediately after turned off	The overload protects switch makes it run after 3 minutes delay.
	When opening power	Run for about 1 minute without other actions
Mist is blown from air conditioner	When cooling	The high humidity air in room is cooled rapidly
Noise is heard from air conditioner	Slight click sound heard once begin running	Sound of initialization for electric expand valve
	Hissing sound heard continuously when cooling	The sound for gas refrigerant flowing in the unit
	Hissing sound heard when staring or stopping	The sound for gas refrigerant stops flow
	Slight hissing sound heard when running or after running	Sound for running of drainage system
	Creak sound heard when running or after running	The grating sound caused by expands of panel and other parts for the change of temperature
Dust be blown for air conditioner	Started up after long time's doesn't runs	Dust in indoor unit be blown out
Odor gives out from air conditioner	When running	This is because when air conditioning, odors or cigarette smoke from the room that was sucked in is discharged again.

★ After-sales Service

If there is any quality or other issues after purchasing air conditioner, please contact the local service center.

6 Maintenance Method

When the unit won't be used for a long time, please cut off the main power supply of air conditioner.

⚠ **Warning!**

◆ Do turn off the unit and cut off the main power supply when cleaning the air conditioner, otherwise electric shock or harm may happen.

◆ It is forbidden to wash air conditioner by water rinsing, otherwise electric shock may happen.

6.1 Cleaning Air Filter

When the usage environment has lots of dust, air filter should be cleaned more frequently (about once 6 months).

(1). Open air inlet grille

Pull the 2 handles on air inlet grille at the same time with the direction showed by arrow in Fig. 18, pull it down slowly. (As per the reverse disassembly order when closing)

(2). Disassemble air filter

As shown in Fig. 19, pull the handle behind air inlet grille, raise it and disassemble. Then remove the 3 purifiers fixed on filter.

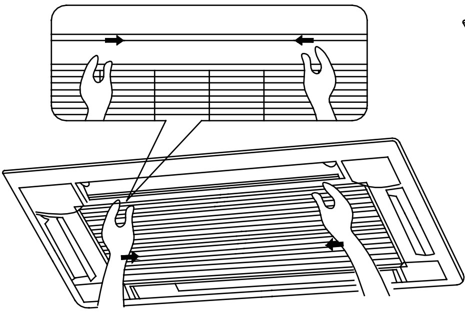


Fig. 18

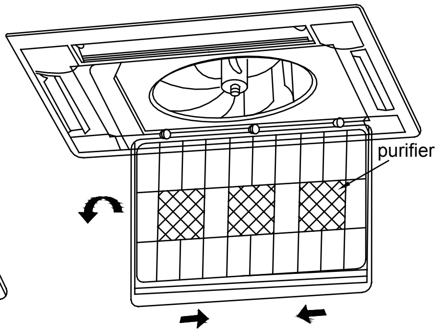


Fig. 19

(3). Clean

Use a cleaner or some water to wash filter; if the filter is too dirty (like oil stain on it), use some warm water (lower than 45℃) with neutral detergent to clean it, then dry it in the shade.

⚠ **Note!**

Do not clean the filter by hot water which temp. is higher than 45 ℃ to prevent fading or deformation.

Do not place the filter near fire; otherwise the filter may catch fire or lead to deformation.

(4). Install air filter

Fix the 3 purifiers on filter, install filter on the several bulges on top of air inlet grille, pull the handle behind air inlet grille toward inside to fix filter. As shown in Fig. 20.

(5). Close air inlet grille (Refer to the 1st step)

Maintenance Method

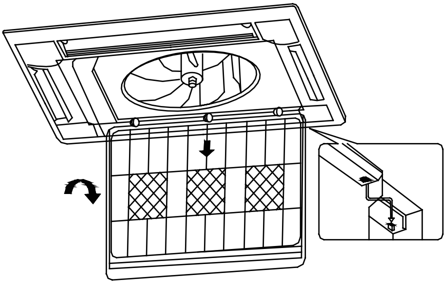


Fig. 20

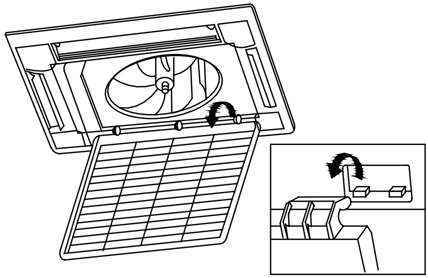


Fig. 21

6.2 Clean Air Inlet Grille

(1). Open air inlet grille (the same with the 1st step of Clean Air Filter)

(2). Take out air filter (the same with the 2nd step of Clean Air Filter)

(3). Take out air inlet grille

Open air inlet grille for an angle of 45°, as shown in fig. 21, raise it.

(4). Clean

Clean it by soft brush, water and neutral cleaning, then dry it after cleaning.

⚠ **Note!**

Do not use water above 45℃ to wash the panel to prevent fading or deformation.

(5). Install air inlet grille (refer to 3rd step)

(6). Install air filter (refer to the 4th step of Clean Air Filter)

(7). Close air inlet grille (refer to the 1st step)

6.3 Install and Change of Air Purifier

(1). Open air inlet grille (the same the 1st step of Clean Air Filter)

(2). Disassembly purifier

As shown in fig 22, disassembly air filter, screw out fixing bolts fixed on purifier on filter, then purifier could be disassembly.

(3). Take out the package sack of static fiber net filter, then install the filter in stand of purifier, and fix purifier on air filter.

(4). Install air filter (the same with the 4th step of Clean Air Filter)

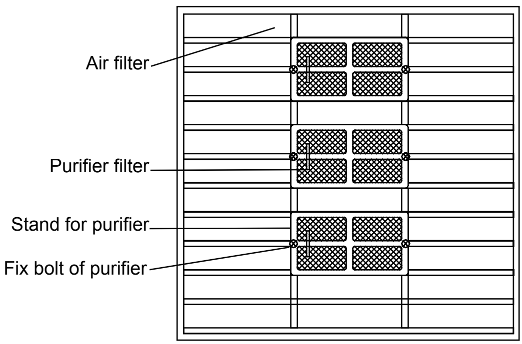


Fig.22

Function and usage period for air purifying

◆ Adsorb CO, CO_2, benzene, aldehydes and odor of gasoline etc..

◆ Adsorb poisonous material that is smaller than 1μm in air, as dust, pollen, bacteria, and virus.

◆ Usage period is 6 months to 1 year. If it is necessary to be changed, purchase new purifier in the nearest Tosot special engaged maintenance center.

6.4 Clean Outlet Vent and Surface Panel

◆ Clean the surface panel by soft dry cloth or wet cloth with neutral scourer.

◆ It is forbidden to clean surface panel by gasoline, benzene, diluents, cleansing powder etc..

◆ If the guide louver is too dirty, it may be removed to be cleaned. (As narrated below)

Disassembly and installation of guide louver

(1). Disassemble guide louver

Screw bolts in both ends of guide louver to loose.

⚠ **Note!**

Do not forcibly wipe guide louver when cleaning, otherwise painted surface layer would fall off.

(2). Install guide louver

Rotate guide louver slightly could install the protruding edge of both end into grooves on both end of guide louver, and then tighten bolts.

6.5 Maintenance before or after Seasonal Use

Check before the seasonal use

◆ Check if there is blockage at inlet or outlet of air conditioner.

◆ Check if the earthing wire has been earthed reliably.

◆ Check if the air filter has been installed well.

◆ In order to start up the air conditioner smoothly after long time's turned off, turn on the main power supply 8 hours before turning on the air conditioner.

Maintenance after seasonal use

◆ Clean filter and body of air conditioner.

◆ Cut off the main power supply of air conditioner.

◆ The cooling or heating capacity and sound level are tested before leaving factory.

◆ If the parameter changes, refer to the data offered on nameplate.

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OWNER'S MANUAL

TM09HTDI
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User Notice

◆ When installing, the entire capacity of the cooperating indoor unit should be not larger than 150% of outdoor unit, otherwise, it will cause the shortage of cooling (heating) capacity.

◆ The power supply of the entire unit must be the power supply of outdoor unit. And disconnect the main power of outdoor unit before cleaning.

◆ In order to start up the unit successfully, the main power switch should be opened 8 hours before the operation.

◆ After receiving the turn off signal, every indoor unit will continue to work for 20-70sec to make good use of the rest cool air or the rest heat air in the heat exchanger, which will prepare for the next operation. And this is normal.

◆ When the selected operating mode of the indoor unit is conflicted to the operating mode of the outdoor unit, 5 sec later, the malfunction hint will be shown on the indoor unit or wired controller, then the indoor unit will stop. At this time, change the operating mode of the indoor unit to the one that would not conflict with the outdoor operating mode to make the operation normal. The HEAT mode conflicts with each of the COOL mode, DRY mode and FAN mode, while the COOL mode, DRY mode and FAN mode are compatible between each other.

◆ The appliance shall not be installed in the laundry. The appliance shall not be used by children without supervisor.

◆ Power supply fluctuating range (+/-10%, +/-1Hz) .

◆ Humidity range: 30%~95%.

◆ Main switch provided by end user: main switch handle should be black or gray, it can be locked in “OFF” position with padlock.

◆ The main disconnection device should be installed at a height of 0.6~1.7m. Over current protection is required(UL 1995,CSA C22.2).

◆ The cooling range of the unit is the outdoor ambient temp -5~48℃ DB, the heating range of the unit (only for the heat pump type unit) is the outdoor ambient temp. -15~27℃ DB.

◆ 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.

This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.

Thank you for selecting Tosot air conditioner. Before use, please read this manual carefully and keep it properly for furthur reference.

Contents

1 Safety Precautions

Please read this manual carefully before using this unit. Operate it correctly according to the guide in this manual.

Please pay special attention to the indicating meaning of these two marks:

⚠ **Warning!** This mark means that the unit may cause property damage, personal injury or loss of life if the operation is incorrect.

⚠ **Caution!** This mark means that the unit may cause minor or moderate property damage or personal injury.

⚠ **Warning!**

◆ The unit should be earthed reliably. Do not connect the earth line to the gas pipe, water pipe, drainage pipe or other unsafe places in potential.

◆ Air conditioner must use special power supply circuit and switches for creepage protect and air with enough capacity should be installed in the circuit.

◆ Ensure that the connecting of power cord is reliable, otherwise, electric shock or fire may happen.

◆ Do not cut off the power supply when the unit is running, otherwise the lifetime of the unit will be shortened.

◆ Do not damage wires or use the wires that are not recommended, otherwise, electric shock or fire may happen.

◆ Please don't operate the unit with wet hands, or electric shock may happen.

◆ Do not put a finger, a rod or other objects into the air outlet or inlet to avoid of damage or injury.

◆ Cut down the main power supply immediately if any abnormality happens (such as smell of fire etc.). Contact with the service center and consult the qualified technician.

◆ Do not repair or adjust the air conditioner by yourself. Please contact the service center or Tosot technicians for help.

◆ Do not use the fuse with unsuitable capacity or iron thread instead of fuse, otherwise, it will cause malfunction or fire.

◆ Switch off the power supply of the unit before cleaning the air conditioner, otherwise, electric shock or damage may happen.

◆ Please turn off the main power of the whole unit before cleaning the conditioner, otherwise electric shock or harm may be happened.

◆ Chemical sprayer should be placed 1m or more away from the unit, otherwise fire or explosion may happen.

◆ Do not block air inlets or outlets. Impaired air flow may result in insufficient performance or trouble.

2 Installation Precautions and Location Choosing

2.1 Installation Precautions

The installation of air conditioner must be conform to national and local safety laws.

Installation quality will directly affect the normal use of air conditioner. Do not attempt to install the air conditioner by yourself. Please contact your dealer after buying this machine. Professional installation workers will provide installation and test services according to installation manual.

Do not connect to power until all installation work is completed.

2.2 Location Choosing

⋆ Such a place where cool air can be distributed throughout the room.

⋆ Such a place where condensate water could be easily drained out.

⋆ Such a place that can handle the weight of indoor unit.

⋆ Such a place, which is easy for maintenance.

⋆ Such a place where is easy to get connected with the outdoor unit.

⋆ Such a place where is 1m or more away from other electric appliances such as television, audio device, etc.

⋆ Avoid a location where there is heat source, high humidity or inflammable gas.

⋆ Do not use the unit in the moist surroundings, such as a laundry, a bath, a shower or a swimming pool.

⋆ Be sure that the installation conforms to the installation drawings.

2.3 Imappropriate Location

⋆ Where there is too much of oil.

⋆ Where it is acid base area.

⋆ Where there is irregular electrical supply.

3 Installation of Floor and Ceiling Type Indoor Unit

3.1 Space Dimension for Unit Installation

The space around the unit is adequate for ventilation. (Refer to Fig.1)

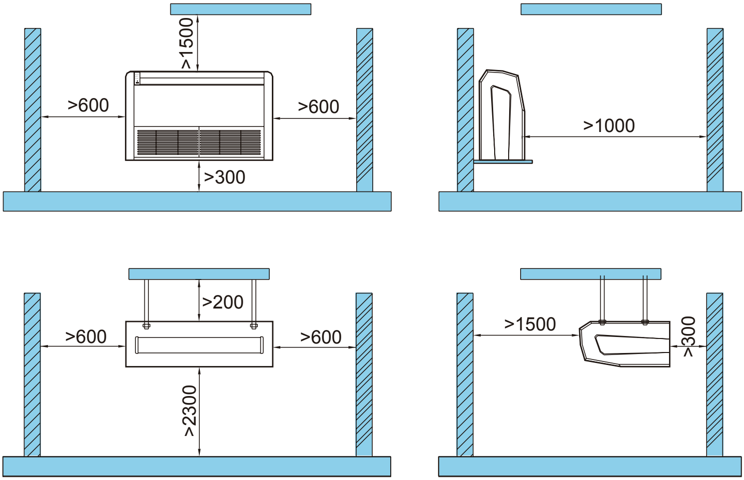


Fig.1

3.2 Important Notice

(1). The unit must be installed by the professional personnel according to this install instruction to ensure the well use.

Please contact the local Tosot special nominated repair department before installation. Any malfunction caused by the unit that is installed by the department that is not special nominated by Tosot would not deal with on time by the inconvenience of the business contact.

(2). It should be done by professional personnel when the air conditioner unit is moved to other place.

3.3 Installation Description

⋆ **Ceiling type**

⋆ **Floor type**

These two types of units have similar installing procedure as follows:

(1). Determine the mounting position on ceiling or wall by using paper pattern to indicate indoor frame. Mark the pattern and pull out the paper pattern.(Refer to Fig.2)

(2). Remove the return grill, the side panel and the hanger bracket from the indoor unit as per procedure bellow.

⋆ Press the fixing knob of the air intake grills, the grilles will be opened wider and then pull them out from the indoor.

⋆ Loosen the side panel fixing screw and remove the side panel. (Refer to Fig.3)

⋆ Loosen two hanger bracket setting bolts (M8) on each side for less than 10mm. Remove two hanger bracket fixing bolts (M6) on the rear side. Detach the hanger bracker by pulling it backward

(Refer to Fig.5).

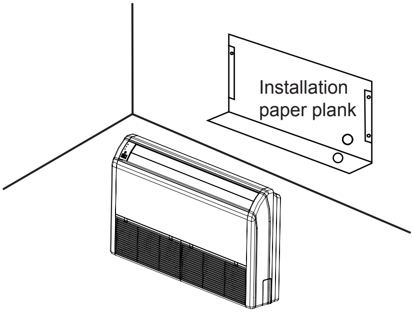


Fig.2

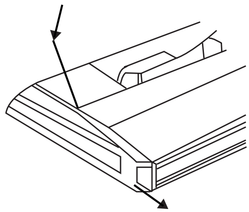


Fig.3

(3). Set the suspension bolt. (Use W3/8 or M10 size suspension bolts)

* Adjust the distance from the unit to the ceiling slab beforehand. (Refer to Fig.4)

(4). Fix the hanger bracket to the suspension bolt.

⚠ **Warning!**

* Make sure that extended suspension bolt from the ceiling stays inside the appointed position. Readjust the hanger bracket when it is out of the appointed position. (Refer to Fig.6)

* Suspension bolt is fixed in the cap of indoor unit. Never remove the cap.

(5). Lift the unit and slide forward unit in place. (Refer to Fig.7)

(6). Screw tightly both hanger bracket-setting bolts (M8). (Refer to Fig.5)

(7). Screw tightly both hanger bracket-fixing bolts (M6) to prevent the displacement of the indoor unit. (Refer to Fig.5)

(8). Adjust the height so that rear side of the drainpipe slightly inclines to improve drainage.

⚠ **Caution!**

* Adjust the height by rotating the nut with a spanner.

* Insert the spanner into the hanger bracket through the interspace. (Refer to Fig.8)

In case of hanging

It is possible to install hanger brackets by not removing the brackets from the indoor unit. (Refer to Fig.9)

Only the specified accessories and parts for installation work could be used.

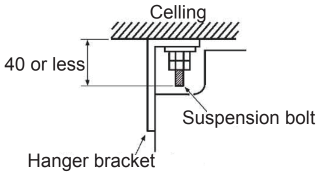


Fig.4

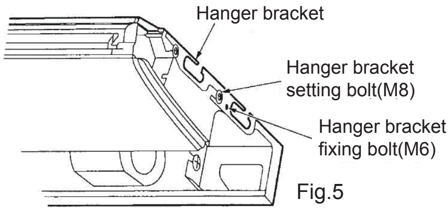


Fig.5

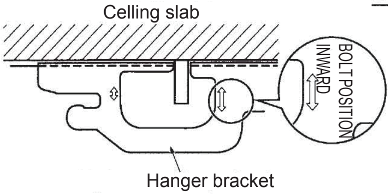


Fig.6

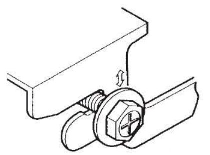


Fig.7

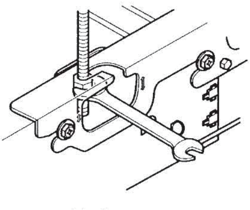


Fig.8

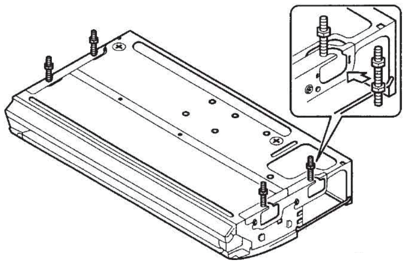
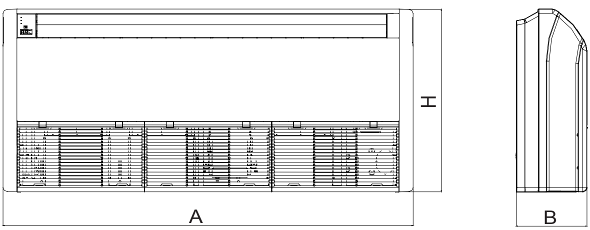
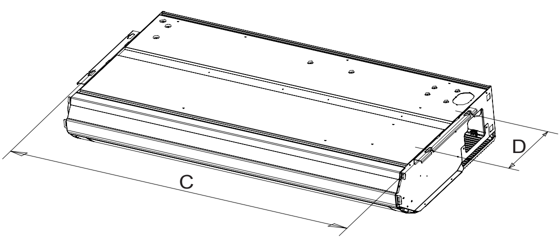


Fig.9

When installing the indoor unit, you can refer the paper pattern for installation. Make sure that the drainage side must be 10mm lower than the other side in order to drain the condensate water easily.





Unit:mm

Model	A	B	H	C	D
TM09HTDI	1220	225	700	1158	280
TM12HTDI					
TM18HTDI					
TM24HTDI					

3.4 Electrical Wiring

⚠ **Caution:**

The power of every indoor unit should be connected in outdoor unit.

① . Open front panel.

② . Remove the electrical box cover.

③ . Route the power connection cord from the back of the indoor unit and pull it toward the front through the wiring hole upward.

④ . Put the 4-core cable through the hole of the chassis and the bottom of the appliance upward, and then connect the power line and the communication line from the outdoor unit to the corresponding terminals N(1), 2, 3 , and grounding terminal of the indoor unit. Wiring shall be done properly as per the wiring diagram. (Note: Be sure the wring terminals A/B/C/D and piping joints A/B/C/D of the indoor unit match with that of the outdoor unit respectively).

⑤ . Reassemble the electrical box cover.

⑥ . Reinstall the front panel.

⑦ . Do not use copper tube at interconnection part as the temperature of refrigerant circuit is high.

⚠ **Caution!**

①. The incorrect of wiring connection would lead malfunction of some of the electric parts.

②. Be sure to leave some space between the connecting end and the clamp end after the wiring is fixed.

③. The installing operation should comform to national wiring regulations.

3.5 Drainpipe Installation

Make sure the drain flows out

(1). Drain piping.

* Either the right rear or right side of the unit is suitable for fixing the drainpipe.

* The diameter of the drainpipe should be equal to or greater than that of the connecting pipe.

* Take the drainpipe as short as possible and slope downward at a gradient of at least 1/100 to prevent air pockets.(Refer to Fig.10)

* Use the attached drain hose ④ and clamp ⑤ .

* Insert the drain hose completely into the drain socket. Tighten the clamp within the range of gray tape until the screw head is less than 4mm from the hose. (Refer to Fig.11,Fig.12)

* Wrap the attached sealing pad ⑪ over the clamp and drain hose to insulate. (Refer to Fig.12)

* No folding of drain hose inside the indoor unit. (Refer to Fig.13)

(2). Confirm that smooth drainage is achieved after the piping work.

Pour 600cc of water into the drain pan from the air outlet for confirming drainage.(Refer to Fig.14)

(When drain hose is connected)

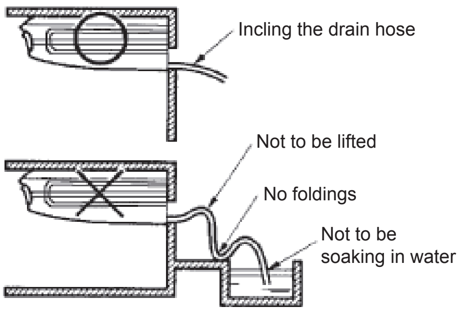


Fig.10

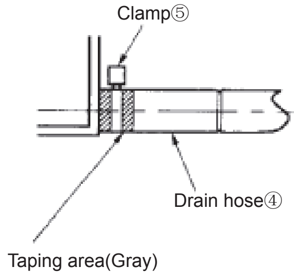


Fig.11

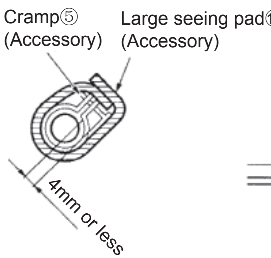


Fig.12

Fig.13

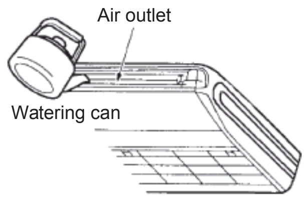
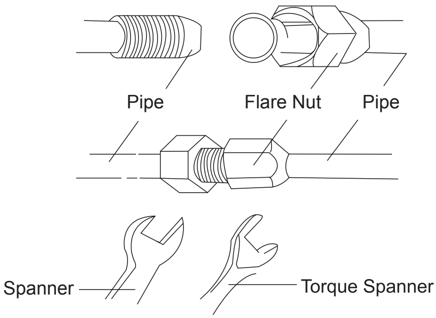


Fig.14

3.6 Install the Connection Pipes



Nut-Required Torque

Pipe Diameter (mm)	Required Torque
φ6.35	15--30
φ9.52	35-40
φ12	45-50
φ15.9	60-65

(1). Align the flared end of the copper tube with the threaded connector, and then hand-tighten the flared nut.

(2). Further tighten the flared nut with a torque wrench until the torque wrench sounds a “crack”.

(3). The bending of the pipe shall not be too small, otherwise the pipe may crack. A pipe bender must be used when bending the pipe.

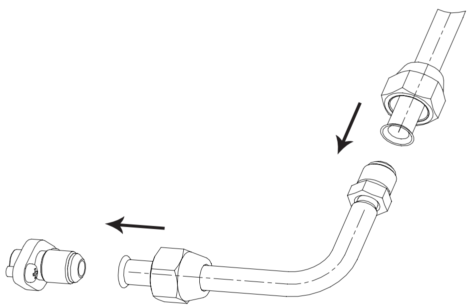
(4). Wrap the thermally untreated pipe and connectors with sponge and then tighten the sponge with plastic tape.

Notes:

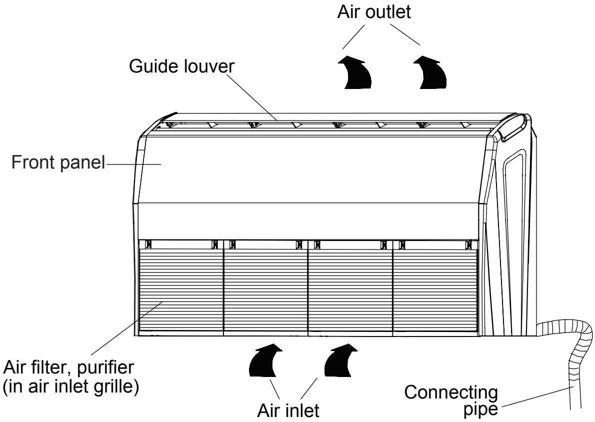
①. During the piping, do not pull any connector forcefully to prevent the capillary and other pipes from cracking, which then would result in leakage.

②. The pipe should be properly supported in the way that its weight will not be borne by the unit.

If the specification of the outdoor unit pipe joint does not conform to that of the indoor unit, then the joint specification of the outlet pipe of the indoor unit takes precedence. A reducing nipple shall be installed at the joint of the outdoor unit so as to make the joint of the outdoor unit compatible with that of the indoor unit.



4 Part Names of Floor and Ceiling Type Indoor Unit



Suitable model：

TM09HTDI

TM12HTDI

TM18HTDI

TM24HTDI

Note: Different models of air conditioners as shown above have the same appearances.

5 Working Temperature Range

Working Temperature Range

	Indoor side state ℉（℃）		Outdoor side state ℉（℃）	
	Dry bulb temp. ℉（℃）	Wet bulb temp. ℉（℃）	Dry bulb temp. ℉（℃）	Wet bulb temp. ℉（℃）
Rated. Cooling	80.0(26.7)	67.0(19.4)	95.0(35.0)	75.0(23.9)
Max. cooling	80.0(26.7)	67.0(19.4)	115.0(46.1)	75.0(23.9)
Min. cooling	67.0(19.4)	57.0(13.9)	67.0(19.4)	57.0(13.9)
Rated. Heating	70.0(21.1)	60.0(15.6)	47.0(8.3)	43.0(6.1)
Max. heating	80.0(26.7)	—	75.0(23.9)	65.0(18.3)
Low Ambient heating	70.0(21.1)	60.0(15.6)	5.0(-15.0)	3.2(-16.0)

6 Maintenance Method

⚠ **Warning!**

①. Turn off the unit and cut off the power supply when cleaning the air conditioner, otherwise, electric shock may happen.

②. Do not let the air conditioner get wet, or it will cause electric shock. Ensure that the air conditioner will not be cleaned by water rinse under any circumstances.

③. Volatile liquid like thinner or gasoline would damage the appearance of air conditioner. (Note: Only soft cloth and wet cloth that moistened by neutral cleaning fluid could be used to clean the front panel of air conditioner.)

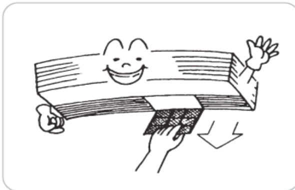
6.1 Cleaning the Air Filters

⚠ **Warning!**

Air filters should be cleaned by professionals with proper operation to ensure personal safety.

Suggestion:

If the air filter is dirty, it will influence normal airflow. As a result, the unit will be overloaded and consume 6% additional electric energy. So regular cleaning is necessary.



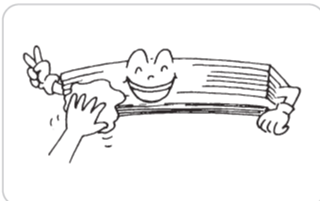
6.2 Cleaning the Unit

Clean the air conditioner and the remote control with dry cloth or a vacuum cleaner. If damp cloth is used, remove moisture by using dry cloth afterward.

⚠ **Caution** !

①. Do not use benzine solvent, gasoline, thinners or polishing products for cleaning.

②. Do not wash with hot water (above 40 ℃). Some parts of the unit may be deformed.



6.3 At the Start of the Season

⁎ Check if there is blockage at inlet and outlet of the air conditioner.

⁎ Check if the batteries in wireless remote controller has been exchanged.

⁎ Check if the batteries in wireless remote controller had been exchanged.

⁎ Check if the air filter has been installed well by professionals.

⁎ In order to start up the air conditioner smoothly after long period stop, switch on the main power supply 8 hours before turning on the air conditioner.

⁎ Notice: All the operations above should be operated by professionals.

6.4 During the off Season

⁎ Switch off the main power supply.

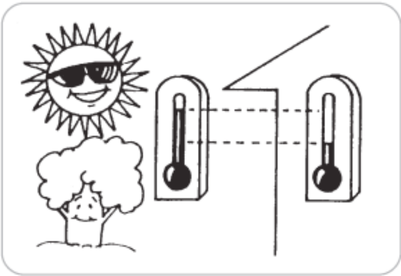
⁎ Clean the air filters and other parts by professionals.

⁎ Keep the fan running for 2-3 hours to dry out the inside of the unit.

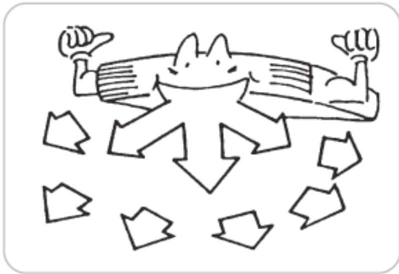
⁎ Notice: All the operations above should be operated by professionals.

7 Operating Instructions

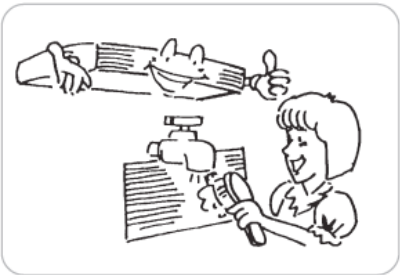
⁎ The expected temperature should be set at a moderate level to avoid of unnecessary energy consumption.



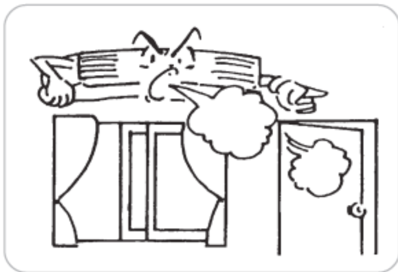
⁎ Airflow direction will be changed by adjusting the louvers and flaps as shown, accordingly well air condition the room temperature.



⁎ Clean the air filter every week for higher efficiency by professional.

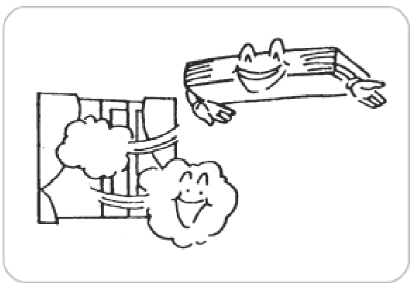


⁎ Close the window and door while operating the unit for saving energy.



⁎ Cover windows with a blind or a curtain to prevent heat source from sunlight when the unit is cooling, which helps to reduce energy consumption.

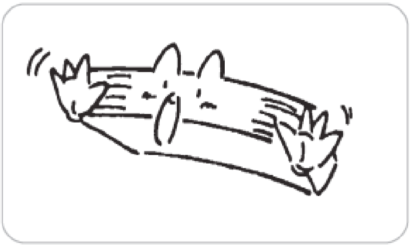
⁎ In case of ineffective ventilation, open the window to ventilate room air occasionally, meanwhile, close the window timely for saving energy.



* Check electrical system (voltage and frequency). Use the power supply indicated on the nameplate of the unit to operate the air conditioner and only fuses with specified capacity should be done by technicians. Do not use pieces of wire instead of fuse.

* If electric shock suddenly happens, turn off the unit. If the unit is not to be used for a long period, cut off the main power supply.

* Do not insert objects into the air inlet or outlet when the air conditioner is running as it may cause damage or personal injury. Also pay special attention when children are around.



* Do not place any obstacles around the indoor and outdoor unit to avoid of inefficient performance or malfunction.

* Never expose infants, aged persons or patients directly to the air flow.

* Do not locate a heater or any other heat source close to the unit. The heat may deform plastic parts.

8 Malfunction Analysis

⚠ **Warning!**

Repairing work should be done by Tosot technicians. For saving your time and spending, please check the following malfunction analysis before contacting customer service center.

Malfunction Phenomena	Malfunction Analysis
After turning off the air conditioner, the unit could not restart immediately.	The overload protection switch of the unit needs 3 mins before restarting.
Odor gives out when the unit just turns on.	When air conditioning, odor or smoke that was sucked in is discharged again.
Slight noise is heard when the unit is running.	The refrigerant flows in the liquid pipe will make some noise.
There is mist coming from air outlet under cooling mode.	Indoor temperature declines too fast.
Creak sound is heard when the unit is running or shut down.	When the ambient temperature changes, the panel and other parts expand or shrink, which might cause some grating sound.
The air conditioner could not run.	Whether the unit is powered off. Whether the unit is disconnected with power supply. Whether the circuit breaker trips off. Whether the voltage is too high or too low. Whether the TIMER has been set in the wireless remote controller. Notice: All the operations above should be done by Tosot technicians.
The cooling (heating) effect of the air conditioner is not good.	Wether the temperature is set properly. Whether the inlet or outlet of the unit is blocked. Whether the air filter is too dirty to cause blockage. Whether the windows and doors are closed. Whether the airflow volume is set at low speed. Whether there is any heat source in the room.
Wireless remote controller doesn't work.	If the wireless remote controller doesn't work with new batteraries, remove the back cover and press ”ACL” button to make it normal. The air conditioner is under abnormal disturbance orchanging function too frequently, to make wireless remote controller cannot control. Cut off main power supply and re-electrify could resume normal operation. Whether the controller is within the signal receiving area; Whether there is blockage; Check if the batteries in wireless remote controller are worn out, otherwise change the batteries.

8.1 Service Center

When the following phenomena appears, please stop operating immediately, cut off the power supply and contact service center for help.

⁎ Harsh sound is heard when the unit is running.

⁎ When the fuse melts or the circuit breaker trips off frequently.

⁎ When some objects or water is sucked in the unit accidently.

⁎ When there is water leakage from indoor unit.
⁎ When the power cord is overheating.
⁎ Odor gives out when the unit is running.

8.2 After-sales Service

Please contact the dealer if the air conditioner has any quality problems.

66129924611

MADE IN CHINA

TOSOT

OWNER'S MANUAL

TM09HEDI
TM12HEDI
TM18HEDI

Contents

OPERATION INSTRUCTIONS

Thank you for selecting our products

One of the benefits awaiting you with our room air conditioner is not only comfort of life but also good health. This operation instruction brings you the many omfort and technological features your unit has to offer. In addition, it provides you vital information about maintenance, service and economical operating. Take the next few minutes to discover how to get your comfort and economy of the operation from your new room air conditioner.

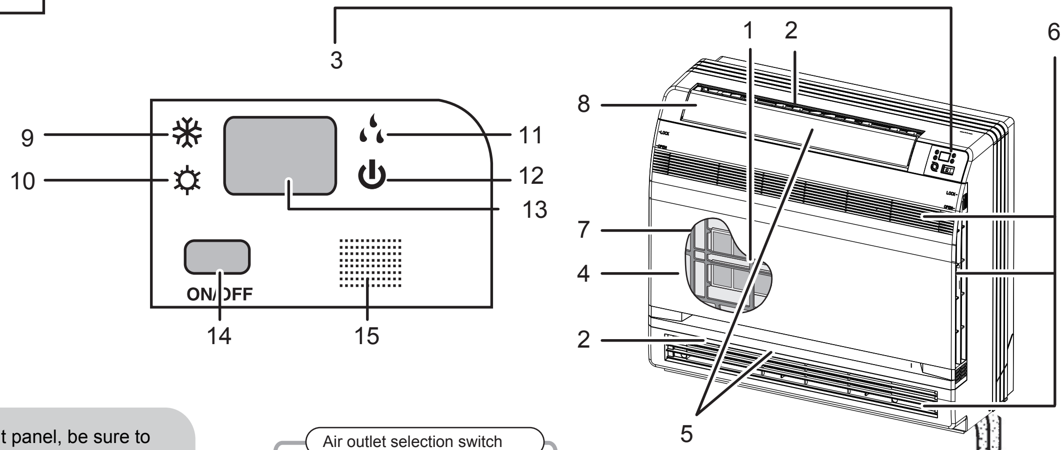
The figures in this manual may be different with the material objects, please refer to the material objects for reference.

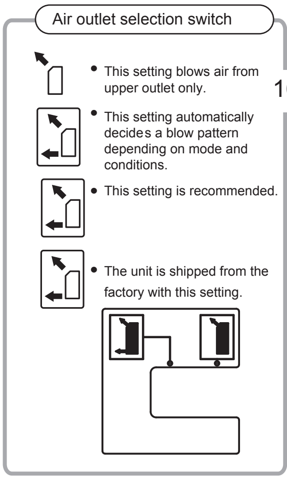
This appliance is not intended for use by persons (including children) with reduced physical , sensory or mental capabilities or lack of experience and knowledge,unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

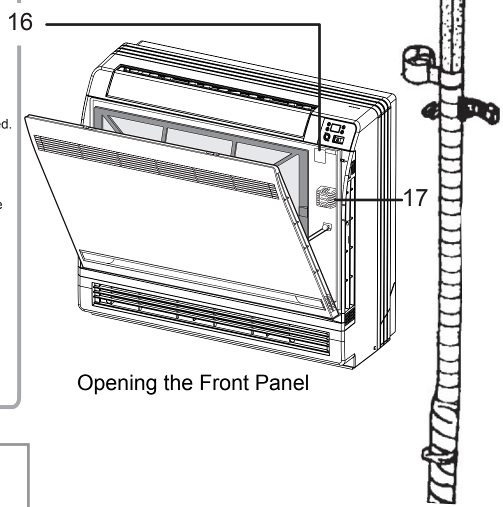
External static pressures at the appliance was tested is 0 Pa
Fuse link: T250 V; 3.15 A

1 Part names and their functions

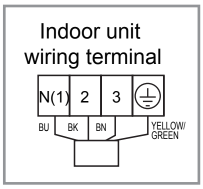
INDOOR UNIT







Opening the Front Panel



⚠ CAUTION

Before opening the front panel, be sure to stop the operation and turn the breaker OFF.
Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.

1. Titanium Apatite Photocatalytic Air-Purifying Filter:
   - These filters are attached to the inside of the air filters.
2. Air outlet
3. Display
4. Front panel
5. Louvers (vertical blades)
   - The louvers are inside of the air outlet.
6. Air inlet
7. Air filter
8. Flap (horizontal blade)
9. Cool mode lamp
10. Heat mode lamp
11. Dry mode lamp
12. Run lamp
13. LED display
14. Indoor Unit ON/OFF switch:
    - Push this switch once to start operation. Push once again to stop it.
    - The operation mode refers to the following table.

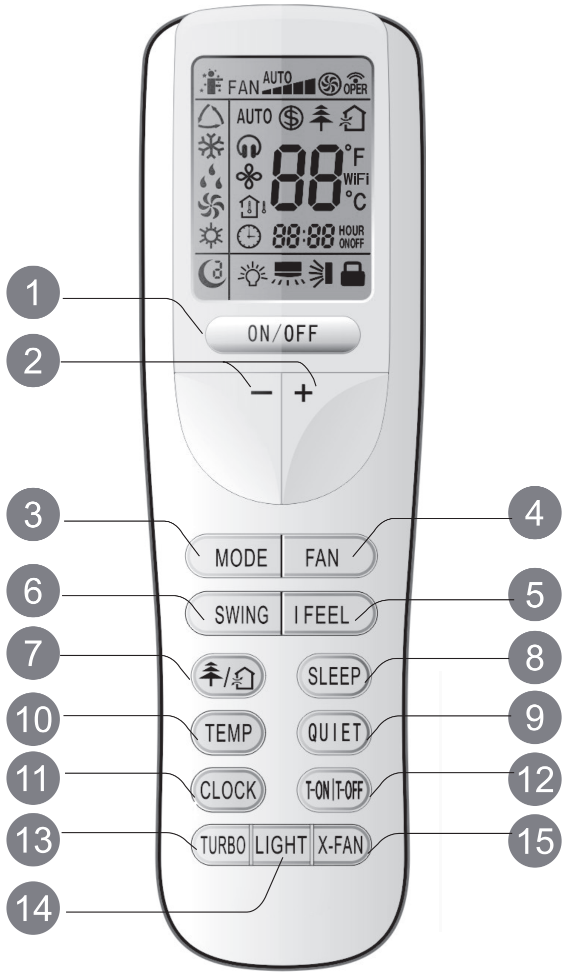
Model	Mode	Temperature setting	Air flow rate
COOLING ONLY	COOL	25℃	AUTO
HEAT PUMP	AUTO	25℃	AUTO

    - This switch is useful when the remote controller is missing.
15. Signal receiver:
    - It receives signals from the remote controller.
    - When the unit receives a signal, you will hear a short beep.
    - Settings changed.....beep
16. Air outlet selection switch
17. Room temperature sensor:
    - It senses the air temperature around the unit.

NOTE:
① If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
② The appliance shall be installed in accordance with national wiring regulations.
③ An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

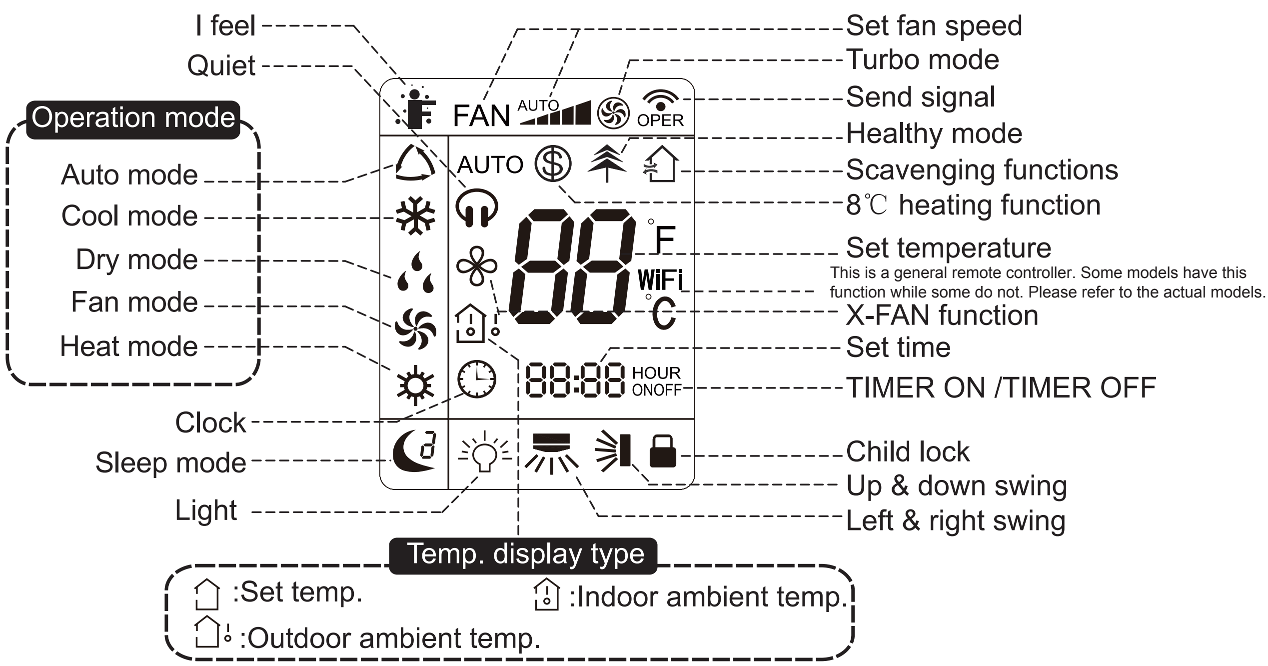
2 How to use the remote control to operate the unit

Remote Controller Description



1. ON/OFF button
2. +/- button
3. MODE button
4. FAN button
5. I FEEL button
6. SWING button
7. 🌲/⌂ button
8. SLEEP button
9. QUIET button
10. TEMP button
11. CLOCK button
12. T-ON|T-OFF button
13. TURBO button
14. LIGHT button
15. X-FAN button

Introduction for icons on display screen



Remote Controller Description

1 ON/OFF :

Press this button to turn on the unit .Press this button again to turn off the unit.

2 —:

Press this button to decrease set temperature. Holding it down above 2 seconds rapidly decreases set temperature. In AUTO mode, set temperature is not adjustable.

3 + :

Press this button to increase set temperature.Holding it down above 2 seconds rapidly increases set temperature. In AUTO mode, set temperature is not adjustable.

4 MODE :

Each time you press this button,a mode is selected in a sequence that goes from AUTO, COOL,DRY, FAN,and HEAT *, as the following:

AUTO ▶ COOL ▶ DRY ▶ FAN ▶HEAT *

*Note:Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LED of the indoor, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.

5 FAN :

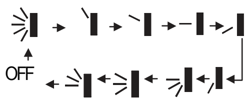
This button is used for setting Fan Speed in the sequence that goes from AUTO, , , , to , then back to Auto.

Low speed   Low-Medium speed   Medium speed

Medium-High speed   High speed

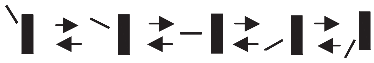
6 SWING:

Press this button to set up &down swing angle, which circularly changes as below:



This remote controller is universal . If any command , or is sent out, the unit will carry out the command as

indicates the guide louver swings as:



7 I FEEL:

Press this button to turn on I FEEL function. The unit automatically adjust temperature according to the sensed temperature. Press this button again to cancel I FEEL function.

8 /

Press this button to achieve the on and off of healthy and scavenging functions in operation status. Press this button for the first time to start scavenging function; LCD displays“ ”. Press the button for the second time to start healthy and scavenging functions simultaneously; LCD displays“ ” and “ ” . Press this button for the third time to quit healthy and scavenging functions simultaneously. Press the button for the fourth time to start healthy function; LCD display “ ” . Press this button again to repeat the operation above.

9 SLEEP:

- Press this button, can select Sleep 1 (1), Sleep 2 (2),Sleep 3 (3) and cancel the Sleep, circulate between these, after electrified, Sleep Cancel is defaulted.
- Sleep 1 is Sleep mode 1, in Cool, Dehumidify modes: sleep status after run for one hour, the main unit setting temperature will increase 1 ℃,setting temperature increased 2℃, the unit will run at this setting temperature; In Heat mode: sleep status after run for one hour, the setting temperature will decrease 1 ℃, 2 hours, setting temperature will decrease 2 ℃, then the unit will run at this setting temperature.
- Sleep 2 is sleep mode 2, that is air conditioner will run according to the presetting a group of sleep temperature curve.
- Sleep 3- the sleep curve setting under Sleep mode by DIY:

(1) Under Sleep 3 mode, press "Turbo" button for a long time, remote control enters into user individuation sleep setting status, at this time, the time of remote control will display "1 hour ", the setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink (The first entering will display according to the initial curve setting value of original factory);

(2) Adjust "+" and "-" button, could change the corresponding setting temperature, after adjusted, press "Trubo "button for confirmation;

(3) At this time, 1 hour will be automatically increased at the timer postion on the remote control, (that are "2 hours " or "3 hours " or "8 hours "), the place of setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink;

(4) Repeat the above step (2) ～ (3) operation, until 8 hours temperature setting finished, sleep curve setting finished, at this time, the remote control will resume the original timer display; temperature display will resume to original setting temperature.

Sleep3- the sleep curve setting under SLEEP mode by DIY could be inquired:

- The user could accord to sleep curve setting method to inquire the presetting sleep curve, enter into user individuation sleep setting status, but do not change the temperature, press "Turbo" button directly for confirmation. Note: In the above presetting or enquiry procedure, if continuously within10s, there is no button pressed, the sleep curve setting within10s, there is no button pressed, the sleep curve setting status will be automatically quit and resume to display the original displaying. In the presetting or enquiry procedure, press "ON/OFF" button, "Mode" button, "Timer"button or "Sleep" button, the sleep curve setting or enquiry status will quit similarly.

10 TEMP:

Press this button, could select displaying the indoor setting temperature or indoor ambient temperature.When the indoor unit firstly power on it will display the setting temperature, if the temperature's displaying status is changed from other status to" ",displays the ambient temperature, 5s later or within 5s, it receives other remote control signal that will return to display the setting temperature. if the users haven't set up the temperature displaying status,that will display the setting temperature.

11 QUIET:

Press this button, the Quiet status is under the Auto Quiet mode (display "" and "Auto" signal) and Quiet mode (display " " singal) and Quiet OFF (there is no signal of " " displayed), after powered on, the Quiet OFF is defaulted. Note: the Quiet function cannot be set up in Fan and Dry mode;Under the Quiet mode (Display " " signal), the fan speed is not available.

12 CLOCK :

Press CLOCK button, blinking . Within 5 seconds,pressing +or - button adjusts the present time.Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting,and then will be constantly displayed.

13 T-ON|T-OFF:

Press T-ON button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again.

After press of this button, disappears and "ON "blinks .00:00 is displayed for ON time setting. Within 5 seconds, press + or - button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 Seconds after setting, press TIMER ON button to confirm.

Press T-OFF button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again.TIMER OFF setting is the same as TIMER ON.

14 TURBO:

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.

15 LIGHT:

Press LIGHT button to turn on the display's light and press this button again to turn off the display's light. If the light is turned on , is displayed. If the light is turned off, disappears.

16 X-FAN:

Pressing X-FAN button in COOL or DRY mode,the icon is displayed and the indoor fan will continue operation for 10 minutes in order to dry the indoor unit even though you have turned off the unit.

After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO,FAN or HEAT mode.

17 Combination of "+" and "-" buttons: About lock

Press "+ " and "-" buttons simultaneously to lock or unlock the keypad. If the remote controller is locked, is displayed. In this case, pressing any button, blinks three times.

How to use the remote control to operate the unit

18 Combination of "MODE " and "-" buttons : About switch between Fahrenheit and centigrade

At unit OFF, press "MODE" and "-" buttons simultaneously to switch between ℃ and ℉ .

19 Combination of " TEMP " and "CLOCK" buttons : About Energy-saving Function

Press “TEMP” and “CLOCK” simultaneously in COOL mode to start energy-saving function. Nixie tube on the remote controller displays “SE”. Repeat the operation to quit the function.

20 Combination of " TEMP " and "CLOCK" buttons : About 8℃ Heating Function

Press “TEMP” and “CLOCK” simultaneously in HEAT mode to start 8℃ Heating Function Nixie tube on the remote controller displays “$” and a selected temperature of “ 8℃”. (46℉ if Fahrenheit is adopted). Repeat the operation to quit the function.

21 About Back-lighting Function

The unit lights for 4s when energizing for the first time, and 3s for later press.

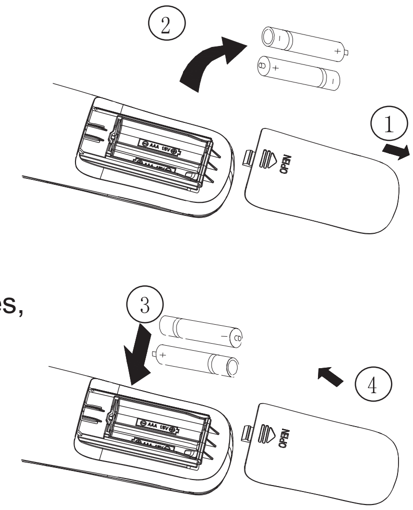
Replacement of Batteries

1.Remove the battery cover plate from the rear of the remote controller. (As shown in the figure)

2.Take out the old batteries.

3.Insert two new AAA1.5V dry batteries, and pay attention to the polarity.

4. Reinstall the battery cover plate.



Sketch map for replacing batteries

★ Notes:

- When replacing the batteries, do not use old or different types of batteries, otherwise, it may cause malfunction.
- If the remote controller will not be used for a long time, please remove batteries to prevent batteries from leaking.
- The operation should be performed in its receiving range.
- It should be kept 1m away from the TV set or stereo sound sets.
- If the remote controller does not operate normally, please take the batteries out and reinsert them after 30 seconds.If it still can't operate properly, replace the batteries.

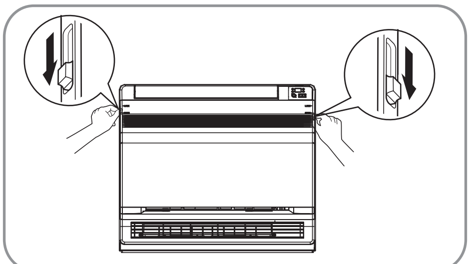
Before inspection and maintenance of the unit. PLEASE set power switch to “OFF” to cut off the power supply.

3.1 Units

● Indoor unit, Outdoor unit and Remote controller

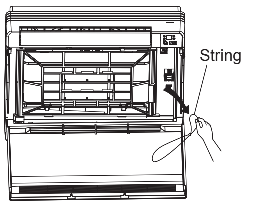
1. Wipe them with dry soft cloth.

● Front panel

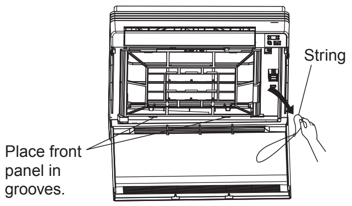


1. Open the front panel.

Slide the two stoppers on the left and right sides inward until they click.



2. Remove the front panel.
   - Remove the string.
   - Allowing the front panel to fall forward will enable you to remove it.
3. Clean the front panel.
   - Wipe it with a soft cloth soaked in water.
   - Only neutral detergent may be used.
   - In case of washing the front panel with water,dry it with cloth, dry it up in the shade after washing.

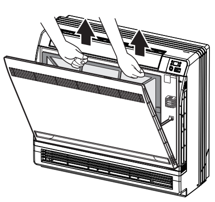


4. Attach the front panel.
   - Insert the front panel into the grooves of the unit (3 places).
   - Attach the string to the right, inner-side of the front grille.
   - Close the panel slowly.

CAUTION

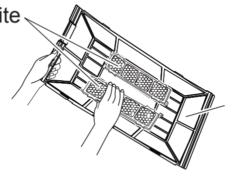
- Don’t touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40°C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

3.2 Filters

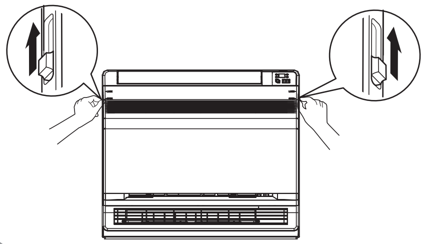


1. Open the front panel.
2. Remove the air filter.
   - Press the claws on the right and left of the air filter down slightly, then pull upward.
3. Take off the Titanium Apatite Photocatalytic Air-Purifying Filter.
   - Hold the tabs of the frame, and remove the claws in 4 places.

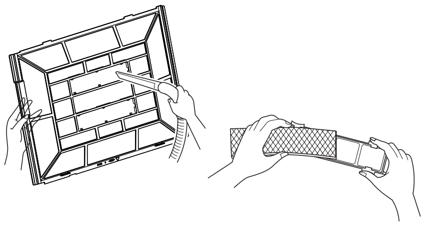
4. Clean or replace each filter.
   See figure.



5. Set the air filter and Titanium Apatite Photocatalytic Air-Purifying Filter as they were and close the front panel.
   • Operation without air filters may result in troubles as dust will accumulate inside the indoor unit.



6. Wash the air filters with water or clean them with vacuum cleaner.
   • If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
   • It is recommended to clean the air filters every week.



3.3 Titanium Apatite Photocatalytic Air-Purifying Filter

The Titanium Apatite Photocatalytic Air-Purifying Filter can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.

● Maintenance

1. Vacuum dusts, and soak in warm water or water for about 10 to 15 minutes if dirt is heavy.
2. Do not remove filter from frame when washing with water.
3. After washing, shake off remaining water and dry in the shade.
4. Since the material is made out of paper, do not wring out the filter when removing water from it.

● Replacement

Remove the tabs on the filter frame and replace with a new filter.

• Dispose of the old filter as flammable waste.

• Dispose of the old filter as flammable waste.

NOTE

• Operation with dirty filters:
  (1) cannot deodorize the air. (2) cannot clean the air.
  (3) results in poor heating or cooling. (4) may cause odour.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

3.4 Before a long idle period

1. Operate the “FAN only” for several hours on a fine day to dry out the inside.
   - Press “MODE” button and select “FAN” operation.
   - Press “ON/OFF” button and start operation.
2. After operation stops, turn off the breaker for the room air conditioner.
3. Clean the air filters and set them again.
4. Take out batteries from the remote controller.

NOTE

• When a multi outdoor unit is connected, make sure the heating operation is not used at the other room befure you use the fan operation.

Working principle and special functions for cooling

Principle:

Air conditioner absorbs heat in the room and transmit to outdoor and discharged, so that indoor ambient temperature decreased, its cooling capacity will increase or decrease by outdoor ambient temperature.

Anti-freezing function:

If the unit is running in COOL mode and in low temperature, there will be frost formed on the heat exchanger, when indoor heat exchanger temperature decreased below 0℃ , the indoor unit microcomputer will stop compressor running and protect the unit.

Working principle and special functions for heating

Principle:

* Air conditioner absorbs heat from outdoor and transmits to indoor, in this way to increase room temperature. This is the heat pump heating principle, its heating capacity will be reduced due to outdoor temperature decrease.
* If outdoor temperature becomes very low, please operate with other heating equipments.

Defrosting:

* When outdoor temperature is low but high humidity, after a long while running, frost will form on outdoor unit, that will effect the heating effect, at this time, the auto defrosting function will act, the heat running will stop for 8-10mins.
* During the auto defrosting, the fan motors of indoor unit and outdoor unit will stop.
* During the defrosting, the indoor indicator flashes(or display “H1”), the outdoor unit may emit vapor, This is due to the defrosting, it isn't malfunction.
* After defrosting finished,the heating will recover automatically.

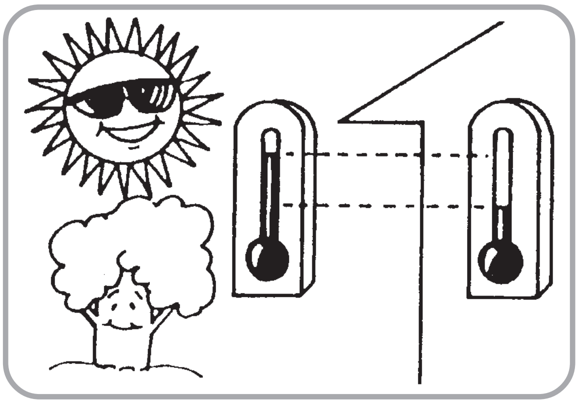
Anti-cool wind function:

In Heat mode, the following three kinds of status, if indoor heat exchanger hasn't achieve certain temperature that indoor fan motor will not start, in this way to prevent blowing cool wind (within 3mins):

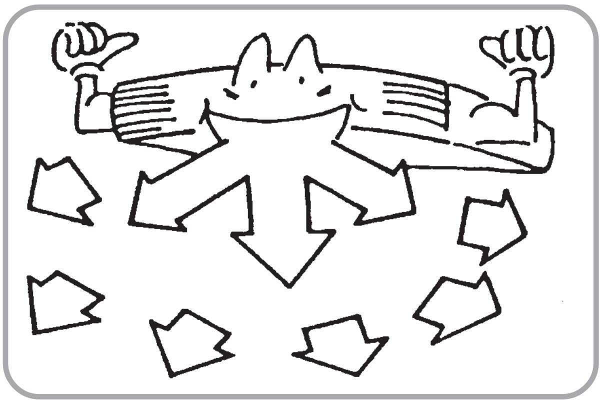
1. Heat operation just startedup. 2. After Auto defrosting operation is finished.
3. Heating under low temperature.

The climate type of this unit is according to the nameplate.

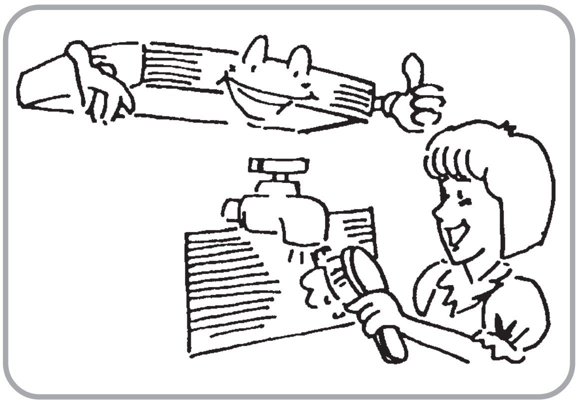
- The temperature should not be set lower than what you need. This would result to increase energy cost.



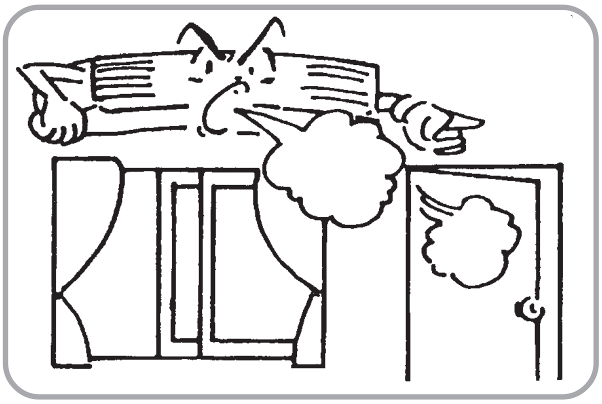
- To distribute cool air through out the room, adjust air flow direction as shown by the arrows (see picture) to diffuse cool air.



- Clean the air filter every week for higher efficiency.

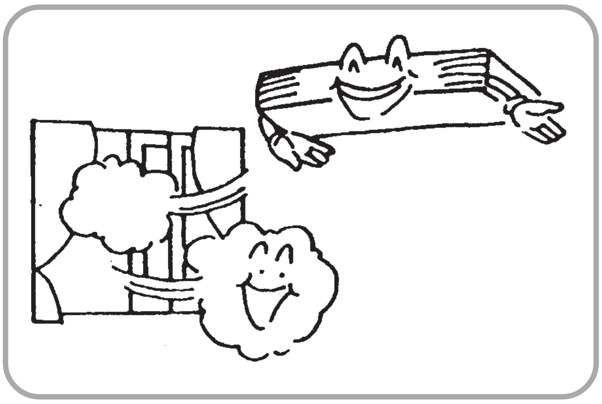


- Close window and door while operating the unit to prevent leakage of cooled air to save energy.



- Draw close curtains or close glass windows when cooling to prevent heat load from sun light which may cause more electricity cost.

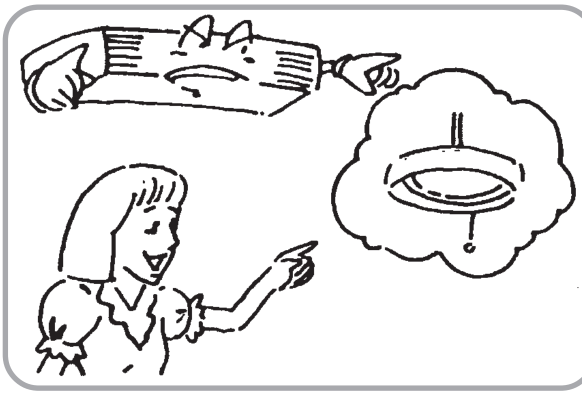
- In case of ineffective ventilation, open the window to ventilate the room air once in a while but not too long since cooled air will be uselessly drained out.



5 Precautions

- Check electrical system (voltage and frequency). Use the proper power supply indicated on the unit to operate the airconditioner and only fuses with specified capacity. Do not use pieces of wire instead of fuse.

- Turn off the airconditioner if, while running, electricity interference occurs. If the unit is not to be used for a long time, cut off the power supply main switch.



- Do not insert objects into the air inlet or outlet when the airconditioner is running as it may cause damage or personal injury. Also pay special attention when children are around.

- Do not locate any obstacle against the air flow direction of indoor and outdoor unit. Inefficient performance or malfunction may result.

- Do not channel the air flow directly at people, especially infants, aged persons, or patients.

- Do not locate a heater or any other heat source close to the unit. The heat may deform plastic parts.

6 Checking before contact the service man

Check the following before contact the service man. You may find the solution to your problems. After checking, if it still does not operate, please contact your local dealer.

PROBLEM	CAUSES
No operation	● Check if eletrical wire is damaged & check if breaker switch is still on. ● Check if the power supply is in order. ● Check if the timer switch is on or not.
The air conditioner runs but does not cool enough.	● Check if the preset temperature is too high. ● Check if the sunlight shines directly into the room. ● Check if the door and window are opened. ● Check if there is anything obstructing the air discharge. ● Check if the exhaust fan still operates. ● Check if the air filter is dirty or clogged.
Vapor or mist fume coming out of the unit while running.	● Hot air in the room mixes with cool air. This causes smoke fume.
Inoperative remote control.	● Loosened or disconnected wire between the unit and the display. ● Check if the batteries are inserted in correct directions ● Check if the batteries are exhaused or not.

SELECTION OF INSTALLATION LOCATION.

- Such a place where cool air can be distributed throughout the room.
- Such a place where condensation water is easily drained out.
- Such a place that can handle the weight of indoor unit.
- Such a place which has easy access for maintenance.
- The appliance shall not be installed in the laundry.

THERE ARE 2 STYLES OF INSTALLATION.

- **CEILING TYPE**
- **FLOOR TYPE**

Each type is similar to the other as follows;

Indoor unit

The indoor unit should be sited in a place where:

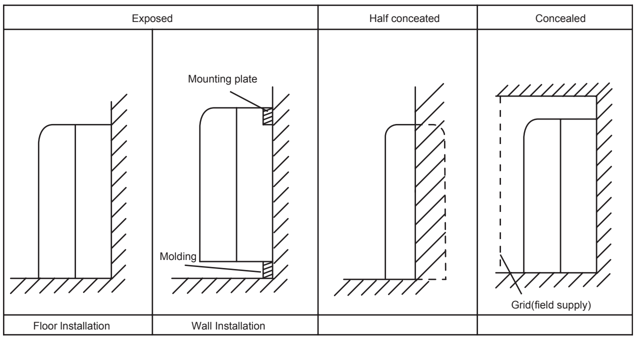
1) the restrictions on installation specified in the indoor unit installation drawings are met.
2) both air intake and exhaust have clear paths met.
3) the unit is not in the path of direct sunlight.
4) the unit is away from the source of heat or steam.
5) there is no source of machine oil vapour (this may shorten indoor unit life).
6) cool(warm) air is circulated throughout the room.
7) the unit is away from electronic ignition type fluorwscent lamps (inverter or rapid stert type) as they may shorten the remote controller range.
8) the unit is at least 1 metre away from any television or radio set(unit may cause interference with the picture or sound).

CAUTIONS FOR INSTALLATION WHERE AIR CONDITIONER TROUBLEIS LIABLE TOOCCUR.

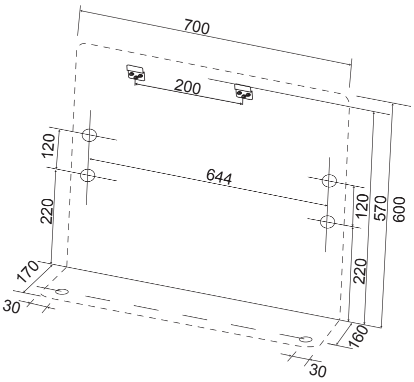
- Where there is too much of oil area.
- Where it is acid base area.
- Where there is irregular electrical supply.

Indoor Unit Installation Drawings

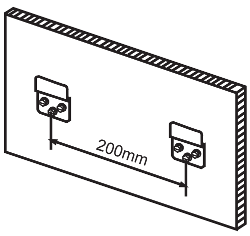
The indoor unit may be mounted in any of the three styles shown here.

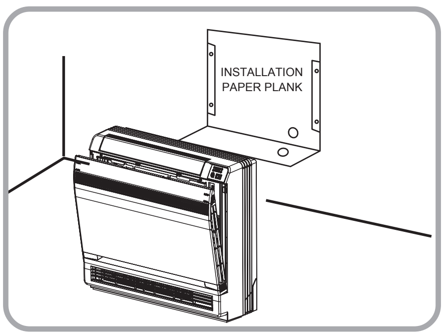


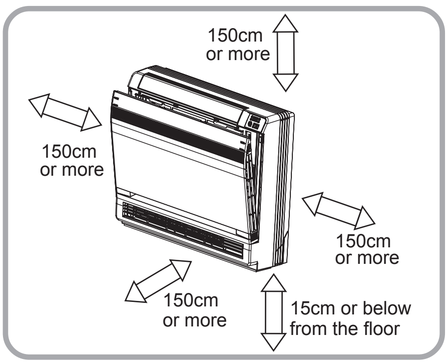
Location for securing the installation panel.



Schematic drawing of hooks:

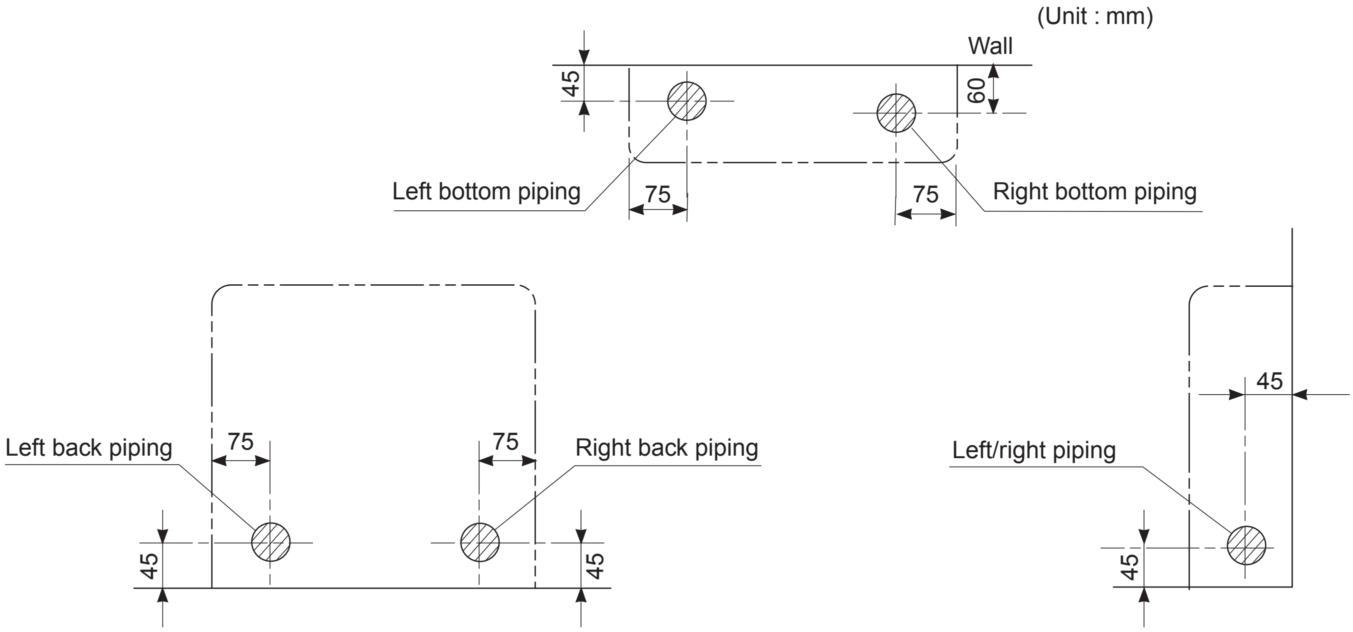






Refrigerant piping

1)Drill a hole (55mm in diameter) in the spot indicated by the symbol in the illustration as below .
2)The location of the hole is different depending on which side of the pipe is taken out .
3)For piping ,see **Connecting the refrigerant pipe** ,under Indoor Unit Installation(1).
4)Allow space around the pipe for a easier indoor unit pipe connection.



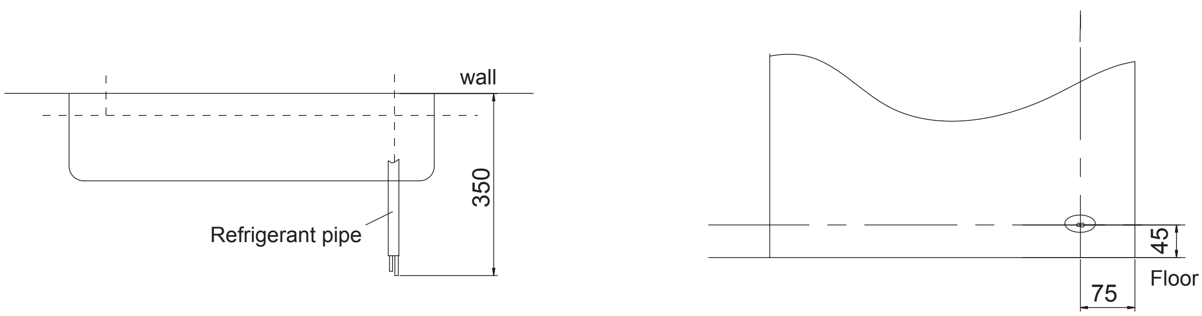
⚠ CAUTION

Min.allowable length

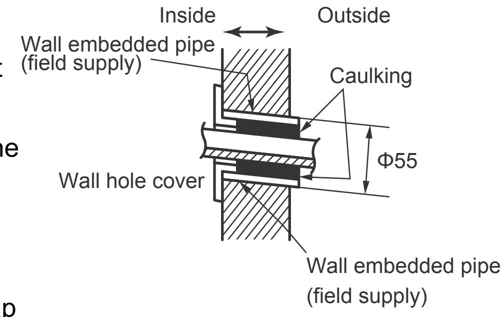
- The suggested shortest pipe length is 2.5m,in order to avoid noise from the outdoor unit and vibration.

(Mechanical noise and vibration may occur depending on how the unit is installed and the environment in which it is used.)

- See the installation manual for the outdoor unit for the maximum pipe length.



Boring a wall hole and installing wall embedded pipe



● For walls containing metal frame or metal board ,be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent water leakage.

● Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.

1)Bore a feed-through hole of 55mm in the wall so it has a down slope toward the outside.

2)Insert a wall pipe into the hole.

3)Insert a wall cover into wall pipe .

4)After completing refrigerant piping, wiring, and drain piping, caulk pipe hole gap with putty.

Drain piping

1)Use commercial regid polyvinyl chloride pipe（general VP 20 pipe, outer diameter 26mm, inner diameter 20mm）for the drain pipe.

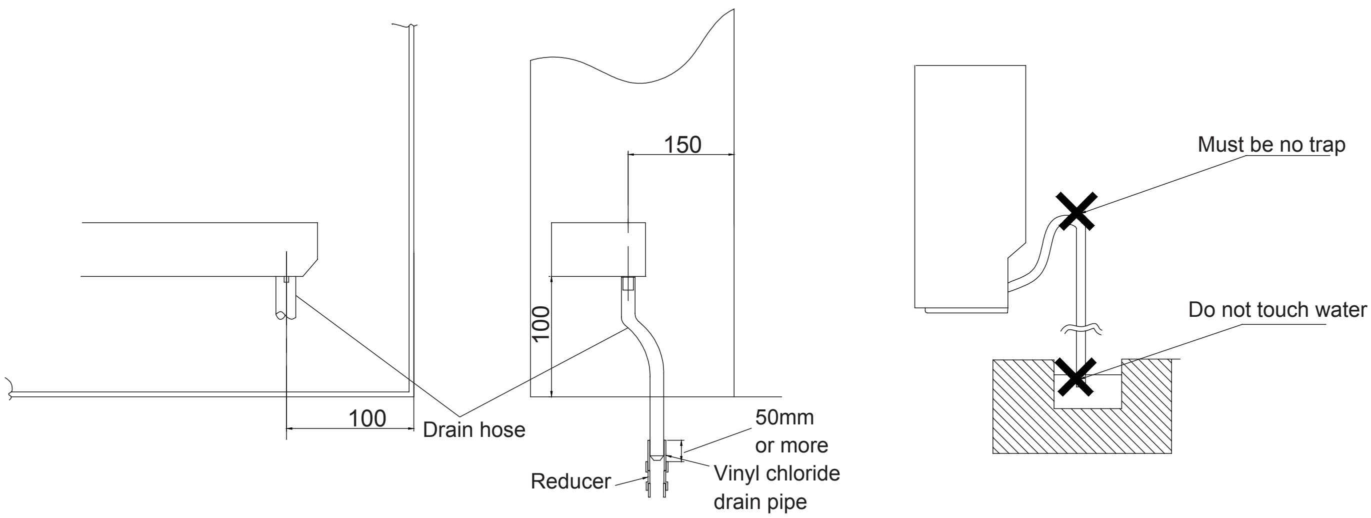
2)The drain hose (outer diameter 18mm at connecting end, 220mm long)is supplied with the indoor unit. Prepare the drain pipe picture below position.

3)The drain pipe should be inclined downward so that water will flow smoothly without any accumulation.(Should not be trap.)

4)Insert the drain hose to this depth so it won’t be pulled out of the drain pipe.

5)Insulate the indoor drain pipe with 10mm or more of insulation material to prevent condensation.

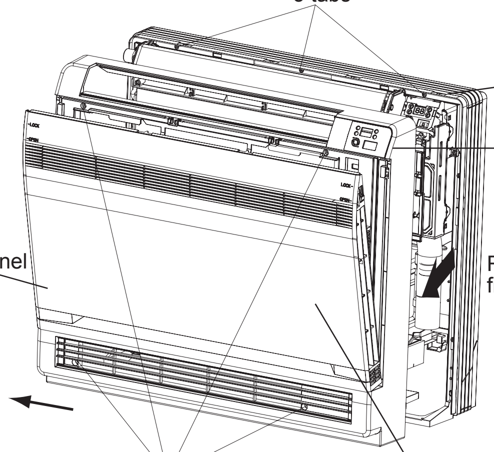
6)Remove the air filters and pour some water into the drain pan to check the water flows smoothly.



Installing indoor unit

1.Preparation

- Open the front panel, remove the 4 screws and dismount the front grille while pulling it forward.
- Follow the arrows to disengage the clasps on the front case to remove it.
- Follow the procedure below when removing the slit portions.



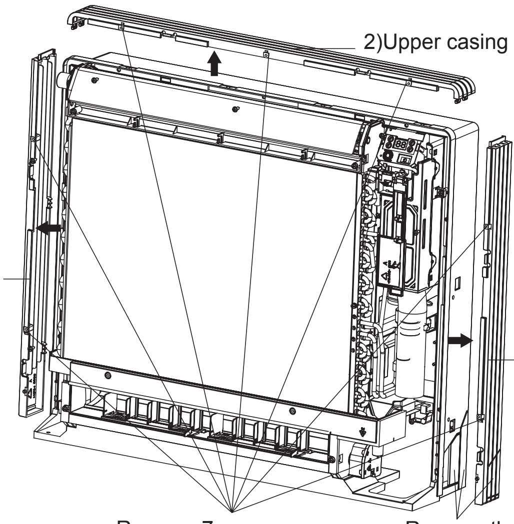
■ For Moldings

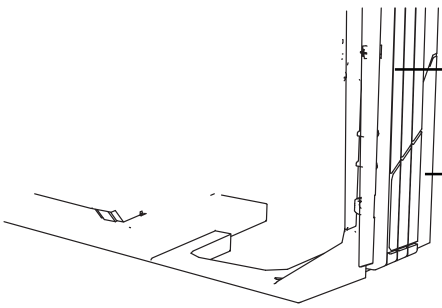
- Remove the pillars. (Remove the slit portions on the bottom frame using nippers.)

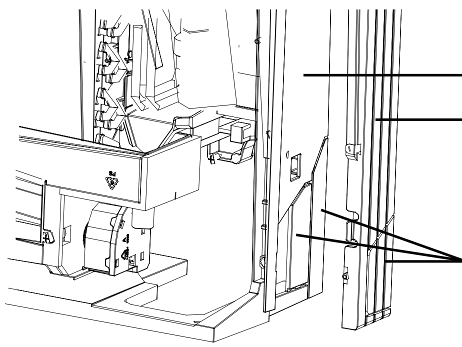
■ For Side Piping

- Remove the pillars.

1)Remove the 7screws.
2)Remove the upper casing (2 tabs).
3)Remove the left and right casings (2 tabs on each side).
4)Remove the slit portions on the bottom frame and casings using nippers .
5)Return by following the steps in reverse order(3>2>1).







2.Installation

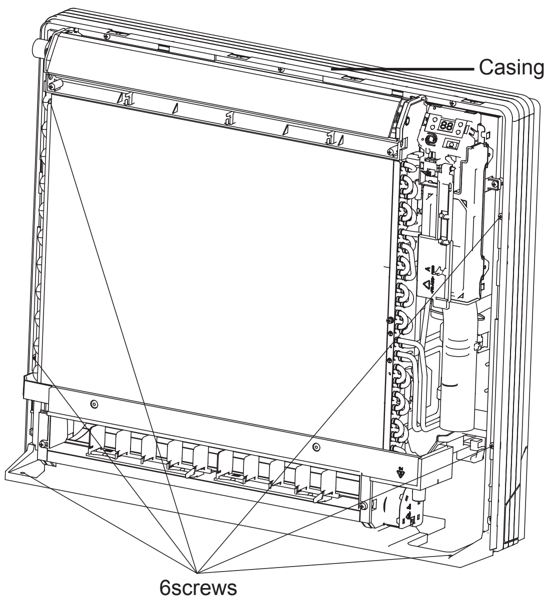
- Secure using 6 screws for floor installations.(Do not forget to secure to the rear wall.)
- For wall installations, secure the mounting plate using 5 screws and the indoor unit using 4 screws.

Installation of indoor unit

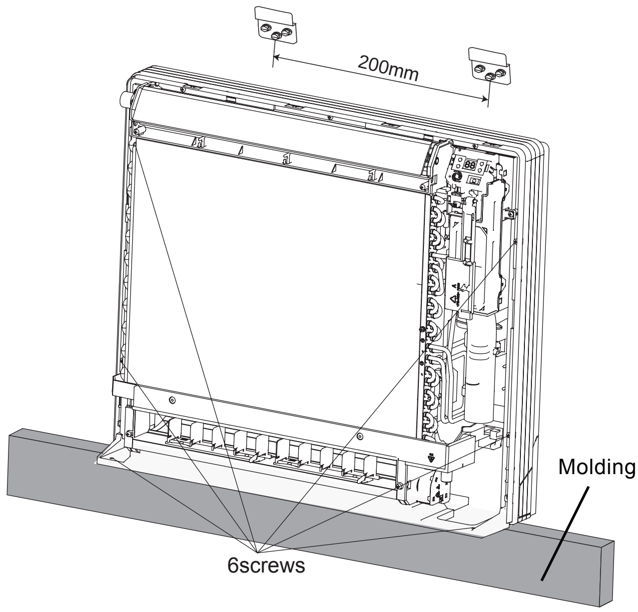
The mounting plate should be installed on a wall which can support the weight of the indoor unit.

1) Temporarily secure the mounting plate to the wall, make sure that the panel is completely level, and mark the boring points on the wall.
2) Secure the mounting plate to the wall with screws.

Floor Installation



Wall Installation



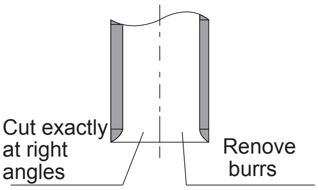
3) Once refrigerant piping and drain piping connections are complete, fill in the gap of the through hole with putty. A gap can lead to condensation on the refrigerant pipe, and drain pipe, and the entry of insects into the pipes.
4) Attach the front panel and front grille in their original positions once all connections are complete.

Flaring the pipe end

1)Cut the pipe end with a pipe cutter.
2)Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
3)Fit the flare nut on the pipe.
4)Flare the pipe.
5)Check that the flaring is properly made.

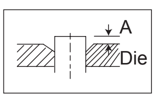
WARNING

1) DO not use mineral oil on flared part.
2) Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
3) Never use piping which had been used for previous installations. Only use parts which are delivered with the unit.
4) Do never install a drier to this R410A unit in order to guarantee its lifetime.
5) The drying material may dissolve and damage the system.
6) Incomplete flaring may cause refrigerant gas leakage.

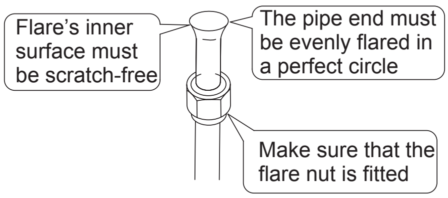


Flaring

Set exactly at the position shown below

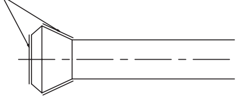


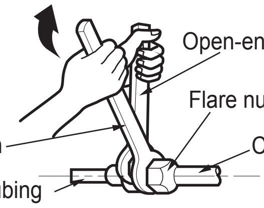
	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.5mm	1.0-1.5mm	1.5-2.0mm



Connecting the refrigerant pipe

1)Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leaks.



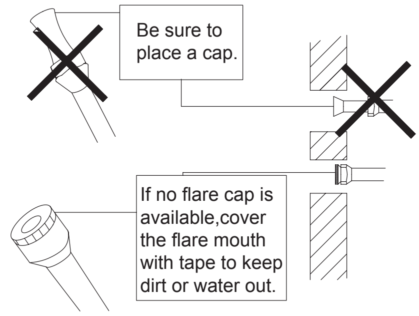


2)Align the centres of both flares and tighten the flares and tighten the flare nuts 3 or 4 turns by hand.
Then tighten them fully with the torque wrenches.
3)To prevent gas leakage, apply refrigeration oil on both inner and outer surfaces in the flare. (Use refrigeration oil for R410A.)

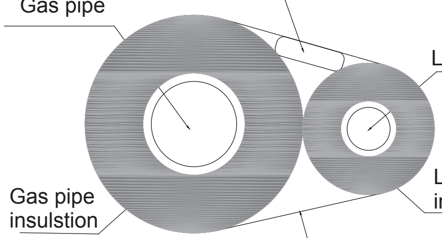
Flare nut tightening torque		
Gas side		Liquid side
09K/12K	18K	09K/12K/18K
3/8 inch	1/2 inch	1/4 inch
31-35N.m	50-55N.m	15-20N.m

Caution on piping handling

1)Protect the open end of the pipe against dust and moisture.
2)All pipe bends should be as gentle as possible. Use a pipe bender for bending.
(Bending radius should be 30 to 40mm or larger.)



Selection of copper and heat insulation materials
● When using commercial copper pipes and fittings, observe the following:
1)Insulation material: Polyethylene foam
Heat transfer rate:0.041 to 0.052W/mK(0.035 to 0.045kca/(mh℃)
Refrigerant gas pipe's surface temperature reaches 110℃ max.
Choose heat insulation materials that will withstand this temperature.



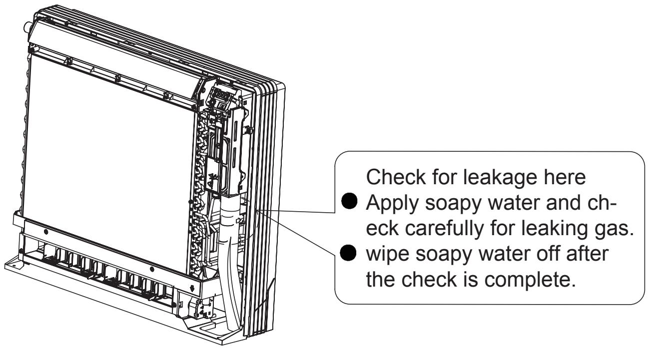
2)Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Gas side		Liquid side	Gas pipe thermal insulation		Liquid pipe thermal insulation
09K/12K	18K		09K	18K	
O.D. 9.55mm	O.D. 12.7mm	O.D. 6.4mm	I.D. 12-15mm	I.D. 14-16mm	I.D. 8-10mm
Thickness 0.8mm			Thickness 10mm Min.		

3)Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

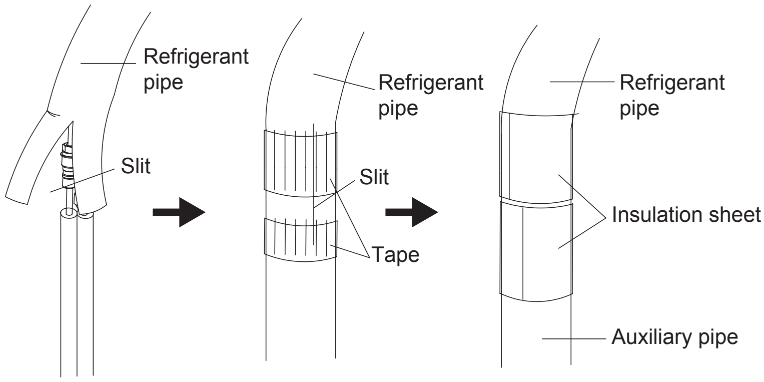
Checking for gas leakage

1)Check for leakage of gas after air purging
2)See the sections on air purges and gas leak checks in the installation manual for the outdoor unit.



Attaching the connection pipe

● Attach the pipe after checking for gas leakage, described above.
1)Cut the insulated portion of the on-site piping, matching it up with the connecting portion.
2)Secure the slit on the refrigerant piping side with the butt joint on the auxiliary piping using the tape, making sure there are no gaps.
3)Wrap the slit and butt joint with the included insulation sheet, making sure there are no gaps.

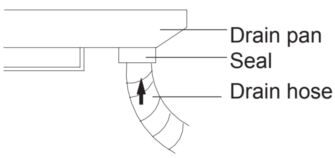


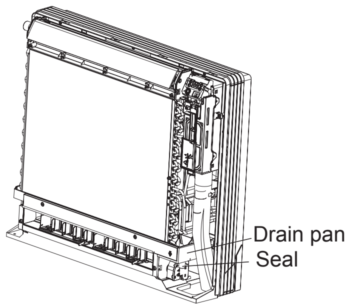
⚠ CAUTION

1)Insulate the joint of the pipes securely.
Incomplete insulation may lead to water leakage.
2)Push the pipe inside so it does not place undue force on the front grille.

Connecting the drain hose

Insert the supplied C drain hose into the socket of the drain pan.
Fully insert the drain hose until it adheres to a seat of the socket.





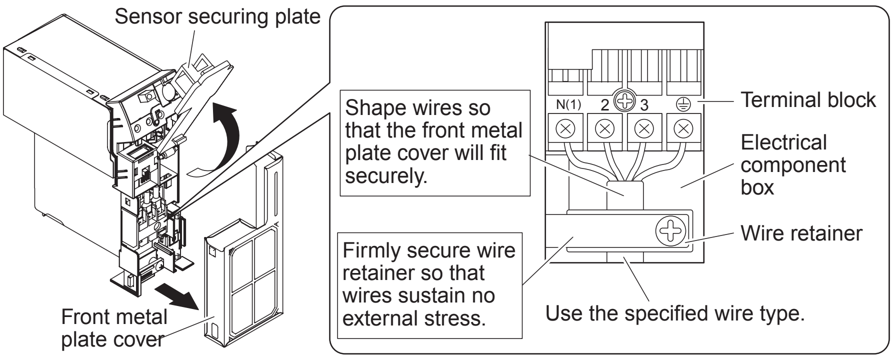
● Live the sensor securing plate, remove the front metal plate cover, and connect the branch wiring to the terminal block.

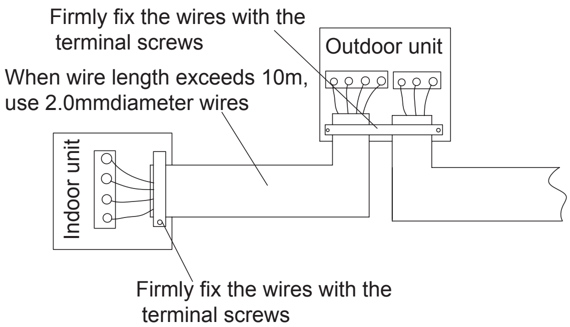
1)Strip wire ends (15mm)

2)Mach wire colours with terminal numbers on indoor and outdoor unit’s terminal blocks and firmly screw wires to the corresponding terminals.

3)Connect the earth wires to the corresponding terminals.

4)Pull wires to make sure that they are securely latches up, then retain wires with wire retainer.





⚠ CAUTION

1)Do not use tapped wires, stranded wires, extensioncords, or starburst connections, as they may cause overheating, electrical shock, or fire.

2)Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc, from the terminal block.) Doing so may cause electric shock or fire.)

8 Routine check after installation

Check after installation

Items to be checked	Possible malfunction	Situation
Has it been fixed firmly?	The unit may drop,shake or emit noise.	
Have you done the refrigerant leakage test?	It may cause insufficient refrigerating capacity.	
Is heat insulation sufficient?	It may cause condensation and dripping.	
Does the unit drain well?	It may cause condensation and dripping.	
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the part.	
Is the electrical wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.	
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.	
Is the power cord specified?	It may cause electric malfunction or damage the part.	
Has the inlet and outlet been covered?	It may cause insufficient refrigerating capacity.	
Has the length of connection pipes and the refrigerant charge been record?	The refrigerating capacity is not accurate	

1. Standard length of connection pipe
   5m、7.5m、8m
2. Min length of connection pipe
   For the unit with standard connection pipe of 5m, there is no limitation for the min length of connection pipe. For the unit with standard connection pipe of 7.5m and 8m, the min length of connection pipe is 3m.
3. Max length of connection pipe

Sheet 1 Max length of connection pipe Unit: m

Capacity	Max length of connection pipe		Capacity	Max length of connection pipe
5000 Btu/h (1465 W)	15		24000 Btu/h (7032 W)	25
7000 Btu/h (2051 W)	15		28000 Btu/h (8204 W)	30
9000 Btu/h (2637 W)	15		36000 Btu/h (10548 W)	30
12000 Btu/h (3516 W)	20		42000 Btu/h (12306 W)	30
18000 Btu/h (5274 W)	25		48000 Btu/h (14064 W)	30

4. The calculation method of additional refrigerant oil and refrigerant charging amount after prolonging connection pipe
   After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.
   The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):
   (1) Additional refrigerant charging amount= prolonged length of liquid pipe × additional refrigerant charging amount per meter
   (2) When the length of connection pipe is above 5m, add refrigerant according to the prolonged length of liquid pipe. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See Sheet 2.

Sheet 2. Additional refrigerant charging amount for R22, R407C, R410A and R134a

Diameter of connection pipe mm		Indoor unit throttle	Outdoor unit throttle	
Liquid pipe	Gas pipe	Cooling only, cooling and heating (g / m)	Cooling only (g / m)	Cooling and heating (g / m)
Φ6	Φ9.5 or Φ12	20	15	20
Φ6 or Φ9.5	Φ16 or Φ19	50	15	50
Φ12	Φ19 or Φ22.2	100	30	120
Φ16	Φ25.4 or Φ31.8	170	60	120
Φ19	-	250	250	250
Φ22.2	-	350	350	350

Note: The additional refrigerant charging amount in Sheet 2 is recommended value, not compulsory.

66129924612

MADE IN CHINA

TOSOT

OWNER'S MANUAL

TM09HFDI
TM12HFDI
TM18HFDI
TM21HFDI
TM24HFDI

User Notice

◆ The total capacity of the indoor units which runs at the same time can not exceed 150% of that of the outdoor units; otherwise, the cooling (heating) effect of each indoor unit would be poor.

◆ Switch the main power on 8 hours before start the unit, helpful for a successful startup.

◆ It is a normal phenomenon that the indoor unit fan will still run for 20~70 seconds after the indoor unit receives the “stop” signal so as to make full use of after-heat for the next operation.

◆ When the running modes of the indoor and outdoor units conflict, it will be indicated on the display of the wired controller in five seconds and then the indoor unit will stop. In this case, they can back to the normal condition by harmonizing their running modes: The HEAT mode conflicts with each of the COOL mode, DRY mode and FAN mode, while the COOL mode, DRY mode and FAN mode are compatible between each other. If the supply power fails when the unit is running, then the indoor unit will send the “start” signal to the outdoor unit three minutes later after power recovery.

◆ During installation, the communication cable and the power cord must not be twisted together but instead separated with an interval of at least 2cm, otherwise the unit is likely to run abnormally.

◆ 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.

This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.

Thank you for selecting Tosot air conditioner. Before use, please read this manual carefully and keep it properly for furthur reference.

Contents

1 Safety Precautions

Please read this manual carefully before using and operating correctly as instructed in this manual.

Please take special attention to the meaning of these two marks:

⚠ **Warning!** It indicates improper operation which will lead to human casualty or severe injury.

⚠ **Note!** It indicates improper operation which will lead to injury or property damage.

⚠ **Warning:**

◆ The installation should be committed to the appointed service center; otherwise it will cause water leakage, electric shock or fire etc..

◆ Please install the unit at a place where is strong enough to withstand the weight of the unit; otherwise, the unit would fall down and cause injury or death.

◆ The drain pipe should be installed as instructed in the manual to guarantee the proper drainage; meanwhile it should be insulated to prevent condensing; otherwise the improper installation would cause water leakage and then wet the household wares in the room.

◆ Do not use or place any inflammable, combustible or any noxious substance next to the unit.

◆ Under the occurrence of an error (like burning smell etc.), please cut off the main power supply of the unit.

◆ Keep good ventilation in the room to avoid oxygen deficit.

◆ Never insert your finger or any other object into the air outlet/inlet grille.

◆ Please take notice of the supporting frame of the unit to see if it is damaged over the long time period of use.

◆ Never refit the unit and contact the sales agent or the professional installation personnel for the repair or relocation of the unit.

An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

⚠ **Caution!**

◆ Before installation, please check if the power supply corresponds with the requirement specified on the nameplate and also check its security.

◆ Before using the unit, please check if the piping and wiring are correct to avoid water leakage, refrigerant leakage, electric shock, or fire etc.

◆ The main power supply must be earthed to avoid the hazard of electric shock and never connect this earth wire to the gas pipe, running water pipe, lightening rod or phone cable's earth lead.

◆ Turn off the unit after it runs at least five minutes; otherwise its service life will be shortened.

◆ Do not allow children operate this unit.

◆ Do not operate this unit with wet hands.

◆ Cut off the main power supply prior to the cleaning of the unit or the replacement of the air filter.

◆ When the unit is not to be used for a long time, please cut off the main power supply of the unit.

◆ Do not expose the unit to the moist or corrosive circumstances.

◆ After the electric installation, please take an electric leakage test.

2 Installation Location and Matters Needing Attention

The installation of the unit must comply with the national and local safety regulations. The installation quality directly affects the normal use, so the user should not carry out the installation personally, instead, the installation and debugging should be done by technician according to this manual. Only after that, can the unit be energized.

2.1 How to select the Installation Location for the indoor unit

(1). Where there is no direct sunlight.

(2). Where the top hanger, ceiling and the building structure are strong enough to withstand the weight of the unit.

(3). Where the drain pipe can be easily connected to outside.

(4). Where the flow of the air inlet and outlet are not blocked.

(5). Where the refrigerant pipe of the indoor unit can be easily led to outside.

(6). Where there is no inflammable, explosive substances or their leakage.

(7). Where there is no corrosive gas, heavy dust, salt mist, smog or moisture.

⚠ **CAUTION!**

The unit which is installed in the following places is likely to run abnormally. If unavoidable, please contact the technician at the Tosot appointed service center：

① Where is full of oil;

② Alkaline soil off the sea;

③ Where there is sulfur gas(like sulfur hot spring);

④ Where there are devices with high frequency (like wireless devices, electric welding devices, or medical equipments);

⑤ Special circumstances.

2.2 Electric Wiring

(1). The installation must be done in accordance with the national wiring regulations.

(2). Only the power cord with the rated voltage and exclusive circuit for the air conditioning can be used.

(3). Do not pull the power cord by force.

(4). The electric installation should be carried out by the technician as instructed by the local laws, regulations and also this manual.

(5). The diameter of the power cord should be large enough and once it is damaged it must be replaced by the dedicated one.

(6). The earthing should be reliable and the earth wire should be connected to the dedicated device of the building by the technician. Besides, the air switch coupled with the leakage current protection switch must be equipped, which is of enough capacity and of both magnetic and thermal tripping functions in case of the short circuit and overload.

2.3 Earthing Requirements

(1). The air conditioner is classified into the Class I appliances, so its earthing must be reliable.

(2). The yellow-green line of the air conditioner is the earth line and can not be used for other purpose, cut off or fixed by the tapping screw; otherwise it would cause the hazard of electric shock.

(3). The reliable earth terminal should be provided and the earth wire can not be connected to any of the following places：

①. Running water pipe;

②. Coal gas pipe;

③. Sewage pipe;

④. Other places where the technician think unreliable.

2.4 Accessories for Installation

Refer to the packing list for the accessories of the indoor and outdoor units respectively.

3 Installation Instructions

3.1 Outline Dimension Drawings of the Indoor Unit

Note: the unit in the followings figures is mm, unless otherwise specified.

Fig.1 is applicable to TM09HFDI ,TM12HFDI, TM18HFDI, TM21HFDI TM24HFDI:

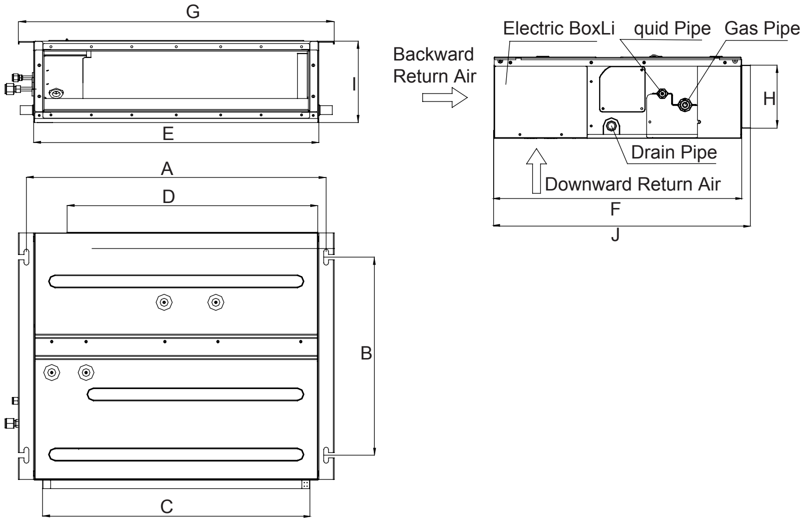


Fig.1

Table 1: Outline Dimensions

Model \ Item	A	B	C	D	E	F	G	H	I	J
TM09HFDI TM12HFDI	742	491	662	620	700	615	782	156	200	635
TM18HFDI	942	491	862	820	900	615	982	156	200	635
TM21HFDI TM24HFDI	1142	491	1062	1020	1100	615	1182	156	200	635

3.2 Dimension Requirements on the Installation Space of the Indoor Unit

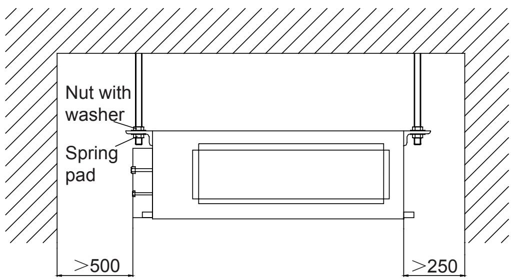


Fig. 2

3.3 Installation of the Indoor Unit

(1). Requirements on the Installation Location

1) Ensure the hanger is strong enough to withstand the weight of the unit.

2) The drainage pipe is easy for connection.

3) No obstacle is in the inlet/outlet and the air circulation is in good condition.

4) Ensure the installation space shown in Fig.2 is left for the access to maintenance.

5) It should be far away from where there is heat source, leakage of inflammable, explosive substances, or smog.

6) It is the ceiling type unit (concealed in the ceiling).

7) The power cords and connection lines of the indoor and outdoor units must be at least 1m away from the TV set or radio to avoid the image interference and noise (even if 1m is kept, the noise may be produced due to the strong electromagnetic wave).

(2). Installation of the Indoor Unit

Insert the M10 expansion bolt into the hole, and then knock the nail into the bolt. Refer to the Outline Dimension Drawings of the Indoor Unit for the distance between holes and see Fig.3 for the installation of the expansion bolt.

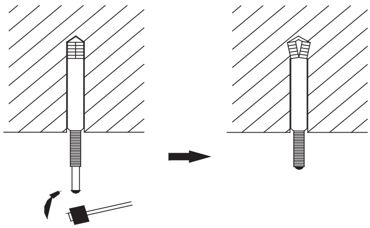


Fig.3

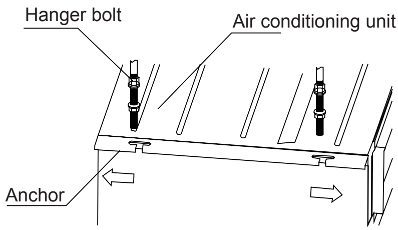


Fig.4

Install the hanger on the indoor unit, as shown in Fig.4.

Install the indoor unit on the ceiling, as shown in Fig.5.

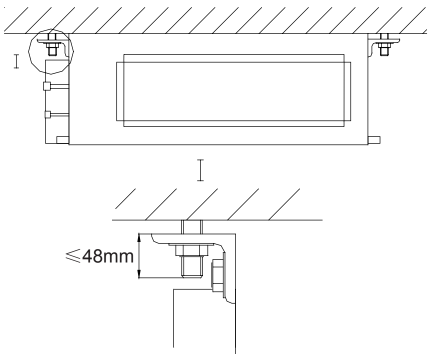


Fig.5

⚠ **CAUTION!**

①. Prior to the installation, please make a good preparation for all piping (refrigerant pipe, drain pipe) and wiring (wires of the wired controller, wires between the indoor and outdoor unit) of the indoor unit to make the further installation much easier.

②. If there is an opening in the ceiling, it is better to reinforce it to keep it flat and prevent it vibrating. Consult the user and builder for more details.

③. If the strength of the ceiling is not strong enough, a beam made of angle iron can be used and then fix the unit on it.

④. If the indoor unit is not installed in the air conditioning area, please use sponge around the unit to prevent condensing. The thickness of the sponge depends on the actual installation environment.

3.4 Horizontality Check of the Indoor Unit

After the installation of the indoor unit, its horizontality must be checked to make sure the unit keep horizontal fore and aft and keep an inclination of 5° toward the drain pipe right and left, as shown in Fig.6.

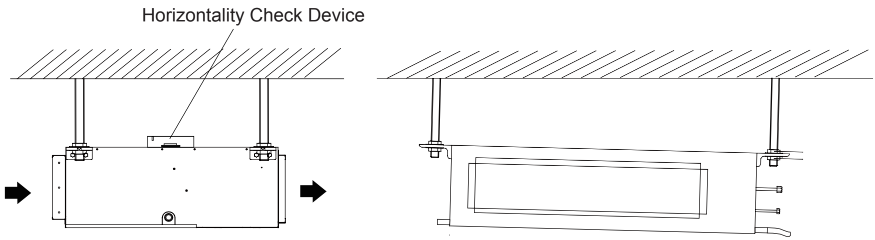


Fig.6

3.5 Installation of the Air Supply Duct

(1). Installation of the Rectangular Air Supply Duct

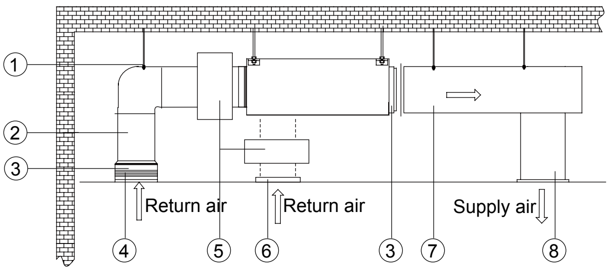


Fig.7

Table 2

No.	Name	No.	Name
1	Hanger	5	Plenum Box
2	Return Air Duct	6	Filter Screen
3	Canvas Duct	7	Main Air Supply Duct
4	Return Air Inlet	8	Air Supply Outlet

(2). Installation of the Round Air Supply Duct

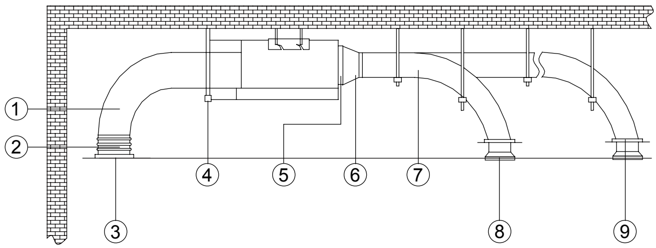


Fig.8

Table 3

No.	Name	**No.**	Name
1	Return Air Duct	**6**	Transition Duct
2	Canvas Duct	**7**	Air Supply Duct
3	Return Air Louver	**8**	Diffuser
4	Hanger	**9**	Diffuser Joint
5	Air Supply Outlet		

(3). Installation Steps of the Round Air Supply Duct

1). Preinstall the outlet of the round duct on the transition duct and then fix it by the tapping screw.

2). Place the transition duct to the air outlet of the unit and fix it with rivet.

3). Connect the outlet to the duct and then tighten them with tape. Other installation details are not covered herein.

⚠ **CAUTION!**

①. The maximum length of the duct means the maximum length of the air supply duct plus the maximum length of the return air duct.

②. For the unit with the auxiliary electric heating function, if the round duct is to be adopted, then the straight length of the transition duct can not be less than 200mm.

③. The duct is either rectangular or round and connected with the air inlet/outlet of the indoor unit. Among all air supply outlets, at least one should be kept open. As for the round duct, it needs a transition duct of which the size should match with the air supply outlet of the unit. After the fitting of the transition duct, it is the turn of the round duct, which is better to be kept 10 meters far away from the corresponding diffuser. The standard accessories supplied by Tosot is the transition duct 200mm long and round air outlet φ200, however, those of other specifications can be purchased.

3.6 Drawings of the Air Supply Outlet and Return Air Inlet

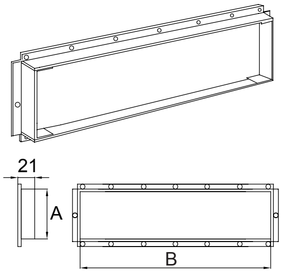


Fig.9 Air Supply Outlet

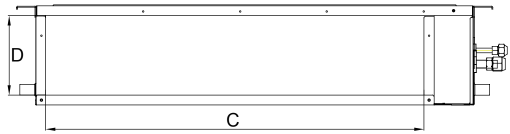


Fig.10 Return Air Inlet

Table 4 Dimensions of the Air Supply Outlet and Return Air Inlet (unit: mm)

Model \ Item	Air Supply Outlet		Return Air Inlet	
	A	B	C	D
TM09HFDI	156	662	580	162
TM12HFDI				
TM18HFDI	156	862	780	162
TM21HFDI	156	1062	980	162
TM24HFDI				

3.7 Installation of the Return Air Duct

(1). The default installation location of the rectangular flange is in the back and the return air cover plate is in the bottom, as shown in Fig.11.

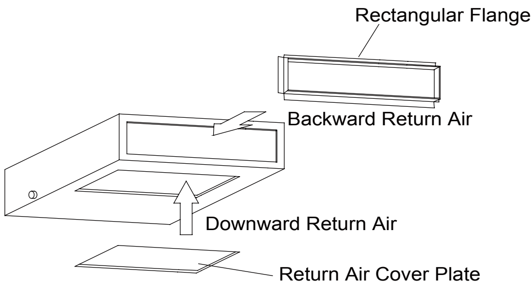


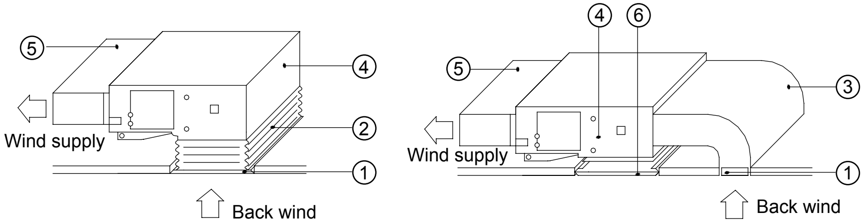
Fig.11

(2). If the downward return air is desired, just change the place of the rectangular flange and the return air cover plate.

(3). Connect one end of the return air duct to the return air outlet of the unit by rivets and the other to the return air louver. For the sake of the convenience to freely adjust the height, a cutting of canvas duct will be helpful, which can be reinforced and folded by 8 # iron wire.

(4). More noise is likely to be produced in the downward return air mode than the backward return air mode, so it is suggestive to install a muffler and a plenum box to minimize the noise.

(5). The installation method can be chosen with considering the conditions of the building and maintenance etc., as shown in Fig.12.



Install the back wind pipe (a)   Install the back wind pipe(b)

Fig.12

Table 5 Parts and Components of the Return Air Duct

No.	Name	No.	Name
1	Return Air Louver(with the filter screen)	4	Indoor Unit
2	Canvas Duct	5	Air Supply Duct
3	Return Air Duct	6	Access Grille

3.8 Installation of the Condensate Pipe

(1). The condensate pipe should keep a inclination angle of 5 ～ 10 ° , which can facilitate the drainage of the condensate water. And the joints of the condensate pipe should be insulated by the insulation material to prevent condensing(see Fig.13).

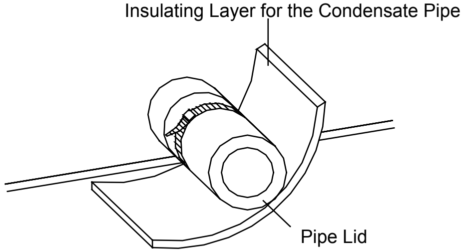


Fig.13 Thermal Insulation of the Condensate Pipe

(2). There is a condensate outlet on both left and right sides of the unit. Once one is confirmed to be used, the other should be clogged by a rubber plug, bundled by the binding wire and insulated by the insulation material to avoid water leakage.

(3). The right outlet is defaulted to be clogged with a plug.

⚠ **CAUTION! No water leakage is allowed on the joint of the condensate pipe.**

3.9 Design of the Drain Pipe

(1). The drain pipe should always keep an inclination angle(1/50 ～ 1/100) to avoid the water gathering in some certain place.

(2). During the connection of the drain pipe and device, do not impose too much force on the pipe on one side of the device and the pipe should be fixed as close as to the device.

(3). The drain pipe can be the ordinary hard PVC pipe which can be purchased locally. During the connection, inset the end of the PVC pipe to the drain outlet, then tighten it with the drain hose and binding wire but never connect the drain outlet and the drain hose by adhesive.

(4). When the drain pipe is used for multiple devices, the public section of the pipe should be 100mm lower than the drain hole of each device and it is better to use the much thicker pipe for such a purpose.

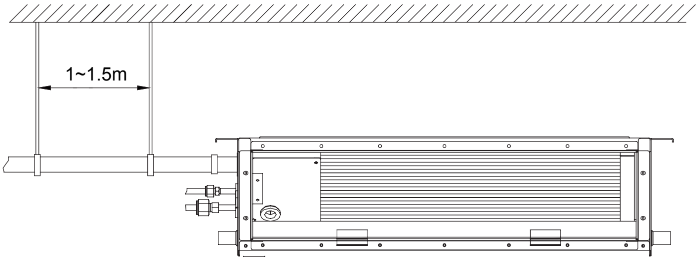
3.10 Installation of the Drain Pipe

(1). The diameter of the drain pipe should be larger than or equal to that of the refrigerant pipe (PVC pipe, outer dimater:25mm, wall thickness ⩾ 1.5mm.

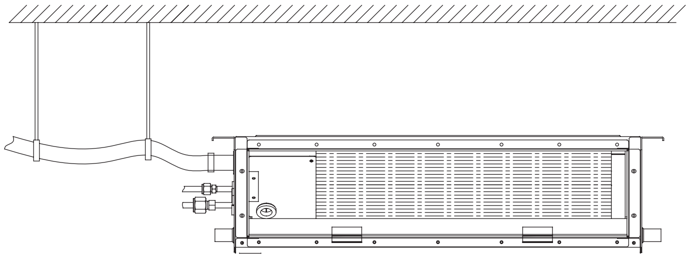
(2). The drain pipe should be as short as possible and with at least a 1/100 degree of slope to avoid forming air pockets.

(3). If the proper degree of slope of the drain pipe is not allowed, a lift pipe should be installed.

(4). A distance 1-1.5m should be kept between the hangers to avoid the drain hose making a turn.



(Right) with a min. degree of slope 1/100



(Wrong)

Fig.14

(5). Insert the drain hose into the drain hole and tighten it with clamps.

(6). Wrap the clamps with large amount of sponge for thermal insulation.

(7). The drain hose inside the room also should be insulated.

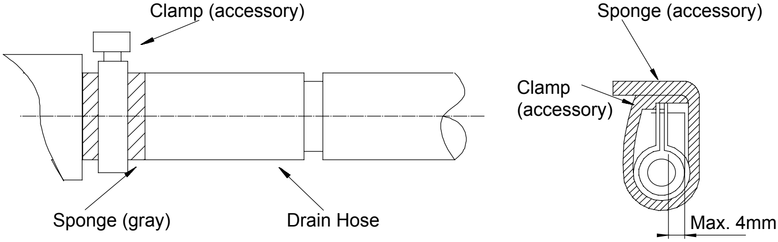


Fig.15

3.11 Precautions for the Lift Pipe

The installation height of the lift pipe should be less than 850mm. It is recommended to set an inclination angle 1° ～ 2° for the lift pipe toward the drainage direction. If the lift pipe and the unit form a right angle, the height of the lift pipe must be less than 800mm.

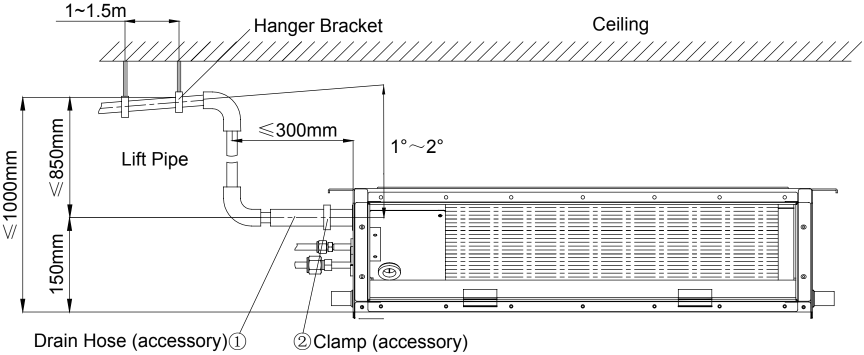
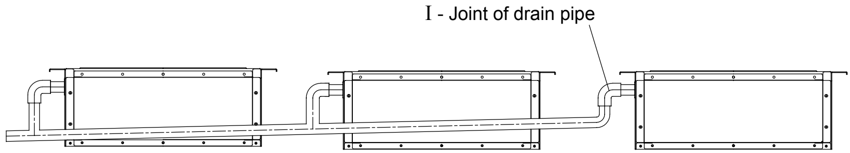


Fig.16

Notes:

①. The inclination height of the drain hose should be within 75mm so that the outlet of the drain hose does not suffer the external force.

②. If multiple drain pipes converge, please follow the installation steps below.



The specification of the joint of the drain pipe should be suitable to the running capacity of the unit

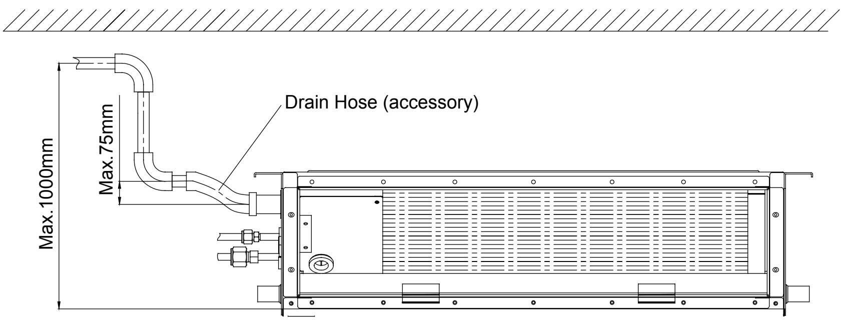


Fig.17

3.12 Test for the Drainage System

(1). After the electric installation, please take a test for the drainage system.

(2). During the test, check if the water flow goes through the pipe correctly and observe carefully the joint to see if it leaks or not. If this unit is installed in the newly built house, it is suggested to take this test prior to the ceiling decoration.

3.13 Piping

(1). Let the flare end of the copper pipe point at the screw and then tighten the screw by hand.

(2). After that, tighten the screw by the torque wrench until it clatters (as shown in Fig.18).

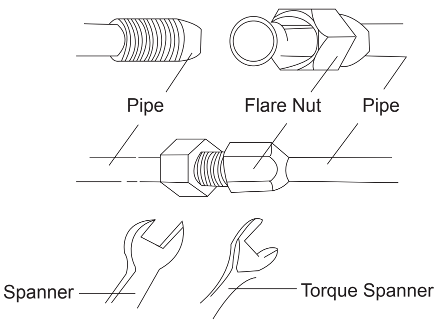


Fig.18

Table 6 Moments of Torque for Tightening Screws

Diameter of Pipe(mm)	Moment of Torque (N·m)
φ6.35	15-30
φ9.52	35-40
φ12	45-50
φ15.9	60-65

(3). The bending degree of the pipe can not be too small; otherwise it will crack. And please use a pipe tube bender to bend the pipe.

(4). Wrap the exposed refrigerant pipe and the joints by sponge and then tighten them with the plastic tape.

⚠ **CAUTION!**

①. During the connection of the indoor unit and the refrigerant pipe, never pull any joints of the indoor unit by force; otherwise the capillary pipe or other pipe may crack, which then would result in leakage.

②. The refrigerant pipe should be supported by brackets, that is, don’t let the unit withstand the weight of it.

If the specification of the outdoor unit pipe joint does not conform to that of the indoor unit, then the joint specification of the outlet pipe of the indoor unit takes precedence. A reducing nipple shall be installed at the joint of the outdoor unit so as to make the joint of the outdoor unit compatible with that of the indoor unit.

3.14 Insulation for the Refrigerant Pipe

(1). The refrigerant pipe should be insulated by the insulating material and plastic tape in order to prevent condensation and water leakage.

(2). The joints of the indoor unit should be wrapped with the insulating material and no gap is allowed on the joint of the indoor unit, as shown in Fig.19.

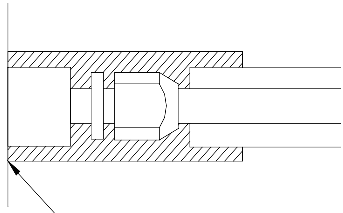


Fig.19

⚠ **CAUTION!**

After the pipe is protected well enough, never bend it to form a small angle; otherwise it would crack or break.

(3). Wrap the pipe with tape.

1). Bundle the refrigerant pipe and electric wire together with tape, and separate them from the drain pipe to prevent the condensate water overflowing.

2). Wrap the pipe from the bottom of the outdoor unit to the top of the pipe where it enters the wall. During the wrapping, the later circle should cover half of the former one.

3). Fix the wrapped pipe on the wall with clamps.

⚠ **CAUTION!**

①. Do not wrap the pipe too tightly; otherwise the insulation effect would be weakened. Additionally, make sure the drain hose is separated from the pipe.

②. After that, fill the hole on the wall with sealing material to prevent wind and rain coming into the room.

3.15 Wiring between the Wire and the Wiring Terminal

(1). Wiring of the Single-Core Wire

1). Strip the insulating layer at the end of the wire about 25mm off with a wire striper.

2). Loosen the screw off on the wiring board of the air conditioning unit.

3). Shape with the pliers at the end of the wire to a circle matching with the size of the screw.

4). Let the screw go through the circle of the wire and then fix it on the wiring board.

(2). Wiring of the Multi-Core Wire

1). Strip the insulating layer at the end of the wire about 100mm off with a wire striper.

2). Loosen the screw off on the wiring board of the air conditioning unit.

3). Fix a wiring terminal matching with the size of the screw to the end of the multi-core wire with the crimpling pliers.

4). Let the screw go through the terminal of the multi-core wire and then fix it on the wiring board.

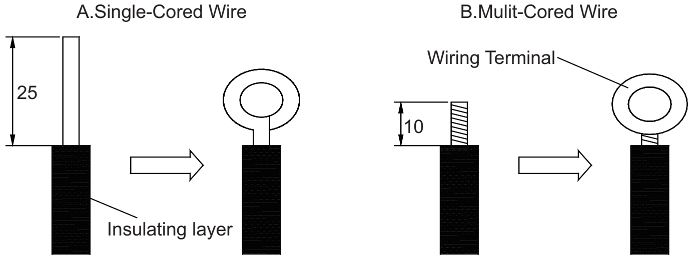


Fig.20

⚠ **WARNING!**

①. If the power cord or the signal line is damaged, they must be replaced with the dedicated one.

②. Prior to the wiring, please check the voltage marked on the nameplate and then carry out the wiring following the wiring diagram.

③. The dedicated power cord must be used for the air conditioning unit and the electrical leakage protection switch and air switch must be installed in case of the overload condition.

④. The air conditioning unit must be earthed to prevent the hazard caused by the failed insulation.

⑤. During the wiring, the wiring terminal or the single-core wire must be used; the direct wiring between the multi-core wire and wiring board would cause fire.

⑥. All wiring should be done strictly in accordance with the wiring diagram; otherwise the improper wiring would cause the air conditioning unit running abnormally or damaged.

⑦. Do not let the electric wires touch the refrigerant pipe, the compressor, the fan or other moving parts.

⑧. Do not modify the wiring inside the indoor unit randomly; otherwise the manufacturer won't assume any responsibility for the damage or abnormal running of the unit.

3.16 Wiring of the Power Cord (single-phase)

⚠ **CAUTION!**

The power supply for each indoor unit must be uniform.

①. Dismantle the cover of the electric box of the indoor unit.

②. Let the power cord go through the rubber ring.

③. Put the 4-core cable through the hole of the chassis and the bottom of the appliance upward, and then connect the power line and the communication line from the outdoor unit to the corresponding terminals N(1), 2, 3 , and grounding terminal of the indoor unit. Wiring shall be done properly as per the wiring diagram. (Note: Be sure the wring terminals A/B/C/D and piping joints A/B/C/D of the indoor unit match with that of the outdoor unit respectively).

④. Fix the power cord tightly with the binding wire.

3.17 Wiring of the Signal Line of the Wired Controller

(1). Open the cover of the electric box of the indoor unit.

(2). Let the signal line go through the rubber ring.

(3). Insert the signal line to the four-pin socket on the printed circuit board of the indoor unit.

(4). Fix the signal line with the binding wire.

3.18 Electric Installation

Table 7

Indoor Unit		Power Supply	Running Current (A)	Input Power(W)		Recommended Power Cord (Sectional Area× Pieces)
Type	Model		Indoor Fan Motor	Cooling	Heating	
Cooling and Heating	TM09HFDI	208/230V~ 60Hz	0.406	75	575	AWG18×4
	TM12HFDI	208/230V~ 60Hz	0.348	65	865	AWG18×4
	TM18HFDI	208/230V~ 60Hz	0.428	80	1080	AWG18×4
	TM21HFDI	208/230V~ 60Hz	0.588	110	1610	AWG18×4
	TM24HFDI	208/230V~ 60Hz	0.588	110	1610	AWG18×4

Notes:

The sectional area listed above is applicable to the power cord with at most a length of 15 meters. For the longer cord, its sectional area should be enlarged to avoid the cord burning out caused by the over-current.

4 Rated Working Conditions

Table 8 Working Temperature Range

	Indoor side state ℉（℃）		Outdoor side state ℉（℃）	
	Dry bulb temp. ℉（℃）	Wet bulb temp. ℉（℃）	Dry bulb temp. ℉（℃）	Wet bulb temp. ℉（℃）
Rated. Cooling	80.0(26.7)	67.0(19.4)	95.0(35.0)	75.0(23.9)
Max. cooling	80.0(26.7)	67.0(19.4)	115.0(46.1)	75.0(23.9)
Min. cooling	67.0(19.4)	57.0(13.9)	67.0(19.4)	57.0(13.9)
Rated. Heating	70.0(21.1)	60.0(15.6)	47.0(8.3)	43.0(6.1)
Max. heating	80.0(26.7)	—	75.0(23.9)	65.0(18.3)
Low Ambient heating	70.0(21.1)	60.0(15.6)	5.0(-15.0)	3.2(-16.0)

5 Error Analysis

If your conditioning unit runs abnormally, please check the following items before contacting the maintenance serviceman.

Table 9

Errors	Possible Causes
Failed startup	There is no power supply. The breaker opens owing to electrical leakage. Voltage is too low.
Stop after a short while of operation	The air inlet/outlet of the indoor/outdoor unit is clogged.
Poor cooling effect	The air filter screen is too dirty or clogged. There are too much heat sources or people in the room. The door or window is open. There are obstacles at the air inlet/outlet. The set temperature is too high.
Poor heating effect	The air filter screen is too dirty or clogged. The door or window is not closed fully. The set temperature is too low.
Uncontrollable controller	If the remote controller crashes even if the batteries have been replaced, please open the back cover of it and press the button “ACL” to let it back to the normal condition. Is the remoter controller in the signal receiving range? Or is it blocked by obstacles? For the duct type unit, operate the remote controller pointing at the wired controller. Check if the otherwise change new batteries. of the wired controller is enough; or change them.

Note:

If the air conditioner still runs abnormally after the above check and handling, please contact the maintenance serviceman at the local appointed service center.

6 Maintenance

⚠ **CAUTION!**

Take notice of the following items before cleaning your air conditioning unit.

(1). Cut off the main power supply before contacting any wiring device.

(2). Only when the unit is turned off and the main power supply is cut off, can the unit be cleaned; otherwise it would cause an electric shock or injury.

(3). Do not wash the unit with water; or it may cause an electric shock.

(4). During the cleaning, remember to use the stable standing platform Daily Maintenance.

1). How to clean the filter

①. Never dismantle the air filer except for cleaning; otherwise it may cause some error.

②. When the air conditioning unit is used under the environment with heavy dust, the air filter should be cleaned often (generally once every two weeks).

2). Maintenance before seasonal use

①. Check if the air inlet/outlet of the indoor unit is clogged.

②. Check if the earthing is in good condition.

③. heck if the wiring is in good condition.

④. Check if the indicating lamp of the wired controller blinks after it is energized.

Note: If there is something abnormal, please consult the after-sales serviceman.

3). Maintenance after seasonal use

①. Let the air conditioning unit run for half day under the fan mode to dry the inside of the unit.

②. If the unit is not to be used for a long time, please shut off the main power supply for energy conservation, at the same time, the power indicating lamp of the wired control will go off.

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MADE IN CHINA

TOSOT

OWNER'S MANUAL

TM18H4O

In line with the company's policy of continual product improvement, the aesthetic and dimensional characteristics, technical data and accessories of this appliance may be changed without notice.

CONTENTS

The products in this manual may be different with the rea one, according to different models, some models have displayer and some models without displayer, the position and shape of the displayer please refer to the real one.

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.

Explanation of Symbols

DANGER	Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates important but not hazard-related information, used to indicate risk of property damage.
⚠	Indicates a hazard that would be assigned a signal word WARNING or CAUTION.

CONFORMITY AND RANGE

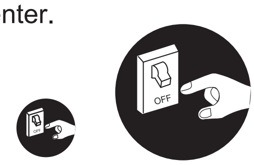
This appliance can be used by children aged from 8 years and above and persons with reduced physical,sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.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

⚠ Please read this owner's manual carefully before operating the unit and keep it carefully for consultation. Instructions for installation and use of this product are provided by the manufacturer.

⚠ Only use the air conditioner as instructed in this booklet. These instructions are not intended to cover every possible condition and situation. As with any electrical household appliance, common sense and caution are therefore always recommended for installation, operation and maintenance.

WARNING

★ When having a burning smell or smoke,please turn off the power supply and contact with the service center.

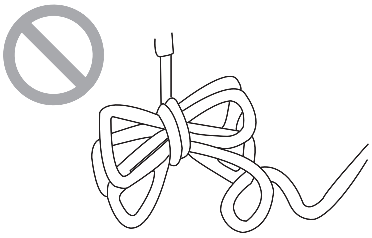


If the abnormity still exists,the unit may be damaged,and may cause electric shock or fire.

★ The power supply must adopt the special circuit that with air switch protection and assure it has enough capacity.The unit will be turned on or off according to your requirement automatically,please do not turn on or turn off the unit frequently,otherwise disadvantage effect may be caused to the unit.

★ Never cut off or damage power cables and control wires. If the power cable and signal control wire were damaged, change them by professional.

★ Power must adopts the special circuit to prevent fire.

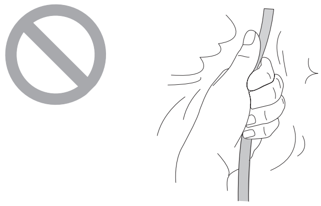


Otherwise, it can cause electric shock or fire.

★ Disconnect the power supply if long putting the air conditioner out of use.

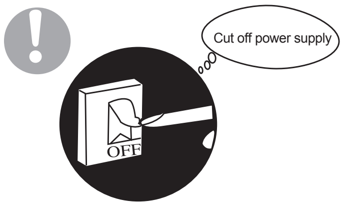
Otherwise,the accumulated dusts may cause overheating or fire.

★ Never damage the electric wire or use the electric wire which is not appointed.



Otherwise,it will cause overheating or fire.

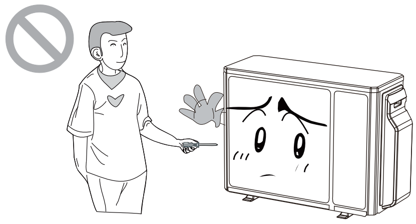
★ When cleaning,it is necessary to stop driving and turn off the power supply.



Otherwise,it may cause electric shock or damage.

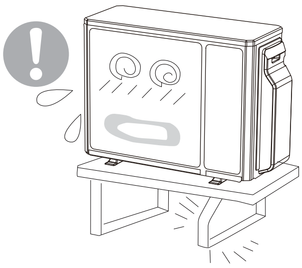
★ Rated voltage of this air conditioner 208/230V, 60Hz, The compressor will vibrate sharply if the voltage is too low, resappointed. amage to refrigerating system. Electrical component are easy to damage if the voltage is too high.

★ Don't attempt to repair the air conditioner by yourself.



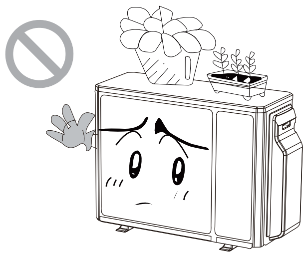
The wrong repair will lead to an electric shock or fire,so you should contact the service center to repair.

★ Please note whether the installed stand is firm enough or not.



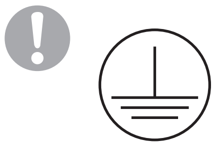
If it is damaged, it may lead to the fall of the unit and cause the injury.

★ Don't step on the top of the outdoor unit or place something on it.



As falling off the outdoor unit can be dangerous.

★ Earthing: The unit must be reliably earthed.The earthing cable shall be connected to the special earthing device in the construction.



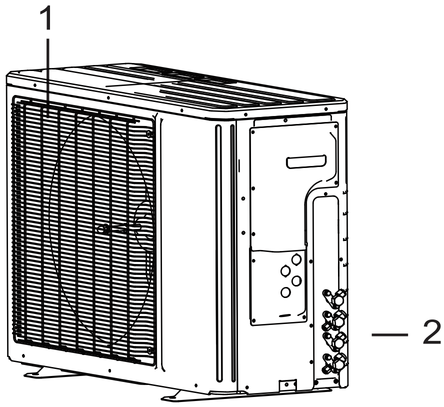
TM18H4O

WARNING

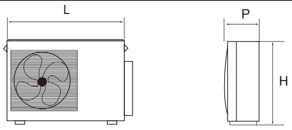
- Be sure to cut off the power supply before cleaning the air conditioner; otherwise electric shock might happen.
- Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth moist cloth clean the air conditioner cabinet).
- This product must not be disposed together with the domestic waste.
  This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.
- The temperature of refrigerant circuit will be high,please keep the interconnection cable away from the copper tube.

OUTDOOR UNIT	
No.	Description
1	Air outlet grille
2	Valve

Note: The above figures are only intended to a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.



TECHNICAL DATA GENERAL INFORMATION

<table>
<tr><td>MODE</td><td colspan="2">TM18H4O</td><td></td></tr>
<tr><td colspan="4">Electrical data</td></tr>
<tr><td>Electricity supply</td><td colspan="3">208/230V,60HZ</td></tr>
<tr><td>Fuse or air switch</td><td colspan="2">25</td><td></td></tr>
<tr><td>Minimum power cord section</td><td colspan="2">2.1</td><td>mm^2</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td colspan="4">Size and clearance</td></tr>
<tr><td rowspan="3"></td><td>L</td><td>890</td><td>mm</td></tr>
<tr><td>P</td><td>362</td><td>mm</td></tr>
<tr><td>H</td><td>700</td><td>mm</td></tr>
</table>

OUTDOOR UNIT WORKING TEMPERATURE RANGE GENERAL INFORMATION

	OutdoorsideDB/WB(℃)
Maximum cooling	48(118.4°F)/-
Maximum heating	27(80.6°F)/-

TM18H4O

1. Remove the handle at the right side plate of the outdoor unit (one screw).
2. Remove the cable clamp, connect the power connection cable with the terminal at the row of connection and fix the connection. The fitting line distributing must be consistent with the indoor unit. terminal of line bank. Wiring should meet that of indoor unit.
3. Fix power connection wire by wire clamp.
4. Ensure wire has been fixed well.
5. Install the handle.

Including an air switch with suitable capacity, please note the following table. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

Air-conditioner	Air switch capacity
TM18H4O	25A

An all-pole disconnection switch having a contact separation of at least 3mm in all pole should be connected in fixed wiring.

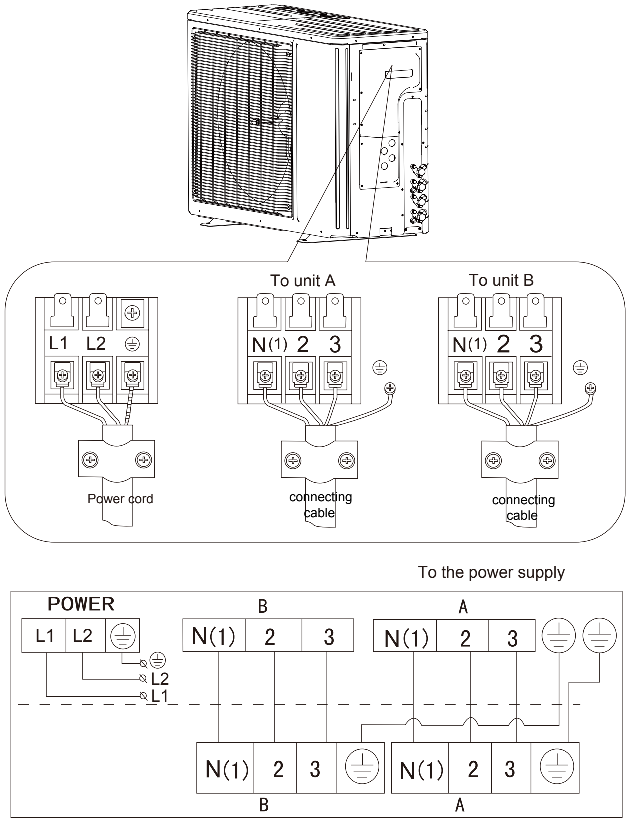
Wrong wire connection may cause malfunction of some electric components.After fixing cable, ensure that leads between connection to fixed point have some space.

The connection pipes and the connectiong wirings of the unit A and unit B must be corresponding to each other respective.

The appliance shall be installed in accordance with national wiring regulations.

Note: the above figures are only intended to be a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.

TM18H4O



INSTALLING THE OUTDOOR UNIT INSTALLER

Location

Use bolts to secure the unit to a flat, solid floor. When mounting the unit on a wall or the roof, make sure the support is firmly secured so that it cannot move in the event of intense vibrations or a strong wind.

- Do not install the outdoor unit in pits or air vents

Installing the pipes

Use suitable connecting pipes and equipment for the refrigerant R410A.

Models(m)	18Kx2	24Kx2	24Kx3	28Kx4
Max. connection pipe length	20	20	60	70
Max. connection pipe length (Simple one indoor unit)	10	10	20	20

The refrigerant pipes must not exceed the maximum heights 10m(18Kx2&24Kx2&24Kx3&28Kx4).

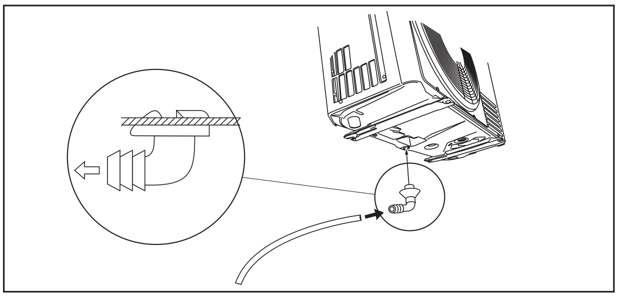
Wrap all the refrigerant pipes and joints.

Tighten the connections using two wrenches working in opposite directions.

Caution: Installation Must be Performed in Accordance with the NEC/CEC by Authorized Personnel Only.

Install the drain fitting and the drain hose (for model with heat pump only)

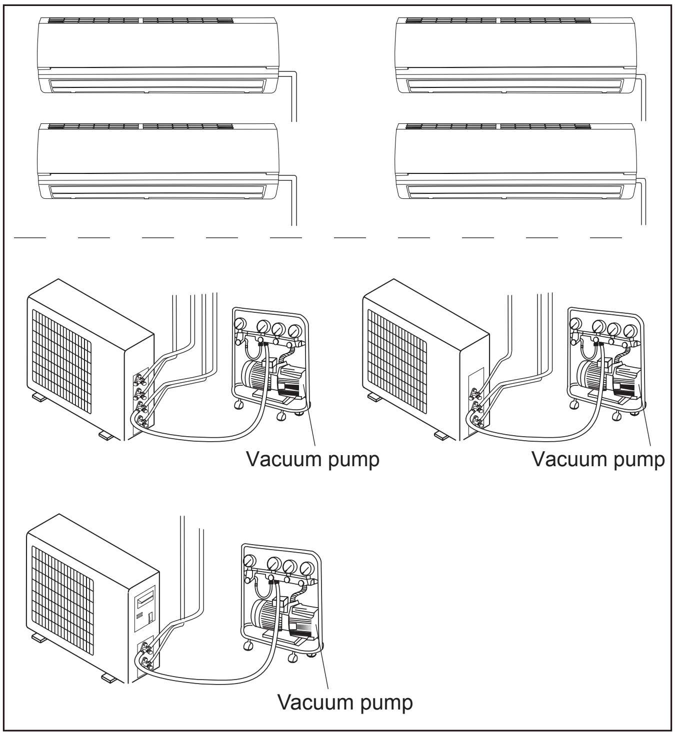
Condensation is produced and flows from the outdoor unit when the appliance is operating in the heating mode. In order not to disturb neighbours and to respect the environment,install a drain fitting and a drain hose to channel the condensate water. Install the drain fitting and rubber washer on the outdoor unit chassis and connect a drain hose to it as shown in the figure.



BLEEDING INSTALLER

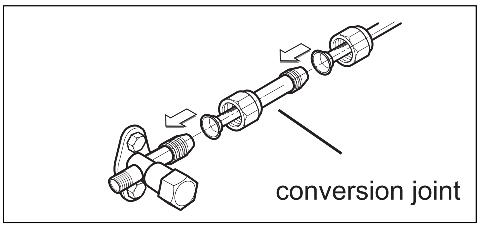
Humid air left inside the refrigerant circuit can cause compressor malfunction. After having connected the indoor and outdoor units, bleed the air and humidity from the refrigerant circuit using a vacuum pump.

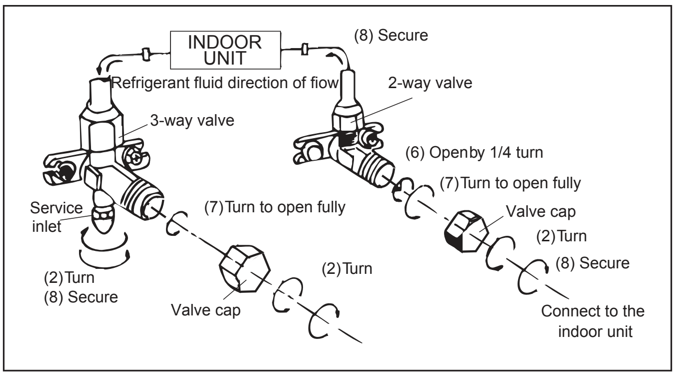
(1) Unscrew and remove the caps from the 2-way and 3-way valves.
(2) Unscrew and remove the cap from the service valve.
(3) Connect the vacuum pump hose to the service valve.
(4) Operate the vacuum pump for 10-15 minutes until an absolute vacuum of 10 mm Hg has been reached.
(5) With the vacuum pump still in operation, close the low-pressure knob on the vacuum pump coupling. Stop the vacuum pump.
(6) Open the 2-way valve by 1/4 turn and then close it after 10 seconds. Check all the joints for leaks using liquid soap or an electronic leak device.
(7) Turn the body of the 2-way and 3-way valves. Disconnect the vacuum pump hose.
(8) Replace and tighten all the caps on the valves.



Diameter (mm)	Twisting moment (N.m)
Φ6	15-20
Φ9.52	35-40
Φ16	60-65
Φ12	45-50
Φ19	70-75

18、24K unit need to be installed the indoor unit



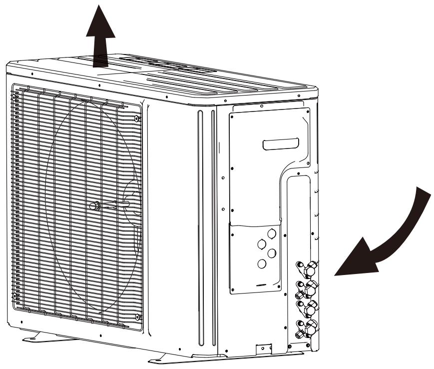


MAINTENANCE INSTALLER

Use suitable instruments for the refrigerant R410A.

Do not use any other refrigerant than R410A.

Do not use mineral oils to clean the unit.



INSTALLATION DIMENSION DIAGRAM INSTALLER

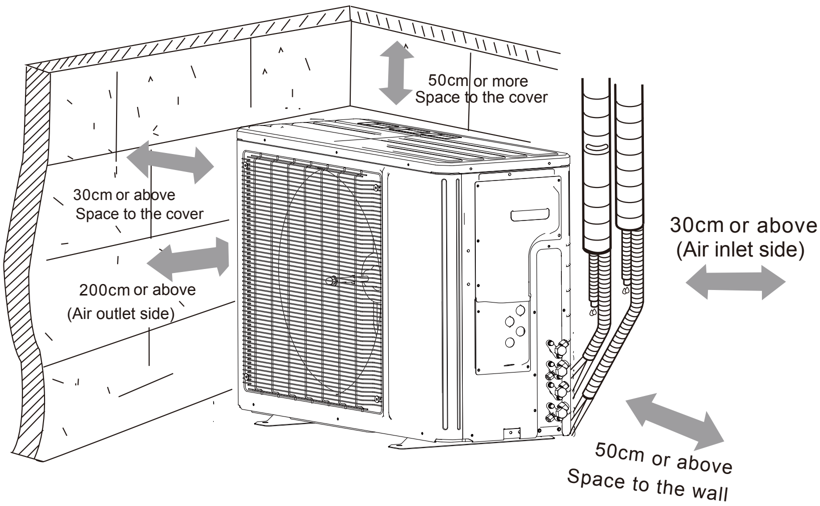
The installation must be done by trained and qualified service personnel with reliability according to this manual.

Contact service center before installation to avoid the malfunction due to unprofessional installation.

When picking up and moving the units, you must be guidedby trained and qualified person.

Ensure that the recommende dspace is left around the appliance.

TM18H4O



Check Items	Problems Owing to Improper Installation
Is the installation reliable?	The unit may drop, vibrate or make noises
Has the gas leakage been checked?	May cause unsatisfactory cooling (heating) effect
Is the thermal insulation of the unit sufficient?	May cause condensation and water dropping
Is the drainage smooth?	May cause condensation and water dropping
Does the power supply voltage accord with the rated voltage specified on the nameplate?	The unit may bread down or the components may be burned out
Are the lines and pipelines correctly installed?	The unit may bread down or the components may be burned out
Has the unit been safely grounded?	Risk of electrical leakage
Are the models of lines in conformity with requirements?	The unit may bread down or the components may be burned out
Are there any obstacles near the air inlet and outlet of the indoor and out-door units?	The unit may bread down or the components may be burned out
Have the length of refrigerating pipe and refrigerant charge amount been recorded?	It is not easy to decide the charge amount of refrigerant.

66129924602

MADE IN CHINA

TOSOT

OWNER'S MANUAL

TM24H4O
TM30H4O
TM36H4O

In line with the company’s policy of continual product improvement, the aesthetic and dimensional characteristics, technical data and accessories of this appliance may be changed without notice.

CONTENTS **GENERAL INFORMATION**

The products in this manual may be different with the rea one, according to different models, some models have displayer and some models without displayer, the position and shape of the displayer please refer to the real one.

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.

Explanation of Symbols

DANGER	Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates important but not hazard-related information, used to indicate risk of property damage.
⚠	Indicates a hazard that would be assigned a signal word WARNING or CAUTION.

CONFORMITY AND RANGE **GENERAL INFORMATION**

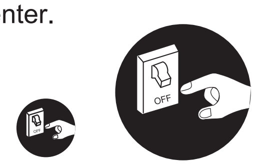
This appliance can be used by children aged from 8 years and above and persons with reduced physical,sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.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

⚠ Please read this owner's manual carefully before operating the unit and keep it carefully for consultation. Instructions for installation and use of this product are provided by the manufacturer.

⚠ Only use the air conditioner as instructed in this booklet. These instructions are not intended to cover every possible condition and situation. As with any electrical household appliance, common sense and caution are therefore always recommended for installation, operation and maintenance.

WARNING

★ When having a burning smell or smoke,please turn off the power supply and contact with the service center.

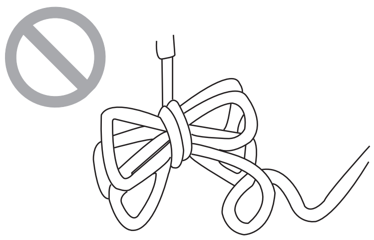


If the abnormity still exists,the unit may be damaged,and may cause electric shock or fire.

★ The power supply must adopt the special circuit that with air switch protection and assure it has enough capacity.The unit will be turned on or off according to your requirement automatically,please do not turn on or turn off the unit frequently,otherwise disadvantage effect may be caused to the unit.

★ Never cut off or damage power cables and control wires. If the power cable and signal control wire were damaged, change them by professional.

★ Power must adopts the special circuit to prevent fire.

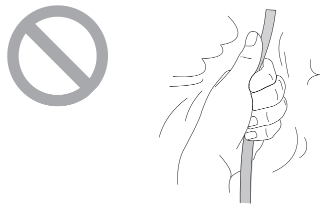


Otherwise, it can cause electric shock or fire.

★ Disconnect the power supply if long putting the air conditioner out of use.

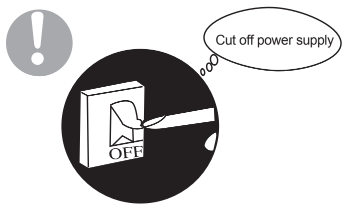
Otherwise,the accumulated dusts may cause overheating or fire.

★ Never damage the electric wire or use the electric wire which is not appointed.



Otherwise,it will cause overheating or fire.

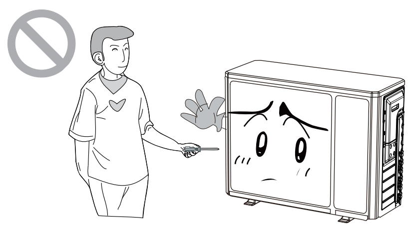
★ When cleaning,it is necessary to stop driving and turn off the power supply.



Otherwise,it may cause electric shock or damage.

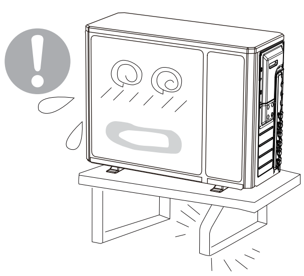
★ Rated voltage of this air conditioner 208/230V, 60Hz, The compressor will vibrate sharply if the voltage is too low, resappointed. amage to refrigerating system. Electrical component are easy to damage if the voltage is too high.

★ Don't attempt to repair the air conditioner by yourself.



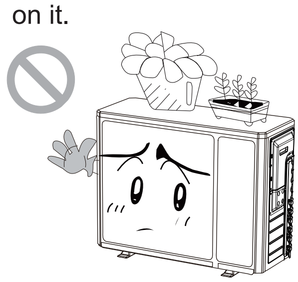
The wrong repair will lead to an electric shock or fire,so you should contact the service center to repair.

★ Please note whether the installed stand is firm enough or not.



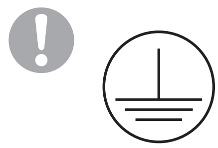
If it is damaged, it may lead to the fall of the unit and cause the injury.

★ Don't step on the top of the outdoor unit or place something on it.



As falling off the outdoor unit can be dangerous.

★ Earthing: The unit must be reliably earthed.The earthing cable shall be connected to the special earthing device in the construction.



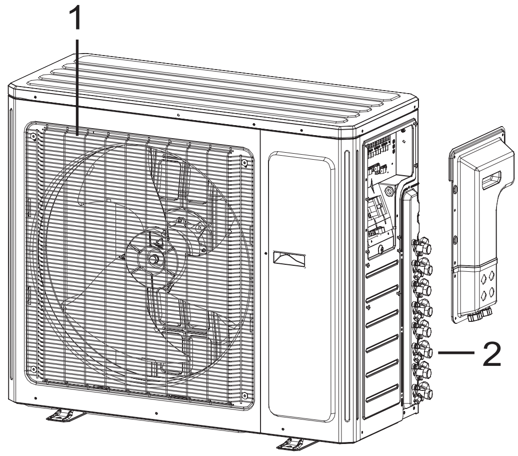
TM24H4O、TM30H4O、TM36H4O

WARNING

- Be sure to cut off the power supply before cleaning the air conditioner; otherwise electric shock might happen.
- Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth moist cloth clean the air conditioner cabinet).
- This product must not be disposed together with the domestic waste.
  This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.
- The temperature of refrigerant circuit will be high,please keep the interconnection cable away from the copper tube.

OUTDOOR UNIT	
No.	Description
1	Air outlet grille
2	Valve

Note: The above figures are only intended to a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.



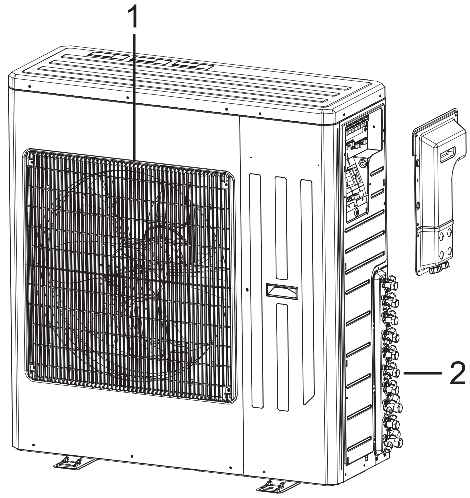
TM24H4O TM30H4O TM36H4O

WARNING

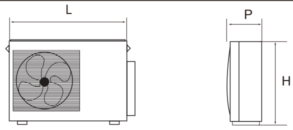
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- Be sure to cut off the power supply before cleaning the air conditioner; otherwise electric shock might happen.
- Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth moist cloth clean the air conditioner cabinet).
- Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

OUTDOOR UNIT	
No.	Description
1	Air outlet grille
2	Valve

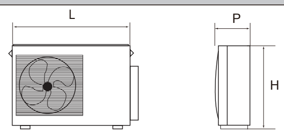
Note: The above figures are only intended to be a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.



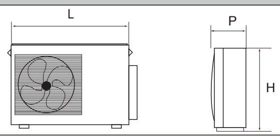
TECHNICAL DATA — GENERAL INFORMATION

MODE		TM24H4O	
Electrical data			
Electricity supply		208/230V,60HZ	
Fuse or air switch		35	A
Minimum power cord section		3.3	mm^2
Size and clearance			
	L	920	mm
	P	380	mm
	H	790	mm

TECHNICAL DATA — GENERAL INFORMATION

MODE		TM30H4O	
Electrical data			
Electricity supply		208/230V,60HZ	
Fuse or air switch		30	A
Minimum power cord section		3.3	mm^2
Size and clearance			
	L	920	mm
	P	370	mm
	H	787	mm

TECHNICAL DATA — GENERAL INFORMATION

MODE		TM36H4O	
Electrical data			
Electricity supply		208/230V,60HZ	
Fuse or air switch		35	A
Minimum power cord section		3.3	mm^2
Size and clearance			
	L	1016	mm
	P	362	mm
	H	1103	mm

OUTDOOR UNIT WORKING TEMPERATURE RANGE — GENERAL INFORMATION

	Outdoor side DB/WB(°F/°C)
Maximum cooling	118.4(48)/-
Maximum heating	80.6(27)/-

TM24H4O TM30H4O TM36H4O

1. Remove the handle at the right side plate of the outdoor unit (one screw).
2. Remove the cable clamp, connect the power con -nection cable with the terminal at the row of conn -ection and fix the connection. The fitting line distr -ibuting must be consistent with the indoor unit. terminal of line bank. Wiring should meet that of indoor unit.
3. Fix power connection wire by wire clamp.
4. Ensure wire has been fixed well.
5. Install the handle.

An all-pole disconnection switch having a contact separation of at least 3mm in all pole should be connected in fixed wiring.

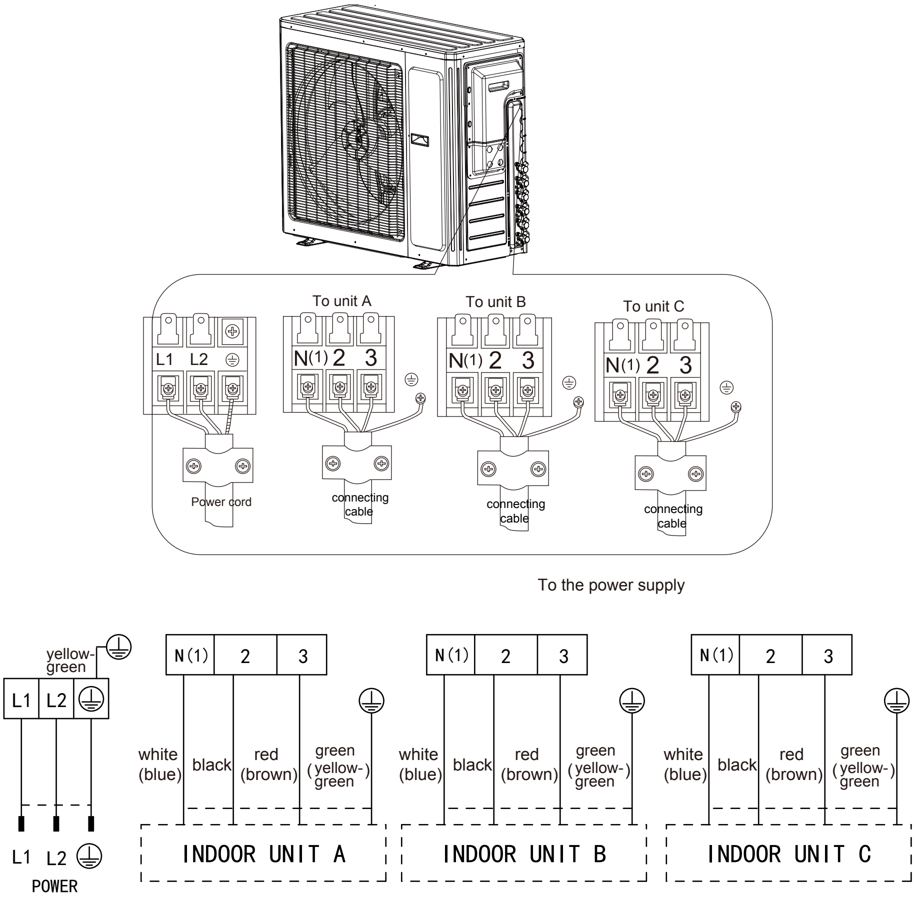
The connection pipes and the connectiong wirings of the unit A and unit B must be corresponding to each other respective.

Wrong wire connection may cause malfunction of some electric components.After fixing cable, ensure that leads between connection to fixed point have some space.

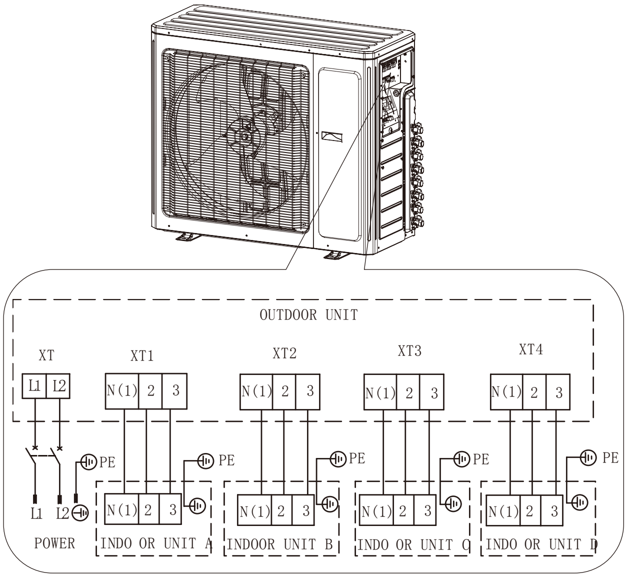
The appliance shall be installed in accordance with national wiring regulations.

Note: the above figures are only intended to be a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.

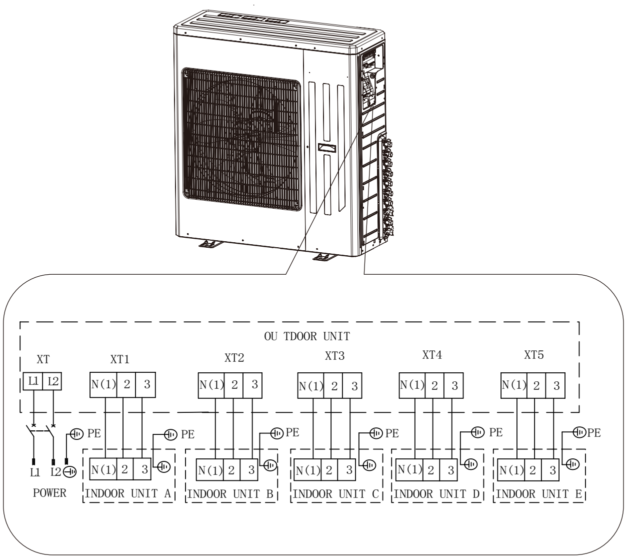
TM24H4O



TM30H4O



TM36H4O



INSTALLING THE OUTDOOR UNIT — INSTALLER

Location

Use bolts to secure the unit to a flat, solid floor. When mounting the unit on a wall or the roof, make sure the support is firmly secured so that it cannot move in the event of intense vibrations or a strong wind.

- Do not install the outdoor unit in pits or air vents

Installing the pipes

Use suitable connecting pipes and equipment for the refrigerant R410A.

Models(m)	18Kx2	24Kx2	24Kx3	28Kx4
Max. connection pipe length	20	20	60	70
Max. connection pipe length (Simple one indoor unit)	10	10	20	20

Models(m)	30Kx4	36Kx5	42Kx5
Max. connection pipe length	70	75	75
Max. connection pipe length (Simple one indoor unit)	25	25	25

The refrigerant pipes must not exceed the maximum heights 10m(18Kx2&24Kx2&24Kx3&28Kx4&30KX4 &36KX5&42KX5).

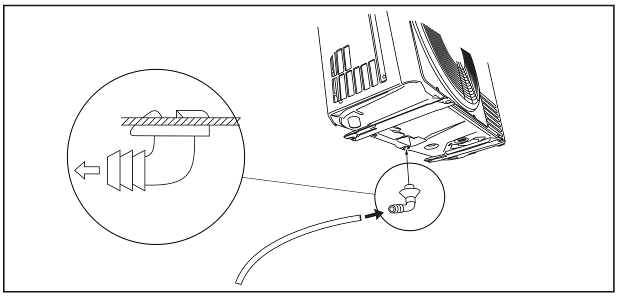
Wrap all the refrigerant pipes and joints.

Tighten the connections using two wrenches working in opposite directions.

Caution: Installation Must be Performed in Accordance with the NEC/CEC by Authorized Personnel Only.

Install the drain fitting and the drain hose (for model with heat pump only)

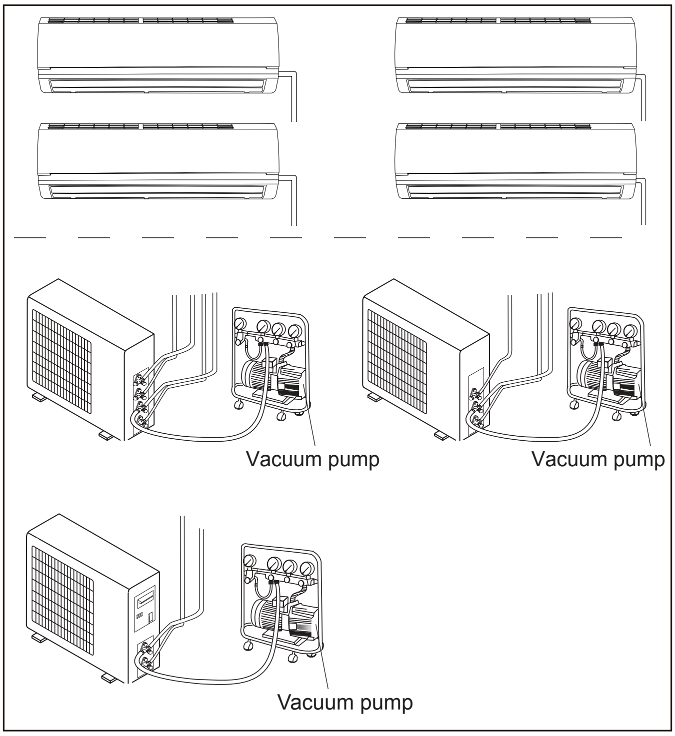
Condensation is produced and flows from the outdoor unit when the appliance is operating in the heating mode. In order not to disturb neighbours and to respect the environment,install a drain fitting and a drain hose to channel the condensate water. Install the drain fitting and rubber washer on the outdoor unit chassis and connect a drain hose to it as shown in the figure.



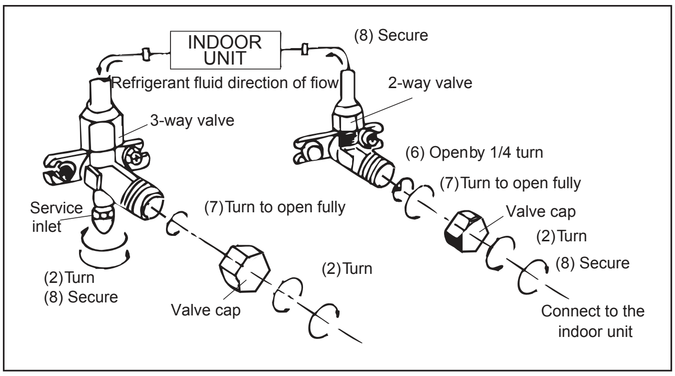
BLEEDING — INSTALLER

Humid air left inside the refrigerant circuit can cause compressor malfunction. After having connected the indoor and outdoor units, bleed the air and humidity from the refrigerant circuit using a vacuum pump.

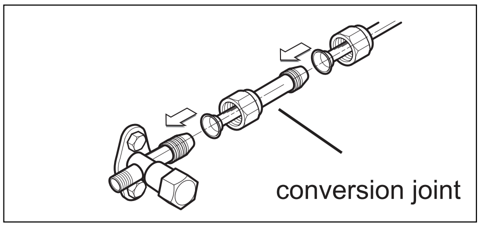
(1) Unscrew and remove the caps from the 2-way and 3-way valves.
(2) Unscrew and remove the cap from the service valve.
(3) Connect the vacuum pump hose to the service valve.
(4) Operate the vacuum pump for 10-15 minutes until an absolute vacuum of 10 mm Hg has been reached.
(5) With the vacuum pump still in operation, close the low-pressure knob on the vacuum pump coupling. Stop the vacuum pump.
(6) Open the 2-way valve by 1/4 turn and then close it after 10 seconds. Check all the joints for leaks using liquid soap or an electronic leak device.
(7) Turn the body of the 2-way and 3-way valves. Disconnect the vacuum pump hose.
(8) Replace and tighten all the caps on the valves.



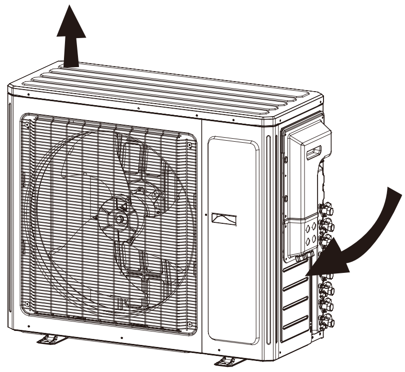
Diameter (mm)	Twisting moment (N.m)
Φ6	15-20
Φ9.52	35-40
Φ16	60-65
Φ12	45-50
Φ19	70-75



30、36、42Kunit need to be installed the indoor unit



MAINTENANCE INSTALLER

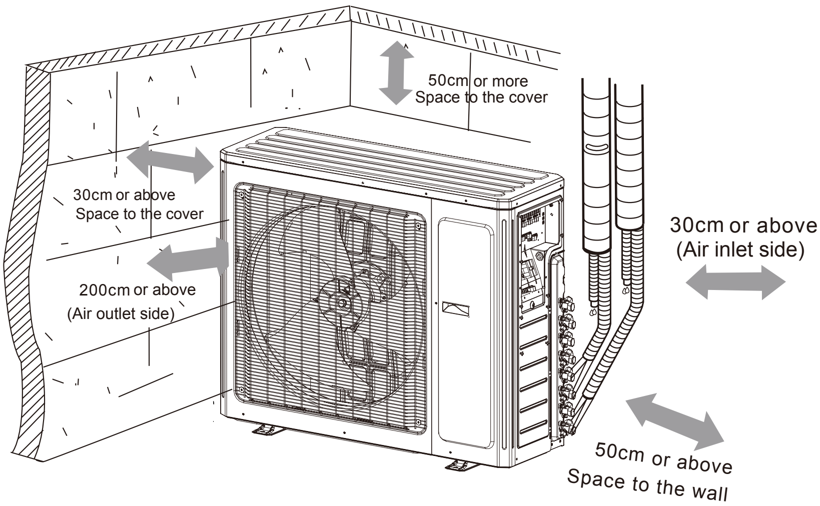


- Use suitable instruments for the refrigerant R410A.
- Do not use any other refrigerant than R410A.
- Do not use mineral oils to clean the unit.

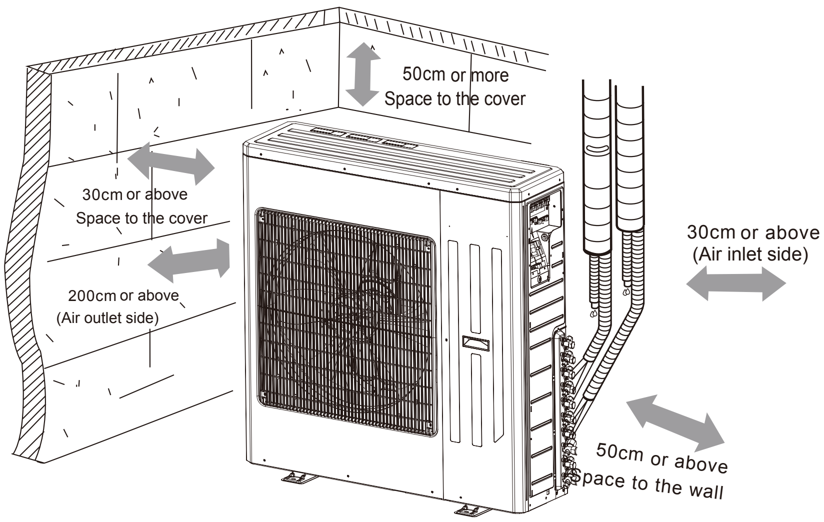
INSTALLATION DIMENSION DIAGRAM INSTALLER

- The installation must be done by trained and qualified service personnel with reliability according to this manual.
- Contact service center before installation to avoid the malfunction due to unprofessional installation.
- When picking up and moving the units, you must be guidedby trained and qualified person.
- Ensure that the recommende dspace is left around the appliance.

TM24H4O
TM30H4O



TM36H4O



Check Items	Problems Owing to Improper Installation
Is the installation reliable?	The unit may drop, vibrate or make noises
Has the gas leakage been checked?	May cause unsatisfactory cooling (heating) effect
Is the thermal insulation of the unit sufficient?	May cause condensation and water dropping
Is the drainage smooth?	May cause condensation and water dropping
Does the power supply voltage accord with the rated voltage specified on the nameplate?	The unit may bread down or the components may be burned out
Are the lines and pipelines correctly installed?	The unit may bread down or the components may be burned out
Has the unit been safely grounded?	Risk of electrical leakage
Are the models of lines in conformity with requirements?	The unit may bread down or the components may be burned out
Are there any obstacles near the air inlet and outlet of the indoor and out-door units?	The unit may bread down or the components may be burned out
Have the length of refrigerating pipe and refrigerant charge amount been recorded?	It is not easy to decide the charge amount of refrigerant.

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