

TOSHIBA

AIR CONDITIONER (ACCESSORY) Installation Manual

3DW Diffusor

Model name:

For commercial use

Ticari kullanım için

TCB-TDL0141SDY-E

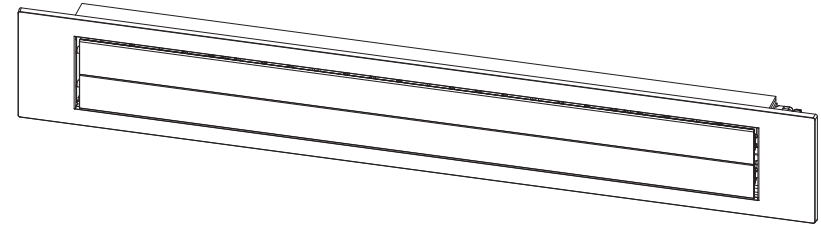
TCB-TDL0181SDY-E

TCB-TDL0271SDY-E

TCB-TDL0141SDY-TR

TCB-TDL0181SDY-TR

TCB-TDL0271SDY-TR



English

Español

Français

Italiano

Deutsch

Português

Polski

Česky

Русский

Hrvatski

Magyar

Türkçe

Nederlands

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Dansk

Română

Български

Eesti

Latviski

Slovenčina

Slovenščina

- Before installation, please read the installation manual carefully.
- Thank you for purchasing TOSHIBA 3DW Diffusor.
 - This installation manual describes the installation method for the 3DW Diffusor.
 - Please install the indoor unit according to the attached installation manual for the indoor unit.
 - When the installation is completed, please be sure to confirm according to the content of "12. Trial Operation and Inspection", fully explain the contents described in the owner's manual to the customer, and hand over the owner's manual and the installation manual to the customer for safekeeping.




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1 Precautions for Safety

The manufacturer shall not assume any liability for the damage caused by not observing the description of this manual.

- The following contents are very important to prevent any harm to users and others and damage to property. Please fully understand the contents (signs, graphic symbols) before reading the text and then follow the instructions.

Mark	Description
 WARNING	Indicate situations where incorrect operation may cause death or serious injury to the user ^(*1) .
 CAUTION	Indicate situations where incorrect operation may cause minor injury ^(*2) to the user or damage to objects ^(*3) .
 PROHIBITION	Indicate prohibited items or actions to be avoided. The detailed items or actions will be illustrated by graphics or words inside or next to this symbol.

- *1: Serious injuries refer to those that require hospitalization or long-term follow-up treatment due to physical sequel caused by blindness, injury, scald (in both high and low temperature), electric shock, fracture, poisoning, etc.
- *2: Minor injuries refer to those injuries, scalds, electrocutions, etc. that do not require hospitalization or long-term follow-up treatment.
- *3: Object damage refers to those extensive loss involving houses, property, poultry, pets, etc.

WARNING

- Before installation, please read the installation procedure carefully and follow the instructions. Failure to follow instructions may result in drop, noise, vibration, water leakage and other problems.
- Only a qualified installer or qualified service person is allowed to carry out the installation work. Improper installation may result in water leakage, electric shock, fire and other problems.
- Before the installation, maintenance, repair or removal work, please set the circuit breaker to the OFF position, otherwise there is a risk of electric shock.
- During the installation, maintenance, repair or removal work, please place a sign of "in operation" near the circuit breaker. There is a danger of electric shock if the circuit breaker is turned on by mistake.
- Only a qualified installer or qualified service person is allowed to carry out the work at heights on the bracket over 50 cm or remove the 3DW Diffusor.
- Please wear safety clothing and protective gloves during the installation, maintenance or disassembly work.
- When working at heights, please use a ladder conforming to ISO 14122 standard and follow the instructions in its manual. In addition, please wear industrial safety helmet as protective equipment during the work.
- Before cleaning the panel and other parts, please set the circuit breaker to the OFF position, and place a sign of "in operation" near the circuit breaker during the work.
- During the operation, please confirm whether the air conditioner is in a stable state. If the product is partially damaged, please contact the sales store.
- Only a qualified installer or qualified service person is allowed to move the 3DW Diffusor. Unlicensed operation is extremely dangerous and may cause fire, electric shock, injury, water leakage, noise, vibration and other problems.
- Please be sure to use it together with the indoor unit designated by our company. Use non-designated products may cause fire, electric shock, water leakage and other problems.

2 Designated Indoor Unit


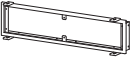




Please use the 3DW Diffusor it together with the indoor units listed in the table below.

Model of 3DW Diffusor	Designated indoor unit
TCB-TDL0141SDY-E	MMD-UP0051SPHY-E, MMD-UP0071SPHY-E, MMD-UP0091SPHY-E, MMD-UP0121SPHY-E
TCB-TDL0181SDY-E	MMD-UP0151SPHY-E, MMD-UP0181SPHY-E
TCB-TDL0271SDY-E	MMD-UP0241SPHY-E, MMD-UP0271SPHY-E
TCB-TDL0141SDY-TR	MMD-UP0051SPHY-TR, MMD-UP0071SPHY-TR, MMD-UP0091SPHY-TR, MMD-UP0121SPHY-TR
TCB-TDL0181SDY-TR	MMD-UP0151SPHY-TR, MMD-UP0181SPHY-TR
TCB-TDL0271SDY-TR	MMD-UP0241SPHY-TR, MMD-UP0271SPHY-TR

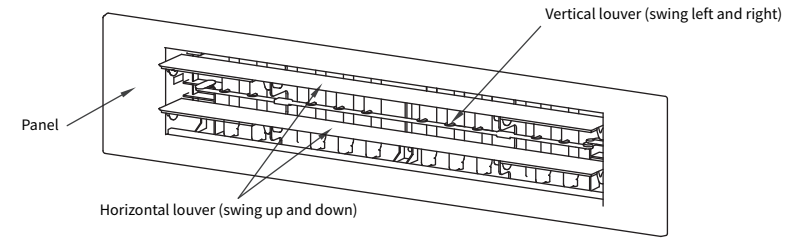
- Please do not connect the 3DW Diffusor with model number MMD-UP0031* indoor unit, otherwise dewing on the product maybe caused.

3 Packing List

Please confirm that the following parts are included.

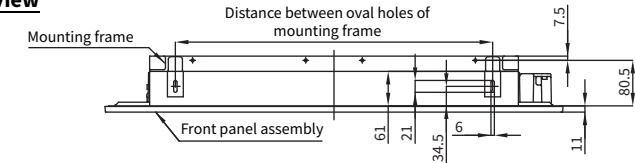
No.	Part	Quantity	No.	Part	Quantity
(1)	 Front panel assembly	1	(5)	Heat insulation sponge * Upper and lower heat insulation for mounting frame (652 × 25 × 15: 014 Type) (852 × 25 × 15: 018 Type) (1052 × 25 × 15: 027 Type)	2
			(6)	Heat insulation sponge * Left and right heat insulation for mounting frame (160 × 28 × 15)	2
(2)	 Mounting frame	1	(7)	Heat insulation sponge * Peripheral heat insulation for mounting frame (600 × 60 × 6: 014 Type) (800 × 60 × 6: 018 Type) (1000 × 60 × 6: 027 Type)	3
			(8)	Heat insulation sponge * Inside heat insulation for mounting frame (190 × 33 × 6)	1
(3)	 Fixing screw for mounting frame (M4x8)	16	(9)	Wire clip 	1
			(10)	Binding belt 	2
(4)	 Fixing screw for front panel assembly (M4x25)	6	(11)	Owner's manual	1
			(12)	Installation manual (this manual)	1

4 Part Names

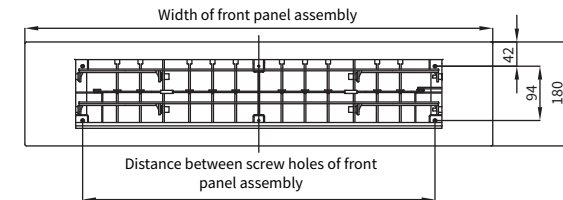


5 Dimension

Top view



Front view



(Unit: mm)

Model	Distance between oval holes of mounting frame	Width of front panel	Distance between screw holes of front panel assembly
014 Type	561	810	610
018 Type	761	1010	810
027 Type	961	1210	1010

6 Location for Installation

⚠ WARNING

- If the user inserts his finger or other object into the air outlet during the operation of the air conditioner, it may cause injury or electric shock. Therefore, please fit the air outlet at a distance of 2.5 m or more over the ground.
- In order to avoid incomplete combustion, do not place the combustion device at the air outlet.
- Please fit the air outlet at a distance of 1.5 m or more from the fire alarm. Otherwise, in case of a fire, the fire alarm may be delayed or malfunction.
- Please ensure there are no obstacles around the air outlet.
- Please install it directly below the air outlet where there are no obstacles such as decorative ceiling or curtain boxes. Otherwise, it may lead to obstacles and 3DW Diffusor condensation or dirt, and may affect the cooling and heating performance.

- Please make sure both cold and warm air can circulate evenly in the location of installation.
- Installation under high humidity conditions

The product has passed the condensation test and is confirmed to be normal. However, water dripping may occur during continuous operation under high humidity conditions. Especially in the following installation places, it is possible to form high humidity air (dew point temperature above 23 °C).

- 1) A place near the window
- 2) A place near the entrance and exit door
- 3) Kitchen
- 4) A place where the 3DW Diffusor is exposed to the outdoor air directly

In the above places, please paste heat insulation materials such as sponges on the panel and the horizontal louver of 3DW Diffusor that are exposed to high humidity air.

[Reference]	Test conditions for condensation
Indoor:	Dry ball temperature 27 °C Wet ball temperature 24 °C
Air volume:	Low
Running time:	4 hours

7 Space for Installation

⚠ CAUTION

- If the distance D between the indoor unit and the wall is less than 91 mm or greater than 1000 mm, this product cannot be applied.
- Please ensure that the distance from the upper end of the 3DW Diffusor to the ceiling is more than 150 mm. Otherwise, there may be condensation or dirt on the ceiling.

D (mm)	Connection mode	
D < 91	Not applicable to this product	
D = 91	Direct connection	
91 < D ≤ 101	Direct connection (additional heat insulation material) ^{*1}	
101 < D ≤ 1000	Connecting air duct ^{*2}	
1000 < D	Not applicable to this product	

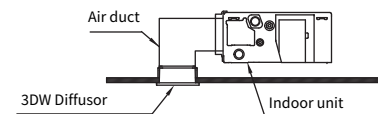
*1: If 91 < D ≤ 101, for the pasting method of heat insulation material, please refer to [Sticking sponge on mounting frame] in [8. Installation of 3DW Diffusor].

*2: If 101 < D ≤ 1000, please purchase air ducts, installation wooden frame, and wooden screws locally.

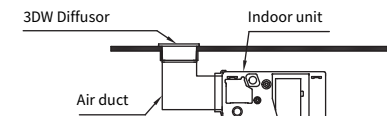
⊘ PROHIBITION

- Do not install the 3DW Diffusor upward and downward by the connecting air duct. Otherwise, dripping water and abnormal operation of horizontal louver may occur.

⊘ Do not install upward



⊘ Do not install downward



8 Installation of 3DW Diffusor

⚠ WARNING

- Please install the 3DW Diffusor in a position that can fully bear the load. If the strength is insufficient, the 3DW Diffusor may fall and cause injury.
- Please wear safety helmet to prevent head injuries caused by falling objects.
- When installing the air duct, if the air duct passes through the fire-resistant area, please use the air duct with flame retardant material, and install fire and disaster prevention dampers. Otherwise, there is a risk of spread in case of fire.

REQUIREMENT

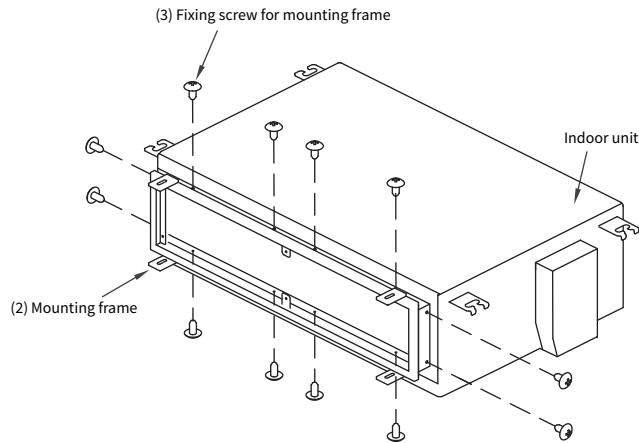
To prevent damage to the 3DW Diffusor and personal injury, be sure to follow the following instructions.

- Do not step on the package of the 3DW Diffusor or place any heavy objects on it.
- Do not place the panel assembly face down or on bumps.
- Please handle the 3DW Diffusor together with its package. In case of inevitable handling without package, please use cushion cloth to prevent scratches.
- When handling the 3DW Diffusor, please hold the outside of the front panel assembly to avoid stress on other parts (horizontal louver, vertical louver, connectors).

■ Direct connection: if $D = 91$ or $91 < D \leq 101$

Installing the mounting frame

- Before installing the indoor unit, secure the mounting frame.
- Fix the mounting frame to the indoor unit using the fixing screws (3) (M4x8) for mounting frame.
- * Only 12 places on TCB-TDL0141SDY-C need to be fixed, meaning there will be 4 fixing screws for mounting frame (3) left.

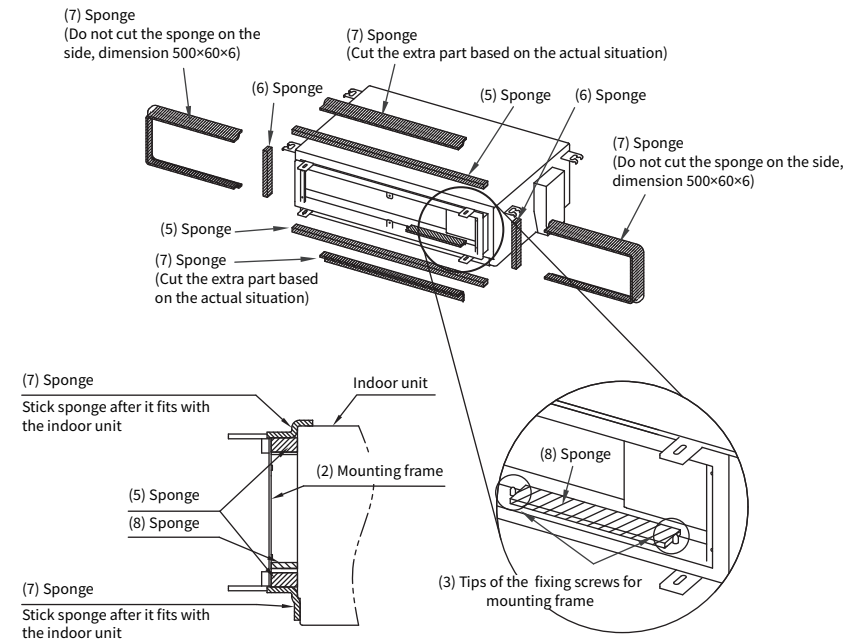


Sticking sponge on mounting frame

- Please stick 2 pieces of sponge (5) and 2 pieces of sponge (6) that are attached with the machine to the fixed screws for mounting frame (3).
- Please stick the attached sponge (7) onto the above sponges, the sponge (7) on the left and right sides can be directly stuck, and cut the remaining sponge (7) according to the actual length and stick it onto the top and bottom of the mounting frame. (There are enough sponges (7), please cut and use it according to the actual situation.)
- Please stick the sponge (8) positioning against the indoor unit to a place which is between the tips of the fixing screws (3) emerged from the inside of the mounting frame (2).

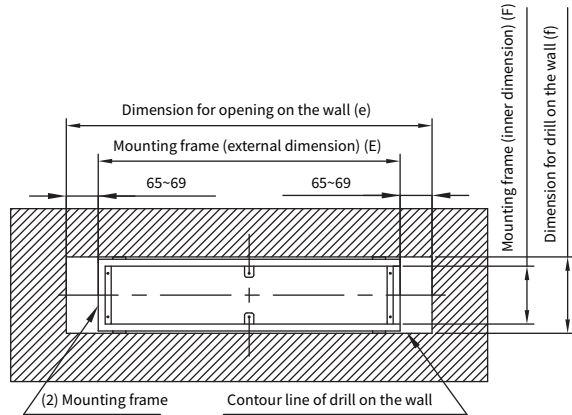
⚠ CAUTION

- When sticking a sponge, press it carefully to ensure that there is no clearance or loosening, and no sheet metal is exposed. Otherwise, it may cause condensation and dirt on the ceiling.



Drilling on the wall

- Please install the indoor unit and connect the pipelines. Perform the heat insulation treatment on the refrigerant connecting pipe and drainage pipe. (For details, refer to the installation manual of the indoor unit)
- Please make the drill on the wall according to the table below.



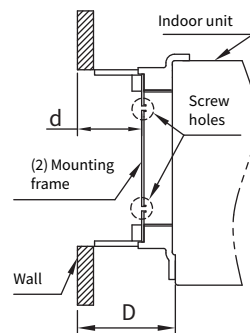
(Unit: mm)

Model	E	e	F	f
014 Type	652	780~790	125	160~165
018 Type	852	980~990	125	160~165
027 Type	1052	1180~1190	125	160~165

Confirming the location of indoor unit

- Please refer to the following table to confirm and adjust the distance “d” between the wall and the screw holes for fixing the panel assembly on the mounting frame (2).

D (mm)	Confirm and adjust the distance d (mm) between the wall and the screw holes for fixing the panel assembly on the mounting frame (2)
D = 91	d = 61
91 < D ≤ 101	61 < d ≤ 71



■ Air duct connection: if 101 < D ≤ 1000

Install the air duct on the frame and stick the sponge.

- Please install the air duct (purchased locally) on the frame.
- Please use ducts of the following dimensions.

(Unit: mm)

Model	Inner dimension (width)	Inner dimension (height)
014 Type	652 or more	129 or more
018 Type	852 or more	129 or more
027 Type	1052 or more	129 or more

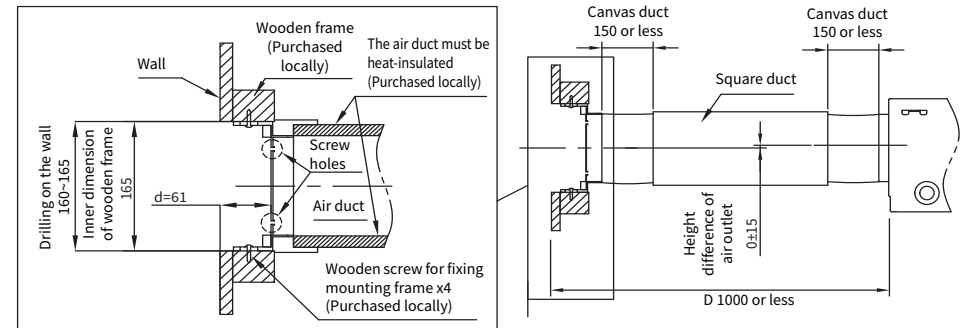
- For the pasting method of heat insulation material (5)(6)(7)(8), please refer to [Sticking sponge on mounting frame] in [8. Installation of 3DW Diffusor].

Install the wooden frame to the wall opening and fix the mounting frame with screws.

- Please install the indoor unit and connect the pipelines. Perform the heat insulation treatment on the refrigerant connecting pipe and drainage pipe. (For details, refer to the installation manual of the indoor unit)
- Please make the drill on the wall according to “Drilling on the wall”.
- Please refer to the figure below to install the wooden frame (locally purchased) to the wall opening.
- Please fix the heat-insulated mounting frame (2) to the wooden frame with wooden screws (purchased locally), and adjust the distance “d” between the wall and the fixing screw for front panel assembly on the mounting frame (2) to 61 mm.
- Please use heat insulation materials (purchased locally) to insulate the periphery of the air duct.

⚠ CAUTION

- If canvas duct is applied, please ensure that the length is less than 150 mm.
- To prevent condensation, please control the height difference between the 3DW Diffusor and the air outlet for the indoor unit within the tolerance of 15 mm.
- When sticking a sponge, press it carefully to ensure that there is no clearance or loosening. Otherwise, there will be condensation and dirt on the ceiling.



9 Installation for Front Panel Assembly

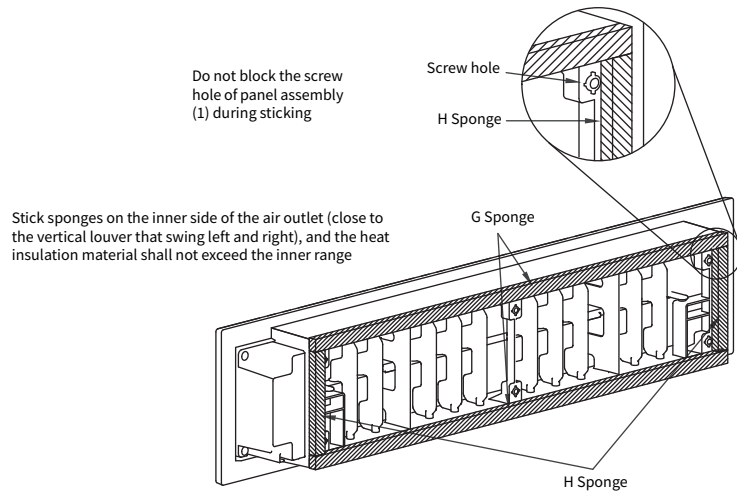
■ Sticking the sponge onto the front panel assembly (direct connection (only if 91 $D \leq 101$))

- * This step is not required for direct connection ($D = 91$) and air duct connection. Please go to the next step "Removing horizontal louver".
- To extend the distance D (distance between the indoor unit and the wall) to more than 91 mm, cut 4 pieces (2 pieces in length and 2 pieces in width) of heat insulation materials required for the extension (purchased locally). According to the following table, stick the sponges against the mounting frame of panel assembly (1) (refer to the following figure).
- * The maximum thickness of heat insulation material is 10 mm ($D = 101$). To extend more, please adjust the position of the indoor unit or install it by the connecting air duct.

(Unit: mm)

Model	G Sponge (length × width)	H Sponge (length × width)
014 Type	652 × 15	120 × 15
018 Type	852 × 15	120 × 15
027 Type	1052 × 15	120 × 15

Illustration for sticking sponge H and G

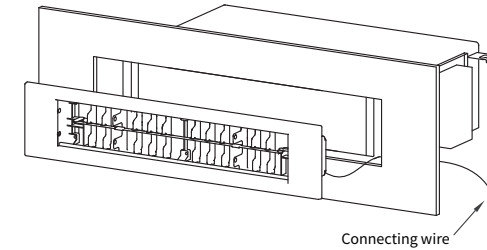


■ Removing horizontal louver

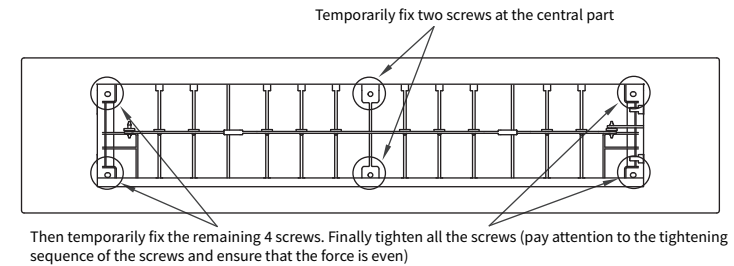
- Remove the blue tapes in the center of the front panel assembly and on the leading part of the wire.
- Remove the horizontal louver to prevent damage to it.
- * Refer to the owner's manual for the 3DW Diffuser for removing the horizontal louver.

■ Fixing front panel assembly

- First thread the connecting wire of the front panel assembly (1) to the wall opening, and then push the front panel assembly (1) into the opening.

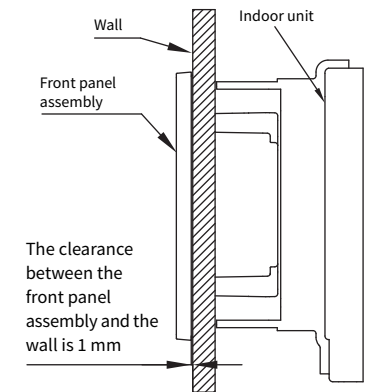


- Temporarily fix two screws at the central part of the panel assembly (1) with the complimentary fixing screws for panel assembly (M4x25) (4).
- Similarly, after temporarily fixing the remaining 4 screws, tighten all the screws (6 in total). Pay attention to the tightening sequence of the screws and ensure even force distribution.
- When the clearance between front panel assembly and the wall is 1 mm or less and the clearance is even, please stop tightening the screws.
- Please ensure that there is no clearance between the indoor unit and the mounting frame, and between the mounting frame and front panel assembly.



⚠ CAUTION

- Over tightening the fixing screws for front panel assembly (M4x25) (4) may cause damage. Therefore if the clearance between front panel assembly and the wall is 1 mm or less, please stop tightening the screws.
- A clearance more than 1 mm between the outer periphery of the front panel assembly (1) and the wall may result in condensation. Please remove the front panel assembly (1), readjust the distance between the indoor unit (it is the mounting frame (2) if air duct is connected) and the wall, and reinstall the front panel assembly (1).
- If there is clearance between the indoor unit and the mounting frame, and between the mounting frame and front panel assembly, condensation may occur. Please ensure that there is no clearance after installation.



■ Installing horizontal louver

- Please install in the reverse order of removal.

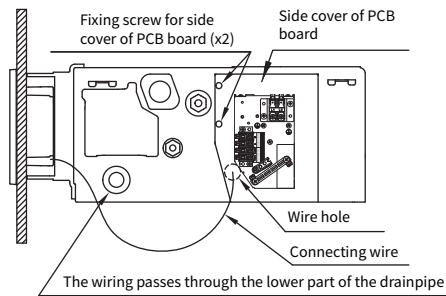
10 Wiring

⚠ WARNING

- Please perform the wiring work on the 3DW Diffusor before the wiring work on the indoor unit.
- Please confirm that the indoor unit is powered off.
- Do not pull the wire. If the terminals are subjected to external forces, smoke, fire, electricity leakage, and faults may occur.
- Do not extend the wire. Otherwise, there may be smoke, fire and electricity leakage.

■ Connection between wire and PCB board

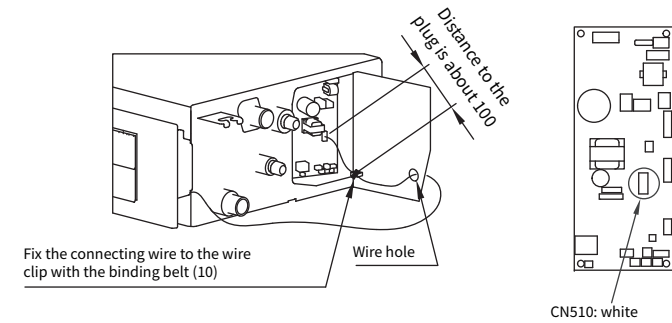
- Remove one screw from the terminal block cover of the indoor unit, and remove the terminal block cover.
- Remove two screws from the side cover of the PCB board, and open the side cover of the PCB board.
- As shown in the figure below, the wire of the front panel assembly passes through the lower part of the drainpipe and then through the wire hole in the side cover of the PCB board.



- * This figure is only used to illustrate the connection between the 3DW Diffusor and the body of the indoor unit. For the wiring method of the indoor unit, please refer to the installation manual of the indoor unit.

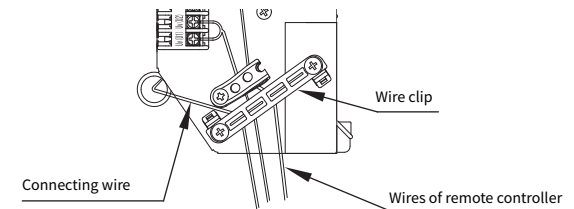
■ Plug of PCB board

- Plug the connector of the wire into the PCB board socket "CN510: white".
- To protect the PCB board from the external pressure, fix the connecting wire on a wire clip on the back of the side cover of the PCB board about 100 mm away from the plug with the binding belt (10).
- Close the side cover of the PCB board and fix it with 2 screws.

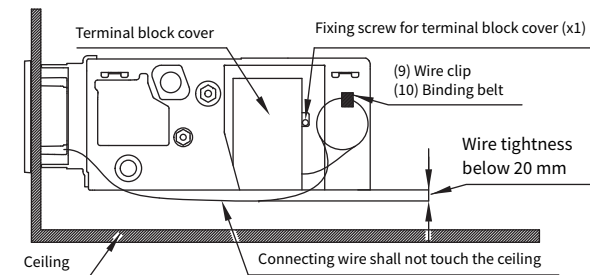


■ Tidy wires

- Tidy the connecting wires and the wires of remote controller for the indoor unit. (For details, refer to the installation manual of the indoor unit)
- Fix the connecting wires and the wires of remote controller with a wire clip.



- Lead the arranged wiring harness from the wire hole of the terminal block cover, and close the terminal block cover.
- If the wire is redundant, please fasten it with the wire clip (9) and the binding belt (10), as shown in the figure below.
- Pay attention to the tightness of the connecting wire when tidying. Ensure that the distance between the wire and the lower part of the indoor unit is within 20 mm to avoid touching the ceiling.
- * If the connecting wire touches the ceiling, please use more wire clips.



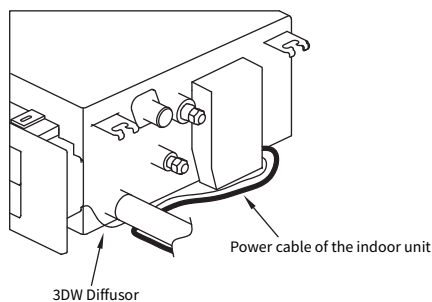
⚠ CAUTION

- Please follow the wire as shown above to avoid condensation water flowing down the wire to the electronic components.
- When routing wires, ensure that the connecting wires shall not be clamped by objects like the terminal block.
- If the indoor unit is installed outside the wall or ceiling, the exposed wires must be covered with insulation sleeves with a thickness of more than 1 mm.

⚠ WARNING

- Do not route the connecting wire of the 3DW Diffusor together with the power cable of the indoor unit. Otherwise, it may result in abnormal operation.

⊘ **Do not route the connecting wire together with the power cable**



11 Setting Parameter

⚠ CAUTION

- Be sure to set parameters before use.
- If the machine is running without setting parameters, it cannot be operated normally.

■ Setting external static pressure

Please refer to the installation manual of indoor unit for the setting method of external static pressure.

- The pressure loss characteristics of 3DW Diffusor will affect the external static pressure. Please refer to the attached fan characteristics for details.
- To avoid deviation from the operating range, please adjust the air volume by adjusting the air doors set at the suction and air outlets under the premise that the maximum air volume position (horizontal louver: fully open; vertical louver: front) that the louvers can provide is the standard air volume.
- * If the wind direction is changed under the condition of non-standard air volume, the system may start the protection program for upper and lower air volume limit, resulting in failure of operation.

■ Setting 3DW Diffusor

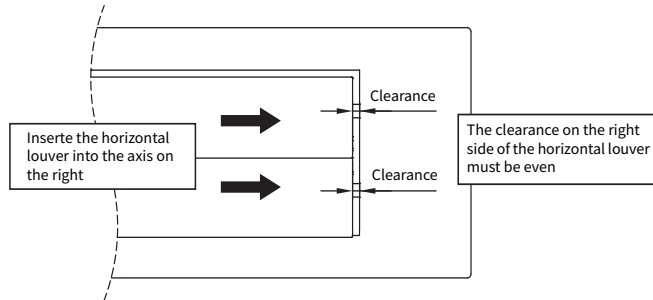
For the setting method of 3D louver, please refer to the manual of the remote controller.

- Remote controller: RBC-ASCU21-C (via APP) or RBC-ASCU11-C
- Setting content: the item code is [019], [119], and the parameter is [0002].
- * If the above parameters are not set, the louvers will not be operated normally.

12 Trial Operation and Inspection

Before trial operation

- Ensure that the horizontal louver (two pieces) are firmly inserted into the axis on the right and that the clearance on the right side of the horizontal louver is even.

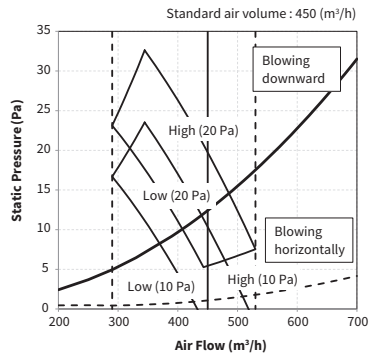


- Perform the trial operation of the indoor unit before the trial operation of the 3DW Diffusor. For details, refer to the installation manual of the indoor unit.
- Please control the operation of the horizontal louver and vertical louver by the remote controller, and confirm that the movement and sound are normal.
- * Refer to the manual of the remote controller for operation.

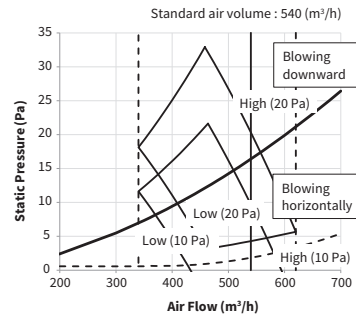
13 Fan Characteristics

- Pressure loss characteristic curve when the horizontal louver blowing downward
- - - Pressure loss characteristic curve when the horizontal louver blowing horizontally
- SSD P-Q characteristic curve

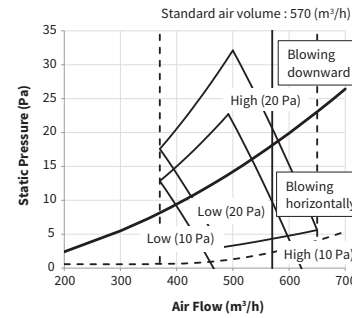
051 Type



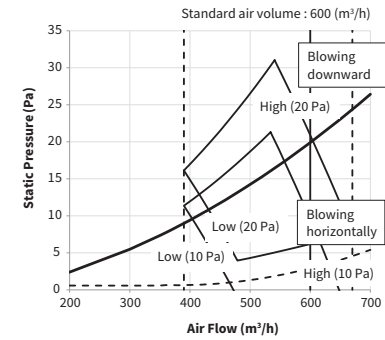
071 Type



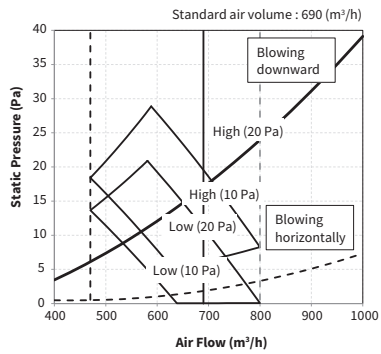
091 Type



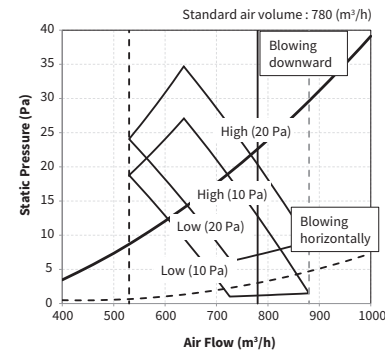
012 Type



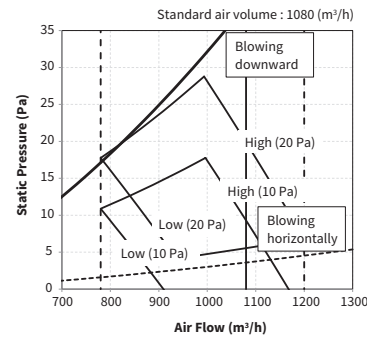
015 Type



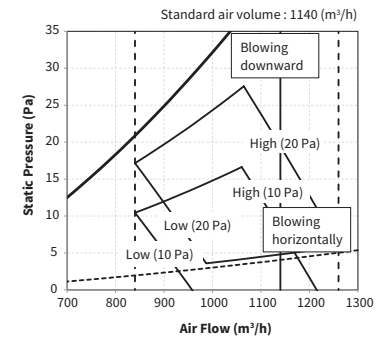
018 Type



024 Type



027 Type



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