

FRESH AIR INTAKE KIT INSTALLATION MANUAL



For authorized service personnel only.

UTZ-VXRA

Note: Before installation, please check the shape of the main product as shown in this manual, so that appropriate parts and accessories are used.

1. SAFETY PRECAUTIONS

- Be sure to read this manual thoroughly before installation.
- The warnings and precautions indicated in this manual contain important information pertaining to your safety. Be sure to observe them.
- Let the customer keep this installation manual because it is needed when the air conditioner or fresh air intake kit is serviced or moved.

WARNING	Indicates a potentially or imminently hazardous situation which, if not avoided, could result in death or serious injury.
Request your dealer or a professional installer to install the indoor unit in accordance with this installation manual. An improperly installed unit can cause serious accidents such as water leakage, electric shock, or fire. If the indoor unit is installed in disregard of the instructions in the installation manual, it will void the manufacturer's warranty.	
Do not turn on the power until all work has been completed. Turning on the power before the work is completed can cause serious accidents such as electric shock or fire.	
Installation work must be performed in accordance with national wiring standards by authorized personnel only.	

CAUTION	Indicates a potentially hazardous situation that may result in minor or moderate injury or damage to property.
----------------	--

2. ABOUT THIS PRODUCT

2.1. Precautions for fresh air intake

- The fresh air intake kit can be installed onto cassette type air conditioners.
- On installation please also refer to the air conditioner installation manual and cassette grille installation manual.
- The volume of ventilated air provided by the fresh air intake kit may be unable to fulfill ventilation regulations in all countries. On such occasions we ask that this kit be used along with energy recovery ventilators.
- When intaking outside air, please ensure correct air-conditioning design as based on air-conditioning load calculations. As outside air is not being processed an increase in outside air load can affect air conditioning.
- When installing the duct fan, connect the drive relay (locally purchased) and operate with the indoor unit. Please ensure the intake air volume is below 10% of the product's air volume HIGH. When the intake air volume becomes too large there the operating noise may increase and room temperature detection may be affected.
- Make sure to carry out replacement of the room temperature sensor. Room temperature detection may be affected.
- Condensation may form on the product when outside air temperature is low, and the temperature and humidity surrounding the product are high. Don't intake the air of below 0°C (32°F) into the fresh air intake kit. The upper limit of the product's temperature range should respond to the outdoor temperature range.
- Please ensure the product is installed a distance of at least three times the duct diameter away from exterior wall air inlets, or air exhausts for the prevention of short circuits.

2.2. Parts and accessories

WARNING

For installation purposes, be sure to use the parts supplied by the manufacturer or other prescribed parts. The use of non-prescribed parts can cause serious accidents such as the unit falling, water leakage, electric shock, or fire.

- The following installation parts are furnished. Use them as required.
- Keep the installation manual in a safe place and do not discard any other accessories until the installation work has been completed.

Name and Shape	Q'ty	Application
Installation manual	1	This manual
Installation manual	1*	Manual (UTZ-VXGA)
Fresh air intake unit	1	
Duct Flange	2	Air joint for connecting duct
Cover	2	Protective cover to prevent surface condensation
Screw	16	For attaching duct flange For attaching Cover
Hook plate	4	Plate for attaching panel
Shutter plate	1	Shutter plate for 1-way intake
Insulation ①	2	Affixing the insulation outside of the kit
Insulation ②	1*	Affixing the insulation to tube of drain pump for prevent condensation
Insulation ③	3	Affixing the insulation outside of the kit
Insulation ④	4	Affixing the insulation outside of the cover
Cable tie	1*	For fixing wire
Wire (External output ①)	1	For connect indoor unit to relay of duct fan
Bolt	4	For attaching the kit to indoor unit

Extension wire for louver	2*	Extension wire for louver
Extension wire for receiver kit	1*	Extension wire for receiver kit
Wire (External output ②)	1*	For connect indoor unit to relay of duct fan
Wire (External output ③)	1	For connect indoor unit to relay of duct fan (for TYPE B)

* Not used with this model.

3. INSTALLATION WORK

3.1. Selecting an installation location

CAUTION

Do not install the unit in the following areas:

- Area with high salt content, such as at the seaside. It will deteriorate metal parts, causing the parts to fall or the unit to leak water.
- Area filled with mineral oil or containing a large amount of splashed oil or steam, such as a kitchen. It will deteriorate plastic parts, causing the parts to fall or the unit to leak water.
- Area that generates substances that adversely affect the equipment, such as sulfuric gas, chlorine gas, acid, or alkali. It will cause the copper pipes and brazed joints to corrode, which can cause refrigerant leakage.
- Area that can cause combustible gas to leak, contains suspended carbon fibers or flammable dust, or volatile inflammables such as paint thinner or gasoline. If gas leaks and settles around the unit, it can cause a fire.

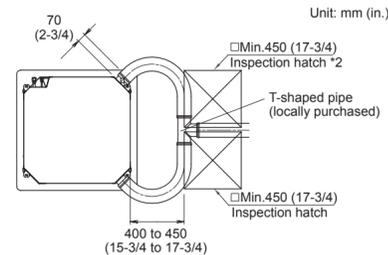
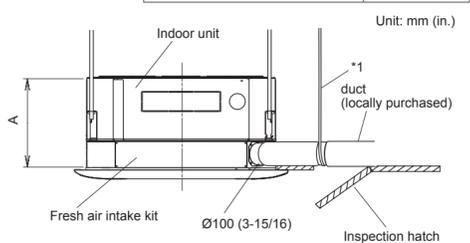
3.2. Installation dimension

WARNING

Install the air conditioner in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration. If the installation location is not strong enough, the indoor unit may fall and cause injuries.

If the job is done with the panel frame only, there is a risk that the unit will come loose. Please take care.

Type [Indoor unit height (mm (in.))]	A (mm (in.))
Standard type [288 (11-5/16)]	418 (16-1/2)
Slim type [246 (9-11/16)]	376 (14-13/16)



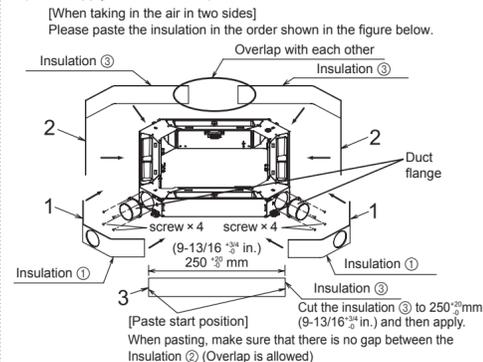
*1 Suspend T-shaped pipe-assembly parts securely. A gap is likely to form between the indoor unit and the fresh air intake kit due to weight of parts, including the T-shaped pipe-assembly.

*2 Please install the Inspection hatch (more than 450 mm × 450 mm (17-3/4 in. × 17-3/4 in.)). Install Inspection hatch on just one side when both are available.

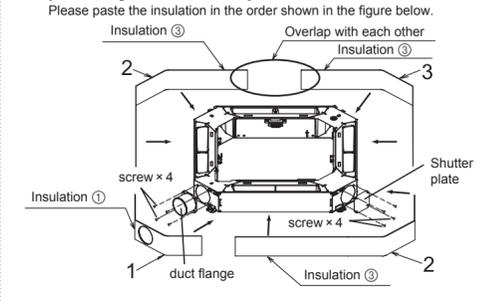
4. INSTALLATION OF THE FRESH AIR INTAKE KIT

4.1. Pre-installation preparations of fresh air intake kit

- Please attach the duct flange provided with screws.
- The fresh air intake kit can be used with an external air intake on just one side. Use included shutter plate to apply for different eye holes.
- Please apply Insulation ① to the installed duct flange parts (Do not apply to sealed areas).



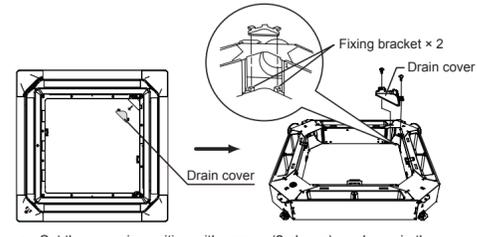
[When taking in the air in two sides]
Please paste the insulation in the order shown in the figure below.



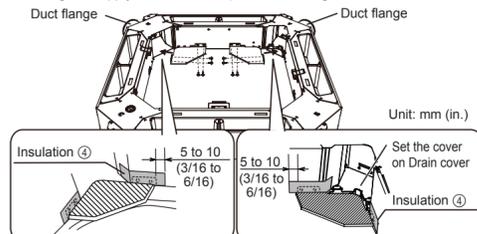
[When taking in the air in one side]
Please paste the insulation in the order shown in the figure below.



- Remove the drain cover attached to the cassette grille and install onto the fresh air intake kit.



- Set the cover in position with screws (2 places) as shown in the diagram. Apply the insulation ④ after installing the cover.



4.2. Provisional attachment

The wiring work for indoor unit. Please be sure to carry out the wiring work before installing the fresh air kit (inside and outside wiring cord, wireless remote controller cord, external output cord and etc.). (The wiring work after the installation may become difficult.)

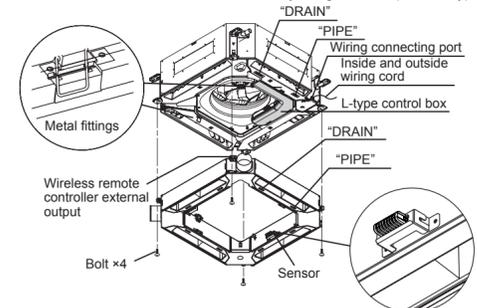
CAUTION

Installing the fresh air intake kit with the wrong direction is a cause of water leakage.

Provisionally attach the "DRAIN", "PIPE" of the fresh air intake kit to the indoor unit foam-sealed "DRAIN", "PIPE", following the direction of the indoor unit, using the metal fittings of the combined diagram.

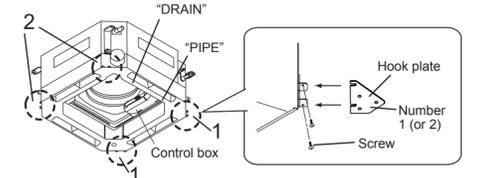
4.3. Attaching the fresh air intake kit

Attach the fresh air intake kit to the main body using the bolts (Accessory).



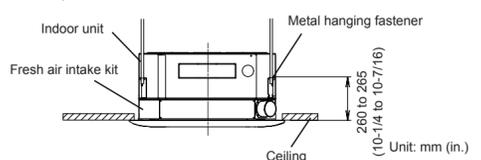
4.4. Attaching the hook plate

Attach the hook plate by each corner of the fresh air intake kit. (The attaching screws are attached to the body of the fresh air intake kit and must be loosened before installing)



4.5. Installing the indoor unit

- Please refer to the installation manual provided (accessory) for installing the indoor unit.
- Please refer to the diagram below for installation height.
- When installing this product to existing indoor units, please adjust the installation height of the indoor units to height 260-265mm (10-1/4 to 10-7/16 in.).



5. DUCT INSTALLATION

5.1. Pre-installation preparations

CAUTION

Procure a duct with internal diameter that fits the external diameter of the duct flange.

Please note that regulations of some countries may require the use of a nonflammable duct.

If the duct penetrates a fire-retarding division or other fire-proofing measures, the installation of fire dampers, or a construction that does not adversely affect fire control measures is a regulatory requirement of some countries.

When using metallic ducts please ensure metals (i.e., metal lath, wire lath, stainless sheeting) are electrically insulated. (A short occurring by electrical connection can cause fire)

Please ensure to thermally insulate connected ducts to prevent condensation.

Please make certain that netting or other measures are installed in parts exposed to the outside air to prevent infiltration of small animals such as birds and insects.

Please be certain to install external air filters to parts exposed to the outside air for heat exchanger protection of indoor equipment.

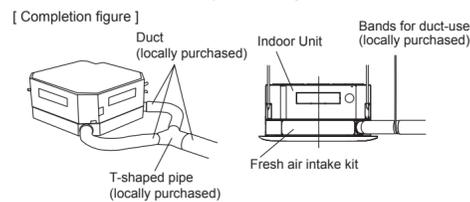
Please avoid the infiltration of rain water by installing outside ducts with an incline of at least 1/30, and fitting hoods on openings.

Be certain to use electric dampers and shutters to avoid infiltration of cold air, wind and fog during shutdown in areas with cold climates, strong winds, or where fogs are common.

5.2. Duct installation

- 1) Please fasten the connecting parts of the ducts with bands, and wrap with vinyl tape to ensure no air leaks. (Carry out the work to ensure no air leakage at a pressure of 200 Pa (0.03 psi))
- Please do not construct the duct in the manner of below.
 - Extreme bends
 - Highly repetitive bends
 - Making the connecting duct diameters smaller

- 2) When using T-shaped pipe, suspend the kit with suspension bands for duct-use to avoid unnecessary load bearing.

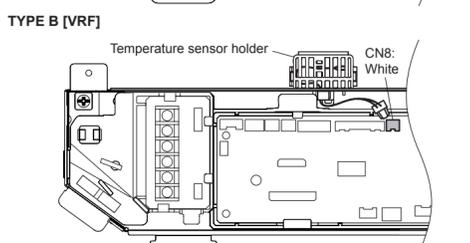
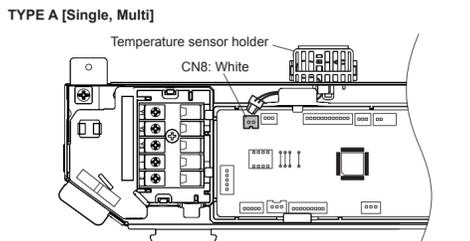


- Please refer to "7. INSTALLING THE DUCT FAN" when wiring is required for the duct fan.

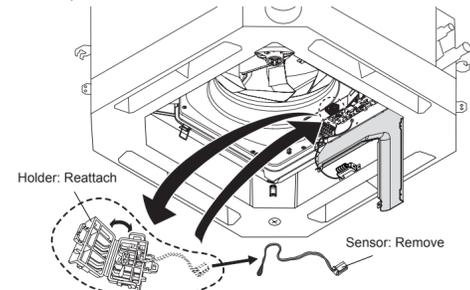
6. CASSETTE GRILLE INSTALLATION

6.1. Wiring procedure

- 1) Please remove the control box cover.
- 2) Remove the connector from the existing temperature sensor, found on the circuit board of the indoor unit.



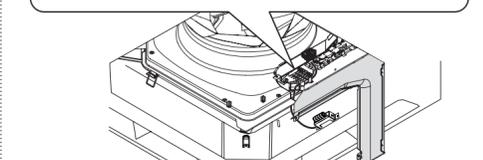
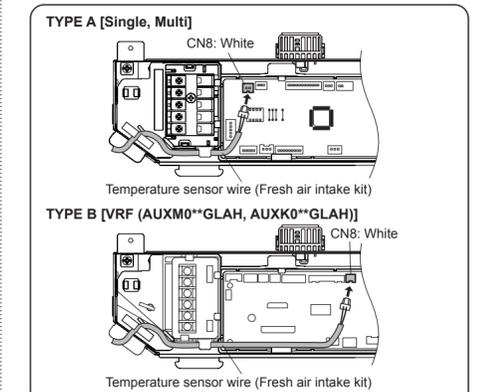
- 3) The existing temperature sensor will not be used so remove it from the sensor holder, and once more install the empty sensor holder (without sensor) in the control box.



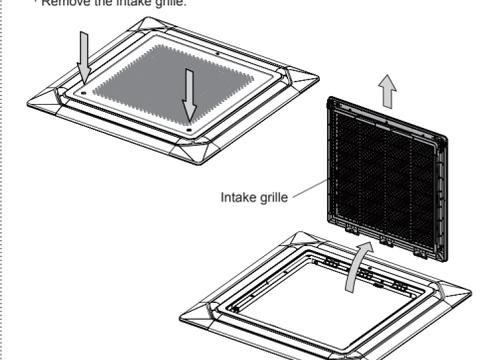
CAUTION

Please make sure to install the sensor holder inside the control box, as it is a fire hazard. Otherwise, it may cause fire.

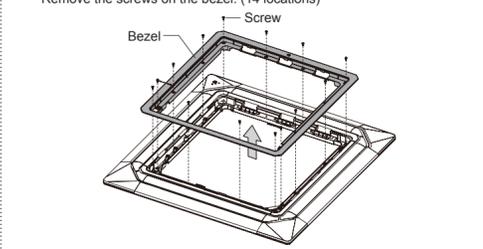
- 4) Insert the connector of the sensor attached to the Fresh air intake kit in the circuit board of the indoor unit.



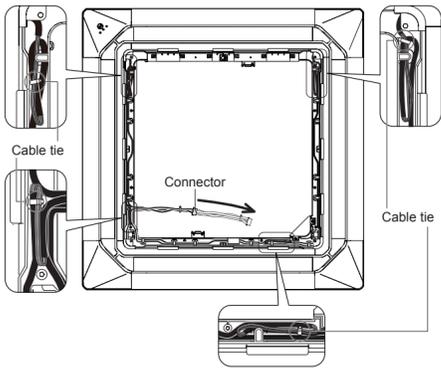
- 5) Prepare the cassette grille.
 - Remove the intake grille.



- Remove the screws on the bezel. (14 locations)

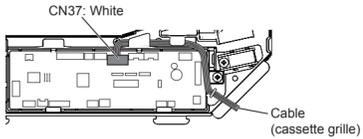


- Remove the existing cable tie. (4 locations)
- Pull out the connector.

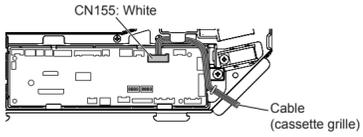


(6) Insert the connection to the circuit board of the indoor unit.

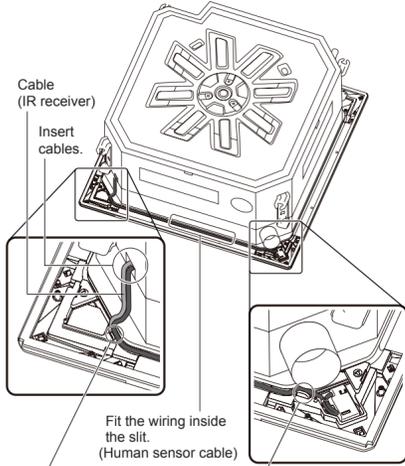
TYPE A [Single, Multi]



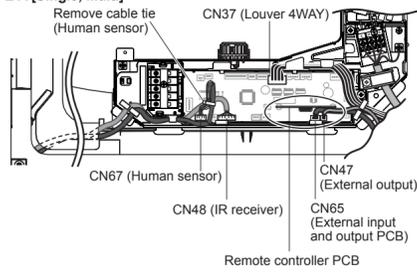
TYPE B [VRF]



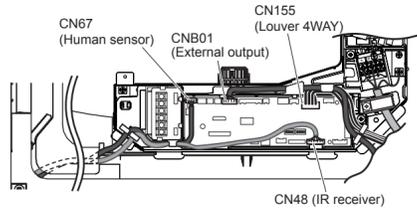
(7) When the IR receiver, human sensor is used in the installation, connect the cables and connectors as shown in the following figures.



TYPE A [Single, Multi]



TYPE B [VRF]



Note:
When wiring to the main PCB, it is possible to detach the remote controller PCB to ease the work.
After the wiring work is complete, be sure to replace it to its original position.
When using a duct fan refer to "7. INSTALLING THE DUCT FAN".

(8) Close the control box cover when the work is complete.
*Please do not pinch the wiring when installing.

6.2. Installation of cassette grille

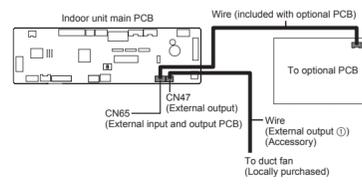
- Install according to the installation manual for Cassette grille.
- Be sure to confirm there is no gap between the panel and main unit after installing the Cassette grille.

7. INSTALLING THE DUCT FAN

7.1. Wiring method

Installations using the duct fan may be connected by using the indoor unit main PCB or a separate optional PCB.

7.1.1. TYPE A [Single, Multi]

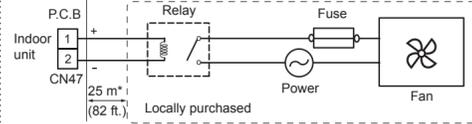


TYPE	Connector	Remarks
TYPE 1 [Indoor unit main PCB]	CN47	Wire (External output ①)
TYPE 2 [Optional PCB] UTY-XCSX (External input output PCB)		See installation manual of Optional PCB

[Indoor unit main PCB]

- A twisted pair cable (22AWG) should be used. Maximum length of cable is 25 m (82 ft.).
 - Output voltage: High DC 12 V \pm 2 V, Low 0 V.
 - Permissible current: 50 mA
 - Change the setting of Function number 60 to "Indoor unit fan operation status" (10).
- (For details, refer to the installation manual of "Indoor unit".)

• Connection diagram



*:Make the distance from the PC board to the Relay unit within 25 m (82 ft.).

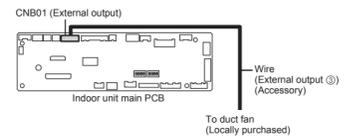
• Wire (External output ①)



[External input and output PCB]

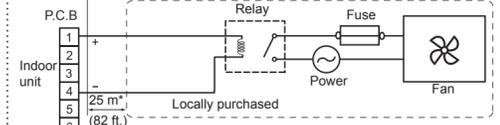
- A twisted pair cable (22AWG) should be used.
- Permissible voltage and current: DC 5 V to 30 V / 3 A, AC 30 V to 250 V / 3 A
- For details, refer to installation manual of "External input and output PCB".

7.1.2. TYPE B [VRF]



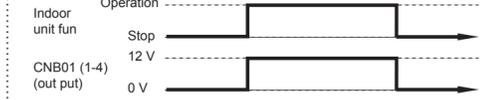
- You can control duct fan by synchronization with fan operation of indoor unit.
- Wire for fresh air control output is supplied with Fresh Air Intake Kit.
- Extended length of the wire : For VRF system Max. 25m (82 ft.)

• Connection diagram



*:Make the distance from the PC board to the Relay unit within 25 m (82 ft.).

• Connection diagram



• Wire (External output ③)

