

UTZ-WUZA-C
UTZ-WUZZB-C

Contents

1. SAFETY PRECAUTIONS.....	1
1.1. IMPORTANT! Please read before starting.....	1
1.2. Special precautions.....	1
2. PRODUCT SPECIFICATION.....	2
2.1. Installation tools.....	2
2.2. Accessories.....	2
2.3. Pipe requirement.....	2
3. INSTALLATION WORK.....	3
3.1. Dimensions.....	3
3.2. Pre-installation considerations.....	3
3.3. Wall sleeve installation.....	4
4. MAINTENANCE.....	8

1. SAFETY PRECAUTIONS

1.1. IMPORTANT! Please read before starting

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

For safe installation and trouble-free operation, you must:

- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.

WARNING:

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

CAUTION:

This symbol refers to a hazard or unsafe practice which can result in personal injury and the potential for product or property damage.

- Hazard alerting symbols



Electrical



Safety/alert

If Necessary, Get Help

These instructions are all you need for most installation sites and maintenance conditions.

If you require help for a special problem, contact our sales/service outlet or your certified dealer for additional instructions.

In Case of Improper Installation

The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in this document.

1.2. Special precautions

When Wiring

ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY A QUALIFIED, EXPERIENCED ELECTRICIAN SHOULD ATTEMPT TO WIRE THIS SYSTEM.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate earthing (grounding) can cause accidental injury or death.
- Ground (Earth) the unit following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.

When Transporting

Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your fingers.

When Installing...

...In a Ceiling or Wall

Make sure the ceiling/wall is strong enough to hold the unit's weight. It may be necessary to construct a strong wood or metal frame to provide added support.

...In a Room

Properly insulate any tubing run inside a room to prevent "sweating" that can cause dripping and water damage to walls and floors.

When Connecting Refrigerant Tubing

- Keep all tubing runs as short as possible.
- Use the flare method for connecting tubing.
- Apply refrigerant lubricant to the matching surfaces of the flare and union tubes before connecting them, then tighten the nut with a torque wrench for a leak-free connection.
- Check carefully for leaks before opening the refrigerant valves.

NOTE:

Depending on the system type, liquid and gas lines may be either narrow or wide. Therefore, to avoid confusion the refrigerant tubing for your particular model is specified as either "small" or "large" rather than as "liquid" or "gas".

When Servicing

- Turn the power OFF at the main circuit breaker panel before opening the unit to check or repair electrical parts and wiring.
- Keep your fingers and clothing away from any moving parts.
- Clean up the site after you finish, remembering to check that no metal scraps or bits of wiring have been left inside the unit being serviced.
- After installation, explain correct operation to the customer, using the operation manual.

WARNING

- To avoid getting an electric shock, never touch the electrical components soon after the power supply has been turned off. After turning off the power, always wait 10 minutes or more before you touch the electrical components.
- Installation of this product must be done by experienced service technicians or professional installers only in accordance with this manual. Installation by nonprofessional or improper installation of the product might cause serious accidents such as injury, water leakage, electric shock, or fire. If the product is installed in disregard of the instructions in this 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 an electric shock or a fire.
- If refrigerant leaks when you are working, ventilate the area. If the leaking refrigerant is exposed to a direct flame, it may produce a toxic gas.
- Installation must be performed in accordance with regulations, codes, or standards for electrical wiring and equipment in each country, region, or the installation place.
- Do not use this equipment with air or any other unspecified refrigerant in the refrigerant lines. Excess pressure can cause a rupture.
- During installation, make sure that the refrigerant pipe is attached firmly before you run the compressor. Do not operate the compressor under the condition of refrigerant piping not attached properly with 2-way or 3-way valve open. This may cause abnormal pressure in the refrigeration cycle that leads to rupture and even injury.
- When installing or relocating the air conditioner, do not mix gases other than the specified refrigerant (R410A) to enter the refrigerant cycle.
- If air or other gas enters the refrigerant cycle, the pressure inside the cycle will rise to an abnormally high value and cause rupture, injury, etc.
- For appropriate working of the air conditioner, install it as written in this manual.
- To connect indoor unit and outdoor unit, or indoor unit, use air conditioner piping and cables available through your local distributor. This manual describes proper connections using such installation set.
- Do not modify power cable, use extension cable or branch wiring. Improper use may cause electric shock or fire by poor connection, insufficient insulation or over current.
- Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation.
- There is no extra refrigerant in the outdoor unit for air purging.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that refrigerants may not contain an outdoor.
- Using the same vacuum pump for different refrigerants may damage the vacuum pump or the unit.
- Use a clean gauge manifold, vacuum pump and charging hose for R410A exclusively.
- During the pump-down operation, make sure that the compressor is turned off before you remove the refrigerant piping.
- Do not remove the connection pipe while the compressor is in operation with 2-way or 3-way valve open. This may cause abnormal pressure in the refrigeration cycle that leads to rupture and even injury.
- Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

⚠ CAUTION

- This unit must be installed by qualified personnel with a capacity certification of handling refrigerant fluids. Refer to regulation and laws in use on installation place.
- Install the unit by following local codes and regulations in force at the place of installation, and the instructions provided by the manufacturer.
- This unit is part of a set constituting an air conditioner. The unit must not be installed alone or be installed with non-authorized device by the manufacturer.
- When installing pipes shorter than 6 ft (2 m), sound of the outdoor unit will be transferred to the indoor unit, which will cause large operating sound or some abnormal sound.
- To protect the persons, earth(ground) the unit correctly, and use the power cable combined with an Earth Leakage Circuit Breaker (ELCB).
- The units are not explosion proof, and therefore should not be installed in explosive atmosphere.
- This unit contains no user-serviceable parts. Always consult experienced service technicians for repairing.
- When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
- Children should be monitored to ensure they do not play with the device.
- 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.
- Do not touch the aluminum fins of heat exchanger built-in the indoor or outdoor unit to avoid personal injury when you install or maintain the unit.
- Do not place any other electrical products or household belongings under indoor unit or sleeve. Condensation dripping from the unit might get them wet, and may cause damage or malfunction of your property.
- Do not open the hole at the sleeve to prevent water and air leak. (except for fixing the sleeve at the wall with screws)

2. PRODUCT SPECIFICATION

- This product is manufactured to metric units and tolerances. United States customary units are provided for reference only. In cases where exact dimensions and tolerances are required, always refer to metric units.

2.1. Installation tools

⚠ WARNING

To install a unit that uses R410A refrigerant, use dedicated tools and piping materials that have been manufactured specifically for R410A use. Because the pressure of R410A refrigerant is approximately 1.6 times higher than R22, failure to use dedicated piping material or improper installation can cause rupture or injury. Furthermore, it can cause serious accidents such as water leakage, electric shock, or fire.

Tool name	Change from R22 to R410A
Gauge manifold	Pressure is high and cannot be measured with a conventional (R22) gauge. To prevent erroneous mixing of other refrigerants, the diameter of each port has been changed. It is recommended the gauge with seals -30 inHg to 768 psi (-0.1 to 5.3 MPa) for high pressure. -30 inHg to 551 psi (-0.1 to 3.8 MPa) for low pressure.
Charge hose	To increase pressure resistance, the hose material and base size were changed.(R410A)
Vacuum pump	A conventional vacuum pump can be used by installing a vacuum pump adapter. (Use of a vacuum pump with a series motor is prohibited.)
Gas leakage detector	Special gas leakage detector for HFC refrigerant R410A.

■ Copper pipes

It is necessary to use seamless copper pipes and it is desirable that the amount of residual oil is less than 0.004 oz / 100 ft (40 mg/10 m). Do not use copper pipes having a collapsed, deformed or discolored portion (especially on the interior surface). Otherwise, the expansion valve or capillary tube may become blocked with contaminants. As an air conditioner using R410A incurs pressure higher than when using conventional refrigerant, it is necessary to choose adequate materials.

Thicknesses of Annealed Copper Pipes

Nominal diameter (in)	Outer diameter (mm)	Thickness [in(mm)]
1/4	6.35	0.031 (0.80)
3/8	9.52	

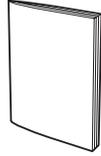
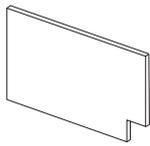
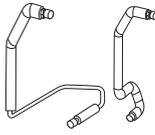
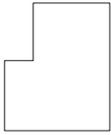
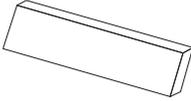
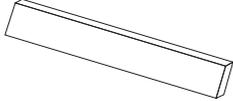
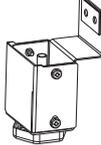
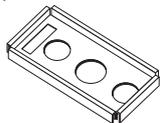
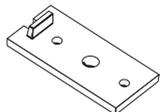
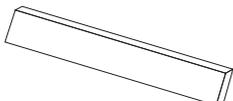
2.2. Accessories

⚠ 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 supplied. 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.

This unit is designed to be installed through the wall in new or existing buildings. A specified outdoor grille is required to complete the installation of this product. The specified outdoor grille must be purchased locally. The chassis and front cabinet are shipped in a single carton. Optional accessories to complete a particular installation are as follows:

Name and Shape	Qty	Name and Shape	Qty
Installation manual (This manual) 	1	Sleeve insulation A 	1
Accessory pipe 	2	Sleeve insulation B 	1
Pipe insulation (T10 1-3/16 x 4-3/4 in [30 x 120 mm]) 	3	Ground wire 	1
Conduit insulation (T15 1-3/16 x 8-11/16 in [30 x 220 mm]) 	2	Drain pipe 	1
Leveling leg 	2	Seal material (13/16 x 13/16 in [20 x 20 mm]) 	2
Self-tapping screw (10 mm) 	4	Drain plate 	1
Self-tapping screw (4 mm) 	2	Rubber seal material 	1
Outer insulation* (T30 13/16 x 13-3/8 in [20 x 340 mm]) * : UTZ-WUZB-C only 	1		

One set of following parts are necessary installation of this product.

Additional materials			
Connection pipe assembly	Decorative tape	Saddle	Self-tapping screws
Connection cable	Vinyl tape	Drain hose	Sealant
Wall pipe	Wall cap	M10 bold, nut	

2.3. Pipe requirement

2.3.1 Protection of pipes

- Protect the pipes to prevent the entry of moisture and dust.
- Especially, pay attention when passing the pipes through a hole or connecting the end of a pipe to the outdoor unit.

Location	Location	Protection method
Outdoor	1 month or more	Pinch pipes
	Less than 1 month	Pinch or tape pipes
Indoor	-	Pinch or tape pipes

2.3.2 Refrigerant pipe size and allowable piping length

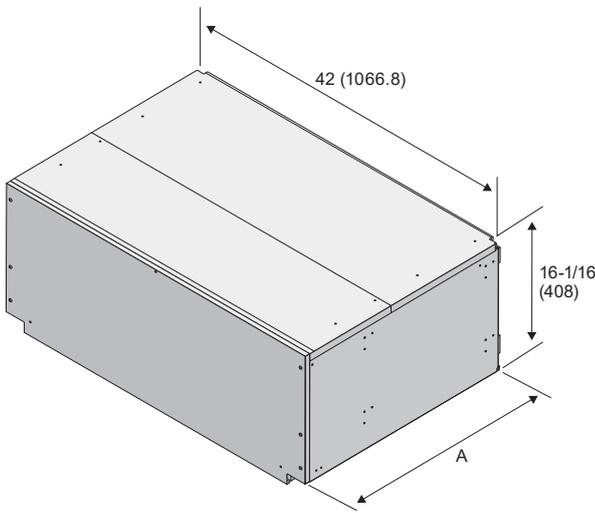
CAUTION		
<ul style="list-style-type: none"> Keep the piping length between the indoor unit and outdoor unit within the allowable tolerance. The maximum lengths of this product are shown in the table. If the units are further apart than this, correct operation cannot be guaranteed. 		
Pipe diameter <Liquid/Gas>	[in (mm)]	1/4 (6.35) / 3/8 (9.52)
Max. piping length (L)	[ft (m)]	24 (7.5)
Max. height difference (H) <Indoor unit to outdoor unit>	[ft (m)]	9 (3)
View (Example)		

3. INSTALLATION WORK

3.1. Dimensions

Figure 1 Wall Sleeve Dimensions

Unit: in (mm)



Model	A
UTZ-WUZA-C	27-7/16 (697)
UTZ-WUZH-C	22-11/16 (577)

Figure 2 Minimum Wall Opening Dimensions

Unit: in (mm)

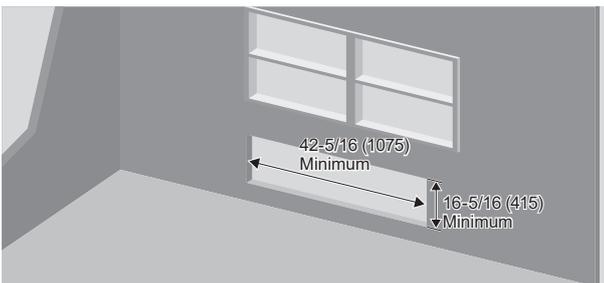


Figure 3 Minimum Unit Clearances

Unit: in (mm)

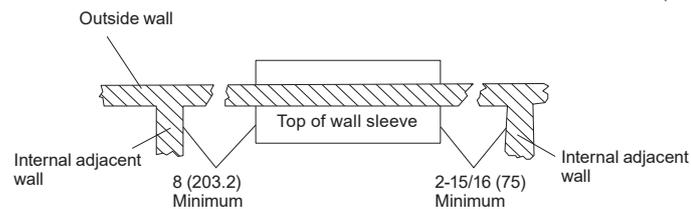
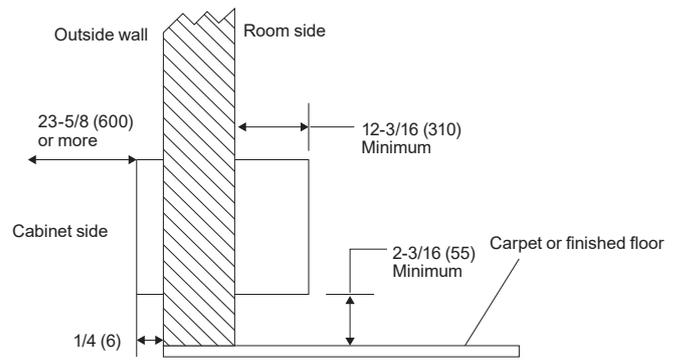


Figure 4 Minimum Interior and Exterior

Unit: in (mm)



3.2. Pre-installation considerations

Before installing the sleeve, check that the following guidelines are satisfied to specify the location of wall opening and sleeve.

- The size of wall opening must be correct. For sleeve dimensions, refer to Figure 1. For opening dimensions, refer to Figure 2. Do not distort the shape of sleeve according to the wall opening.
- For the clearance between sleeve and floor and the projection to indoor side, minimum dimensions are defined. For outdoor use, do not place any obstacles around the sleeve, and keep the necessary clearance. For details, refer to Figures 3 and 4.
- When installing at concrete or masonry wall, use the lintel to reinforce it. Do not use the sleeve as a lintel. For the typical lintel construction, refer to Figure 5.
- When installing the sleeve at opening, front to back and right to left must be made level to drain the condensed water properly.
- The installer must purchase the mounting bolts or screws locally to install the sleeve at the side of wall opening. Check that the strength of wall is sufficiently high.
- The installer must provide adequate sealing and insulation around the sleeve of both indoor and outdoor side after the sleeve is installed.
- Power must be supplied from the distribution board (disconnect switch). For the wiring example, refer to Figure 6. Do not make holes to sleeve to fix the disconnect switch to prevent the water and air leak from inside of sleeve.

Figure 5 Framing with Lintel

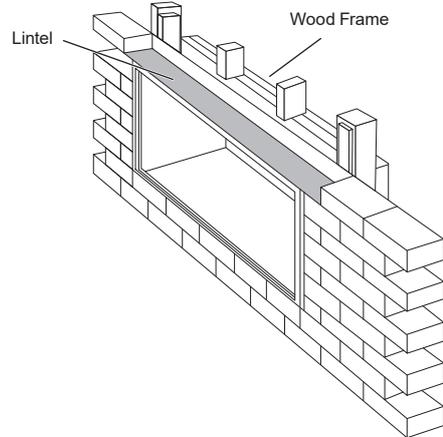
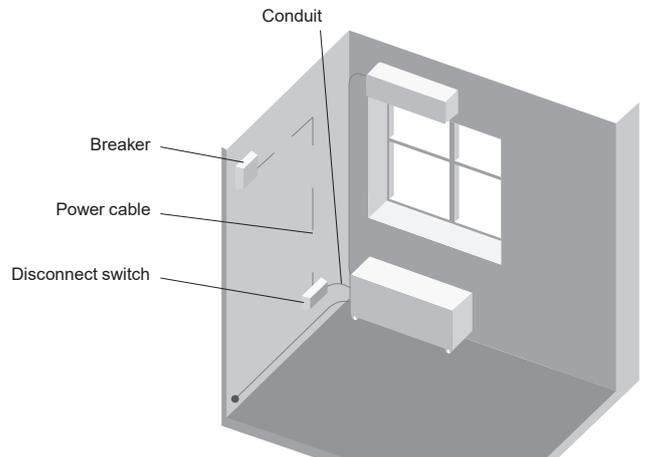


Figure 6 Power Connection

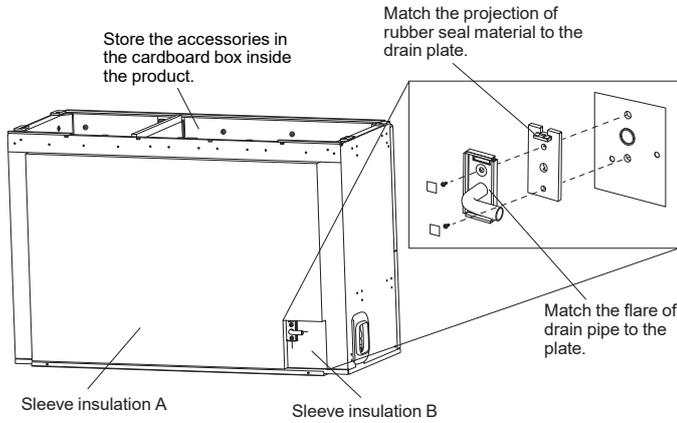


3.3. Wall sleeve installation

1. Drain pipe installation

- Install to the sleeve using drain pipe, drain plate, rubber seal material, seal material (13/16 × 13/16 in. [20 × 20 mm]), and self-tapping screw (14 mm). (Refer to Figure 7)
- Remove these parts from the accessory packaging inside the sleeve and attach them.
- Tighten the drain pipe with the self-tapping screw at the specified torque (2.0 N•m or more)

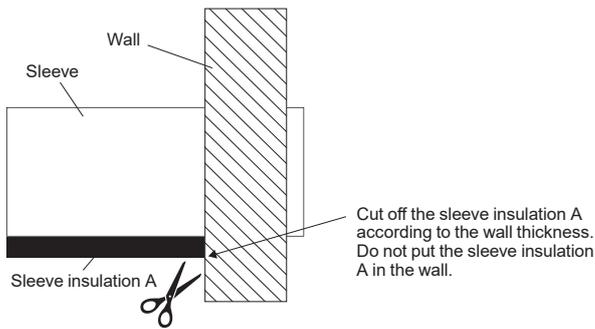
Figure 7 Treatment of sleeve lower surface



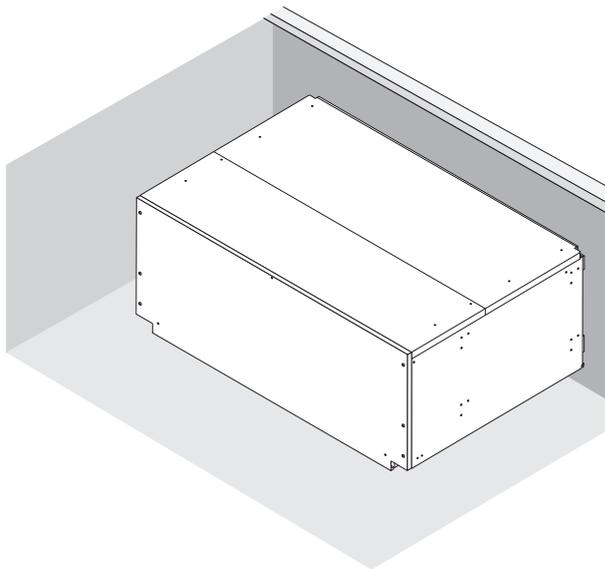
2. Attaching the insulation to the sleeve lower surface

- Attach the Sleeve insulation A and Sleeve insulation B along the drain plate. (Refer to Figures 7 and 8)
- * Cut out the sleeve lower surface insulation to match the wall thickness.

Figure 8 Sleeve insulation installation



3. Inserting the sleeve into the wall

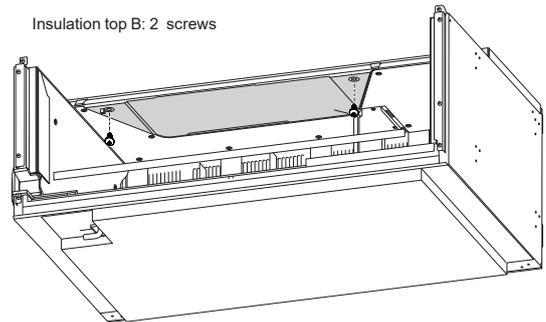
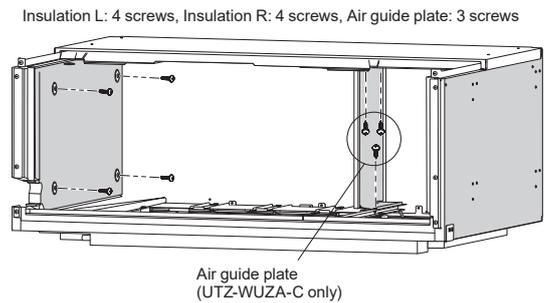
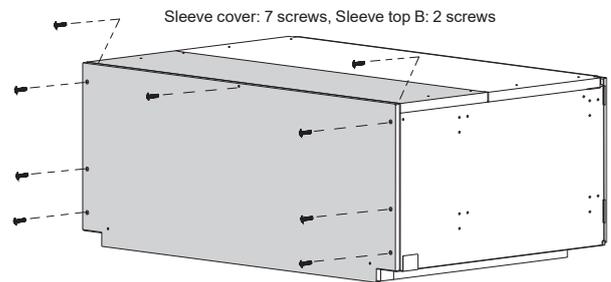
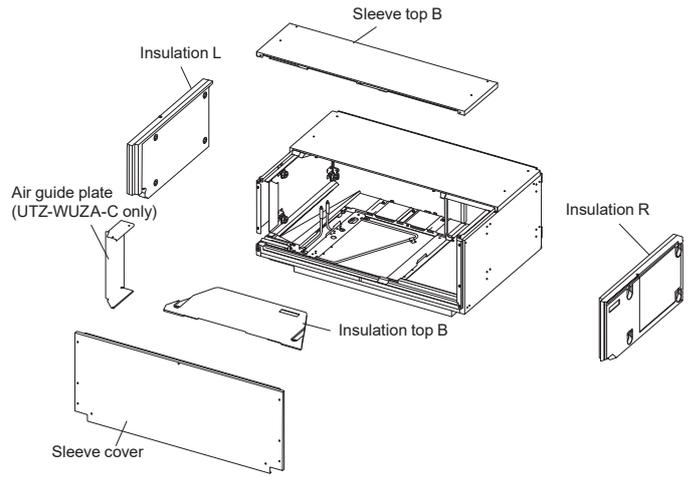


When the location, size, and clearance of wall opening are satisfied, perform the following procedures.

- (1) Slide the sleeve into the wall opening.
- (2) Install the sleeve to meet the requirements of Figures 3 and 4.
- (3) Check that the front to back and right to left of sleeve are made level.
- (4) Fix to the wall.
- (5) Install the outdoor unit.
- (6) Seal or caulk.

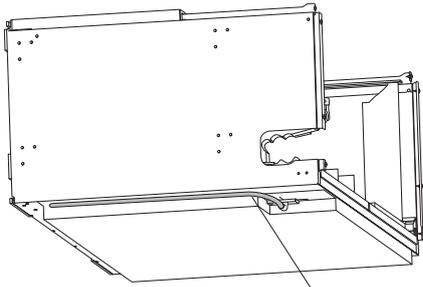
4. Removing the sleeve cover, sleeve top B, insulation top B, insulation L, insulation R and air guide plate

- * The parts used are different between UTZ-WUZA-C and UTZ-WUZB-C. (Refer to the figure below for details.)
- Remove the following accessories.



5. Sleeve drain installation

- Connect the drain hose (locally purchased) to the drain pipe (copper pipe). Maximum 1.8 l/h discharged water may flow. After connection, check that the discharged water flows properly.
- Do not drain outdoors.
- Insulate the drain pipe side to prevent freezing.

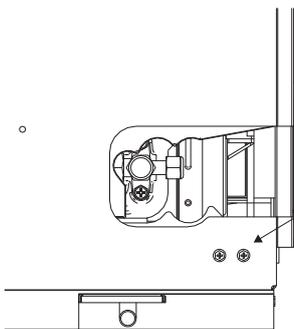
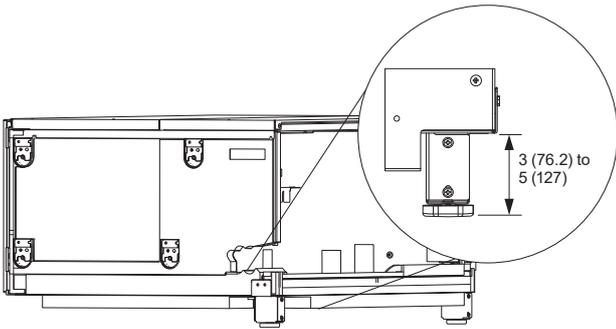


Securely fix the drain hose.
Insulate the drain pipe to prevent condensation.

6. Leveling leg installation and level measurement.

- Adjust the height and keep the level at both ends of the front and rear.
In order for condensate water to drain properly inside the unit, the sleeve must be installed properly.
- If the height is beyond the adjusting range of leveling leg, adjust it using a pedestal.
- When leveling leg is not used, mount the leveling leg fixing screws to cover the screw hole. Otherwise, water leak may occur.
- Check that sleeve is level. For proper drain, front to back and right to left must be made level.
- Fasten the leveling leg fixing screws with the specified torque. (2.0 N•m or more)

Unit: in (mm)

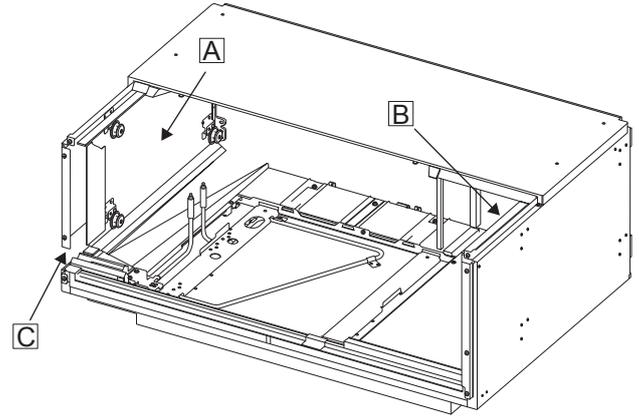


Even if the leveling leg is not used, firmly mount the fixing screws to prevent water leak. (2 places, right and left)
Tightening torque: 2.0 N•m or more

7. Screwing the sleeve to the wall (Screws are locally purchased.)

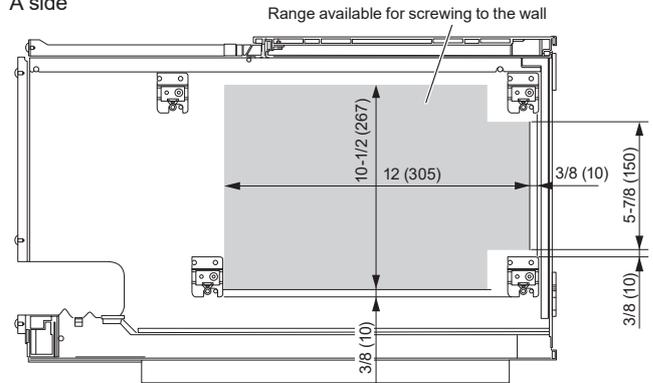
- Local drilling: 2 pcs × 2 places, Screwing: 2 pcs × 2 places
- To install to the wall, two holes must be drilled on both sides of the sleeve. Drill the holes of proper size and in the proper place so that the screws engage into strong supporting members of the wall. In addition, make sure that the place is within the screw allowable range in the sleeve. Do not drill through the bottom of the sleeve.

Figure 10

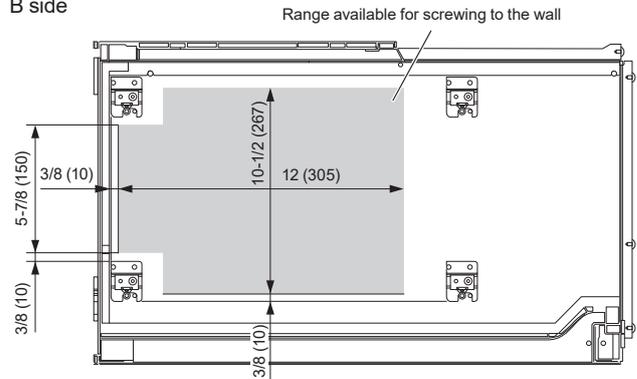


Unit: in (mm)

A side

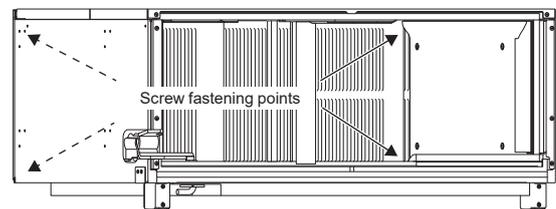


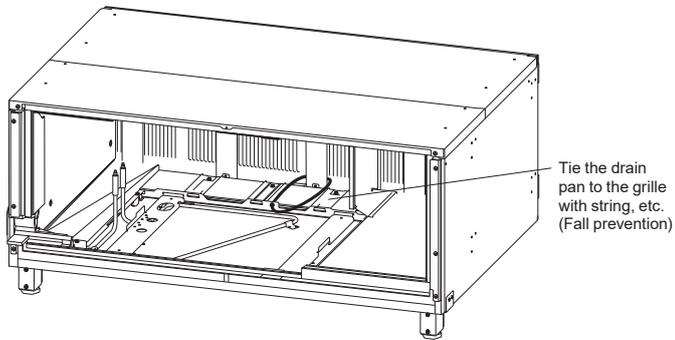
B side



8. Rear grille installation

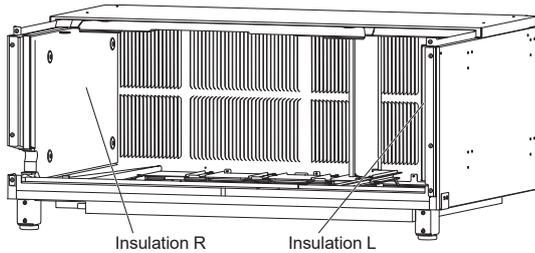
- Fix the grille to the sleeve by screwing at 4 places.
- Rear grille and screws are locally purchased.
- Rear grille must be installed before installing the outdoor unit. For the details of installation procedure, refer to the installation procedure manual attached to outdoor grille kit.
- An improper outdoor grille can reduce cooling or heating capacity, increase energy usage, shorten compressor life, and void the warranty.
(For the proper outdoor grille, refer to the Design & Technical manual.)
- To prevent the grille from falling, pass the string, etc. through the drain pan hole and connect it to the grille. Be careful that the string does not touch the heater or get caught in the outdoor unit.





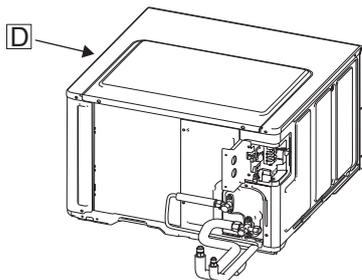
9. Air guide plate and insulation L/R installation

- Install the air guide plate, insulation L and insulation R with screws.



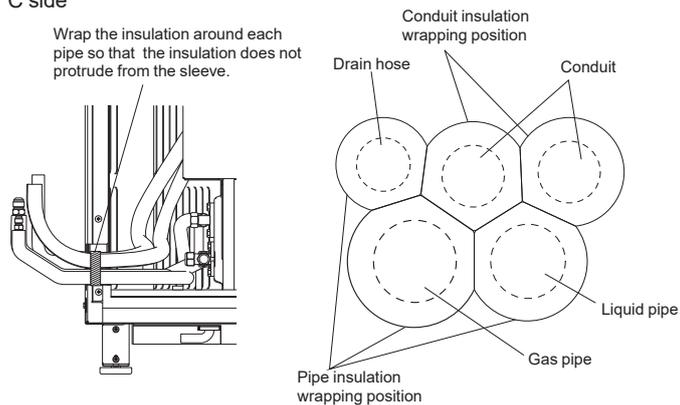
10. Installing the accessory pipe to the outdoor unit

- Install the accessory pipe to the outdoor unit. Wrap the attached Pipe insulation and Conduit insulation around each pipe.
- There are two types of insulation. Wrap the insulation suitable for the pipe.
- Adjust the knockout drawing part to make it level.



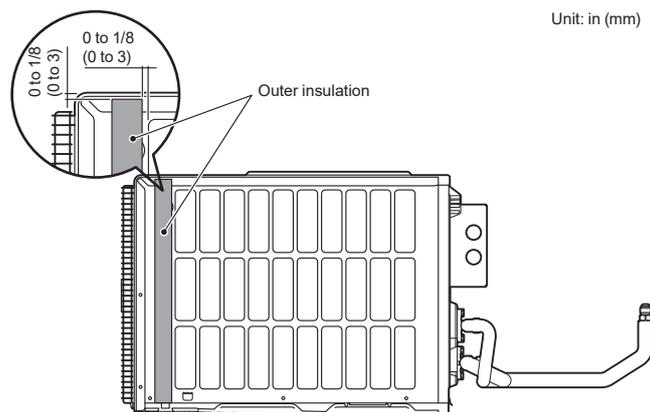
C side

Wrap the insulation around each pipe so that the insulation does not protrude from the sleeve.



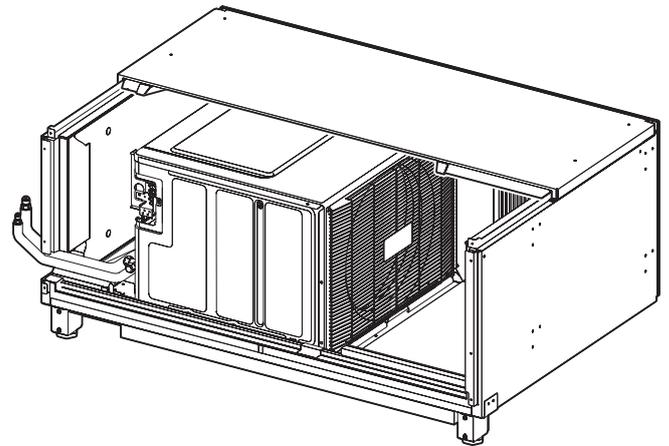
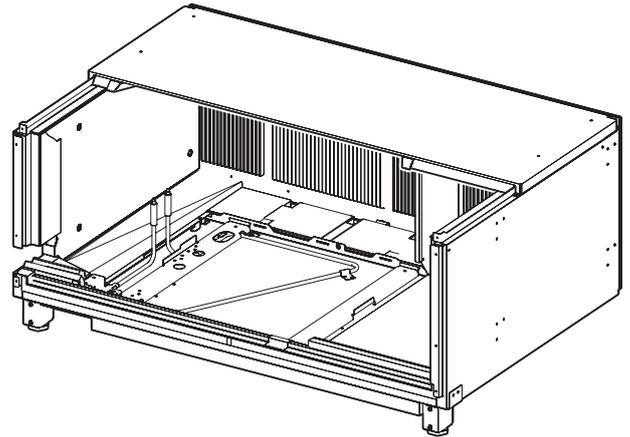
D side (UTZ-WUZB-C only)

Unit: in (mm)



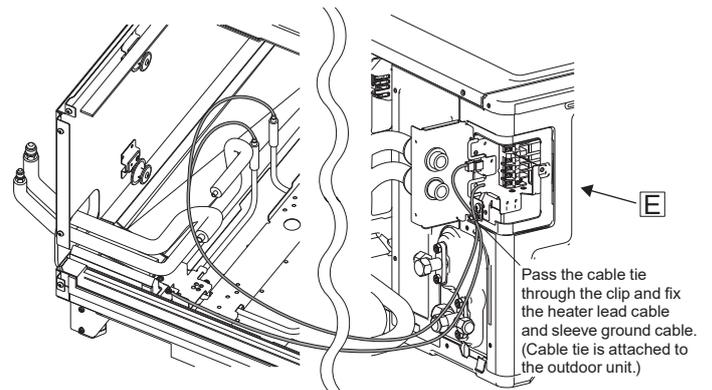
11. Installing the outdoor unit into the sleeve

- Put the outdoor unit in front of the sleeve. Slide and store it to the fixed position.
- After storing to the sleeve, connect the conduit cable.
- When installing the outdoor unit, be careful not to get the heater cable caught in.

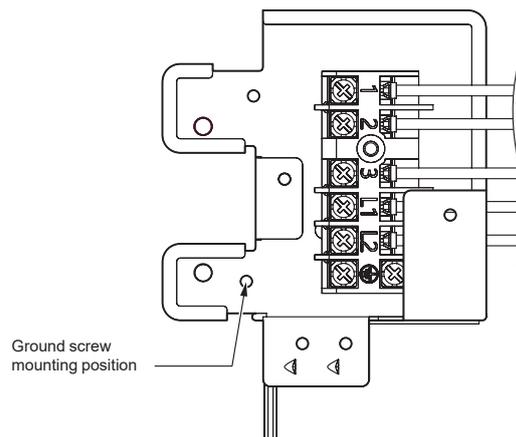


12. Connecting the sleeve ground cable and heater lead cable

- Heater lead cable: Connect it to the relay connector of terminal block fixture.
- Sleeve ground cable: Screw it to the terminal block fixture and EPS fixture.



E side

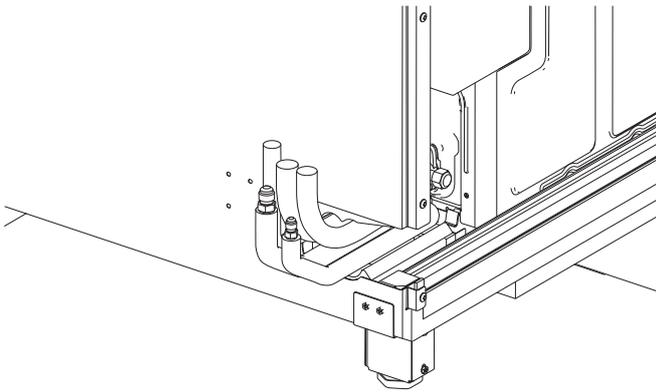
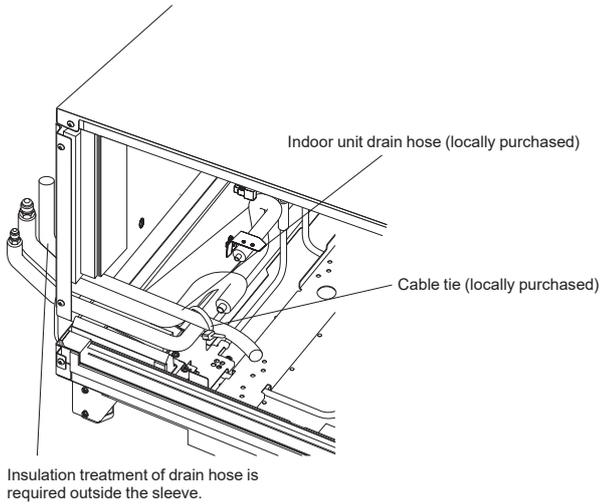


13. Installing the indoor unit

- For the details of indoor unit installation work, refer to the indoor unit installation manual.

14. Connecting the connection pipe, serial line, conduit, and indoor unit drain hose

- Connect the connection pipe, serial line, conduit, and indoor unit drain hose.
- Adjust the length so that the tip end of indoor unit drain hose reaches the sleeve drain pan. In addition, fix the position of drain hose tip end and connecting pipes with cable tie (locally purchased) to avoid the contact with heater.
- There are two types of insulation. Wrap the insulation suitable for the conduit and drain hose.
- When the drain hose is not passed through the sleeve, block the wind using additional insulation (locally purchased) to prevent the sleeve from having holes in its sides.
- Insulation (locally purchased) must be added to the drain hose outside the sleeve to prevent the condensation.
- * For details on connecting the wire to the outdoor unit, refer to the outdoor unit installation manual.



15. Connecting the power cable to the disconnect switch

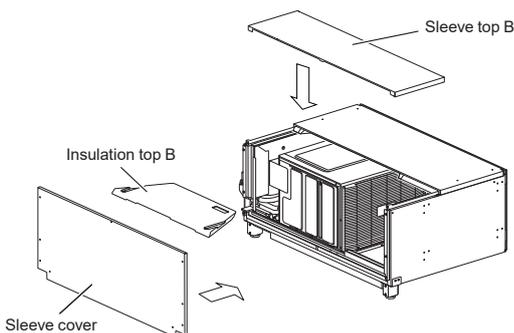
- Connect the line from the breaker and the line from the outdoor unit to each switch.

16. Vacuuming and opening 3-way valve

- For the details of work, refer to the outdoor unit installation manual.
- * After these works, proceed test run according to the outdoor unit installation manual.

17. Installing the insulation top B, sleeve top B, and sleeve cover

- Install in the order of insulation top B, sleeve top B, and sleeve cover.



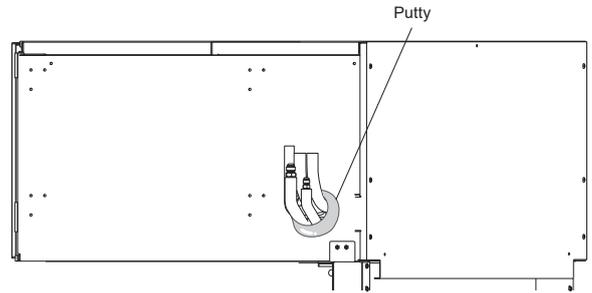
18. Caulking the gap between the sleeve and the wall

NOTE:

Caulk the gap between the sleeve and the wall both indoors and outdoors. Otherwise, water leak may occur.

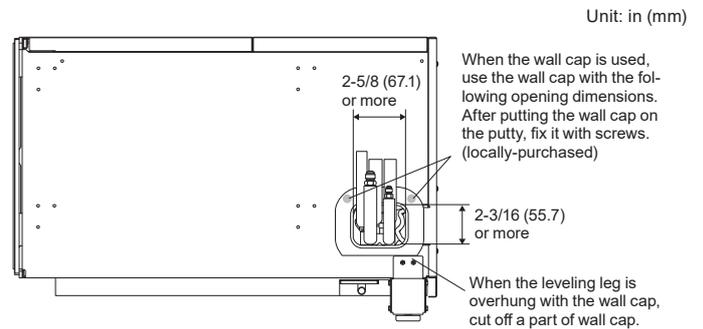
19. Applying the putty at the knockout part

- Apply the putty around the pipe to block wind and prevent water leakage at the knockout part.



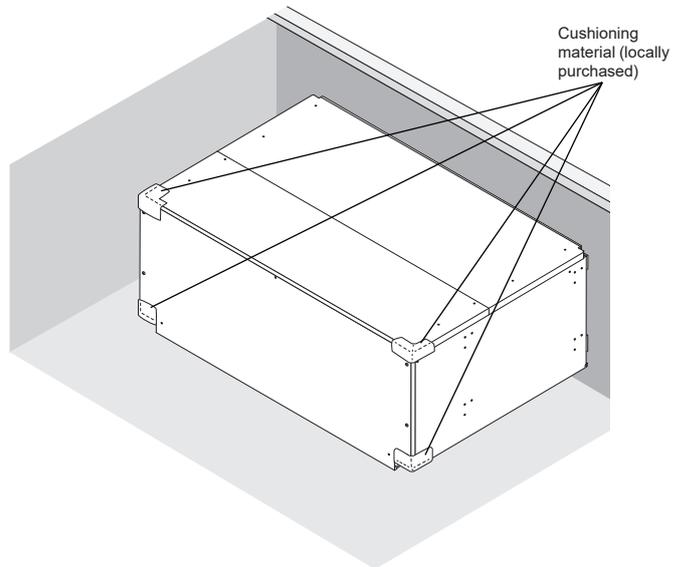
20. Filling the knockout gaps with putty (Manufacture recommended)

- Depending on the situation, install the decorative cover. (locally purchased)



21. Mounting the cushioning material at the corner of the sleeve (Manufacture recommended)

- After the installation work is complete, mounting the cushioning material (locally purchased) at the corner of the sleeve to prevent the user from being injured.



4. MAINTENANCE

• Check the clogged dust inside the drain hose.

- (1) Stop the unit operation and turn off the disconnect switch.
- (2) Remove the 7 screws and remove the sleeve cover.
- (3) Remove the 2 screws and remove the drain cover.
- (4) Check the clogged dust around drain port and remove the dust.

For the installation procedure, perform in the order of (3) to (1).

