TOSHIBA

INSTALLATION MANUAL AIR CONDITIONER (SPLIT TYPE)



Indoor unit RAS-M05, 07PKVSG-E R32

INVERTER

ENGLISH

ESPAÑOL

FRANÇAIS

ITALIANO

DEUTSCH

PORTUGUÊS

POLSKI

ČESKY

РУССКИЙ

HRVATSKI

MAGYAR

NEDERLANDS

ΕΛΛΗΝΙΚΑ

SVENSKA

SUOMI

NORSK

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БЪЛГАРСКИ

EESTI

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LIETUVIŲ



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PRECAUTIONS FOR SAFETY



Read the precautions in this manual carefully before operating the unit.



This appliance is filled with R32.

- Before installation, please read these precautions for safety carefully.
- Be sure to follow the precautions provided here to avoid safety risks. The symbols and their meanings are shown below.

WARNING: It indicates that incorrect use of this unit may cause severe injury or death.

CAUTION: It indicates that incorrect use of this unit may cause personal injury (*1), or property damage (*2).

- *1: Personal injury means a slight accident, burn, or electrical shock which does not require admission or repeated hospital treatment.
- *2: Property damage means greater damage which affects assets or resources.

For general public use

Power supply cord and connecting cable of appliance use shall be at least polychloroprene sheathed flexible cord (design H07RN-F) or cord designation 60245 IEC66. (Shall be installed in accordance with national wiring regulations.)

CAUTION To disconnect the appliance from the main power supply

This appliance must be connected to the main power supply by means of a circuit breaker or a switch with a contact separation of at least 3 mm in all poles.

DANGER

- FOR USE BY QUALIFIED PERSONS ONLY.
- TURN OFF MAIN POWER SUPPLY BEFORE ATTEMPTING ANY ELECTRICAL WORK. MAKE SURE ALL POWER SWITCHES ARE OFF. FAILURE TO DO SO MAY CAUSE ELECTRIC SHOCK.
- CONNECT THE CONNECTING CABLE CORRECTLY. IF THE CONNECTING CABLE IS CONNECTED WRONGLY, ELECTRIC PARTS MAY BE DAMAGED.
- CHECK THE EARTH WIRE THAT IT IS NOT BROKEN OR DISCONNECTED BEFORE INSTALLATION.
- DO NOT INSTALL NEAR CONCENTRATIONS OF COMBUSTIBLE GAS OR GAS VAPORS.
 - FAILURE TO FOLLOW THIS INSTRUCTION CAN RESULT IN FIRE OR EXPLOSION.
- TO PREVENT OVERHEATING THE INDOOR UNIT AND CAUSING A FIRE HAZARD, PLACE THE UNIT WELL AWAY (MORE THAN 2 M) FROM HEAT SOURCES SUCH AS RADIATORS, HEATERS, FURNACE, STOVES, ETC.
- WHEN MOVING THE AIR CONDITIONER FOR INSTALLING IT IN ANOTHER PLACE AGAIN, BE VERY CAREFUL NOT TO GET THE SPECIFIED REFRIGERANT (R32) WITH ANY OTHER GASEOUS BODY INTO THE REFRIGERATION CYCLE. IF AIR OR ANY OTHER GAS IS MIXED IN THE REFRIGERANT, THE GAS PRESSURE IN THE REFRIGERATION CYCLE BECOMES ABNORMALLY HIGH AND IT RESULTINGLY CAUSES BURST OF THE PIPE AND INJURIES ON PERSONS.
- IN THE EVENT THAT THE REFRIGERANT GAS LEAKS OUT OF THE PIPE DURING THE INSTALLATION WORK, IMMEDIATELY LET FRESH AIR INTO THE ROOM. IF THE REFRIGERANT GAS IS HEATED BY FIRE OR SOMETHING ELSE, IT CAUSES GENERATION OF POISONOUS GAS.

WARNING

- Never modify this unit by removing any of the safety guards or bypassing any of the safety interlock switches.
- Do not install in a place which cannot bear the weight of the unit. Personal injury and property damage can result if the unit falls.
- Before doing the electrical work, attach an approved plug to the power supply cord.
 - Also, make sure the equipment is properly earthed.
- Appliance shall be installed in accordance with national wiring regulations.
 If you detect any damage, do not install the unit. Contact your dealer immediately.

- Do not use any refrigerant different from the one specified for complement or replacement.
 - Otherwise, abnormally high pressure may be generated in the refrigeration cycle, which may result in a failure or explosion of the product or an injury to your body.
- 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).
- Be aware that refrigerants may not contain an odour.
- Do not pierce or burn as the appliance is pressurized. Do not expose the appliance to heat, flame, sparks, or other sources or ignition. Else, it may explode and cause injury or death.
- For R32 model, use pipes, flare nut and tools which is specified for R32 refrigerant. Using of existing (R22) piping, flare nut and tools may cause abnormally high pressure in the refrigerant cycle (piping), and possibly result in explosion and injury.
- Thickness of copper pipes used R32 must be more than 0.8mm. Never use copper pipes thinner than 0.8mm.
- Do not perform flare connection inside a building or dwelling or room, when
 joining the heat exchanger of indoor unit with interconnection piping. Refrigerant
 connection inside a building or dwelling or room must be made by brazing or
 welding. Joint connection of indoor unit by flaring method can only be made
 at outdoor or at outside of building or dwelling or room. Flare connection may
 cause gas leak and flammable atmosphere.
- After completion of installation or service, confirm there is no leakage of refrigerant gas. It may generate toxic gas when the refrigerant contacts with fire.
- Appliance and pipe-work shall be installed, operated and stored in a room with a floor area larger than A_{min} m².
 - How to get A_{min} m²: $A_{min}^{min} = (M / (2.5 \times 0.22759 \times h_0))^2$
 - M is the refrigerant charge amount in appliance in kg. h_0 is the installation height of the appliance in m: 0.6 m for floor standing/1.8 m for wall mounted/1.0 m for window mounted/2.2 m for ceiling mounted (For these units recommend installation height 2.5 m.).
- Comply with national gas regulations.

CAUTION

 Exposure of unit to water or other moisture before installation could result in electric shock.

Do not store it in a wet basement or expose to rain or water.

- After unpacking the unit, examine it carefully for possible damage.
- Do not install the unit at place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause of fire.
- Do not install in a place that can increase the vibration of the unit. Do not install in a place that can amplify the noise level of the unit or where noise and discharged air might disturb neighbors.
- To avoid personal injury, be careful when handling parts with sharp edges.
- Please read this installation manual carefully before installing the unit. It contains further important instructions for proper installation.
- The manufacturer shall not assume any liability for the damage caused by not observing the description of this manual.

REQUIREMENT OF REPORT TO THE LOCAL POWER SUPPLIER

Please make absolutely sure that the installation of this appliance is reported to the local power supplier before installation. If you experience any problems or if the installation is not accepted by the supplier, the service agency will take adequate countermeasures.

■ Important information regarding the refrigerant used

This product contains fluorinated greenhouse gases.

Do not vent gases into the atmosphere.

Refrigerant type: R32

GWP⁽¹⁾ value: **675** * (ex. R32 ref. AR4)

⁽¹⁾GWP = global warming potential

The refrigerant quantity is in dicated on the unit name plate.

* This value is based on F gas regulation 517/2014

ACCESSORY PARTS

	Indoo	r Unit	
No.	Part name	No.	Part name
1	Installation Plate x 1	2	Wireless remote control × 1
3	⑤ Battery × 2	4	Remote control holder × 1
(5)	Toshiba new IAQ filter x 1	6	()□□□□□□ Mounting screw × 6
7	⟨Ĵ∭□> Flat head wood screw x 2	8	Owner's Manual x 1
9	Installation Manual × 1	10	(X) > Flat head wood screw × 1
11)	Battery cover		

Air filters

Clean every 2 weeks.

- 1. Open the air inlet grille.
- 2. Remove the air filters.
- 3. Vacuum or wash and then dry them.
- 4. Reinstall the air filters and close the air inlet grille.

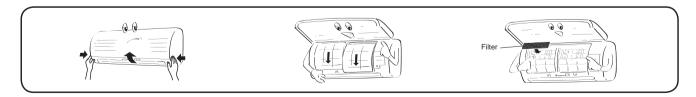
Filter

Maintenance & Shelf-life

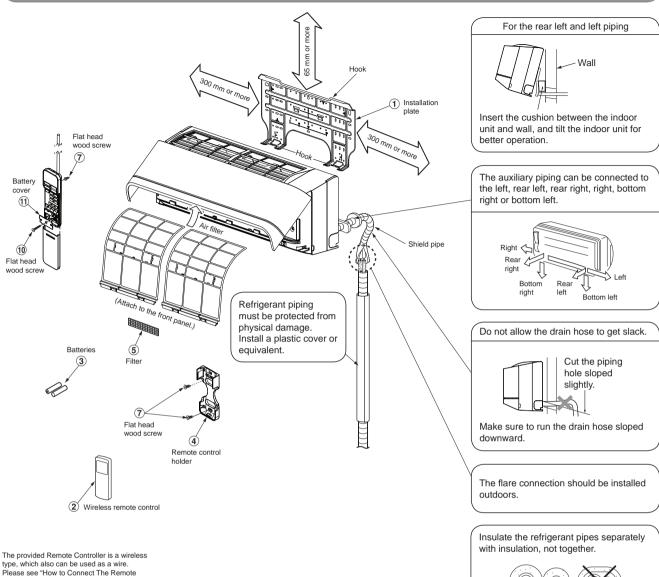
Clean every 3-6 months when dust tuck or covers the filter.

- 1. Recommend to use vacuum to clean by sucking the dusts which stick or dip inside the filter or use the blower to blow the dust go out through the filter.
- 2. If necessary to use water to clean, simply use the plain water to wash the filter, dry with the sunlight for 3-4 hours or until it completely dry. Nevertheless, use hair drier to dry it. However, washing with water, it may reduce the performance of the filter.
- 3. Replace every 2 years or sooner. (contact your dealer to purchase new filter) (P/N: RB-A620DE)

Note: Filter life depends on the level of impurities in your operating environment. Higher levels of impurities may require more frequent cleaning and replacement. In all cases, we recommend an additional set of filters to improve the purifying and deodorizing performance of your air conditioner.



INSTALLATION DIAGRAM OF INDOOR UNIT



6 mm thick heat resisting polyethylene foam

type, which also can be used as a wire. Please see "How to Connect The Remote Controller for Wired Operation", in case of wired control is required.

Optional Installation Parts

Part code	Parts name	Q'ty
A	Refrigerant piping Liquid side : Ø6.35 mm Gas side : Ø9.52 mm	One each
В	Pipe insulating material (polyethylene foam, 6 mm thick)	1
©	Putty, PVC tapes	One each

INDOOR UNIT

Installation Place

- A place which provides the spaces around the indoor unit as shown in the diagram
- · A place where there are no obstacles near the air inlet and outlet
- · A place which allows easy installation of the piping to the outdoor unit
- A place which allows the front panel to be opened
- The indoor unit shall be installed at least 2.5 m height. Also, it must be avoided to put anything on the top of the indoor unit.

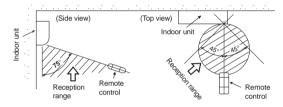
CAUTION

- Direct sunlight to the indoor unit's wireless receiver should be avoided.
- The microprocessor in the indoor unit should not be too close to RF noise sources.

(For details, see the owner's manual.)

Remote control

- A place where there are no obstacles such as a curtain that may block the signal from the indoor unit
- Do not install the remote control in a place exposed to direct sunlight or close to a heating source such as a stove.
- Keep the remote control at least 1 m apart from the nearest TV set or stereo equipment. (This is necessary to prevent image disturbances or noise interference.)
- · The location of the remote control should be determined as shown below.

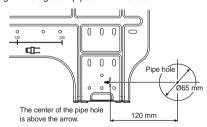


Cutting a Hole and Mounting Installation Plate



Cutting a hole

When installing the refrigerant pipes from the rear

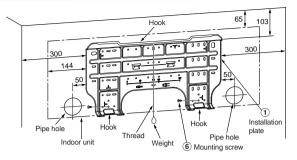


 After determining the pipe hole position on the mounting plate (→), drill the pipe hole (Ø65 mm) at a slight downward slant to the outdoor side.

NOTE

 When drilling a wall that contains a metal lath, wire lath or metal plate, be sure to use a pipe hole brim ring sold separately.

Mounting the installation plate

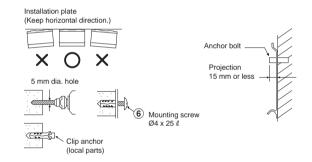


When the installation plate is directly mounted

- Securely fit the installation plate onto the wall by screwing it in the upper and lower parts to hook up the indoor unit.
- To mount the installation plate on a concrete wall with anchor bolts, use the anchor bolt holes as illustrated in the below figure.
- 3. Install the installation plate horizontally in the wall.

CAUTION

When installing the installation plate with a mounting screw, do not use the anchor bolt holes. Otherwise, the unit may fall down and result in personal injury and property damage.



CAUTION

Failure to firmly install the unit may result in personal injury and property damage if the unit falls.

- In case of block, brick, concrete or similar type walls, make 5 mm dia. holes in the wall.
- Insert clip anchors for appropriate mounting screws 6.

NOTE

 Secure four corners and lower parts of the installation plate with 4 to 6 mounting screws to install it.

Wiring Connection



Indoor unit

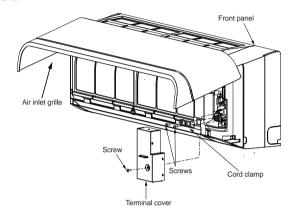
Wiring of the connecting cable can be carried out without removing the front panel.

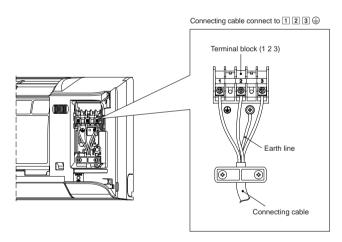
- Remove the air inlet grille.

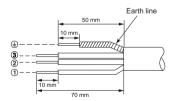
 Onen the air inlet grille upward and pull.
- Open the air inlet grille upward and pull it toward you.
- 2. Remove the terminal cover and cord clamp.3. Insert the connecting cable (according to the local cords) into the pipe hole
- on the wall.

 4. Take out the connecting cable through the cable slot on the rear panel so
- that it protrudes about 20 cm from the front.

 5. Insert the connecting cable fully into the terminal block and secure it tightly
- with screws.
- 6. Tightening torque: 1.2 N·m (0.12 kgf·m)
- 7. Secure the connecting cable with the cord clamp.
- Fix the terminal cover, rear plate bushing and air inlet grille on the indoor unit.

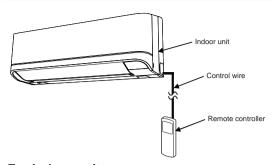






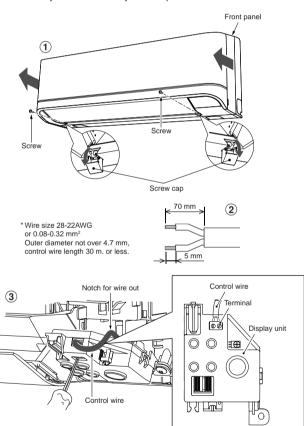
Stripping length of the Connecting cable

How to Connect Remote Controller for Wire Operation



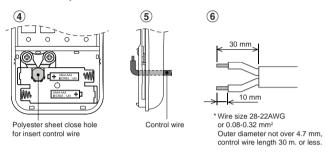
For indoor unit

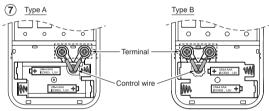
- 1 Open two screw caps and securely remove two screws at the front panel.
- 2. Slightly open the lower part of the front panel then pull the upper part of the front panel toward you to remove it as shown on figure ①.
- 3. Arrange the control wire as detail and specification as shown on figure ②
- 4. Securely connect the control wire to terminal of Display unit as shown on figure ③ (tighten firmly but not over 0.12 N·m (0.01 kgf·m)).
- 5. Set the control wire out from indoor unit same portion as power supply and connecting cable as shown on figure ③. (Notch for wire out)
- 6. Reassembly the indoor unit by reverse process of 1 to 2.



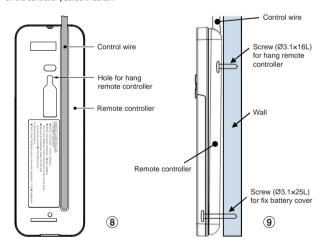
For remote controller

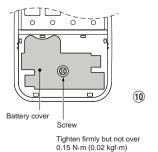
- 1. Remove cover of remote controller by sliding down and take it out.
- If batteries are exist, please take them out. The combination of using wire controller and batteries may cause of batteries explosion.
- Make hole for insert control wire by use screwdriver break the polyester sheet as shown on figure (4).
- 4. Insert control wire from rear side of remote controller as shown on figure (5).
- 5. Fix control wire which arrange as shown on figure ⑥ and ⑦ to terminal by provided screws (tighten firmly but not over 0.25 N⋅m (0.03 kgf⋅m)).
- 6. Set control wire through gutter way at rear side of remote controller as shown on figure (8).
- Fix provided screw (Ø3.1x16L) on the wall to hang remote controller as shown on figure (9).
- 8. Mark and arrange hole for fix below screw (Ø3.1×25L) as shown on figure (9).
- Assembly battery cover which provided with accessory bag then use provide screw (Ø3.1×25L) to fix battery cover together with wall as shown on figure (0) (tighten firmly but not over 0.15 N·m (0.02 kgf·m)).
- 10. Reassembly cover of remote controller.





*Terminals for wiring can be either on right (type A) or left (type B), depending on the controller packed in carton.



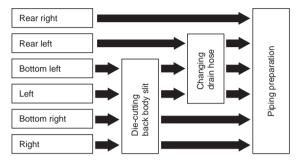


- *Remark: 1. Recommend to use double insulation lead wire for connect remote control and air conditioner.
 - For wire operation, 1 remote control can control only 1 indoor unit.
 - In wire operation, remote controller will return to initial condition (PRESET, TIMER and CLOCK will return to initial condition) when user shutdown power supply of air conditioner.

Piping and Drain Hose Installation

Piping and drain hose forming

* Since dewing results in a machine trouble, make sure to insulate both connecting pipes. (Use polyethylene foam as insulating material.)



1. Die-cutting back body slit

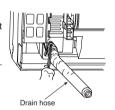
Cut out the slit on the left or right side of the back body for the left or right connection and the slit on the bottom left or right side of the back body for the bottom left or right connection with a pair of nippers.

2. Changing drain hose

For leftward connection, bottom-leftward connection and rearleftward connection's piping, it is necessary to change the drain hose and drain cap.

How to remove the drain hose

- The drain hose can be removed by removing the screw securing the drain hose and then pulling out the drain hose.
- When removing the drain hose, be careful of any sharp edges of steel plate. The edges can injuries.
- To install the drain hose, insert the drain hose firmly until the connection part contacts with heat insulator, and then secure it with original screw.



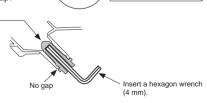
How to remove the drain cap

Clip the drain cap by needle-nose pliers and pull out.

How to fix the drain cap

- 1) Insert hexagon wrench (4 mm) in a center head.
- 2) Firmly insert the drain cap.





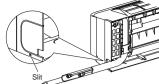
CAUTION

Firmly insert the drain hose and drain cap; otherwise, water may leak.



In case of right or left piping

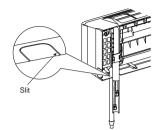
 After scribing slits of the back body with a knife or a making-off pin, cut them with a pair of nippers or an equivalent tool.





In case of bottom right or bottom left piping

 After scribing slits of the back body with a knife or a making-off pin, cut them with a pair of nippers or an equivalent tool.



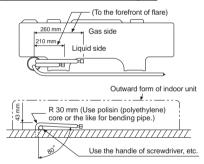


Left-hand connection with piping

 Bend the connecting pipe so that it is laid within 43 mm above the wall surface. If the connecting pipe is laid exceeding 43 mm above the wall surface, the indoor unit may unstably be set on the wall.
 When bending the connecting pipe, make sure to use a spring bender so as not to crush the pipe.

Bend the connecting pipe within a radius of 30 mm.

To connect the pipe after installation of the unit (figure)

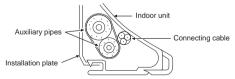


NOTE

If the pipe is bent incorrectly, the indoor unit may unstably be set on the wall. After passing the connecting pipe through the pipe hole, connect the connecting pipes to the auxiliary pipes and wrap the facing tape around them.

CAUTION

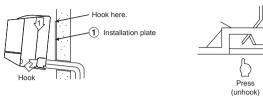
 Bind the auxiliary pipes (two) and connecting cable with facing tape tightly. In case of leftward piping and rear-leftward piping, bind the auxiliary pipes (two) only with facing tape.



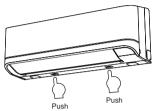
- Carefully arrange pipes so that any pipe does not stick out of the rear plate of the indoor unit.
- Carefully connect the auxiliary pipes and connecting pipes to one another and cut off the insulating tape wound on the connecting pipe to avoid double-taping at the joint; moreover, seal the joint with the vinyl tape, etc.
- Since dewing results in a machine trouble, make sure to insulate both connecting pipes. (Use polyethylene foam as insulating material.)
- When bending a pipe, carefully do it, not to crush it.

Indoor Unit Fixing

- Pass the pipe through the hole in the wall and hook the indoor unit on the installation plate at the upper hook.
- Swing the indoor unit to right and left to confirm that it is firmly hooked up on the installation plate.
- While pressing the indoor unit onto the wall, hook it at the lower part on the installation plate. Pull the indoor unit toward you to confirm that it is firmly hooked up on the installation plate.



 For detaching the indoor unit from the installation plate, pull the indoor unit toward you while pushing its bottom up at the specified parts.

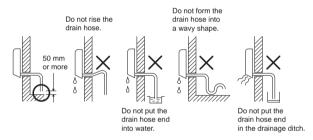


Drainage

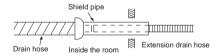
1. Run the drain hose sloped downwards.

NOTE

• The hole should be made at a slight downward slant on the outdoor side.



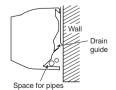
- Put water in the drain pan and make sure that the water is drained out of doors.
- When connecting extension drain hose, insulate the connecting part of extension drain hose with shield pipe.



CAUTION

Arrange the drain pipe for proper drainage from the unit. Improper drainage can result in dew-dropping.

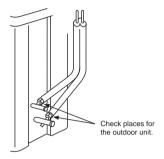
This air conditioner has the structure designed to drain water collected from dew, which forms on the back of the indoor unit, to the drain pan. Therefore, do not store the power cord and other parts at a height above the drain guide.



OTHERS

Gas Leak Test





 Check the flare nut connections for the gas leak with a gas leak detector or soap water.

Remote Control A-B Selection

- When two indoor units are installed in the same room or adjacent two
 rooms, if operating a unit, two units may receive the remote control signal
 simultaneously and operate. In this case, the operation can be preserved
 by setting either one remote control to B setting. (Both are set to A setting
 in factory shipment.)
- The remote control signal is not received when the settings of indoor unit and remote control are different.
- There is no relation between A setting/B setting and A room/B room when connecting the piping and cables.

To separate using of remote control for each indoor unit in case of 2 air conditioner are installed near.

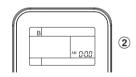
Remote Control B Setup.

- 1. Press [RESET] button on the indoor unit to turn the air conditioner ON.
- 2. Point the remote control at the indoor unit.
- 3. Push and hold [CHECK] button on the Remote Control by the tip of the pencil. "00" will be shown on the display (Picture 1).
- Press [MODE] during pushing [CHECK]. "B" will show on the display and "00" will disappear and the air conditioner will turn OFF. The Remote Control B is memorized (Picture ②).

Note: 1. Repeat above step to reset Remote Control to be A.

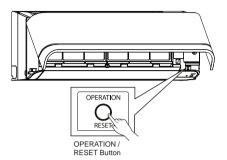
- 2. Remote Control A have not "A" display.
- 3. Default setting of Remote Control from factory is A.





Test Operation

To switch the TEST RUN (COOL) mode, press [RESET] button for 10 seconds. (The beeper will make a short beep.)



Auto Restart Setting

This product is designed so that, after a power failure, it can restart automatically in the same operating mode as before the power failure.

Information

The product was shipped with Auto Restart function in the off position. Turn it on as required.

How to set the Auto Restart

- Press and hold the [RESET] button on the indoor unit for 3 seconds to set the operation. (3 beep sound and OPERATION lamp blink 5 time/sec for 5 seconds)
- Press and hold the [RESET] button on the indoor unit for 3 seconds to cancel the operation. (3 beep sound but OPERATION lamp does not blink)
 - In case of ON timer or OFF timer are set, AUTO RESTART OPERATION does not activate.

APPENDIX

Work instructions

The existing R22 and R410A piping can be reused for inverter R32 product installations.

∯ WARNING

the pipe strength are conventionally referred to the Confirming the existence of scratches or dents on the existing pipes and confirming the reliability of

possible to update existing R22 and R410A pipes If the specified conditions can be cleared, it is to those for R32 models.

Basic conditions needed to reuse existing

Check and observe the presence of three conditions in

- Dry (There is no moisture inside of the pipes.)
 Clean (There is no dust inside of the pipes.)
 Tight (There are no refrigerant leaks.) the refrigerant piping works.

Restrictions for use of existing pipes

not be reused as they are. Clean the existing pipes In the following cases, the existing pipes should or exchange them with new pipes.

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- 1. When a scratch or dent is heavy, be sure to use new pipes for the refrigerant piping works.

 2. When the existing pipe thickness is thinner than the
 - specified "Pipe diameter and thickness," be sure to use new pipes for the refrigerant piping works.
- that of R22). If there is a scratch or dent on the pipe or a thinner pipe is used, the pressure strength may be inadequate, which may cause the pipe to break The operating pressure of R32 is high (1.6 times in the worst case.
 - Pipe diameter and thickness (mm)

Pipe outer	Pipe outer diameter	96.4	06.4 09.5 012.7	Ø12.7
Teigh	R32, R410A	0	0 0	0
LICKLIESS	R22	0.0	0.0	0.0
3. When the outdoor unit was left with the pipes	tdoor unit was	left with th	ne pipes	

- disconnected, or the gas leaked from the pipes and When the outdoor unit was left with the pipes the pipes were not repaired and refilled.
- There is the possibility of rain water or air, including moisture, entering the pipe.

4. When refrigerant cannot be recovered using a

refrigerant recovery unit.

· There is the possibility that a large quantity of dirty oil or moisture remains inside the pipes.

- 5. When a commercially available dryer is attached to the existing pipes.
- · There is the possibility that copper green rust has been generated.
- Check if the oil is judged to be clearly different from 6. When the existing air conditioner is removed after refrigerant has been recovered. normal oil.
- There is the possibility that moisture has mixed with the oil and rust has been generated inside the pipe. · The refrigerator oil is copper rust green in color:
 - There is discolored oil, a large quantity of residue,
- or a bad smell.
 - · A large quantity of shiny metal dust or other wear residue can be seen in the refrigerant oil.
- 7. When the air conditioner has a history of the compressor failing and being replaced.
- shiny metal dust, or other wear residue or mixture of 8. When temporary installation and removal of the air When discolored oil, a large quantity of residue, foreign matter is observed, trouble will occur.
 - conditioner is other than the following oil (Mineral oil), conditioner are repeated such as when leased etc. If the type of refrigerator oil of the existing air
- (HAB, Barrel-freeze), ester series, PVE only of ether Suniso, Freol-S, MS (Synthetic oil), alkyl benzene
- The winding-insulation of the compressor may deteriorate.

NOTE

conditioners, but do not guarantee the use of the existing The above descriptions are results have been confirmed pipes of air conditioners that have adopted R32 in other by our company and represent our views on our air companies.

Curing of pipes

When removing and opening the indoor or outdoor unit for a long time, cure the pipes as follows:

- foreign matter due to condensation enters the pipes. Otherwise rust may be generated when moisture or
 - The rust cannot be removed by cleaning, and new pipes are necessary.

Placement location	Term	Curing manner
0.000	1 month or more	Pinching
SIOODII	Less than 1 month	
ndoors	Every time	Finching or taping

Do not apply refrigerator oil to the flare surface.

YES Existing pipes: Cannot be used. • Use new pipes.	ON			Nitrogen gas pressure 0.5 MPa			(If there is discharge of remains, it is judged that a	YES Clean the pipes or use new pipes.	[Piping necessary to change the flare nut / machining size due to pipe compression	1) Flare nut width: H	Copper pipe Ø6.4 Ø9.5 Ø12.7	For R32, R410A 17 22	H For R22 Same as above 24	2) Flare machining size: A (mm)	Copper pipe Q6.4 Q9.5 Q12.7 A outer diameter Q6.4 Q9.5 Q12.7 Q12.7	For R32, R410A 9.1 13.2 16.6	For R22 9.0 13.0 16.2 Becomes a little larger for R32
Are there scratches or dents on the existing pipes?	Is it possible to operate the existing air conditioner?	▼ YES	After the existing air conditioner is operated in cooling mode for approx. 30 minutes or longer,* recover the	refrigerant. • For cleaning the pipes and recovering oil • Refrigerant recovery: Pump down method	->	Remove the existing air conditioner from the piping and carry out flushing (nitrogen pressure 0.5 MPa) to remove any remains inside of the pipe. Note: In case of twin pipes, also be sure to flush the branching pipe.	->	Was largely discolored oil or a large quantity of remains discharged? (When the oil deteriorates, the color of the oil changes to a muddy or black color.)	ON >	Connect the indoor / outdoor units to the existing pipe. • Use a flare nut attached to the main unit for the indoor units. (Do not use the flare nut of the existing pipe.)	Re-machine the flare machining size to size for R32.	>	 (Airtight test), Vacuum dry, Refrigerant charge, Gas leak check 	->	Test run				