Evacuating - Toshiba RAS-M14GAV-E Installation Manual

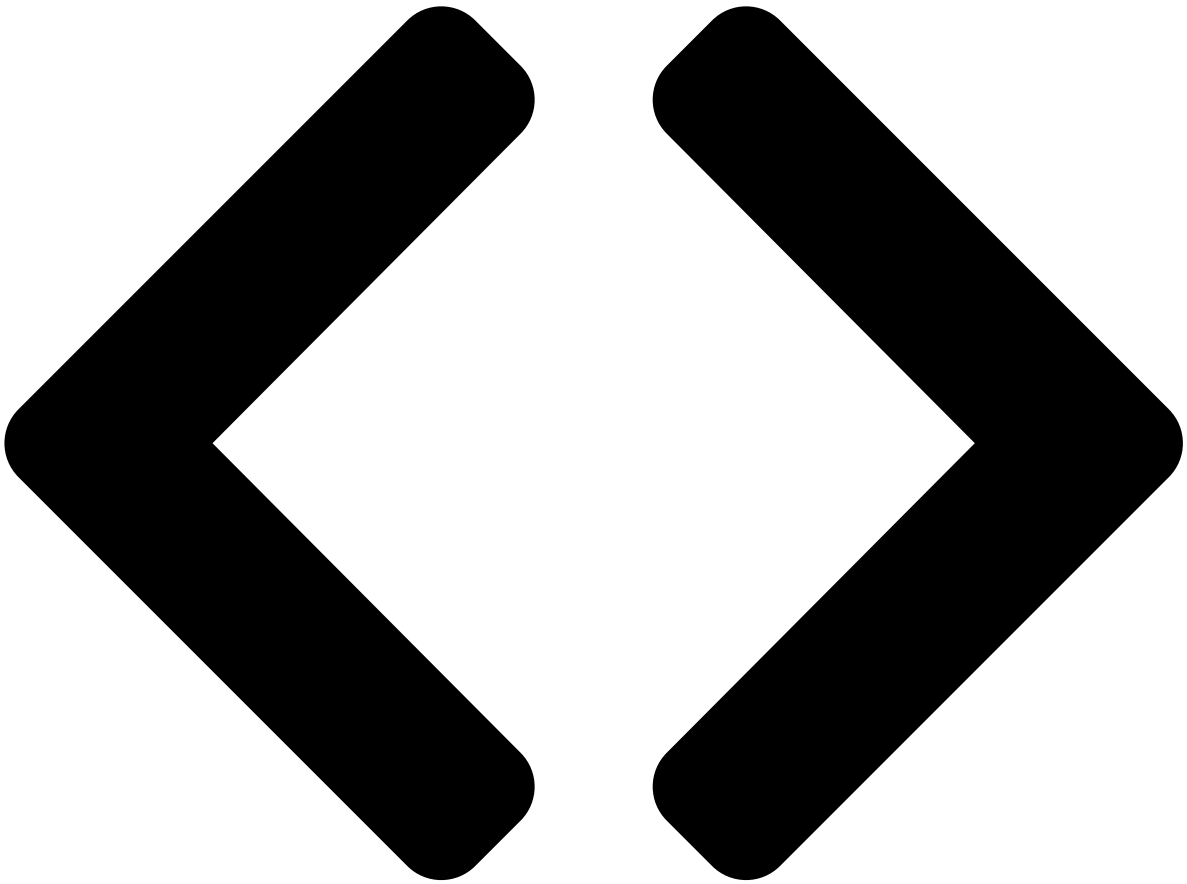
Split type

1
Table Of Contents
2
3
4
5
6
7
8
9
10
11
12

-

Table of Contents

Bookmarks



Enlarged version

• Tightening torque for connection of fl are pipe
The pressure of R410A is higher than R22 (Approx. 1.6 times). Therefore securely tighten the fl are pipes which connect the outdoor unit and the indoor unit with the specifi ed tightening torque using a torque wrench. If any fl are pipe is incorrectly connected, it may cause not only a gas leakage but also trouble in the refrigeration cycle.

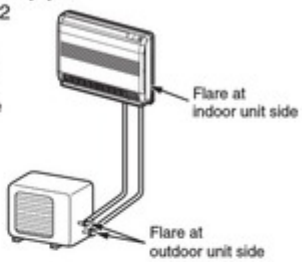
Evacuating

After the piping has been connected to the indoor unit, you can perform vacuuming together at once.
VACUUMING
Evacuate the air in the connecting pipes and in the indoor unit using a vacuum pump. Do not use the refrigerant in the outdoor unit. For details, see the manual of the vacuum pump.

Using a vacuum pump

Be sure to use a vacuum pump with counter-fl ow prevention function so that inside oil of the pump does not fl ow backward into pipes of the air conditioner when the pump stops.
(If oil inside of the vacuum pump enters the air conditioner, which use

Tightening torque for connection of flare pipe
The pressure of R410A is higher than R22 (Approx. 1.6 times). Therefore securely tighten the flare pipes which connect the outdoor unit and the indoor unit with the specified tightening torque using a torque wrench. If any flare pipe is incorrectly connected, it may cause not only a gas leakage but also trouble in the refrigeration cycle.



Gas side (∅12.70 mm)	50 to 62 N·m (5.0 to 6.2 kgf·m)
Gas side (∅9.52 mm)	33 to 42 N·m (3.3 to 4.2 kgf·m)
Liquid side (∅6.35 mm)	14 to 18 N·m (1.4 to 1.8 kgf·m)
Service port	14 to 18 N·m (1.4 to 1.8 kgf·m)

Evacuating

After the piping has been connected to the indoor unit, you can perform vacuuming together at once.

VACUUMING

Wiring Con

1. Remove the valve cover, the electric pa the outdoor unit.
2. Connect the connecting cable to the ter numbers on the terminal block of indoor
3. Insert the power cord and the connectin block and secure it tightly with screws.
4. Use vinyl tape, etc. to insulate the cords

R410A, refrigeration cycle trouble may happen.)
1. Connect the charge hose from the manifold valve to the service port of the packed valve at gas side.
2. Connect the charge hose to the port of the vacuum pump.
3. Open fully the low pressure side handle of the gauge manifold valve.
4. Operate the vacuum pump to start evacuating. Perform evacuating for about 15 minutes if the piping length is 20 meters (15 minutes for 20 meters) (assuming a pump capacity of 27 liters per minute). Then confirm that the compound pressure gauge reading is –101 kPa (–76 cmHg).
5. Close the low pressure side valve handle of the gauge manifold valve.
6. Open fully the valve stem of the packed valves (both gas and liquid sides).
7. Remove the charging hose from the service port.
8. Securely tighten the caps on the packed valves.

Compound pressure gauge
–101 kPa (–76 cmHg)
Handle Lo
Charge hose
(For R410A only)
Connecting pipe
Packed valve at gas side
Service port (Valve core (Setting pin))
Packed valve at liquid side

CAUTION

• KEEP IMPORTANT 5 POINTS FOR PIPING WORK.
(1) Take away dust and moisture (inside of the connecting pipes).
(2) Tighten the connections (between pipes and unit).
(3) Evacuate the air in the connecting pipes using a VACUUM PUMP.
(4) Check gas leak (connected points).
(5) Be sure to fully open the packed valves before operation.

Packed valve handling precautions

• Open the valve stem until it touches the stopper. Once it is in contact with the stopper, refrain from applying any more force than is necessary.
• Securely tighten the valve stem cap with torque in the following table.

Gas side
(∅12.70 mm)
Gas side
(∅9.52 mm)
Flare at
Liquid side
indoor unit side
(∅6.35 mm)
Service port
Flare at
outdoor unit side

1. Remove the valve cover, the electric parts cover and the piping clamp from the outdoor unit.
2. Connect the connecting cable to the terminal (according to the color) of the indoor unit and outdoor unit securely.
3. Insert the power cord and the connecting cable fully into the terminal block and secure it tightly with screws.
4. Use vinyl tape, etc. to insure the cords will not touch electrical parts.
5. Secure the power cord and the connecting cable with the cord clamp.
6. Attach the electric parts cover and the valve cover on the outdoor unit.
1. The supply voltage must be the same as the rated voltage of the air conditioner.
2. Prepare the power source for exclusive use with the air conditioner.
X When using a multi-system outdoor unit is used, refer to the installation

Pressure gauge
Manifold valve
Handle Hi
(Keep full closed)
Terminal
Charge hose
block
(For R410A only)
Vacuum pump adapter for
counter-fl ow prevention
(For R410A only)
Vacuum
pump

RAS-10SAVR-A, RAS-18SAV-E

Terminal
block

8

50 to 62 N·m
(5.0 to 6.2 kgf·m)
33 to 42 N·m
(3.3 to 4.2 kgf·m)
14 to 18 N·m
(1.4 to 1.8 kgf·m)
14 to 18 N·m
(1.4 to 1.8 kgf·m)

Wiring Connection

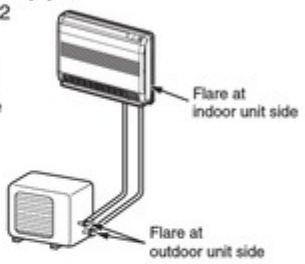
the outdoor unit.
numbers on the terminal block of indoor and outdoor unit.
block and secure it tightly with screws.
Locate them so that they do not touch any electrical or metal parts.

Electrical Work

conditioner.
RAS-(B)10UFV

Tightening torque for connection of flare pipe

The pressure of R410A is higher than R22 (Approx. 1.6 times). Therefore if severely tighten the flare pipes which connect the outdoor unit and the indoor unit with the specified tightening torque using a torque wrench, if any flare pipe is incorrectly connected, it may cause not only a gas leakage but also trouble in the refrigeration cycle.



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Evacuating

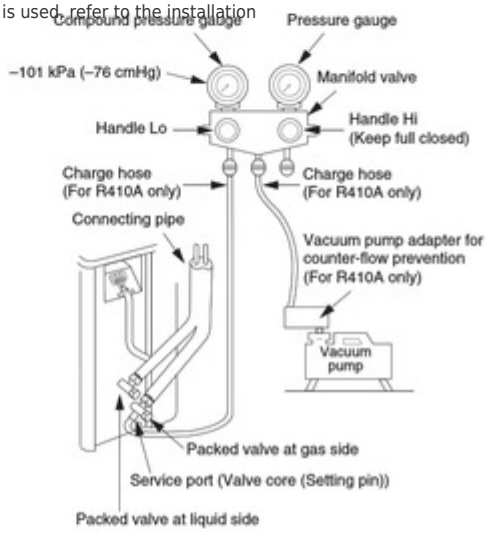
After the piping has been connected to the indoor unit, you can perform vacuuming together at once.

VACUUMING
Evacuate the air in the connecting pipes and in the indoor unit using a vacuum pump. Do not use the refrigerant in the outdoor unit. For details, see the manual of the vacuum pump.

Using a vacuum pump

Be sure to use a vacuum pump with counter-flow prevention function so that inside oil of the pump does not flow backward into pipes of the air conditioner when the pump stops.
(If oil inside of the vacuum pump enters the air conditioner, which use R410A, refrigeration cycle trouble may happen.)

1. Connect the charge hose from the manifold valve to the service port of the packed valve at gas side.
2. Connect the charge hose to the port of the vacuum pump.
3. Open fully the low pressure side handle of the gauge manifold valve.
4. Operate the vacuum pump to start evacuating. Perform evacuating for about 15 minutes if the piping length is 20 meters (15 minutes for 20 meters) (assuming a pump capacity of 27 liters per minute). Then confirm that the compound pressure gauge reading is –101 kPa (–76 cmHg).
5. Close the low pressure side valve handle of the gauge manifold valve.
6. Open fully the valve stem of the packed valves (both gas and liquid sides).
7. Remove the charging hose from the service port.
8. Securely tighten the caps on the packed valves.



CAUTION

• **KEEP IMPORTANT 5 POINTS FOR PIPING WORK.**
(1) Take away dust and moisture (inside of the connecting pipes).
(2) Tighten the connections (between pipes and unit).
(3) Evacuate the air in the connecting pipes using a VACUUM PUMP.
(4) Check gas leak (connected points).
(5) Be sure to fully open the packed valves before operation.

Wiring Con

1. Remove the valve cover, the electric pa
the outdoor unit.
2. Connect the connecting cable to the ter
numbers on the terminal block of indoor
3. Insert the power cord and the connectin
block and secure it tightly with screws.
4. Use vinyl tape, etc. to insulate the cords
Locate them so that they do not touch a
5. Secure the power cord and the connect
6. Attach the electric parts cover and the v

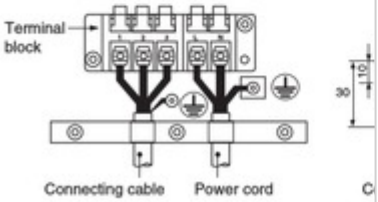
Electrical

1. The supply voltage must be the same a
conditioner.
2. Prepare the power source for exclusive

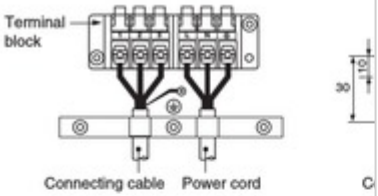
Model	RAS-(B)10UFV series	R
Power source	220–240V ~ 50Hz 220–230V ~ 60Hz	22 22
Maximum running current	8.5A	
Plug socket & fuse rating		
Power cord	H07RN-F or 60	
Connecting cable	H07RN-F or 60	

※ When using a multi-system outdoor unit
manual provided with the model concer

Stripping length of the conr



RAS-10SAVR-A, RAS-18SAV-E

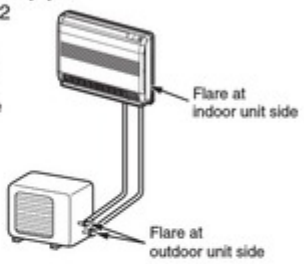


CAUTION

- Wrong wiring connection may cause s
- Be sure to comply with local rule on ru
to outdoor unit (size of wire and wiring

RAS-(B)13UFV
Model
series
220–240V ~ 50Hz
220–240V ~ 50Hz
Power source
220–230V ~ 60Hz
220–230V ~ 60Hz
Maximum running
8.5A
current
Plug socket & fuse
rating
Power cord
H07RN-F or 60245 IEC66 (1.5 mm
Connecting cable
H07RN-F or 60245 IEC66 (1.0 mm
manual provided with the model concerned.
Stripping length of the connecting cable
30
Connecting cable
Power cord
Connecting cable
1
2
3
L
N
30
Connecting cable
Power cord
Connecting cable
CAUTION
• Wrong wiring connection may cause some electrical parts to burn out.
• Be sure to comply with local rule on running the thermal of the vacuum
to outdoor unit (size of wire and wiring method, etc.).
• Every wire must be connected fi rmly.
• If incorrect or incomplete wiring is carried out, it will cause an ignition
or smoke.
• Prepare the power supply for exclusive use with the air conditioner.
• This product can be connected to the mains.
Connection to fi xed wiring : A switch which disconnects all poles and
has a contact separation of at least 3 mm must be incorporated in the
fi xed wiring.
Toshiba 1112150201 (EN)
Hexagon wrench
is required.
EN
ES
FR
IT
DE
PT
RAS-(B)18UFV
PL
series
series
220–240V ~ 50Hz
220–230V ~ 60Hz
CZ
11.0A
12.0A
RU
16A
CR
2
or more)
2
or more)
HU
TR
NL
1 2 3
L N
GR
40
40
30
SV
Earth line
Power cord
FI
1 2 3
L N
NO

• **Tightening torque for connection of flare pipe**
The pressure of R410A is higher than R22 (Approx. 1.6 times). Therefore securely tighten the flare pipes which connect the outdoor unit and the indoor unit with the specified tightening torque using a torque wrench. If any flare pipe is incorrectly connected, it may cause not only a gas leakage but also trouble in the refrigeration cycle.



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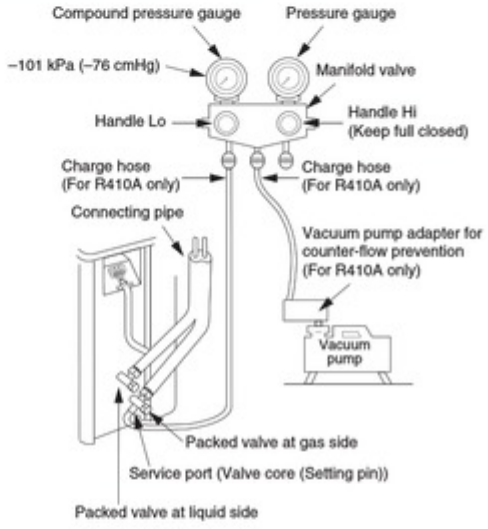

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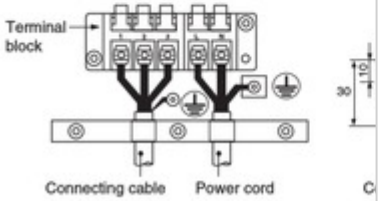
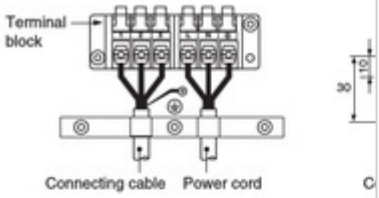
Plug socket & fuse rating		
Power cord	H07RN-F or 60	
Connecting cable	H07RN-F or 60	

※ When using a multi-system outdoor unit
manual provided with the model concern

Stripping length of the conn



RAS-10SAVR-A, RAS-18SAV-E



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to outdoor unit (size of wire and wiring

40
40
30
DK
Earth line
RO
Power cord
BG
EE
LV
SK
SI

- **Tightening torque for connection of flare pipe**
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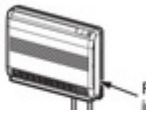

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Table of Contents

Previous Page
Next Page

Quick Links:

Related Manuals for Toshiba RAS-M14GAV-E

Air Conditioner Toshiba RAS-M10GDCV-E Owner's Manual

(multi-split type) (164 pages)

Air Conditioner toshiba RAS-B10GKVP-E Service Manual

Split type heat pump type/cooling onlytype (134 pages)

Air Conditioner Toshiba 16N3KVP Series Owner's Manual

(105 pages)

Air Conditioner Toshiba RAS-B10SKVP-E Owner's Manual

Split type air conditioner (91 pages)
Air Conditioner Toshiba RAS-M07N3KV2 Series Installation Manual

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Air Conditioner Toshiba RAS-B10SKVP-E Owner's Manual

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Air Conditioner Toshiba RAS-M14GAV-E Owner's Manual

Split type (7 pages)
Air Conditioner Toshiba RAS-B10N3KVP Owner's Manual

Toshiba air conditioner (split type) owner's manual (5 pages)

Related Content for Toshiba RAS-M14GAV-E

SM560AT-E Refrigerant Piping And Evacuating

Toshiba SM560AT-E

RAS-07G3KVSG-TR Evacuating

Toshiba RAS-07G3KVSG-TR

RAS-B16J2AVSG-E Evacuating

Toshiba RAS-B16J2AVSG-E

RAS-B22N3KV2-E1 Evacuating

Toshiba RAS-B22N3KV2-E1

RAS-16N3KV2 Series Evacuating

Toshiba RAS-16N3KV2 Series

RAS-24J2KVG-EE Evacuating

Toshiba RAS-24J2KVG-EE

RAS-B10PKVSG-E Evacuating

Toshiba RAS-B10PKVSG-E

RAV-SM560KRT-E Evacuating

Toshiba RAV-SM560KRT-E

This manual is also suitable for:

Ras-3m26gav-e1Ras-m18gav-eRas-3m18sav-eRas-4m23sav-eRas-4m27gav-e1Ras-5m34uav-e ... Show all